# CERAMIC ABSTRACTS

## November–December, 1994

Compiled by the American Ceramic Society

## AUTHOR INDEX FOR 1994

The abstract number appears at the end of each citation. Abstracts are numbered continuously through an entire volume.


**Aamili, A.; Mahiou, R.; Linares, C.; Zambon, D.; Avignant, D.; Cousseins, J. C.**
Luminescence of $Gd^{3+}$-activated $LiNaY_2F_8$.—73-02324

**Aasland, S.** See Grande, T.

**Aasland, S.; Grande, T.; Julsrud, S.**
Oxidation states of transition metals in ZBLAN.—73-06950

**Ababou, A.** See Bernache-Assollant, D.

**Abakumova, L. A.** See Mashir, Yu. I.

**Abashkina, S. A.; Korol'kov, V. I.; Rimshans, Ya. S.; Skryl, Y. I.; Tabarov, T. S.**
Numerical calculation of transient characteristics of GaAs vertical FET's.—73-15064

**Abbakumov, V. G.** See Novikov, V. L.

**Abbas, Tahir** See Arshed, M.

**Abbas, Tahir; Khan, Y.; Ahmed, Mushtaq; Anwar, S.**
XRD study of cation distribution in the Mn-Zn ferrites.—73-12736

**Abbasov, G. Z.** See Trofimov, V. T.

**Abbasov, S. N.** See Tadzhiev, F. Kh.

**Abbate, A.** See Han, K. J.

**Abbate, M.** See Soriano, L.

**Abbott, K. J.** See Lo, G. Q.

**Abbott, Richard** See Pober, Richard

**Abd Allah, E. W.** See Ahmed, A. A.

**Abd El-Ati, M. I.** See Tawfik, A.

**Abd Karim, M. M.** See Holland, D.

**Abd-Elzaher, M. M.** See Amin, R. S.

**Abd-Shukor, R.**
Optimum preparation of bulk $Tl_2Ba_2CaCu_2O_{8-\delta}$ (2212) high-temperature superconductor.—73-11854

**Abdel-Fattah, Wafa I.** See El-Defrawi, S. A.

**Abdel-Halim, S. T.** See Ahmed, A. A.

**Abdel-Latif, M.** See Taylor, P. R.

**Abdelalim, A. M. K.** See Ghorab, H. Y.

**Abdelalim, A. M. K.; Ghorab, H. Y.**
Effect of bituminous emulsions on the sulfate resistance of cement pastes.—73-00071

**Abdelghani-Idrissi, M. A.** See Ozkul, C.

**Abdikamalov, B. A.; Erezhepov, M. T.; Ernazarov, U. K.**
Substructure of polysynthetic zinc sulfide and selenide crystals.—73-16344

**Abdrakhimov, V. F.**
Phase transformations occurring during the firing process of ceramic tiles based on beneficiation tailings.—73-07267

**Abdrakhimov, V. Z.**
Kaolins from Zhana-Daursk as local materials for ceramic tile production.—73-01984

**Abdukadyrova, I. Kh.**
Influence of reactor radiation on spectroscopic characteristics of quartz glass.—73-14008

**Abdulaev, G. B.; Godzhaev, M. O.; Kakhramanov, N. B.; Suleimanov, R. A.**
Stimulated emission [of radiation] in layered InSe and GaSe crystals.—73-15179

**Abdullaev, A. A.; Gadzhiev, A. Z.**
Characteristics of the diffusion and drift of nonequilibrium carriers in $CdCr_2Se_4$.—73-03080

**Abdullaev, Kh. A.** See Ismatov, A. A.

**Abdullaev, M. A.** See Kokhanovskii, S. I.

**Abdullaev, M. A.**
Exciton structure of the fundamental absorption edge of $CuInSe_2$.—73-07519

**Abdullah, M. H.; Shiraishi, K.**
Effects of electron irradiation on $J_c$ of $Y_1Ba_2Cu_3O_x$ superconductors.—73-04708

**Abdurazakov, A.**
Chemical compositions of ancient Central Asian glasses and the results of the restoration of lost schicht recipes.—73-13664

**Abduvaliev, T. A.; Isakov, T. U.; Esimov, B. O.**
Synthesis of glass-ceramics in the wollastonite–apatite–celsian system.—73-07182

**Abe, Akira** See Muramatsu, Gyo

**Abe, F.** See Araki, H.; Noda, T.

**Abe, Fumio; Susuki, Junichi**
Honeycomb heater and catalytic converter.—73-15927

**Abe, Hidekazu** See Kanai, Hideyuki

**Abe, Hisao; Seki, Hideya; Fukunaga, Akio; Egashira, Makoto**
Preparation and water permeation property of bimodal porous cordierite ceramics.—73-02941 & ;73-13180

**Abe, Hitoshi** See Ogihara, M.

**Abe, Hitoshi; Yamada, Tomoyuki**
Method of forming an oxide superconductor/semiconductor junction.—73-04851

**Abe, K.** See Majima, A.

**Abe, Kiyoshi** See Nakazawa, Tadahisa

**Abe, Kohji; Dolino, Gerard**
Optical study of time variation of memory effect in incommensurate phase of quartz.—73-08940

**Abe, M.** See Zhang, Q.

**Abe, M.; Itoh, T.; Tamaura, Y.**
Magnetic and biomagnetic films obtained by ferrite plating in aqueous solution.—73-13126

**Abe, Masahiro; Nanataki, Tsutomu; Yano, Shinsuke**
Dielectric ceramic composition containing $ZnO-B_2O_3-SiO_2$ glass, method of preparing the same, and resonator and filter using the dielectric ceramic composition.—73-11010; Dielectric ceramic composition containing $ZnO-B_2O_3-SiO_2$ glass.—73-04201; Method of producing low-temperature-firing dielectric ceramic composition containing $B_2O_3$.—73-11036

**Abe, Masahiro; Sugiura, Tatsumi; Nanataki, Tsutomu; Yano, Shinsuke**
Dielectric ceramic composition used for producing dielectric resonator or filter for microwave application.—73-11011; Dielectric resonator or filter for microwave application, and method of producing the dielectric resonator of filter.—73-14745

**Abe, Mitsuo** See Tomishima, Hiroshi

**Abe, Osami**
Machinability of rate-controlled sintered alumina.—73-02888

**Abe, Osami**
Machinability of rate-controlled sintered alumina.—73-13125

**Abe, Shinji** See Mori, Toru

**Abe, Tetsuya** See Ikegaya, Akihiko

**Abe, Toshimi; Suemitsu, Maki; Miyamoto, Nobuo**
Formation of highly uniform and dense diamond microcrystal thin films using a combustion flame surrounded by an inert gas flow.—73-09139

**Abe, Toshio** See Mori, Masashi

**Abe, Y.** See Fukuhara, M.

**Abe, Y.; Kakegawa, Kazuyuki; Sasaki, Y.**
Synthesis of solid solutions of the $Pb(Mg_{1/3}Ta_{2/3})O_3$-$Pb(Yb_{1/2}Ta_{1/2})O_3$ system having no compositional fluctuation.—73-09364

**Abe, Yoshihiro** See Hosono, Hideo

**Abe, Yoshihiro** See Kasuga, Toshihiro; Lee, Won-Hyuk; Li, Guang-Ming; Zhang, Zhi-Bo

**Abe, Yoshihiro; Hosono, Hideo; Akamatsu, Takeshi**
Method of fabricating superconducting ceramic pipe.—73-04849

**Abe, Yoshihiro; Hosono, Hideo**
Protonic conduction in glasses.—73-14262

**Abe, Yoshimoto** See Goto, Hitoshi; Kasgoz, Ahmet

**Abe, Yoshio** See Onisawa, Kenichi

**Abe, Yoshio; Hamaji, Yukio; Sakabe, Yukio**
Production of barium titanate thin films.—73-15957

**Abe, Yumi** See Ishihara, Tatsumi

**Abel, Phillip B.** See Miyoshi, Kazuhisa

**Abel, Phillip B.**
Scanning tunneling microscope for use in vacuum.—73-15843

**Abeles, F.** See Rivory, J.; Vuye, G.

**Abell, J. S.** See Bi, Y. J.; Gencer, F.; Rand, M.

**Abello, L.** See Scherban, T.

**Abelson, J. R.** See Yang, S.-Y.; Yang, Y. H.

**Aben, H.; Josepson, J.; Kell, K.-J.; Puro, A.**
Residual stress analysis in glass specimens of complicated shape using integrated photoelasticity.—73-14275

**Abernathy, C. R.** See Chakrabarti, U. K.; Lothian, J. R.; Pearton, S. J.;Ren, F.

**Abernathy, C. R.; Pearton, S. J.; Ren, F.; Wisk, P. W.**
Effect of electron cyclotron resonance generated hydrogen plasmas on carbon incorporation and interfacial quality of GaAs and AlGaAs grown by metallorganic molecular beam epitaxy.—73-07463

**Abernathy, C. R.; Pearton, S. J.; Ren, F.; Wisk, P. W.**
Growth of InN for ohmic contact formation by electron cyclotron resonance metallorganic molecular beam epitaxy.—73-13082

**Abernathy, C. R.; Ren, F.; Pearton, S. J.; Song, J.**
Dopant incorporation in GaAs and AlGaAs grown by MOMBE for high-speed devices.—73-14841

**Abernathy, C. R.**
Growth of III-V materials by metallorganic molecular beam epitaxy.—73-04352

**Abicht, Hans-Peter** See Felgner, Karl-Heinz; Voltzke, Dieter

**Abilov, Ch. I.; Iskender-Zade, Z. A.; Gabibov, T. A.**
Physicochemical properties of melts of the system PbTe-Mn.—73-02394

**Able, Edward C.; Gibler, Martin J.**
Gas turbine engine combustor fiber-reinforced glass-ceramic matrix liner with embedded refractory ceramic tiles.—73-15992

**Abo El Soud, A. M.; Zayed, H. A.; Soliman, L. I.**
Transport properties of $CuInS_2$, $CuInSe_2$, and $CuInTe_2$ thin films.—73-09426

**Abolhassani, S.** See Kahn-Harari, A.

**Abolmaali, S. B.; Talbot, Jan B.**
Synthesis of superconductive thin films of $YBa_2Cu_3O_{7-x}$ by a nonaqueous electrodeposition process.—73-08241

**Abou Aly, A. I.** See Ibrahim, A. K.

**Abou, Sekkina M. M.; El-Shereafy, E.; Khidr, M. A.**
Zirconia-modified calcium oxide ceramics and industrial recommendations.—73-12906

**Abou-Elfotouh, Fouad A.** See Ashour, S.

**Abou-Elfotouh, Fouad A.; Kazmerski, L. L.; Moutinho, H. R.; Wissel, J. M.; Dhere, R. G.; Nelson, Arthur J.**
Determination and observation of electronic defect levels in $CuInSe_2$ crystals and thin films.—73-03089

**Aboukais, Antoine** See Bechara, Rafeh

**Abouzeid, A. Z. M.** See Fuerstenau, D. W.

**Abov, Yu. G.; Smirnov, Yu. I.; Denisov, D. S.**
Using multiple small-angle neutron scattering technique to study porosity parameters of high-$T_c$ ceramics.—73-15663

**Abraham, I.; Gritzner, G.**
Mechanical properties of doped zirconia ceramics.—73-09637

**Abraham, M. M.** See Chen, G.

**Abraham, Thomas**
Current U.S. markets for advanced ceramics and projection of future growth.—73-09708; Economics of ceramic magnets.—73-15315; Industrial diamonds, diamond and cBN products, diamond and diamondlike films—emerging applications and markets.—73-09721; Permanent magnets—Nd-Fe-B and ceramic hard ferrites continue to grow.—73-15356; U.S. advanced ceramics industry: the growth continues.—73-13647

**Abrahams, I.** See Bruce, P. G.

**Abrahams, I.; Nowinski, J. L.; Bruce, P. G.; Gibson, V. C.**
Structure of the intercalate $NaWO_2Cl_2$.—73-02466

**Abraitis, R. I.; Vaitekunas, P. P.**
Destruction of refractories by a high-temperature gas stream.—73-00796

**Abramov, A. A.; Zakhanikova, L. P.; Mikulenok, A. V.; Stoyanova, I. G.**
Distributions of the concentrations of shallow and deep charged centers in the InP layers doped by implantation of Be ions.—73-04284

**Abramov, A. P.; Abramova, I. N.; Verbin, S. Yu.; Gerlovin, I. Y.; Grigorev, S. R.; Ignat'ev, I. V.**
Photoluminescence of a degenerate electron gas in GaAs:Si films grown by the method of MBE.—73-11385

**Abramova, I. N.** See Abramov, A. P.

**Abramova, N. I.** See Grinberg, V. Ya.

**Abramowitz, Mortimer**
Advanced camera for photomicrography.—73-12103

**Abrams, L.** See Parise, John B.

**Abramson, I. G.; Vaisman, A. F.; Kapralova, R. M.**
Development of radiation-thermal technology of cement manufacture.—73-09891

**Abramyan, Yu. A.; Papazyan, K. Z.; Stafeev, V. I.**
Influence of In on the energy spectrum of $Pb_{1-x}Sn_xTe$.—73-07595

**Abrashev, M. V.** See Gyurov, G.

**Abriata, J. P.** See Caneiro, A.

**Abriou, Daniel** See Creuzet, F.; Garnier, Patrick

**Abritta, T.** See Sosman, L. P.

**Abrosimov, N. V.; Bazhenov, A. V.**
Dipole-active phonon spectrum in $Nd_2CuO_4$ single crystals.—73-02238

**Abstreiter, G.** See Brunner, J.

**Abstreiter, G.** See Brunner, K.

**Abu-Agel, Nayef** See Rimai, L.

**Abu-Dayah, A.; Wager, J. F.; Kobayashi, S.**
Electrical characterization of atomic layer epitaxy ZnS:Mn alternating current thin-film electroluminescent devices subject to various wave forms.—73-11177

**Aburatani, Hideaki** See Uchino, Kenji

**Abutalybov, G. I.** See Dzhafarova, S. Z.; Krupnikov, E. S.

**Abutalybov, G. I.; Dzhafarova, S. Z.; Ragimova, N. A.; Mekhtiev, E. I.**
Exciton, intracenter, and structure-defect transitions in quasi-2-D $TlGaS_2$:$Nd_2S_3$ crystals.—73-01161

**Abyzov, A. S.; Slezov, V. V.; Tanatarov, L. V.**
Irradiation-induced growth of new phase inclusion.—73-02309

**Abznev, Yu. A.; Dedov, N. V.; Ivanov, Yu. F.**
Fractal properties of boundary surfaces in zircon powders prepared by plasmochemistry methods.—73-09454

**Acar, Y. B.; Li, H. Y.; Gale, Robert J.**
Phenol removal from kaolinite by electrokinetics.—73-15911

**Acero, M. C.** See Martin, Ferran

**Achard, H.** See Cattan, E.

**Acharya, H. N.** See Bose, S.

**Achete, C. A.** See Lepienski, C. M.

**Achete, C. A.; Freire, F. L., Jr.**
Growth of sodium clusters on the surface of Na ß´´-alumina crystals induced by electron bombardment.—73-09157

**Achikita, Masakazu; Ohtsuka, Akihito**
Compound and process for an injection molding.—73-04967

**Achutharaman, V. S.** See Chandrasekhar, N.

**Achutharaman, V. S.; Beauchamp, K. M.; Chandrasekahar, N.; Spalding, G. C.; Johnson, B. R.; Goldman, A. M.**
Fabrication of high-$T_c$ superconductors using ozone-assisted molecular beam epitaxy.—73-08074

**Ackerman, J. F.**
Preparation and structures of the alkaline-earth iron oxyhalides.—73-02403

**Ackerman, William C.** See Huling, Jeffrey C.

**Ackerman, William C.; Smith, D. M.; Huling, Jeffrey C.; Kim, Yong-Wah; Bailey, Joseph K.; Brinker, C. Jeffrey**
Gas/vapor adsorption in imogolite: a microporous tubular aluminosilicate.—73-09456

**Ackland, G. J.** See Crain, J.

**Acocella, J.; Benenati, J. A.; Caulfield, T.; Puttlitz, K.**
Mixed wirebond, TAB, and flipchip interconnections on multilayer ceramic [MLC] MCM's [multichip modules].—73-04141

**Acosta, D. R.; Maldonado, A.; Asomoza, R.**
Tin oxide films grown over glass and KBr at several substrate temperatures.—73-17062

**Adachi, G.** See Aono, Hiromichi

**Adachi, G.; Imanaka, N.**
High-lithium-conducting glass formation by a new flash explosion method.—73-16815

**Adachi, H.; Takano, M.**
Electronic and spin state of high-valent iron oxides studied by a DV-Xα cluster method.—73-02258

**Adachi, Hirohiko** See Kowada, Yoshiyuki; Tanaka, Isao

**Adachi, K.** See Shioyama, H.

**Adachi, Koshi; Kato, Koji**
Tribology of ceramics.—73-06546

**Adachi, S.** See Aguekian, V. F.

**Adachi, Sadao; Kimura, Toshifumi; Suzuki, Norihiro**
Optical properties of CdTe: experiment and modeling.—73-08932

**Adachi, Seiji; Sugii, Nobuyuki; Yamauchi, Hisao; Tanaka, Shoji; Mori, Nobuo**
Effect of oxidizer addition for synthesis of Sr-Ca-Cu-O superconductor.—73-08034

**Adachi, Seiji; Sugii, Nobuyuki; Yamauchi, Hisao; Tanaka, Shoji; Mori, Nobuo**
Effect of oxidizer addition for synthesis of Sr-Ca-Cu-O superconductors.—73-15430

**Adachi, Shigeyuki** See Matsushita, Takeshi

**Adachi, T.** See Yokobori, A. T.

**Adadurov, G. A.; Borovinskaya, I. P.; Gordopolov, Yu. A.**
Technological fundamentals of shock-wave SHS compaction.—73-16359

**Adair, James H.** See Venigalla, S.

**Adair, James H.; Casey, Jon A.; Venigalla, S.**
Handbook on Characterization Techniques for the Solid-Solution Interface.—73-06604

**Adair, James H.; Linhart, Richard V.**
Generalized program to calculate interparticle interactions in a variety of suspension conditions.—73-09147

**Adam, F.** See Guillamet, R.

**Adam, J. L.** See Macho, E.; Rigout, N.

**Adam, J. L.; Rigout, N.; Charron, Christophe; Lucas, Jacques**
Low refractive index fluoride glasses containing barium, indium, and gallium.—73-14217

**Adam, John D.** See Krishnaswamy, S. Visvanathan

**Adam, K.** See Ravaglioli, A.

**Adam, Randall E.** See Nikutowski, Enrique A.

**Adamashvili, G. T.; Peikrishvili, M. D.; Bitsadze, D. D.**
Nonlinear surface acoustic waves in GaAs-AlAs superlattices.—73-11353

**Adams, A. R.** See Jones, G.

**Adams, Edward** See Rogers, Jim L.; Varhue, W. J.

**Adams, F. P.** See Hutcheon, Ronald M.

**Adams, J. A.** See Taylor, R. P.

**Adams, James M.; Catchen, Gary L.**
Perturbed-angular-correlation spectroscopy: evidence for probe-dopant interactions in Ca-doped barium titanate.—73-12648

**Adams, Jane W.** See Zutshi, Ajoy

**Adams, Jeff C.** See Pearsall, T. P.

**Adams, Margaret Byrd; Frechette, Van Derck**
Optical glass development, 1875-1918: Germany's contributions.—73-03402

**Adams, Margaret Byrd; Spriggs, Richard M.**
Paradigm or paradox: Kuczynski's model of sintering.—73-03403

**Adams, Paul M.** See Derderian, Garo J.

**Adams, S. J. A.** See Simpson, J.

**Adamson, Barry W.; Yellepeddi, Ravi S.**
Chemical analysis of cement ... "a more complete solution."—73-03441

**Adamyan, V. M.; Pavlov, B. S.**
High-$T_c$ superconductivity as consequence of overlap nondegenerate and plane bands.—73-15501

**Addiego, William P.; Lachman, Irwin M.; Patil, M. D.; Williams, Jimmie L.**
Controlled pore size phosphate-alumina material and method for producing [the] same.—73-05210

**Ade, R. W.** See Sacks, R. N.

**Adelman, D.; Burmester, C. P.; Wille, L. T.; Sterne, P. A.; Gronsky, Ronald**
Long-range interactions, long-range order, and a devil's staircase in $YBa_2Cu_3O_x$.—73-01587

**Adelman, T. L.** See Maher, M. P.

**Adelmann, P.** See Brugger, T.

**Adenot, F.; Buil, M.**
Modeling of the corrosion of cement paste by deionized water.—73-03503

**Aderhold, W. R.** See Bauer, A. J.

**Ades, Claude** See Traverse, Jean-Pierre

**Adesida, I.** See Agrawala, S.; Ballegeer, D. G.

**Adibi, F.** See Wahlstrom, U.

**Adibi, O. F.** See Petrov, I.

**Adigamov, B. Ya.** See Min'ko, N. I.

**Adjerid, S.; Flaherty, J. E.; Shephard, M. S.; Wang, Y. J.; Hillig, William B.; Hudson, J.**
Adaptive numerical techniques for reactive vapor infiltration.—73-16652

**Adkins, D. F.; Merkley, G. P.; Brito, G.**
Mathematics of concrete scaling.—73-03495

**Adler, D. L.** See Benton, J. L.

**Adler, J.; Schulz, I.**
Selection, manufacture, and application of pressureless-sintered silicon carbide and silicon nitride grinding media.—73-12442

**Adler, Stuart B.; Smith, Jacob W.**
Effects of long-range forces on oxygen transport in yttria-doped ceria: simulation and theory.—73-13349

**Adler, T. A.** See Anderson, R. M.

**Adler, William F.; Mihora, Dennis J.**
Biaxial flexure testing: analysis and experimental results.—73-06334

**Adlerborn, J. E.** See Bjorklund, H.

**Admaiai, L. F.** See Bernier, A.

**Adnot, Alain** See Huang, Min-Ning

**Ado, Kazuaki** See Saito, Yuria

**Ado, Kazuaki** See Takeuchi, Tomonari

**Adomenas, P. V.** See Tikhomirova, N. A.

**Adotey, A.** See Hing, P.

**Adriansens, W.** See Weyten, H

**Advani, R.** See Ivers, J. D.

**Aebi, P.; Tyliszczak, T.; Hitchcock, A. P.; Jackman, T. E.; Baribeau, J. M.**
X-ray absorption fine structure studies of buried Ge-Si interfaces.—73-01364

**Aegerter, M. A.** See Almeida, R. M.; Cardoso, C. X.; Delben, A.; Guzman, G.; Messaddeq, Y.

**Aegerter, M. A.**
Ferroelectric thin coatings.—73-11577

**Aeppli, G.** See Bao, Wei; Mason, T. E.; Mook, H. A.

**Aers, G. C.** See Allard, L. B.; Halliday, D. P.; Springthorpe, A. J.

**Aerts, Renatus** See Van Hal, Henricus A. M.

**Afanas'ev, A. M.; Imamov, R. M.; Maslov, A. V.**
Indirect processes in standing X-ray wave method.—73-01907

**Afanas'ev, I. I.** See Andrianova, L. K.

**Afanas'ev, I. I.; Andrianova, L. K.; Vetrov, V. N.**
Variation of optical properties of leucosapphire after high temperature plastic deformation [HTPD].—73-02721

**Afanas'eva, M. V.** See Ezerskaya, N. A.

**Affronte, M.; Marcus, J.; Escribe-Filippini, C.**
Transport properties of $Ba_{1-x}K_xBiO_3$ single crystals.—73-09425

**Afonikova, N. S.; Bdikin, I. K.; Osip'yan, Yu. A.; Shekhtman, V. S.; Shmytko, I. M.**
Structure of interdomain and interphase boundaries in 1-2-3 crystals.—73-01671

**Afonina, G. A.; Leonov, V. G.; Beresnevich, L. A.**
Mullite-corundum ceramics with eutectic additions from the BaO-CaO-$SiO_2$ system.—73-07344

**Afonso, C. N.** See Wood, R. A.

**Afridi, Musarrat Ullah Khan; Ohama, Yoshihiko; Demura, Katsunori; Iqbal, M. Z.**
Note on the formation of $Ca(OH)_2$ crystals in polymer-modified mortars.—73-03507

**Agaev, A. B.** See Akhmedova, D. A.

**Agahi, Farid** See Landini, Barbara E.

**Agarwal, G.; Speyer, Robert F.**
Devitrifying cupola slag for use in abrasive products.—73-09766

**Agarwal, M.; Xiao, S. Q.; Heuer, Arthur H.**
Decalcification studies on avian eggshell.—73-05727

**Agarwal, S.** See Raina, S. J.

**Agashe, Chitra** See Goyal, D. J.

**Agassi, D.; Bardo, R. D.**
Flux pinning in a slab model of grain and twin boundaries.—73-11765

**Ageeva, I. V.; Krylova, A. V.**
Iron-cobalt catalysts for ammonia synthesis with ceria additives.—73-16526

**Ager, Joel W., III** See Nickel, Janice H.; Pan, L. S.; Perry, Scott S.;

**Ager, R.** See Rimai, L.

**Aggarwal, Ishwar D.** See Harbison, Barry B.; Higby, Paige L.; Jewell, John M.

**Aggarwal, K.** See Schmidbauer, E.

**Aggarwal, P. K.** See Richards, L. E.

**Aggarwal, P. S.** See Mitra, B. L.

**Aggarwal, R. L.** See Shih, O. W.; Wall, K. F.

**Aghajanian, Michael K.** See Claar, Terry D.

**Aghajanian, Michael K.; Biel, John P.; Smith, Russell G.**
AlN matrix composites fabricated via an infiltration and reaction approach.—73-12910

**Aghajanian, Michael K.; Claar, Terry D.**
Metal matrix composite which utilizes a barrier.—73-10322

**Aghajanian, Michael K.; Newkirk, Marc S.; Kennedy, Christopher R.; Kantner, Robert C.; Rocazella, Michael A.; Weinstein, Jerry G.**
Method for in situ tailoring the component of ceramic articles.—73-04985

**Aghajanian, Michael K.; Newkirk, Marc S.**
Aluminum metal matrix composites.—73-10300

**Agius, B.** See Cattan, E.

**Agius, B.; Hugon, M. C.; Jiang, N.; Varniere, F.; Plais, F.; Pribat, D.**
Floating temperature deposition of device-quality $SiO_2$ thin films by DECR [distributed electron cyclotron resonance] plasma.—73-03843

**Aglietti, Esteban F.** See Mazzoni, A. D.; Scian, Alberto N.

**Agnello, P. D.; Fink, A.**
Improved control of momentary rapid thermal annealing for silicidation.—73-04112

**Agnesi, A.; Banfi, GianPiero; Ghigliazza, M.; Reali, G. C.**
Picosecond nonlinear optical characterization of GaAs at 1.064 μm.—73-04443

**Agnesi, A.; Reali, G. C.**
Passive and self-*Q*-switching of phase-conjugation Nd:YAG laser oscillators.—73-08945

**Agnihotri, O. P.** See Kumar, Vipan

**Agostinelli, J. A.** See Hung, L. S.

**Agranovich, Vladimir M.** See Talanina, Irina B.

**Agrawal, Anoop; Habibi, Hamid R.; Agrawal, R. K.; Cronin, J. P.; Roberts, D. M.; Caron-Popowich, R'Sue**
Effect of deposition pressure on the microstructure and electrochromic properties of electron-beam-evaporated nickel oxide film.—73-13003

**Agrawal, Dinesh C.** See Roy, S.Saha, Atanu

**Agrawal, Dinesh K.** See Breval, E.Fang, Yi; Harshe, Girish; Hu, Jia-Shan; Mathis, M. D.; Steinke, Richard A.

**Agrawal, R. K.** See Agrawal, Anoop

**Agrawal, Ranchhor D.** See Tandon, Sashi

**Agrawal, V.** See Chandrasekhar, N.

**Agrawala, S.** See Ballegeer, D. G.

**Agrawala, S.; Tong, M.; Ballegeer, D. G.; Nummila, K.; Ketterson, A. A.; Adesida, I.**
Characterization of selective reactive ion etching effects on δ-doped GaAs/AlGaAs MODFET [modulation-doped field effect transistor] layers.—73-04266

**Agudo, Antonio Lopez; Benitez, Adrian; Fierro, Jose Luis G.; Palacios, J.; Neira, J.; Cid, R.**
Surface properties of Mo-impregnated ZSM-5 catalysts.—73-08762

**Aguekian, V. F.; Gridneva, L. K.; Serov, A. Yu.**
Magnetic polaron effect in diluted magnetic semiconductor $Cd_{1-x}Mn_xTe$ [0.25<x<0.36] with high Mn concentrations.—73-07650

**Aguekian, V. F.; Gridneva, L. K.; Serov, A. Yu.**
Optical properties of new diluted magnetic semiconductor $Cd_{1-x-y}Mn_xMg_yTe$.—73-15073

**Aguekian, V. F.; Orekhova, N. V.; Radzhab, D.; Serov, A. Yu.**
Luminescence and Raman light scattering in some I-III-$VI_2$ crystals and their solid solutions.—73-16204

**Aguekian, V. F.; Takeyama, S.; Adachi, S.; Takagi, Y.; Miura, N.**
Exciton localization in $Cd_{1-x}Mn_xTe$ and its dependence on the strong magnetic field.—73-04339

**Agui, Akane; Nakai, Yusuke; Mizoguchi, Kohji; Ikeda, Susumu; Tominaga, Yasunori**
Hydrogen and $PO_4$ modes of $RbH_2PO_4$.—73-08638

**Agui, Akane; Tominaga, Yasunori; Takenaka, I.; Endo, S.; Kobayashi, M.**
New high-pressure phase and local distortion of $PO_4$ in $RbH_2PO_4$.—73-16225

**Aguilar-Hernandez, J.** See Mendez, Juan Manual

**Aguillon-LeVillain, C.** See Gu, H.

**Aguillon-Levillain, C.; Senoussi, S.; Gu, H.**
Influence of defects on relaxation in high-$T_c$ superconductors.—73-04743

**Aguirre-Villafana, Juan-Lauro; Leal-Gonzalez, Juan**
Process for purifying silica sand by abrasive attrition.—73-12094

**Agullo-Lopez, F.** See Soares, J. C.

**Agullo-Lopez, F.; Karpushko, F. V.**
Field ionization mechanism for a high refractive nonlinearity in heavily doped *n*-GaAs.—73-14925
**Agullo-Rueda, F.; D'Intino, A.; Schmidt, K. H.; Dohler, G. H.; Grahn, H. T.; Ploog, K.**
Miniband formation at finite electric fields in a graded-gap superlattice.—73-07672
**Agulyanskii, A. I.; Mel'nikova, V. M.; Tikhomirova, E. L.**
Features of thermal dissociation of oxyfluoroniobates.—73-16150
**Ahadur, D. B.** See Sharma, S. V.
**Aharony, Amnon; Auerbach, Assa**
Multicritical phase diagram and random field effects in superconducting bismuthates.—73-15560
**Ahearn, J. S.** See Nathan, M.
**Ahlborn, K.; Kagawa, Yutaka; Okura, A.**
Influence of the network of microcracks upon the crack propagation behavior inside of transparent zirconia.—73-06463
**Ahlgren, W. L.** See Hamilton, W. J.
**Ahlkvist, Bo; Lohnherr, L.**
Raising the throughput of the roller grinding mill at the Slite [Sweden] cement works.—73-10124
**Ahlkvist, Bo; Wilck, K.**
Use of RSP [reinforced suspension preheater] calciners in Sweden's largest rotary kiln plant at the Slite cement works.—73-03553
**Ahlkvist, Bo**
Increasing the roller mill capacity in line 8 of Cementa AB's Slite plant.—73-03483
**Ahluwalia, S. C.** See Mathur, V. K.; Prakash, Ram
**Ahluwalia, S. C.; Goswami, R. K.; Kuznetsova, Tamara V.**
Role of clinker liquid in promoting the clinkerization and its impact on clinker morphology and microstructure.—73-10141
**Ahluwalia, S. C.; Page, C. H.**
Effect of low-grade fuels, combustible wastes, and nontraditional raw materials [on cement manufacture].—73-09910
**Ahluwalia, S. C.; Raina, K.**
Morphology and microstructure features of clinker from vertical shaft kiln.—73-10058
**Ahmad, A** See Varma, S.; Canaday, J. D.; Chehab, S. F.; Khan, M. N.
**Ahmad, A.; Wheat, T. A.; Canaday, J. D.; McDonald, A. G.**
Processing and characterization of precursor hydronium ß/ß''-alumina ceramics.—73-09277
**Ahmad, A.; Wheat, T. A.; Prasad, S. E.; Varma, S.; Wiederick, Harvey D.; Mukherjee, Binu K.**
Smart ceramic materials and systems.—73-09749
**Ahmad, Iftikhar** See Saadaldin, Hussamaldin S.
**Ahmad, Iftikhar; Clark, David E.**
Effect of microwave heating on the mass transport in ceramics.—73-06156
**Ahmad, Iftikhar; Paquette, Edward L.; Silberglitt, Richard**
Microwave energy-assisted chemical vapor infiltration.—73-01869
**Ahmad, Iftikhar; Silberglitt, Richard; Black, W. Murray; Saadaldin, Hussamaldin S.; Tian, Yong-Lai; Katz, Joel D.**
Microwave joining of dissimilar SiC ceramics.—73-05920
**Ahmad, Iftikhar; Silberglitt, Richard**
Joining ceramics using microwave energy.—73-02882
**Ahman, M. H.** See Al-Saie, A. M.
**Ahmed, A. A.** See Shaaban, M. H.
**Ahmed, A. A.; Sharaf, N. A.; Abd Allah, E. W.; Ezz-Eldin, F. M.**
Gamma irradiation and heat treatment of ion-exchanged silver-containing glasses.—73-10379
**Ahmed, A. A.; Sharaf, N. A.; Shaaban, M. H.; Abdel-Halim, S. T.**
Absorption and emission spectra of Ag-containing soda-lime-silica glasses.—73-14129
**Ahmed, A. U.** See Yu, Z. J.
**Ahmed, Ejaz** See Ahmed, Wagar
**Ahmed, H. M.** See Ghorab, H. Y.;
**Ahmed, H.** See Mahmood, F.; Woodham, R. G.; Young, R. J.
**Ahmed, K.** See Mukherjee, P.
**Ahmed, Mushtaq** See Abbas, Tahir; Arshed, M.
**Ahmed, O. M.** See Ghorab, H. Y.
**Ahmed, S. H.** See Zia, P.
**Ahmed, S. T.** See Ghorab, H. Y.
**Ahmed, Wagar; Ahmed, Ejaz**
Oxidation of silicon using [TCA] trichloroethane-$O_2$ and HCl-$O_2$ mixtures.—73-02915
**Ahmed, Zahra** See Khan, M. N.
**Ahn, Byung T.; Beyers, Robert B.; Lee, Wen Y.**
Methods for producing $Tl_2Ca_2Ba_2Cu_3$ oxide superconductors.—73-11979
**Ahn, Byung-Chul; Kim, Jeong-Hyun; Hong, Chan-Hee; Kim, Woo-Yeol; Kim, Kwang-Nam; Kang, Hee-Kyung**
Amorphous silicon thin-film transistors produced by atmospheric pressure CVD.—73-04058
**Ahn, Byung-Tae** See Chung, Gil-Yong; Kim, Shi-Yul
**Ahn, Byung-Tae; Huggins, Robert A.**
Phase behavior and conductivity of $Li_2SiS_3$.—73-02371
**Ahn, Chung-Sun; Shim, Young-Jae; Cho, Byung-Doo**
Effect of heat treatment on the nonlinear exponents in ZnO varistors.—73-04290
**Ahn, Chung-Sun; Shim, Young-Jae; Cho, Sung-Gurl**
Characteristics of ZnO varistors prepared by organic process.—73-04264
**Ahn, Hyo-Suk** See Kim, Jang-Yup
**Ahn, J.-W.** See Son, S.-H.
**Ahn, Jae-Hwan** See Ahn, Jeong-Hwan
**Ahn, Jae-Min; Choi, Duck-Kyun; Kim, Young-Ho**
Phase formation of $BaTiO_3$ thin films by sputtering.—73-13161
**Ahn, Jae-Shin; Tan, F.-H.; Tan, H.-S.**
Diamond thin-film growth by microwave plasma chemical vapor deposition and investigation by scanning tunneling/force microscopy and scanning electron microscopy.—73-09070; Interpretation of stresses in the glass-bonded ferrites by Vickers indentation method.—73-13557
**Ahn, Jeong-Hwan; Je, Hae-June; Hong, Kug-Sun; Ahn, Jae-Hwan; Ko, Kyung-Hyun**
Magnetic properties and residual stress developed in Mn-Zn ferrite bonded with glass.—73-11660
**Ahn, Ki-Cheol; Lee, Jeon-Kook; Kim, Ho-Gi**
Crystallization and crack formation in sol-gel PLZT thin films.—73-04542
**Ahn, Sang-Wook; Choi, Dong-Jin; Hyun, Sang-Hoon; Jung, Hyung-Jin; Yoo, Kwang-Soo**
Preparation and permeation characteristics of alumina composite membranes by CVD and evaporation-oxidation process.—73-13175
**Ahn, Y.** See Chauhan, R.
**Ahn, Y.; Chandrasekar, S.; Farris, T. N.**
Measurement of residual stresses in machined ceramics using the indentation technique.—73-06475
**Ahn, Y.; Farris, T. N.; Chandrasekar, S.**
Elastic stress fields caused by sliding microindentation of brittle materials.—73-06402
**Ahrenkiel, R. K.** See Sheldon, P.
**Ahrens, E. T.** See Reyes, A. P.
**Ahrens, M.** See Vancauwenberghe, N.
**Ahuja, Deepak P.** See Beeghly, Craig W.
**Ahzi, S.** See Asaro, R. J.
**Ai, Bui** See Castelan, P.
**Ai, R.** See Choi, C.-H.;Marks, L. D.
**Ai, Xing** See Xiao, Hong
**Ai, Z.-P.** See Wang, X.-L.
**Aiao, Jian-Min** See Ajimine, Eric M.
**Aida, Hiroshi**
Method for producing diamond films.—73-12488
**Aida, Toshiyuki** See Hasegawa, Haruhiro; Nishi, Y.; Nishino, Toshikazu
**Aida, Toshiyuki; Tanuma, H.; Sasaki, S.; Yaguchi, T.; Taguchi, S.; Koganezawa, Nobuyuki**
Emission life and surface analysis of barium-impregnated thermionic cathodes.—73-10945
**Aidaraliev, M. Sh.; Zegrya, G. G.; Zotova, N. V.; Karandashev, S. A.; Matveev, B. A.; Stus, N. M.**
Nature of the temperature dependence of the threshold current density of long-wave-length InAsSbP/InAs and InAsSbP/InAsSb double heterostructure lasers.—73-07690
**Aidaraliev, M. Sh.; Zotova, N. V.; Karandashev, S. A.; Matveev, B. A.; Stus, N. M.; Talalakin, G. N.**
Long-wavelength low-threshold lasers based on III-V compounds.—73-15015
**Aiello, R.** See Tavolaro, Adalgisa
**Aiga, M.** See Isshiki, Kunihiko
**Aihara, Katsuzo** See Nabatame, Toshihide; Ogihara, Masahiro; Okada, Michiya
**Aihara, Yasuhiko** See Matsuda, Motohide
**Aikawa, Haruhiko** See Kanamori, Hiroo
**Aikawa, Yasutaka** See Nishiyama, Akio
**Aikens, Quinn; Ochoa, Ozden O.; Engblom, John H.**
Experimental and statistical characterization of brittle composites.—73-09594
**Ailavadi, A. K.** See Laxmi, S.
**Ailey-Trent, K. S.** See Sumakeris, J.
**Ainger, F.; Patel, Anil; Shorrocks, N. M.; Trundle, C.; Whatmore, R. W.**
Thin ferroelectric films for thermal detector applications.—73-11626
**Ainslie, Benjamin J.; Craig-Ryan, Susan P.**
Wave-guiding structure with lasing properties.—73-10671
**Airaksinen, V. M.** See Makinen, J.
**Airapetov, A. A.; Logunov, M. V.; Randoshkin, V. V.**
Properties of $(Ho,Bi)_3(Fe,Ga)_5O_{12}$ films near angular momentum compensation point.—73-15363
**Aita, Carolyn Rubin** See Luksich, John
**Aita, Carolyn Rubin** See Mukherjee, S. N.
**Aita, Carolyn Rubin** See Tait, W. S.
**Aita, Carolyn Rubin; Tait, W. S.**
Nanocrystalline aluminum nitride: growth by sputter deposition, optical absorption, and corrosion protection behavior.—73-12436
**Aita, Carolyn Rubin**
Phase formation in sputter-deposited metal (V, Nb, Zr, Y,) oxides: relationship to metal, metal-oxygen, and oxygen flux.—73-09235; Phase maps for sputter-deposited refractory metal oxide ceramic coatings: review of niobium oxide, yttrium oxide, and zirconium oxide growth.—73-16254
**Aitala, Roger**
Soda ash picture in the United States.—73-12301
**Aitchison, J. S.** See Al-Hemyari, K.
**Aitchison, Kenneth A.** See Derderian, Garo J.
**Aitcin, Pierre-Claude** See Kortbaoui, A.; Lessard, M.; Nilsen, A. Ulrik; Sarkar, Shondeep L.; Simard, M.-A.
**Aitken, Bruce G.** See Dickinson, James E.
**Aitken, Bruce G.; Annunziata, Frank A.; Bartholomew, Roger F.; Newhouse, Mark A.; Powley, Mark L.; Sadd, Andrea L.**
Rare-earth-doped, stabilized cadmium halide glasses.—73-00761
**Aitken, Bruce G.; Beall, George H.; Quinn, Candace J.**
Fibersizable zinc-phosphate glass compositions.—73-14536
**Aitken, Bruce G.; Bookbinder, Dana C.; Greene, Margaret E.; Morena, Robert M.**
Nonlead sealing glasses.—73-00751
**Aitken, Bruce G.; Faber, Margaret K.; Ketcham, Thomas D.; St. Julien, Dell J.**
Solid electrolyte fuel cells.—73-04234
**Aitken, Bruce G.; Hall, Douglas W.; Newhouse, Mark A.**
Thallium germanate, tellurite, and antimonite glasses.—73-10667; Thallium germanate, tellurite, and antimonite glasses.—73-10668
**Aitken, Bruce G.**
Alkali metal, copper phosphate glasses.—73-10620; Low-melting, durable phosphate glasses.—73-03940; Perovskite glass-ceramics.—73-14453
**Aiura, Yoshihiro** See Tomiki, Tetsuhiko
**Aivazov, A. A.** See Kudoyarova, V. K.
**Aivazov, A. A.; Budaguan, B. G.; Meitin, M. N.; Stanovov, O. N.**
Influence of structural inhomogeneity on the conductivity and relaxation processes in a-Si:H and a-$Si_{1-x}N_x$:H.—73-01207
**Aizawa, K.** See Higuchi, Mikio
**Aizawa, Mamoru** See Itatani, Kiyoshi
**Aizawa, Mamoru; Itatani, Kiyoshi; Miyamoto, Yutaka; Kishioka, Akira; Kinoshita, Makio**
Properties of calcium metaphosphate and calcium diphosphate powders prepared by spray pyrolysis technique.—73-00172
**Aizawa, Masanobu; Kobayashi, Chihiro; Yamane, Hisanori; Hirai, Toshio**
Preparation of $ZrO_2$ thin films by CVD using $H_2$-$CO_2$ as oxidizer.—73-05986 & 73-16945; Preparation of $ZrO_2$-$Y_2O_3$ films by CVD using ß-diketone metal chelates.—73-05987 & 73-16946
**Aizawa, T.** See Hwang, Y.; Souda, R.
**Ajayi, O. O.; Erdemir, A.; Hsieh, J. H.; Erck, R. A.; Fenske, G. R.; Nichols, F. A.**
Boundary film for structural ceramic materials.—73-06741
**Ajayi, O. O.; Lee, R. H.; Cook, R. E.**
Plasma etching of structural ceramics for microstructural analysis.—73-12177
**Ajersch, F.** See Mada, M.
**Ajimine, Eric M.; Aiao, Jian-Min; Giese, G. L.; Patel, P. P.; Segovia, M. A.; Yang, C.-Y.**
Effects of bias-temperature cycling on electrical characteristics of YBCO/YSZ/Si Su/S capacitors.—73-04082
**Ajmera, P. K.** See Madani, M. R.
**Ajuwa, C. I.; Mayer, A.; Zednicek, W.**
Phases in the $Na_2O$-$GeO_2$ system.—73-08698
**Ak'yan, A. M.**
Casting-up parameters for quartz ceramics.—73-01765
**Aka, G.** See Kahn-Harari, A.
**Akada, S.** See Miyata, N.
**Akahama, Yuichi** See Ihara, Hideo
**Akahori, Hiroshi** See Horita, Susumu
**Akai, Tomoko** See Wakabayashi, Hajimu
**Akai, Tomoko; Kadono, Kohei; Yamanaka, Hiroshi; Sakaguchi, Toru; Miya, Masaru; Wakabayashi, Hajimu**
Preparation of copper-ruby glasses by sputtering and their optical properties.—73-03872 & 73-10579
**Akaishi, M.** See Kondo, Kenichi
**Akaishi, M.; Satoh, T.; Ishii, M.; Taniguchi, T.; Yamaoka, S.**
Synthesis of translucent sintered cubic boron nitride.—73-17048
**Akaishi, T.** See Kojima, Akira
**Akamatsu, Kazuo** See Ichinose, Hiromichi
**Akamatsu, Takeshi** See Abe, Yoshihiro
**Akani, M.; Benouis, C. E.; Benzohra, M.**
Electrical characterization of interface $p^+$-Si-poly/Ni-*c*-Si obtained by LPCVD deposition of heavily in situ boron-doped films.—73-07312
**Akano, U. G.; Mitchell, I. V.; Shepherd, F. R.; Miner, C. J.; Rousina, R.**
Implant-damage isolation of InP and InGaAsP.—73-07573
**Akano, U. G.; Mitchell, I. V.; Shepherd, F. R.; Miner, C. J.**
Effect of implant temperature and beam flux on damage accumulation and Si activation of Si-implanted InP.—73-07464
**Akao, Masaru**
In vitro differentiation and mineralization in the presence of hydroxyapatite.—73-06231
**Akao, Y.** See Suzuki, K.
**Akasaka, T.** See Muranoi, T.
**Akasaki, Isamu** See Kotaki, Masahiro; Okazaki, Nobuo; Takeuchi, Tetsuya
**Akashi, K.** See Hasegawa, Akihiro
**Akashi, Kazuo** See Ito, Shigeru
**Akashi, Keisuke** See Iguchi, Eisuke
**Akashi, Tamotsu** See Dan, Koji
**Akatsu, Takashi; Tanabe, Yasuhiro; Matsuo, Yohtaro; Yasuda, Eiichi**
Mechanical properties of unidirectionally oriented SiC whisker/$Al_2O_3$ composite.—73-13567
**Akatsu, Takashi; Tanabe, Yasuhiro; Matsuo, Yohtaro**
Mechanical properties of unidirectionally oriented SiC whisker/$Al_2O_3$ composite.—73-06484
**Akazawa, H.; Takahashi, Junichi; Utsumi, Yuichi; Kawashima, I.; Urisu, T.**
Photostimulated evaporation of $SiO_2$ and $Si_3N_4$ films by synchrotron radiation and its application for low-temperature cleaning of Si surfaces.—73-02921
**Akazawa, Kiyoshi** See Goto, Seishi
**Akazawa, Masamichi** See Kodama, Satoshi
**Akazawa, Toshiyuki; Matsubara, Hideki; Takahashi, Junichi; Kodaira, Kohei**
Sintering and infrared radiation property of $Mn^{2+}$-substituted cordierite solid solutions.—73-16991
**Akbar, Sheikh A.** See Azad, Abdul M.; Mhaisalkar, S. G.;Zhu, W.
**Akcakaya, R.**
Thermoelastic contact damage on glass container surfaces.—73-14120
**Akchurin, R. Kh.; Zhegalin, V. A.; Chaldyshev, V. V.**
Electrical properties and photoluminescence of epitaxial GaSb:Bi and GaSb:Bi:Sn films formed from Bi solutions.—73-01145
**Aker, Bruce W.** See Li, Kin
**Akerman, Jan** See Hartzell, E. Torbjorn
**Akh'yan, A. M.**
Quartz ceramic structures for chemistry.—73-16287; Stability of quartz glass slips.—73-07175
**Akhetov, A. I.** See Fedorov, N. F.

**Akhlestin, E. S.** See Solov'ev, V. I.

**Akhmadulin, I. Sh.; Golenishchev-Kutuzov, V. A.; Migachev, S. A.; Mironov, S. P.; Korzhik, M. V.**
Photochromic effects of impurity and structural centers in YAG.—73-02663

**Akhmedov, A. A.** See Kyazym-Zade, A. G.

**Akhmedov, M. A.; Mukhamedbaev, A. A.; Artykbaev, M. T.**
Impact of nontraditional raw materials on the formation and properties of clinker.—73-09996

**Akhmedova, D. A.; Agaev, A. B.; Rustamov, P. G.**
System $Ho_2S_3$-$In_2S_3$.—73-12715

**Akhmedova, F. I.** See Trifonova, M. M.

**Akhmedova, N. A.; Guseinova, Sh. A.; Mustafaev, N. M.; Zargarova, M. I.**
Compound $Li_3Ln_2(BO_3)_3$ in the systems $Li_2O$-$Ln_2O_3$-$B_2O_3$.—73-16063

**Akhmedzhanov, F. R.** See Asrarov, Sh. A.

**Akhmetov, I. S.; Miryuk, O. A.**
Phase transformations when synthesizing clinkers produced of technogeneous raw materials.—73-10081

**Akhorukomeite, Zh.; Pak, V. N.**
Protonic conductivity of silicotungstic, phosphotungstic, and phosphomolybdic heteropolyacids adsorbed by porous glass.—73-14263

**Akhtar, Masyood** See Herrington, Tommy L.

**Akhter, H.; Cartledge, F. K.; Roy, Amitava; Tittlebaum, M. E.**
Effects of nickel chloride and calcium chloride on hydration of portland cement.—73-06651

**Akhtyamov, A. V.** See Shutov, A. I.

**Akiba, E.** See Hara, N.

**Akiba, Etsuo** See Hayakawa, Hiroshi

**Akiba, M.** See Linke, Joachim

**Akiba, Tohru** See Ogasawara, Toshio

**Akiba, Tokuji** See Mitamura, Takashi

**Akiba, Tooru** See Akimune, Yoshio

**Akimenko, A. I.; Goll, G.; Van Lohneysen, H.**
Energy distribution of gaps in $GdBa_2Cu_3O_7$.—73-08057; Gap anisotropy and gapless superconductivity in the Zn-doped $YBa_2Cu_3O_7$.—73-08087

**Akimitsu, Jun** See Yoshida, Akira

**Akimoto, J.; Takei, Humihiko**
Crystal structure of $Na_xTi_2O_4$ with $0.5 \le x \le 0.57$.—73-02201; Synthesis and crystal structure of $NaTi_8O_{13}$.—73-02483

**Akimoto, Ryouichi; Kobayashi, Michihiro; Suzuki, Takashi**
High-pressure study of photoluminescence [PL] spectra in magnetic semiconductor EuSe.—73-07564

**Akimoto, Shigeru; Kijima, Kazunori; Kitamura, Makoto**
Time dependence of AlN densification by plasma sintering.—73-06121 & 73-13325

**Akimoto, Shigeru; Kijima, Kazunori; Tokunoh, Eiji**
Plasma sintering temperature for $Y_2O_3$-doped AlN.—73-02925 & 73-13165

**Akimoto, Toshio** See Shibaoka, Kazuo

**Akimov, A. V.; Krivolapchuk, V. V.; Poletaev, N. K.; Shofman, V. G.**
Luminescence study of long-term kinetics of carriers in epitaxial GaAs.—73-15028

**Akimov, B. A.; Albul, A. V.; Bogdanov, E. V.; Lin, V. Y.**
*I-V* characteristics and switching to a low-resistivity state in PbTe:Ga at low temperatures.—73-01192

**Akimov, B. A.; Albul, A. V.; Ivanchik, I. I.; Ryabova, L. I.; Slyn'ko, E. I.; Khokhlov, D. R.**
Influence of doping with Ga on the properties of $Pb_{1-x}Ge_xTe$ solid solutions.—73-14979

**Akimov, B. A.; Korobeinikova, E. N.; Ryabova, L. I.; Tamm, Marina E.**
Influence of Tm on the properties of lead telluride.—73-01212

**Akimov, G. Ya.** See Dabizha, N. A.; Prokhorov, I. Yu.

**Akimov, V. G.** See Kuznetsova, Tamara V.

**Akimov, V. V.**
Thermal expansion of potassium borosilicate glasses.—73-00559 & 73-00560; Thermal expansion of sodium borosilicate glasses.—73-00561 & 73-00562; Viscosity of potassium borosilicate glasses in the glass transition region.—73-00574; Viscosity of potassium borosilicate glasses in the vitrification interval.—73-00575; Viscosity of sodium borosilicate glasses in the glass transition range.—73-00576; Viscosity of sodium borosilicate glasses in the vitrification range.—73-00577

**Akimune, Yoshio** See Hirosaki, Naoto; Ogasawara, Toshio

**Akimune, Yoshio; Katano, Yasushi; Akiba, Tooru; Ogasawara, Toshio**
Thermal and mechanical properties of $SiC_p$-$/Al_2O_3$ composite.—73-03366

**Akimune, Yoshio; Ogasawara, Toshio; Hirosaki, Naoto**
Influence of starting powder characteristics on mechanical properties of SiC-particle/$Si_3N_4$ composites.—73-06462 &73-13554

**Akimune, Yoshio; Ogasawara, Toshio; Hirosaki, Naoto**
Mechanical properties and microstructure in sintered and HIPed SiC particle/$Si_3N_4$ composites.—73-03326; Mechanical properties of an SiC-fiber-reinforced CVI-SiC composite.—73-03330

**Akinaga, H.; Ando, K.; Yoshida, S.**
Effects of cluster ionization and acceleration on photoluminescence spectra of CdTe films grown by ionized cluster beam deposition.—73-07469

**Akinaka, Noboru** See Baba, Toshihide

**Akinc, Mufit** See Han, Y.; Tas, A. Cuneyt

**Akinocho, G.; Houenou, P.; Oyetola, S.; Eholie, R.; Jumas, J. C.; Olivier-Fourcade, J.**
Structural analysis of $Tl_4SnSe_4$.—73-02446

**Akioka, Koji** See Ishibashi, Toshiyuki

**Akita, Chiyoshi** See Shibagaki, Shigeki

**Akita, Chiyoshi; Fujimoto, Masayuki; Ito, Kenji; Shibagaki, Shigeki; Okushi, Hideyo; Haneda, Hajime**
Isothermal capacitance transient spectroscopy of grain-boundary interfacial states in Bi-doped $SrTiO_3$ ceramics.—73-07331

**Akita, Hiroshi** See Fujiwara, Tadashi

**Akita, K.** See Kawanishi, H.

**Akiya, H.** See Nagase, M.

**Akiyama, Hajime; Kondoh, Hisao; Satoh, Katsumi**
Lifetime control in thyristors by proton irradiation.—73-04381

**Akkerman, V. A.; Bulka, G. R.; Vainshtein, D. I.; Vinokurov, A. A.; Ermakov, G. A.**
Photo- and thermostimulated charge transfer on impurity ions and intrinsic defects in $Y_3Al_5O_{12}$.—73-17093

**Akmoulin, I. A.; Djahazi, M.; Buravova, N. D.; Jonas, J. J.**
Superplastic forging procedure for manufacture of ceramic yttria-stabilized tetragonal zirconia products.—73-06073

**Akolekar, D. B.; Kaliaguine, S.**
Synthesis, characterization, thermal stability, acidity, and catalytic properties of large-pore MAPO-46.—73-12885

**Akopov, F. A.; Barykin, B. M.; Val'yano, G. E.**
Electric conductivity of $CeO_2$-$Ta_2O_5$ ceramics in an atmosphere of combustion products and in air.—73-05553

**Akporiaye, Duncan; Stocker, Michael**
Solid-state NMR and XRD study of the thermal stability of VPI-5: assignment of $^{31}P$ and $^{27}Al$ MAS NMR spectra.—73-05479

**Akram, H.** See Kitao, M.

**Akram, Salman** See Han, K. J.

**Akram, Salman; Bhat, Ishwara B.**
Methods for reducing deep level emissions from ZnSe grown by organometallic vapor phase epitaxy.—73-04403

**Akramov, A. Sh.** See Aliev, A. E.

**Akramova, N. N.** See Sirazhiddinov, N. A.

**Aksay, Ilhan A.** See Schilling, C. H.; Shih, Wei-Heng

**Aksel'rod, E. I.** See Bulakh, V. L.

**Aksel'rod, E. I.; Bulakh, V. L.; Kravchenko, V. M.**
Improving the thermal shock resistance of siliceous refractories.—73-00827

**Akselrod, L. M.** See Kuznetsov, G. I.

**Aksenov, N. D.** See Namedov, S. B.

**Aksenov, N. D.; Gutenev, M. S.; Orkina, T. N.; Makarov, L. L.**
Interaction of components in fluorochalcogenide vitreous systems.—73-14013

**Aksenov, V. S.; Belikov, A. P.; Borman, V. D.; Khmelev, A. V.; Korushonkov, Yu. G.; Milov, I. V.**
Alterations in optical properties of materials covered with oxide films during laser heating in gases.—73-16407

**Aktik, C.; Beerens, J.; Blain, S.; Bsiey, A.**
Epitaxial growth of GaAs prepared by low-pressure MOCVD at low temperatures.—73-07506

**Akulova, M. V.** See Belousov, Yu. L.

**Akuzawa, Housei** See Takahashi, Junichi

**Akuzawa, N.; Terai, T.**
Carbons and fullerenes—chemical modifications of fullerenes.—73-12416

**Akyurek, Altan**
Method for fabrication of a carrier body of aluminum nitride.—73-12482

**Al Cheik, A.** See Murat, M.

**Al'ragig Salekh, M. M.** See Get'man, E. I.

**Al'shits, V. I.; Lyubimov, V. N.**
Transformation of acoustic waves on superconductor layer in piezocrystals.—73-01440

**Al'tshuler, G. B.; Bakhanov, V. A.; Dul'neva, E. G.**
Nature of double refraction of microporous glasses.—73-00519; Nature of the birefringence of microporous glasses.—73-00520

**Al-Amoudi, Omar S. B.; Maslehuddin, Mohammed**
Effect of chloride and sulfate ions on reinforcement corrosion.—73-03454

**Al-Amoudi, Omar S. B.; Rasheeduzzafar; Maslehuddin, Mohammed**
Carbonation and corrosion of rebars in salt contaminated OPC/PFA [ordinary portland cement/pulverized fly ash] concretes.—73-00029

**Al-Ani, S. K. J.** See Beynon, J.

**Al-Assafi, S.; Cruse, T.; Simmons, J. H.; Brennan, A. B.; Sacks, M. D.**
Sol-gel processing of continuous mullite fibers.—73-17005

**Al-Dallal, S.** See Khan, M. N.

**Al-Gahtani, A. S.** See Rasheeduzzafar,

**Al-Hemyari, K.; Ironside, C. N.; Aitchison, J. S.**
Resonant nonlinear optical properties of GaAs-GaAlAs single quantum-well waveguide and an integrated asymmetric Mach-Zehnder interferometer.—73-01305

**Al-Jassim, M. M.** See Schultz, J. C.; Vernon, S. M.

**Al-Qadi, Imad L.** See Weyers, Richard E.

**Al-Robaee, Mansour S.; Krishna, M. Ghanashyam; Rao, K. Narasimha; Mohan, S.**
Optical properties of ion-assisted-deposited $CeO_2$ films.—73-02653

**Al-Robaee, Mansour S.; Shivalingappa, L.; Rao, K. Narasimha; Mohan, S.**
Influence of substrate temperature on the properties of argon-ion-assisted deposited $CeO_2$ films.—73-12816

**Al-Saadoun, S. S.** See Ali, Mohammad Golam; Rasheeduzzafar,

**Al-Saffar, R.; Freer, R.**
Hot-pressed cordierite glass-ceramics.—73-00500

**Al-Saie, A. M.; Ahman, M. H.; Beynon, J.**
Film thickness effects on the optical and electrical properties of Cu-$GeO_2$ thin cermet films.—73-06790

**Al-Shahrani, A.** See Illingsworth, J.

**Al-Shatei, Mansour A.** See Hussain, M. Sakhawat

**Ala, Taha** See Granier, W.

**Alam, M.** See Sun, Q.

**Alam, M.; Sun, Q.**
Improvement in the thermal oxidation resistance of chemical-vapor-deposited diamond films.—73-09528

**Alami, M.; Brochu, R.; Soubeyroux, J. L.; Gravereau, P.; Leflem, G.; Hagenmuller, P.**
Structure and thermal expansion of $LiGe_2(PO_4)_3$.—73-02694

**Alaoui, Z. K.** See Bernede, J. C.

**Alapin, B. G.** See Khonchik, I. V.

**Alapin, B. G.; Lysak, S. V.; Eliseeva, G. G.**
Complex investigation of crystallization of glasses in the system BaO-$Al_2O_3$-$SiO_2$.—73-13947

**Alarco, J. A.** See Wang, S. Z.

**Alarcon, J.** See Cantavella, V.; Monros, G.; Sales, M.

**Alario-Franco, M. A.** See Senaris-Rodriguez, M. A.

**Alavi, Kambiz** See Badakhshan, Ali

**Albanesi, E. A.; Sferco, S. J.; Lefebvre, I.; Allan, G.; Lannoo, M.**
Electronic structure of crystalline InP oxides.—73-07500

**Albaro, Jose Luis Amoros**
Glazes for ceramic wall and floor tiles: evolution and perspectives.—73-07256

**Albats, B. S.; Krivoborodov, Yu. R.; Ryazin, V. P.**
Phase composition formation of portland cement clinker and alite formation kinetics.—73-10079

**Albella, J. M.** See Gonzalvez, J. M.; Jimenez, C.; Montero, I.

**Albenque, M.; Risse, P.**
Determination of the grog content in clay.—73-01892

**Albers, J.** See Gudat, G.

**Albers, W.** See Saruhan, B.

**Albert, M.; Kershaw, R.; Dwight, K.; Wold, A.**
Preparation and characterization of semiconducting $\alpha$-$MoTe_2$ single crystals.—73-07743

**Alberti, Alberto** See Vezzalini, Giovanna

**Albertinetti, N.; Minden, H. T.**
Effect of a magnetic field on the deposition of $TiO_2$ films.—73-05749; Sputter distribution of a large scale ion beam coater.—73-17007

**Albertini, G.; Benedetti, A.; Carsughi, F.; De Morais, M. M.; Francescangeli, O.; Geotti-Bianchini, F.**
Small-angle neutron scattering study of the microstructure in container glass in correlation with workability problems.—73-00702

**Albertini, G.; Benedetti, A.; Carsughi, F.; De Morais, M. M.; Francescangeli, O.; Geotti-Bianchini, F.**
Small-angle neutron scattering study of the microstructure in container glass in correlation with workability problems.—73-07075

**Albiss, B. A.; Hamdan, N.; Menard, A.; Ozkan, H.**
Effect of gamma-irradiation on pure and Ag-doped YBCO superconductor.—73-15427

**Albrecht, H.** See Bender, A.

**Albrecht, W.** See Barth, R.

**Albrecht, W.; Kruse, T.; Kurz, H.**
Time-resolved observation of coherent phonons in superconducting $YBa_2Cu_3O_{7-\delta}$ thin films.—73-08261

**Albrektsen, O.** See Salemink, H. W. M.; Thirstrup, C.

**Albridge, R. G.** See McKinley, J. T.

**Albu-Yaron, Ana; Arvot, Y. M.**
Iron phosphate coatings on cold-rolled steel: morphology formation and intrinsic adhesion mechanisms.—73-13853

**Albul, A. V.** See Akimov, B. A.

**Alcala, R.** See Bunuel, M. A.; Martin, I. R.; Orera, V. M.

**Alcheev, I. S.** See Samchenko, N. P.

**Alcock, Charles B.**
Electrochemical oxygen sensors.—73-14875

**Aldao, C. M.** See Castro, M. S.

**Aldica, G.** See Diamandescue, L.

**Aldica, G.; Popa, S.; Mandache, S.**
Preparation and properties of high-$T_c$ $GdBa_2Cu_3O_{m-7}$ superconducting ceramics obtained from gadolinium nitrate.—73-11868

**Aldinger, Fritz** See Majewski, Peter

**Aldinger, Fritz; Bocker, Wolfgang D. G.**
Development of ceramic high-performance materials: I, State of the art and research.—73-12324; Development of ceramic high-performance materials: II, Technical actuality—market introduction.—73-12325

**Aleandri, L. E.** See Brennan, T. D.

**Aleiner, I. L.** See Ivchenko, E. L.

**Aleiner, I. L.; Ivchenko, E. L.**
Electron minibands in $(GaAs)_n(AlAs)_m$ superlattices with even and odd *M*.—73-14880

**Alejo-Armenta, C. A.; Vaquez-Lopez, C.; Perez-Gonzalez, A.**
Modulation of the reflectivity in amorphous semiconductors.—73-04410

**Aleko, V. A.** See Gaidash, B. I.

**Alekperov, O. Z.; Gamzaev, D. O.; Kulibekov, A.; Suleimanov, R. A.**
Anisotropy of the photoconductivity of GeS single crystals.—73-11066

**Aleksandrov, A. S.; Bazanov, M. A.; Khmelinina, A. B.**
Response function of nonideal Bose gas of bipolarons.—73-01652

**Aleksandrov, B. P.** See Borisovskii, E. S.

**Aleksandrov, I. E.** See Aleksandrova, S. P.

**Aleksandrov, I. E.; Litovskaya, T. I.; Aleksandrova, S. P.**
Refractory products for production of amorphous metals and alloys.—73-04017

**Aleksandrov, K. S.** See Flerov, I. N.; Makarova, I. P.

**Aleksandrov, V. B.** See Otroshchenko, L. P.

**Aleksandrov, V. V.; Potapova, Yu. B.**
Mandelstamm-Brillouin light scattered by the surface of (111), (110)GaAs and (111)InSb crystals.—73-01238

**Aleksandrov, V. V.; Velichkina, T. S.; Potapova, Yu. B.; Voronkova, V. I.; Yakovlev, I. A.; Yanovskii, V. K.**
Determination of high-frequency pseudosurface mode velocity in high-$T_c$ superconducting $RBa_2Cu_3O_{7-y}$ (R=Tm, Er, Ho, Dy, Gd, Eu, Sm, Nd, Pr) single crystals by Mandelstamm-Brillouin light scattering spectra.—73-01520

**Aleksandrov, V. V.; Velichkina, T. S.; Vodolaszskaya, I. V.; Voronkova, V. I.; Yakovlev, I. A.; Yanovskii, V. K.**
Hypersound studies of the electron-doped $Ln_{2-x}CeCuO_4$ and hole-doped $La_{2-x}M_xCuO_4$ high-$T_c$ single crystals.—73-11792

**Aleksandrov, V. V.; Velichkina, T. S.; Vorob'ev, P. G.**
Mandelshtam-Brillouin light scattering spectrum study of pseudosurface acoustic wave propagation in (110)- and (111)-cut PbTe crystals.—73-15036

**Aleksandrov, Yu. A.** See Perepletchikov, M. L.
**Aleksandrova, E. A.** See Zhukov, N. D.
**Aleksandrova, S. P.** See Aleksandrov, I. E.
**Aleksandrova, S. P.; Aleksandrov, I. E.; Alloi, B. V.**
Structure of calcareous gunite coatings of the converter linings.—73-00872
**Alekseev, D. V.**
Barocurrents in piezoelectrics with diffusion conductance mechanism.—73-15249; Charges on moving cracks in nonpolar dielectrics.—73-14683
**Alekseev, P. A.; Lazukov, V. N.; Osborn, R.; Rainford, B. D.; Sadikov, I. P.; Konovalova, E. S.**
Neutron scattering study of the intermediate-valent ground state in $SmB_6$.—73-08677
**Alekseev, S. A.; Kolosov, A. M.; Pshenitsyn, V. I.**
Determining the depth of the fissured layer of the polished surface of quartz glass using the method of ir ellipsometry.—73-07009
**Alekseev, V. D.** See Zemlyanukhin, A. V.
**Alekseev, Yu. E.** See Shatalov, P. I.
**Alekseev, Yu. I.; Karpova, E. A.; Vereshchagin, V. I.**
Phase formation and properties of electrical porcelain in the presence of diopside additive.—73-01008
**Alekseeva, G. T.; Zemskov, B. G.; Konstantinov, P. P.; Prokofeva, L. V.; Urazbaeva, K. T.**
Row of defects in acceptor doping of PbTe-type semiconductors with group I elements.—73-07781
**Alekseeva, Z. D.** See Kalinina, A. M.
**Alekseyenko, V. I.; Konstantinova, T. E.; Nosolev, I. K.**
Plastic deformation of bismuth-containing glass-ceramics.—73-14254
**Aleksic, R.** See Milinkovic, S.
**Alemany, Pere; Boorse, R. Samuel; Burlitch, James M.; Hoffmann, R.**
Metal-ceramic adhesion: quantum mechanical modeling of transition metal–$Al_2O_3$ interfaces.—73-06824
**Aleonard, S.** See Le Fur, Y.
**Aleshin, V. A.** See Surowiak, Z.
**Aleshina, L. A.; Glazkova, S. V.; Malinenko, V. P.; Pashkova, O. A.; Fofanov, A. D.**
Technique for determination of unit cell periods of $YBa_2Cu_3O_{7-\delta}$.—73-08244
**Aleshkevich, N. I.** See Syt'ko, V. V.
**Aleshkin, V. Ya.** See Karpovich, I. A.
**Aleshkin, V. Ya.; Anshon, A. V.; Babushkina, T. S.; Batukova, L. M.; Demidov, E. V.; Zvonkov, B. N.**
Intersubband absorption of ir radiation in stressed quantum-well $In_xGa_{1-x}As$-GaAs structures.—73-04376
**Aleshkin, V. Ya.; Anshon, A. V.; Batukova, L. M.; Demidov, E. V.; Demidova, E. R.; Zvonkov, B. N.**
Photoluminescence of superlattices in GaAs δ-doped with C.—73-07728
**Aleshkin, V. Ya.; Anshon, A. V.; Karpovich, I. A.**
Polarization dependence of the interband optical absorption by an InGaAs quantum well in GaAs.—73-11398
**Aleshkin, V. Ya.; Kostin, A. A.; Romanov, Yu. A.**
Temperature dependence of the binding energy of Wannier-Mott excitons in quantum wells.—73-07829
**Aleshkin, V. Ya.; Romanov, Yu. A.**
Absorption of ir radiation by holes in [GaAs] quantum well structures.—73-14766
**Alessandrini, G.; Bocci, A.; Peruzzi, R.**
Conservation treatments for an Italian sandstone: laboratory tests.—73-17471
**Alexander, Andrew** See Mazzullo, Jim
**Alexander, G. B.** See Chang, H.
**Alexander, H.**
Lithium chemicals.—73-12284
**Alexander, Jeffery C.**
Apparatus for batch preheating and pollution abatement in glass manufacture.—73-12070
**Alexander, Kathleen B.** See Wang, Xun-Li
**Alexander, Kathleen B.; Becher, Paul F.; Waters, Shirley B.; Bleier, Alan**
Grain growth kinetics in alumina–zirconia (CeZTA) composites.—73-09457
**Alexander, M. C.**
Two experimental techniques for studying the effects of the interfacial zone between cement paste and rock.—73-08452
**Alexandre, N.; Desmaison-Brut, M.; Valin, F.; Boncoeur, M.**
Mechanical properties of hot isostatically pressed zirconium nitride materials.—73-03332
**Alexandrescu, R.** See Borsella, E.
**Alexandrov, A. S.; Mott, N. F.**
Thermal transport in the charged Bose gas and in high-$T_c$ oxides.—73-15653
**Alexandrov, Andrei V.** See Ryzhik, A. B.
**Alexandrov, I. E.** See Egorov, G. B.
**Alexandrov, S. E.; Kovalgin, A. Yu.**
Remote plasma chemical vapor deposition of silicon nitride films.—73-09303
**Alfano, R. R.** See Shum, Kai; Wang, W. B.; Yang, Lina
**Alferov, Zh. I.; Egorov, A. Yu.; Zhukov, A. E.; Ivanov, S. V.; Kopev, P. S.; Ledentsov, N. N.**
Growth of GaAs-AlAs quantum clusters on non-(100)-oriented faceted GaAs surfaces by MBE.—73-07554
**Alfonsetti, R.; Lozzi, L.; Passacantando, M.; Picozzi, P.; Santucci, S.**
Determination of stoichiometry of $SiO_x$ thin films using an Auger parameter.—73-08597
**Alford, Neil McN.** See Clegg, William J.
**Alford, Neil McN.; Birchall, James D.; Kendall, Kevin**
Article of ceramic material and production thereof.—73-01846
**Ali, M. M.** See Laxmi, S.; See Raina, S. J.
**Ali, M. M.; Sharma, P. S.; Bhargava, R.**
Potentials of using dolomitic limestone in making sulfoaluminate-silicate cements.—73-13762
**Ali, M. N.** See Foster, C. M.
**Ali, Mohammad Golam; Rasheeduzzafar; Al-Saadoun, S. S.**
Migration of ions in concrete due to cathodic protection current.—73-03502
**Aliev, A. E.; Akramov, A. Sh.; Valetov, R. R.; Khabibullaev, P. K.**
Peculiarities of ultrasonic propagation in piezoactive superionic conductors.—73-01422
**Aliev, A. E.; Valetov, R. R.**
Acoustic emission [and sound velocity and absorption] in ionic conductor $Li_2B_4O_7$.—73-14676; Acoustic mechanism of sound absorption in $Li_2B_4O_7$.—73-01390
**Aliev, F. G.; Moshchalkov, V. V.; Pryadun, V. V.; Monge, M. A.**
Thermal conductivity of $TmBa_2Cu_3O_x$ and $Bi_2Sr_2CaCu_2O_x$ single crystals in the vicinity of $T_c$.—73-08253
**Aliev, F. Yu.** See Krupnikov, E. S.
**Aliev, G. N.; Gavaleshko, N. P.; Koshchug, O. S.; Pleshko, V. I.; Seisyan, R. P.; Sushkevich, K. D.**
Absorption edge structure of cubic cadmium and zinc chalcogenides.—73-14764
**Aliev, G. P.; Koshchug, O. S.; Nesvizhskii, A. I.; Seisyan, R. S.; Yazeva, T. V.**
Electron and hole energy spectrum parameters of cubic cadmium and zinc chalcogenides.—73-14878
**Aliev, K. A.** See Aliev, O. M.
**Aliev, O. M.; Aliev, K. A.; Gadzhiev, S. M.**
Interactions in the systems ZnS-$Sm_2S_3$ and Zn-$Sm_2S_3$.—73-02299
**Aliev, O. M.; Einullaev, A. V.**
Phase development in the system Gd-Cr-S.—73-02374
**Aliev, O. M.; Gadzhiev, S. M.; Aliev, K. A.**
System ZnS-$Dy_2S_3$.—73-02513
**Aliev, O. M.; Sadyrov, F. M.; Mekhtieva, S. A.**
Liquidus of the system Sm-Sb-Se.—73-12622
**Aliev, Sh. M.; Kamilov, I. K.; Mollaev, A. Yu.; Saipullaeva, L. A.**
Behavior of residual magnetization of gadolinium ferrite garnet sublattices near compensation point.—73-15307
**Aliev, V. A.** See Tekhanovich, N. P.
**Alieva, E. V.; Kuzik, L. A.; Pudonin, F. A.; Yakovlev, V. A.**
Determination of optical constants of crystalline quartz and ultrathin niobium films from surface electromagnetic wave propagation study.—73-16440
**Aligia, A. A.; Garces, J.**
Low-temperature oxygen ordering in $YBa_2Cu_3O_{6+x}$.—73-15542
**Alikanyan, A. S.** See Marushkin, K. N.
**Alim, Mohammad A.** See Azad, Abdul M.
**Alim, Mohammad A.**
High-frequency terminal resonance in ZnO-$Bi_2O_3$-based varistors.—73-11244; Passivating coating for metal oxide varistors.—73-11041
**Alimoussa, A.; Casanove, M. J.; Roucau, C.**
TEM characterization of high-$T_c$ superconductive multilayered thin films.—73-01688
**Alimov, L. A.** See Razhenov, Yu. M.
**Alimpiev, S. S.** See Bagratashvili, V. N.
**Alince, B.; Vandeven, T. G. M.**
Stability of clay suspensions—effect of pH and polyethylenimine.—73-03027
**Aliouane, T.** See Vanis, M.
**Alkan, Zeynel** See Hurtado, Antonio M.
**Alkemade, P. F. A.** See Jongste, J. F.
**Alkunhaimi S.,** See Ashour, S.
**Allain, J. Y.; Le Flohic, M.; Monerie, M.; Poignant, H.**
Holmium in ZBLAN: interplay of lasing, colasing, and excited state absorption.—73-07035
**Allain, J. Y.; Monerie, M.; Poignant, H.; Georges, T.**
High-efficiency ytterbium-doped fluoride fiber laser.—73-07034
**Allaire, Roger A.; Janas, Victor F.**
Method for making ceramic matrix composites.—73-04986
**Allais, M.** See Gandais, M.
**Allakhverdiev, K. R.** See Aydinli, A.; Ismailov, A. A.
**Allakhverdiev, K. R.; Salaev, F. M.; Mikhailov, F. A.; Mamedov, T. S.**
Low-temperature phase transition in layered $TlInSe_2$ and $TlGaSe_2$ ferroelectric semiconductors.—73-15023
**Allakhverdiev, K.; Babaev, S.; Elliatioglu, S.; Ismailov, A. A.**
Raman scattering in layer indium selenide under pressure.—73-15139
**Allan, G.** See Albanesi, E. A.; Foulon, Y.
**Allan, G.; Delerue, C.**
Electronic structure of samarium atoms adsorbed on the GaAs(110) surface.—73-07501
**Allan, Ruth**
Decorating with volatile materials in saggars.—73-13667
**Allancon, Christine** See Gervais, Francois
**Allard, L. B.; Aers, G. C.; Charbonneau, S.; Jackman, T. E.; Templeton, I. M.; Buchanan, M.**
Focused ion-beam implantation in strained InGaAs-GaAs quantum wells.—73-07531
**Allard, L. F.** See Volkl, E.
**Allard, L. F.; Hollar, W. E.; Coffey, D. W.; Lowden, Richard A.**
Ultrastructure of bulk SiC fibrils grown by VLS methods.—73-09381
**Allen, Carlton** See Nazeri, Azar
**Allen, Gary A.** See Dionne, Gerald F.
**Allen, Geoffrey C.** See Ciliberto, Enrico
**Allen, J. P.** See Ballentine, P. H.
**Allen, J. W.** See Anderson, R. O.; Dreyhsig, J.
**Allen, L. H.** See Broussard, P. R.; Cukauskas, E. J.; Ma, Z.
**Allen, R. F.; Beevers, C. J.; Bowen, P.**
Fraction and fatigue of a Nicalon/CAS continuous-fiber-reinforced glass-ceramic matrix composite.—73-03295
**Allen, S. James; Brehmer, Dan; Palmstrom, C. J.**
Novel electronics enabled by rare-earth arsenides buried in III-V semiconductors.—73-04421
**Allenspach, P.** See Guillaume, M.; Mesot, J.
**Allenspach, P.; Lee, B. W.; Gajewski, D.; Maple, M. B.; Yoo, S. I.; Kramer, M. J.**
Heat capacity data of doped $NdBa_2Cu_3O_x$.—73-04731
**Allera, Ronald E.**
Graphite, synthetic.—73-12278
**Alley, R. G.** See Hattangady, S. V.
**Allison, John E.; Cole, Gerald S.**
Metal matrix composites in the automotive industry: opportunities and challenges.—73-06823
**Allison, Kevin W.** See Stadnicar, Edward, Jr.
**Allix, Olivier** See Aubard, Xavier
**Allkhverdiev, K.** See Kulibekov, A.
**Allman, D. D. J.; Fuchs, K. P.; Cuchiaro, J. M.**
Using a design of experiments approach for characterization of undoped plasma-enhanced chemical vapor deposited $SiO_2$ film properties.—73-03070
**Alloi, B. V.** See Aleksandrova, S. P.
**Allor, Richard L.** See DeBell, George C.; Jahanmir, Said
**Allor, Richard L.; Whalen, T. J.; Baer, J. R.; Kumar, K. V.**
Machining of silicon nitride: experimental determination of process/property relationships.—73-05906
**Alloul, H.; Mahajan, A.; Casalta, H.; Klein, O.**
$^{89}$Y NMR study of the anisotropy of the static and dynamic susceptibility in $YBa_2Cu_3O_{6+x}$.—73-15671
**Allred, D. D.** See Gonzalez-Hernandez, J.
**Alman, D. E.; Stoloff, N. S.**
Powder processing of intermetallic-base composites.—73-13881
**Almasan, C. C.; De Andrade, M. C.; Dalichaouch, Y.; Neumeier, J. J.; Seaman, C. L.; Maple, M. B.**
Evidence for scaling invariance and universality of the irreversibility line of high-temperature superconductors.—73-08067
**Almeida Valente, Manuel; Mendiratta, Sushil Kumar; Guedes de Sousa, Eduardo**
Structure-dependent effects on the magnetic behavior of Fe ions in borate and silicate glasses.—73-15369
**Almeida, M.** See Nunes, F.
**Almeida, R. M.** See Santos, L. F.
**Almeida, R. M.; Pereira, J. C.; Messaddeq, Y.; Aegerter, M. A.**
Vibrational spectra and structure of fluorindate glasses.—73-06987
**Almeras, P.; Berger, H.; Margaritondo, G.**
Effect of Y on the Ca and Sr planes in Y-doped $Bi_2Sr_2CaCu_2O_x$.—73-15441
**Almonte, M.** See Benton, J. L.
**Alok, Dev** See Baliga, Bantval J.
**Alonso, J. C.** See Falcony, C.
**Alonso, M. Isabel** See Ilg, Matthias
**Alonso, M.** See Evans, D. A.; Palomares, F. J.
**Alonso, M.; Cimino, R.; Horn, K.**
Surface photovoltage effects in photoemission from metal/GaP(110) interfaces: temperature-dependent Fermi level movement.—73-01335
**Alonso, M.; Soria, F.; Gonzalez, M. L.**
Comparative study of the oxide growth mode on GaAs(111) and (III) surfaces: implications for direct oxide electron beam writing.—73-01106
**Alonso, R. G.; Mascarenhas, A.; Froyen, Sverre; Horner, G. S.; Bertness, K.; Olson, J. M.**
Polarized piezomodulated reflectance study of spontaneous ordering in $GaInP_2$.—73-07741
**Alonso, R. G.; Mascarenhas, A.; Homer, G. S.; Sinha, K.; Zhu, J.; Friedman, D. J.**
Evidence for pyroelectricity in single variant spontaneously ordered $GaInP_2$.—73-14895
**Alp, E. E.** See Homma, H.
**Alpas, A. T.** See Ames, W.; Ariapour, A.
**Alrawwas, A. D.** See Dann, Sandra E.
**Alshamsi, A. M.; Sabouni, A. R.; Bushlaibi, A. H.**
Influence of set-retarding superplasticizers and microsilica on setting times of pastes at various temperatures.—73-06676
**Alshawa, A. K.** See Lozykowski, H. J.
**Alshawa, A. K.; Lozykowski, H. J.; Li, T.; Brown, Ian G.**
Luminescence properties of Yb- and Nd-implanted CdS.—73-04392
**Alston, David**
Pass/fail tolerancing based on artificial intelligence and superellipsoids.—73-08431
**Alt, Ludwig**
Practice-oriented evaluations for improving the heat balance of tunnel kilns.—73-10882
**Altebockwinkel, M.** See Schroder, F.
**Alten, T.** See Bittner, Hans-Georg
**Altenhofer, F.** See Ertug, S.
**Alterovitz, Samuel A.** See Sieg, Robert M.; Vitta, Satish
**Alterovitz, Samuel A.; Drotos, Mark A.; Young, Paul G.**
Ellipsometric study of rapid thermal annealed [RTA] PECVD SiN films.—73-05559
**Althaus, Heinrich**
Bevel-gear planetary gear units for roller mills.—73-04902
**Althof, Jurgen**
Failure analysis of glazes and bodies using electron microscopy.—73-01898
**Altindal, A.** See Ozturk, Z. Z.
**Altshuler, B. L.; Loffe, L. B.**
3-D correlation in high-$T_c$ copper oxides.—73-08259
**Altshulin, S.; Rosen, A.; Zahavi, J.**
Morphology of TiN coating produced by laser ablation.—73-09492
**Altus, E.** See Tirosh, J.
**Aluero, Alina**
International Conference on Metallurgical Coatings and Thin Films.—73-17490
**Aluker, E. D.; Gavrilov, V. V.; Konovskii, V. S.; Litvinov, L. A.; Sitdikov, A. M.; Chernov, S. A.**
Effect of nonstoichiometry on the luminescence properties of α-$Al_2O_3$.—73-02585
**Aluker, E. D.; Gavrilov, V. V.; Sitdikov, A. M.; Chernov, S. A.; Erts, D. P.**
Subthreshold production of cation Frenkel defects in α-$Al_2O_3$.—73-03114

**Alunno Rossetti, V.; Curcio, F.; Cussino, L.**
Production performance and utilization of a special superplasticized cement.—73-06702
**Alunovic, M.** See Voss, A.
**Alvarado, Santos F.; Renaud, Philippe**
Spin-polarized electron tunneling from a ferromagnet into GaAs.—73-07808
**Alvarez, J.** See Leccabue, F.
**Alvarez, J.; Vazquez de Parga, A. L.; Hinarejos, J. J.; Delafiguera, J.; Michel, E. G.; Ocal, C.**
Geometric and electronic structure of epitaxial iron silicides.—73-05409
**Alvarez, Luis Javier; Sanz, Javier Fernandez; Capitan, Maria Jose; Centeno, M. A.; Odriozola, J. A.**
Surface models for $\gamma$-$Al_2O_3$ from molecular dynamics simulations.—73-12707
**Alvarez, Nieves** See Martinez, Nelson P.
**Alvarez-Bravo, J. V.; Carrascosa, M.; Arizmendi, L.**
Experimental effects of light intensity modulation on the recording and erasure of holographic gratings in BSO crystals.—73-16495
**Alvarez-Casariego, P.**
Functional automotive glass. The formulation of colorants.—73-14386
**Alvarez-Garcia, G.** See Nair, M. T. S.
**Alves, E.; Da Silva, M. E.; Melo, A. A.; Soares, J. C.; Van den Hoven, G. N.; Polman, A.**
Lattice location and photoluminescence of Er in GaAs and $Al_{0.5}Ga_{0.5}As$.—73-04380
**Alves, J. L. A.; Watari, K.; Ferraz, A. C.**
Calculated atomic structures of ZnS, ZnSe, and ZnTe(110) surfaces.—73-14789
**Alves, O. L.** See Medeiros Neto, J. A.
**Alwan, J. J.** See John, P. C.
**Alybakov, A. A.; Gubanova, V. A.; Polyba, A. N.; Esenbaeva, K.**
Optical spectra of $In^+$ centers in the NaF crystal.—73-02656
**Alybakova, A. A.** See Polyba, A. N.
**Amada, Shigeyasu** See Takahashi, Chiori
**Amador, C.** See Lambrecht, W. R. L.
**Amalraj, R. V.** See Rao, S. V. S.
**Amandikov, M. A.** See Khalilev, V. D.
**Amano, C.** See Kawamura, Yuichi
**Amano, Hiroshi** See Kotaki, Masahiro; Okazaki, Nobuo; Takeuchi, Tetsuya
**Amano, J.** See Sheats, James R.
**Amano, Jun; Ko, H.; Narbutovskih, M.; Tibbs, K.**
Superconducting $Ba_{1-x}K_xBiO_3$ thin films and junctions.—73-11913
**Amano, Koshi; Mizobata, Masatoshi**
Terminal electrodes for multilayer ceramic capacitor and method of manufacture thereof.—73-04236
**Amano, Masahiko** See Jackson, John E.
**Amano, Masatake** See Sakata, Hironobu
**Amano, Masatake; Sakata, Hironobu; Tanaka, Kazuhiro; Hirayama, Toru**
Electrical properties of $Bi_2O_3$-SrO-$V_2O_5$ glasses and glass-ceramics.—73-14175
**Amano, Y.** See Hasegawa, S.
**Amarger, V.** See Campo, A.
**Amatuni, L. E.** See Lee, Kei-Jin
**Amazit, Y.** See Feuillard, G.
**Ambia, M. G.; Islam, M. N.; Hakim, M. Obaidul**
Temperature-dependent studies on the electrical properties of pyrolytic ZnO thin films prepared from $Zn(C_2H_3O_2)_2$.—73-08980
**Ambree, P.; Kreiler, F.; Wolf, R.; Wandel, K.**
Mechanical stress in plasma-enhanced chemical-vapor-deposited $SiO_2$ and SiN layers.—73-11310
**Amelinckx, S.** See Milat, O.; Van Tendeloo, G.
**Amemiya, H.** See Takeshita, S.
**Amer, A. A.** See Helmy, I. M.
**America, William G.; Poole, Richard R.**
Boron nitride membrane in wafer structure.—73-05287
**Ames, W.; Alpas, A. T.; Stephenson, T. F.**
Sliding wear of an aluminum-silicon alloy reinforced with nickel-coated carbon fibers.—73-09671
**Ametov, S. A.; Ganeev, R. A.; Ganikhanov, F. Sh.; Kunin, D. G.; Redkorechev, V. I.; Usmanov, T.**
Efficient amplification of the stable ps pulses radiated from an Nd:glass oscillator with negative feedback.—73-08842
**Ami, Takaaki** See Tanaka, Masahiro
**Amin, A. M.** See Helmy, I. M.
**Amin, R. S.; Fouda, M. F. R.; Abd-Elzaher, M. M.**
Extraction of alumina from Egyptian kaolin ore with sulfuric and hydrochloric acids.—73-12270
**Amin, S.** See Dyer, Alan; Fichtner-Schmittler, H.
**Amini, M.** See Vessal, Behnam
**Aminov, B. A.; Bush, A. A.; Osnika, T. E.**
Manifestation of the proximity effect in break junctions based on Bi-Sr-Ca-Cu-O:Pb.—73-08129
**Aminov, T. G.** See Gubaidullin, R. K.
**Amirtharaj, P. M.** See Pellegrino, J. G.
**Amkhanitskii, G. Ya.; Lapidus, M. A.; Turkina, I. A.**
Small wall blocks of nonautoclave gas-ash concrete.—73-00189
**Amler, H.; Pichlmaier, S.; Ramm, P.; Maier, M.**
Polariton dispersion relation and stimulated Raman scattering from 132 $cm^{-1}$ $E$ mode in $\alpha$-quartz.—73-05615
**Amler, H.; Pichlmaier, S.; Ramm, P.; Maier, M.**
Polariton dispersion relation and stimulated Raman scattering from the 132 $cm^{-1}$ $E$ mode in $\alpha$-quartz.—73-16569
**Ammerlaan, C. A. J.** See Gregorkiewicz, T.
**Ammor, L.** See Soret, J. C.
**Amo, J. M.** See Fernandez-Saez, J.
**Amoh, Kazuo** See Kohno, Kiyoshi
**Amoros, J. L.** See Negre, F.
**Amos, Lynn G.; Jones, Peter C.**
Method for manufacturing an optical waveguide fiber with a very thin titania-silica outer cladding layer.—73-14428; Optical waveguide fiber with very thin titania–silica outer cladding layer.—73-00753
**Amosov, A. V.** See Ovcharov, A. T.
**Amosov, A. V.; Petrovskii, G. T.; Rybaltovskii, A. O.; Shapovalov, V. N.**
Color center formation and destruction in silica glasses with 248- and 242-nm absorption bands under the 248-nm laser irradiation.—73-13944
**Amosova, R. R.** See Bunin, V. M.
**Ampuero, Silva; Bowen, Paul; Ring, Terry A.**
Synthesis of $Si_3N_4$ powder by thermal decomposition of $Si(NH)_2$.—73-06095
**Amra, C.** See Dumas, P.
**Amtout, A.; Leonelli, R.**
Time-resolved photoluminescence from excitons in $TiO_2$.—73-05681
**Amulevicius, A.; Balciuniene, M.; Petretis, B.; Pileckis, R.**
Synthesis of Fe-B system thin films from powder mixtures under the influence of laser radiation.—73-09355
**An, C. Y.** See Gennaro, A. M.
**An, Il-Sin** See Collins, R. W.; Heyd, A. R.; Witham, H. S.
**An, Il-Sin; Collins, R. W.; Nguyen, Hien-V.; Vedam, K.; Witham, H. S.; Messier, R.**
Hydrogen diffusion and reaction processes in thin films investigated by real-time spectroscopic ellipsometry [SE].—73-17145
**An, Yong-Kwan** See Choi, Byung-Hyun
**An, Yu-Ying** See Liu, Jin-Song
**Anand, D. K.** See Zhang, G. M.
**Anand, S.** See Srivatsan, T. S.
**Ananichev, V. A.** See Arif, Mokhammad; Belousov, V. V.; Lapin, Yu. K.; Orkina, T. N.
**Ananthakumar, S.** See Varma, Hari Krishna
**Ananthapadmanabhan, P. V.; Sreekumar, K. P.; Ravindran, P. V.; Venkatramani, N.**
Electrical resistivity of plasma-sprayed titanium diboride coatings.—73-08858
**Anast, M.; Bell, J. M.; Bell, T. J.**
Precision ultra-microhardness measurements of sol-gel-derived zirconia thin films.—73-03343
**Anastassakis, E.** See Calamiotou, M.
**Anastassopoulos, G.** See Daniel, I. M.
**Anavekar, R. V.; Devaraj, N.; Ramesh, K. P.**
Mossbauer effect and electron paramagnetic resonance studies on zinc borate glasses containing transition metal oxides.—73-03741
**Anayama, C.** See Furuya, Akira
**Anayama, C.; Sekiguchi, H.; Kondo, M.; Domen, K.; Tanahashi, T.**
Simultaneous impurity doping with Zn and Se in AlGaInP by MOVPE.—73-04482
**Ancona, M.** See Dobisz, E. A.
**Andaspaeva, A. A.; Baranov, A. N.; Gel'mont, B. L.; Dzhurtanov, B. E.; Zegrya, G. G.; Imenkov, A. N.**
Temperature dependence of the threshold current density of double-heterostructure GaInAsSb lasers.—73-01346
**Anders, A. G.; Volotskii, S. V.**
Internal field and EPR in $Sm_{1.995}Gd_{0.005}CuO_4$ crystals.—73-08644
**Anders, Andre; Anders, Simone; Brown, Ian G.; Chow, Peter**
Joining of metal films to carbon-carbon composite material by metal plasma immersion ion implantation.—73-00246
**Anders, E. E.** See Startsev, S. V.
**Anders, E. E.; Batrak, A. G.; Nechiporenko, I. N.**
Kinetic and structural characteristics of Zr-doped Y-Ba-Cu-O ceramic.—73-08119
**Anders, E. E.; Derevyanko, V. V.; Kudryavtsev, I. N.**
Thermal conductivity of $YBa_2Cu_{3-x}Ag_xO_{7-\delta}$.—73-08985
**Anders, E. E.; Kudryavtsev, I. N.; Nemchenko, K. E.**
Lattice dynamics and specific heat of layered $CsDy(MoO_4)_2$ crystals.—73-16193
**Anders, E. E.; Startsev, S. V.; Volotskii, S. V.**
Electric resistance and estimate of skin effect in samarium cuprate single crystals.—73-08846
**Anders, E. E.; Startsev, S. V.**
Manifestations of periodic superstructure in $CsDy(MoO_4)_2$.—73-16209; Peculiarities of low-temperature lattice dynamics of layered crystals $CsR(MO_4)_2$ (R=Dy,Gd).—73-08689; Structure phase transitions in $CsDy(MO_4)_2$.—73-08761
**Anders, Simone** See Anders, Andre
**Andersen, A. F.** See Karen, Pavel
**Andersen, N. K.**
Choice of optimum methodology and procedure for the correct alignment of rotary kilns and parameters influencing such a choice.—73-00040
**Andersen, O. K.** See Anisimov, V. I.
**Anderson W. A.,** See Shi, Z. Q.
**Anderson, A. C.** See Weilert, M. A.
**Anderson, Alfred B.** See Mehandru, S. P.
**Anderson, Alfredo C.** See Choi, B. I.; Westerheim, A. C.
**Anderson, C. R.** See Nathan, M.
**Anderson, D. W.**
Minimizing glass batch costs through linear programming.—73-07152
**Anderson, Edward M.** See MacZura, George
**Anderson, H. U.** See Carini, G. F.; Koc, Rasit; Nasrallah, M. M.
**Anderson, James A.; Daza, Loreta; Fierro, Jose Luis G.; Rodrigo, M. T.**
Influence of preparation method on the characteristics of Ni/sepiolite catalysts.—73-13098
**Anderson, James A.; Rodrigo, M. T.; Daza, Loreta; Mendioroz, S.**
Influence of the support in the selectivity of Ni/clay catalysts for vegetable oil hydrogenation.—73-16521
**Anderson, L. D.; Dennis, T.; Elliott, M. L.; Hrma, Pavel**
Noble metal behavior during melting of simulated high-level nuclear waste glass feeds.—73-08302; Waste-glass-melting stages.—73-08316
**Anderson, Leonard J.** See Lombard, James H.
**Anderson, M. S.** See Pike, William T.
**Anderson, M. W.** See Dyer, Alan
**Anderson, Marc A.** See Hyun, Sang-Hoon; Tickanen, L. D.; Tunesi, Simonetta; Webster, Elizabeth; Xu, Qun-Yin; Zeltner, Walter A.
**Anderson, Marc A.; Sheng, Guang-Yao**
Microporous aluminosilicate ceramic membranes.—73-05234
**Anderson, Neal P.** See Ulion, Nicholas E.
**Anderson, Olaf** See Meyer, Ernst
**Anderson, P. W.** See Baskaran, G.
**Anderson, P.** See Breunig, T. M.
**Anderson, R. M.; Adler, T. A.; Hawk, J. A.**
Scale of microstructure effects on the impact resistance of $Al_2O_3$.—73-09668
**Anderson, R. O.; Claessen, R.; Allen, J. W.; Olson, C. G.; Janowitz, C.; Liu, L. Z.**
Luttinger Fermi surface of metallic gap spectral weight in $Nd_{1.85}Ce_{0.15}CuO_{4-\delta}$.—73-15543
**Anderson, T. J.** See Park, Chin-Ho; Rees, William S., Jr.
**Anderson, W. A.** See He, L.; Jia, Q. X.; Shi, Z. Q.
**Andersson, K. E.; Wahlstrom, M. K.; Roos, Arne**
High-stability titanium-nitride-based solar control films.—73-16505
**Andersson, Kjell; Liden, Carl; Eronen, Raimo; Ohlenforst, Hans; Hahn, Dieter; Lacoste, Jean-Pierre**
Method of printing a glass pane with a decorative coating reaching the peripheral face of the glass pane.—73-03951
**Andersson, M. O.** See Farmer, K. R.
**Andersson, Magnus** See Han, Shun-Hui
**Andersson, Magnus; Rapp, O.; Tellgren, R.**
Neutron diffraction studies of interatomic distances in $Y_{1-2x}Ca_xTh_xBa_2Cu_3O_{7-\delta}$ system.—73-01610
**Andersson, P.** See Hirvonen, J.-P.
**Ando, A.** See Hanada, Teiichi
**Ando, Akira** See Hayashi, Seigo
**Ando, Eiichi** See Katayama, Y.
**Ando, Eiichi**
Automobile glasses with heat-shielding surface coating.—73-03822
**Ando, K.** See Akinaga, H.; Ohki, A.; Takeno, S.
**Ando, Kazuto** See Higuchi, Mikio
**Ando, Kiminari** See Zhang, Yao
**Ando, Motohide** See Hirosaki, Naoto
**Ando, Yasunori** See Ogata, Kiyoshi
**Ando, Yoichi; Kubota, Hiroshi; Tanaka, Shoji**
Size effect in the vortex-glass transition in submicron $YBa_2Cu_3O_x$ strips: evidence for softening of vortex motion.—73-08198
**Ando, Yoshinori** See Ohkohchi, Masato
**Ando, Yoshinori; Iwanaga, Hiroshi**
Secondary particles grown on crystal surfaces of silicon carbide.—73-17197
**Ando, Yoshinori**
Carbon nanotubes at as-grown top surface of columnar carbon deposit.—73-17112
**Andoh, Katsumi** See Fukuzawa, Yasushi
**Andrade, Carmen** See Goni, S.; Lopez, W.
**Andrade, Carmen**
Calculation of chloride diffusion coefficients in concrete from ionic migration measurements.—73-03439
**Andrade, Leandro H. F.; Sacilloti, M. A.; Cruz, Carlos H. Brito**
Intervalley scattering in indirect gap $Al_{0.48}Ga_{0.52}As$ alloy.—73-04377
**Andrade, Octavio M.** See Bringhurst, Shane; Janas, Victor F.; Newman, J. D.
**Andre, C.** See Winterberger, M.
**Andre, E.** See Dumas, P.; Mathiot, D.
**Andre, G.** See Llewellyn, P. L.
**Andre, J. P.** See Lugagne-Delpon, Emanuel
**Andre, Stephane; Degiovanni, Alain**
Experimental measurements of the phonic diffusivity of semitransparent materials up to 800 K.—73-12137; Flash method for thermal characterization of glass.—73-15799
**Andreae, C.** See Bruckner, A.
**Andreasen, Jens Henrik**
Statistics of brittle failure in multiaxial stress states.—73-03355
**Andreev, A. M.; Antipov, V. G.; Kalinovskii, V. S.; Kallion, R. V.; Nikishin, S. A.; Ruvimov, S. S.**
Photodetector AlGaAs/GaAs structures formed on Si substrates by combining LPE and MBE methods.—73-15091
**Andreev, A. N.** See Anikin, M. M.
**Andreev, A. V.** See Il'ichev, E. V.
**Andreev, B. V.** See Nikolaev, A. V.
**Andreev, B. V.**
Thermoluminescence and defect annealing in $\gamma$-irradiated $KTiOPO_4$.—73-16639
**Andreev, O. V.; Kertman, A. V.; Bamburov, V. G.**
Interactions in the systems $BaS-Ln_2S_3$ (Ln=La, Nd).—73-02298
**Andreev, V. M.; Kalinovskii, V. S.; Milanova, M. M.; Mintairov, A. M.; Rumyantsev, V. D.; Smekalin, K. E.**
Spectral and electrical characteristics of n-GaAs-(n-p)-$Al_xGa_{1-x}As$- p-$Al_{(x>x)}$
**Andreeva, E. V.; Zil'berman, A. B.; Il'in, Yu. L.; Makhin, A. V.; Moshnikov, V. A.; Yaskov, D. A.**
Effect of ethanol on electrical properties of $SnO_2$.—73-11152
**Andrei, A.** See Dinescu, Maria
**Andreola, Fernanda; Bonamartini Corradi, Anna; Manfredini, T.; Pellacani, Gian Carlo; Pozzi, Paolo**
Concentrated glaze suspensions.—73-14648
**Andreone, A.; Di Chiara, A.; Fontana, F.**
Structural and superconducting properties of high-quality YBCO films with different orientation.—73-08209
**Andreone, A.; Di Chiara, A.; Peluso, G.**
Surface impedance measurements of superconducting

(NbTi)N films by a ring microstrip resonator technique.—73-01682
**Andres, U.**
Disintegration of rocks by electric impulses.—73-01775
**Andres-Verges, M.; De Julian, C.; Gonzalez, J. M.; Serna, C. J.**
Preparation and magnetic properties of monodispersed Zn ferrites of submicrometric size.—73-07971
**Andreu, J.** See Bertomeu, J.
**Andreussi, Paola** See Soldati, Alfredo
**Andrews, A. B.** See Wolcik, J. C.
**Andrews, Claude R.** See Preston, Barry W.
**Andrews, J. W.** See Hu, Y. Z.
**Andrews, Kimberly** See Moore, Edmund H.
**Andrews, Mary K.** See Marra, Sharon L.
**Andrews, Mary K.; Bibler, Ned E.**
Radioactive demonstration of DWPF [Defense Waste Processing Facility] product control strategy.—73-08307
**Andrews, Mary K.; Cicero, Connie A.; Marra, Sharon L.; Beam, D. Chris**
Durability of simulated DWPF [Defense Waste Processing Facility] annealed glasses.—73-06908
**Andrews, R. J.** See El-Bayoumi, O. H.
**Andrews, R. M.** See Idriss, H.
**Andrianov, A. V.; Beregulin, E. V.; Lyanda-Geller, Yu. B.**
Magnetic-field-induced photovoltaic effect in *p*-type GaAs.—73-07652
**Andrianov, D. G.; Matveyev, I. V.; Khalyavin, E. A.**
Low-frequency electromagnetic losses on high-$T_c$ $YBa_2Cu_3O_{7-\delta}$ superconductors in magnetic fields up to $H_{c1}$.—73-15538
**Andrianov, V. I.** See Bolotina, N. B.; Genkina, E. A.; Klokova, N. E.; Rastsvetaeva, R. K.
**Andrianova, L. K.** See Afanas'ev, I. I.
**Andrianova, L. K.; Afanas'ev, I. I.; Demidenko, A. A.**
Dynamics of thermal stresses in certain optical materials during contact heating on one side.—73-05542
**Andrianova, T. N.; Khol'kin, A. I.; Moiseeva, G. A.; Reshetnikov, O. G.; Nikulin, M. Ya.**
Phase behavior during synthesis by metal carboxylate pyrolysis.—73-16246
**Andrianova, T. N.; Khol'kin, A. I.; Pol'skii, A. I.; Chereshkevich, A. V.; Gulyaeva, L. V.**
Sintering of $YBa_2Cu_3O_x$ superconducting ceramics produced by carboxylate pyrolysis.—73-15621
**Andrienko, A. V.; Podd'yakov, L. V.; Safonov, V. L.**
Parametric excitation of magnetoelastic waves in single crystals of $CoCO_3$ and $FeBO_3$.—73-05608
**Andrienko, P. I.; Variamov, A. G.; Grigorev, Yu. M.**
Anticorrosion coating for quartz glass.—73-00590
**Andries, Koen J.** See Smith, Joseph V.
**Andriesh, A.** See Michelotti, F.
**Andrievskikh, L. I.; Bocharov, L. D.; Koptelov, V. N.**
Periclase-carbon refractories bonded with lignosulfonates and complex additives.—73-00835
**Andrikidis, C.** See Bendavid, A.; Shi, F.
**Andritschky, M.** See Meng, Li-Jian
**Andritschky, M.; Teixeira, V.**
Modeling of the intrinsic stress in PVD coatings.—73-05930
**Andronescu, Ecaterina** See Teoreanu, Ion
**Andronik, K. I.; Boiko, M. P.; Nikorich, A. V.**
Influence of the In impurity on the electrophysical properties of $Pb_{1-x}Sn_xTe$ with $x>0.3$.—73-01210
**Andrukhiv, A. M.; Gadaev, O. A.; Ivanov-Omskii, V. I.; Mironov, K. E.; Smirnov, V. A.; Yuldashev, S. U.**
Photoluminescence of epitaxial $Zn_xCd_yHg_{1-x-y}Te$ films.—73-01280
**Andrukhiv, A. M.; Gadaev, O. A.; Ivanov-Omskii, V. I.; Tsidil'kovskii, E. I.**
Tails of the density of states in $Zn_xCd_yHg_{1-x-y}Te$ solid solutions.—73-15198
**Andrukhiv, A. M.; Ivanov-Omskii, V. I.; Sidorchuk, P. G.**
Microhardness of $Zn_xCd_yHg_{1-x-y}Te$ solid solutions.—73-16543
**Andrukhiv, M. G.; Belotelov, S. V.; Virt, I. S.; Shkumbatyuk, P. S.**
Defect noise in reverse-biased $p$-$n^+$ junctions made of $Cd_xHg_{1-x}Te$.—73-07437
**Andrukhiv, M. G.; Grigorovich, G. M.; Bochkareva, L. V.; Khlyap, G. M.; Shkumbatyuk, P. S.**
Heterojunctions of the ZnTe-PbS type.—73-01182
**Andrus, Ronald L.; MacDowell, John F.; Pinckney, Linda R.**
Glass-bonded ceramic composites.—73-03417
**Andrus, Ronald L.; MacDowell, John F.**
Coated metal article.—73-03676 & 73-03677;Glass-ceramic coatings for titanium-based metal surfaces.—73-10313
**Andujar, J. L.** See Campmany, J.; Canillas, A.; Costa, J.
**Anedda, Alberto** See Pyshkin, Sergei L.
**Anedda, Alberto; Bongiovanni, G.; Cannas, M.; Congiu, F.; Mura, A.; Martini, M.**
1.9-eV photoluminescence-induced by 4-eV photons in high-purity wet synthetic silica.—73-12842
**Anekawa, Y.** See Tiwari, R.
**Aneva, Z.** See Nesheva, D.
**Anfimova, I. N.** See Tsekhomskaya, T. S.
**Ang, Chen** See Yu, Zhi
**Ang, S. S.** See Mauskaar, Ashutosh
**Ang, S. S.; Sreenivas, G.; Brown, William D.; Naseem, H. A.; Ulrich, R. K.**
Effects of nitrogen trifluoride on the growth and properties of plasma-enhanced chemical vapor deposited diamondlike carbon [DLC] films.—73-05781
**Angel, Paul J.** See Vance, Eric R.
**Angel, R. J.** See Ross, N. L.
**Angelescu, N.** See Teoreanu, Ion
**Angelini, P.** See Dal Maschio, Roberto
**Angelo, J. E.** See Dabiran, A. M.
**Angelov, S.** See Pourroy, G.
**Angenault, J.** See Tillement, O.
**Angers, R.** See Garneau, J.-F.; Pelletier, Sylvian
**Anghaie, Samim** See Erkmen, Z. Engin
**Anglada, M.** See Monros, G.
**Angus, John C.** See Argoitia, Alberto; Gat, Roy; Geis, Michael W.
**Angus, John C.**
Diamond and diamondlike films.—73-12423
**Anikin, M. M.; Andreev, A. N.; Lebedev, A. A.; Pyatko, S. N.; Rastegaeva, M. G.; Savkina, N. S.**
High-temperature Au-SiC-6H Schottky diodes.—73-01186
**Anikin, M. M.; Ivanov, P. A.; Rastegaev, V. P.; Savkina, N. S.; Syrkin, A. L.; Chelnokov, V. E.**
Experimental FET based on 4H:SiC polymorph.—73-14901
**Anikin, M. M.; Zubrilov, A. S.; Lebedev, A. A.; Stalchuk, A. P.; Cherenkov, A. E.**
Recombination processes in 6H-SiC $p$-$n$ structures and the influence of deep centers.—73-01299
**Anis'kova, L. V.** See Nemilov, S. V.
**Anisimkin, V. I.; Kotelyanskii, I. M.**
Operating characteristics of SAW gas detectors.—73-04423
**Anisimov, N. K.** See Sham, P. I.
**Anisimov, V. I.; Korotin, M. A.; Zaanen, J.; Andersen, O. K.**
Spin bags, polarons, and impurity potentials in $La_{2-x}Sr_xCuO_4$ from first principles.—73-08202
**Anisova, L. A.** See Syt'ko, V. V.
**Anjard, R. P.**
Increased microelectronics packaging capabilities through green tape technology.—73-10961
**Ankyu, Hirofumi** See Shiragami, Tsutomu
**Annamalai, V. E.** See Ponraj, R.; Sornakumar, T.
**Annamalai, V. E.; Ponraj, R.; Iyer, S. Ramakrishna; Gokularathnam, C. V.; Krishnamurthy, R.**
Mechanical properties of low-temperature sintered ceria-stabilized tetragonal zirconia polycrystals: II, Fracture toughness.—73-13565
**Annapurna, K.; Buddhudu, S.**
Characterization of fluorophosphate optical glasses.—73-00437
**Annen, Michael J.** See De Man, A. J. M.
**Annen, Michael J.** See Lobo, Raul F.
**Annunziata, Frank A.** See Aitken, Bruce G.
**Anokhina, S. P.** See Kotel'nikov, I. N.
**Anosova, G. V.** See Bazhenov, Yu. M.
**Ansaldo, E. J.** See Niedermayer, C.
**Ansari, T. H.** See Pandit, A. K.
**Anshits, A. G.** See Shor, A. M.
**Anshon, A. V.** See Aleshkin, V. Ya.; Karpovich, I. A.
**Anshukova, N. V.** See Nedil'ko, S. A.; Panova, G. Kh.
**Anthony, B.** See Qian, R.
**Anthony, Thomas R.** See Bovenkerk, Harold P.
**Anthony, Thomas R.; Banholzer, William F.; Ettinger, Robert H.; Fleischer, James F.**
CVD diamond for coating twist drills.—73-05296
**Anthony, Thomas R.; Fleischer, James F.; Woodruff, David W.**
Method for determining thickness of chemical-vapor-deposited layers.—73-12208
**Anthony, Thomas R.; Fleischer, James F.**
Free-standing diamond sheet and method and apparatus for making [the] same.—73-05301; Substantially transparent free-standing diamond films.—73-05345
**Antipin, M. Yu.** See Belokoneva, E. L.; Shuvaeva, V. A.
**Antipin, V. G.; Chukhal, P. A.; Vyatkin, Yu. F.**
Service of refractories in steelmaking plants.—73-00860
**Antipov, V. G.** See Andreev, A. M.
**Antolini, E.** See Berbenni, V.l.; Marini, A.
**Antonelli, A.** See Gilliland, G. D.
**Antonenko, V. I.; Todua, P. A.; Znamenskii, D. A.; Moiseev, Y. N.; Panov, V. I.**
Electron properties of dielectric-semiconductor interfaces in $SiO_2$-α-Si:H Langmuir-Blodgett film structure.—73-01155
**Antonenko, V. I.; Znamenskii, D. A.; Kalugin, S. M.; Levanovich, V. N.; Moiseev, Y. N.; Panov, V. I.**
Electronic properties of semiconductor-insulator interfaces in a thin-film $SiO_2$/a-Si:H/Langmuir-Blodgett film transistor structure.—73-14882
**Antoniadis, D. A.** See Vignaud, D.
**Antonic, Tatjana; Cizmek, Ankica; Kosanovic, Cleo; Subotic, Boris**
Dissolution of amorphous aluminosilicate zeolite precursors in alkaline solutions: I, Kinetics of the dissolution.—73-12574
**Antonioli, Gianni** See Lottici, Pier Paolo
**Antonov, E. V.; Bagdasarov, Kh. S.; Prave, G. G.**
Internal stresses in yttrium aluminum garnet crystals grown by horizontal directed crystallization technique.—73-02624
**Antonov, G. I.** See Kamenetskii, Yu. L.
**Antonov, G. I.; Korchakov, V. G.; Nedosvitii, V. P.; Kulik, A. S.**
Periclase-carbon tubes for protection of a stream of metal from secondary oxidation.—73-00836
**Antonov, G. I.; Yakobchuk, L. M.; Kulik, A. S.**
Periclase-spinel products containing fused spinel made from bauxite and periclase.—73-10752
**Antonova, K.; Grigorov, G.; Martev, I.; Yakovlev, V.; Zhizhin, G.**
Optical properties of selective reflection $TiN_x$ films.—73-12851
**Antony, Michael M.** See Schmutzler, Hans J.
**Antonyak, O. T.; Voloshinovskii, A. S.; Pashuk, I. P.; Pidzyrailo, S. N.; Rodnyi, P. A.**
Eigen luminescence of $CsMgCl_3$ single crystals.—73-02592
**Antoshina, L. G.; Goryaga, A. N.**
Effect of indirect and direct exchange interactions on magnetic structure of $CuFe_2O_4$ and $CuFeCrO_4$ ferrites.—73-15317
**Antraptseva, N. M.** See Shchegrov, L. N.
**Antropova, T. V.**
Model of the porous-glass-producing process.—73-14431
**Antroshchenko, E. S.** See Panova, T. I.
**Antson, J.** See Kattelus, Hanno
**Anwar, S.** See Abbas, Tahir
**Anwarulislam, M.** See Arshed, M.
**Anyanwu, V.** See Robertson, A., Jr.
**Anzai, Iwao** See Ino, Takashi; Kawada, Tatsuya
**Anzai, Masahiro; Kawashima, Etsuya; Otaki, Hisanori; Nakagawa, Takeo**
Magnetic abrasive finishing of WC-Co curved surfaces.—73-05907
**Anzai, Masahiro; Otaki, Hisanori; Ayabe, Yoshinori; Takahashi, Seizo; Kawashima, Etsuya; Nakagawa, Takeo**
Manufacturing of ferrite-base abrasives for magnetic-electrolytic polishing and its finishing characteristics.—73-06608
**Ao, Jing-Qiu** See Jiang, Jin-Ming
**Aoi, Tsuneharu** See Aruga, Atsushi
**Aoki, Aiko; Ohno, Satoru; Muramatsu, Yuji**
Preparation of Y-Ba-Cu oxide precursor by the citrate gel process.—73-11873
**Aoki, Hiroo** See Moriyama, Minoru
**Aoki, K.** See Sakka, Sumio
**Aoki, K.; Kondo, T.; Takahashi, Y.**
Cross-talk coupling between two filamentary currents in $n$-GaAs under longitudinal magnetic field.—73-07428
**Aoki, Katsumi** See Fukuda, Koichiro
**Aoki, M.** See Masuda, S.
**Aoki, Masahiro** See Uomi, Kazuhisa
**Aoki, Masahiro; Suzuki, Makoto; Sano, Hirohisa; Kawano, T.; Ido, T.; Taniwatari, T.**
InGaAs/InGaAsP MQW electroabsorption modulator integrated with a DFB laser fabricated by band-gap energy control selective area MOCVD.—73-14992
**Aoki, S.; Arai, Y.**
Ion-exchange reaction of granulated blast-furnace slag in acid solution.—73-08648
**Aoki, Shigenori; Kamezaki, Hiroshi; Hida, Masaharu; Yokouchi, Kishio**
Method of manufacturing a multilayered ceramic circuit board containing layers of reduced dielectric constant.—73-14753
**Aoki, Takafumi** See Nakamura, Toshio
**Aoki, Takafumi** See Ozeki, Hidekichi
**Aoki, Touru** See Konishi, Ryosuke
**Aoki, Yuji** See Kamei, Masayuki
**Aomine, Nobutaka; Yamada, Hiroshi; Soejima, Yuji; Okazaki, Atsushi; Tanaka, Isao; Kojima, Hironao**
Characterization of single crystals of high-$T_c$ superconductor $La_{2-x}Sr_xCuO_4$.—73-11701
**Aomine, T.** See Fukami, T.
**Aono, Hiromichi; Sugimoto, Eisuke; Sadaoka, Yoshihiko; Imanaka, N.; Adachi, G.**
Electrical property and sinterability of $LiTi_2(PO_4)_3$ mixed with lithium salt ($Li_3PO_4$ or $Li_3BO_3$).—73-04089
**Aono, T.; Kase, K.**
Green photoemission of α-$Ga_2S_3$ crystals.—73-01177; Photoemission of Ag-, Cu-, and Ge-doped α-$Ga_2S_3$ crystals.—73-04437
**Aoshima, Toshihiro** See Watanabe, Toshiya
**Aoto, Sho; Kuroi, Tokio; Matsumura, Kimio**
How to prevent strength reduction of concrete due to large size coarse aggregate by means of chemical admixture in 60-cm lifts.—73-09984
**Aoude, Farid Y.; Cooper, Emanuel I.; Duncombe, Peter R.; Farooq, Shaji; Giess, Edward A.; Kim, Young-Ho**
Via paste compositions and use thereof to form conductive vias in circuitized ceramic substrates.—73-11057
**Aoyagi, Eiji** See Pezzotti, Giuseppe
**Aoyagi, M.** See Gonzalez Oliver, C. J. R.
**Aoyagi, Y.** See Hara, Shiro; Simko, J. P.
**Aoyagi, Yoshinobu** See Meguro, T.; Nakamota, Ichiro
**Aoyagi, Yoshinobu; Hara, T.; Hamagaki, M.; Ryoji, M.; Ohnishi, K.**
Large radium new etching system using electron beam excited plasma [EBEP].—73-08348
**Aoyama, Kazuhiro; Uyama, Haruo; Matsumoto, Osamu**
Diamond deposition with Ar-CO-$H_2$ plasma jet at reduced pressure.—73-02774
**Aoyama, Kazuteru; Ohtaki, Yuuzou; Asano, Keisuke**
Development of $Al_2O_3$-C-SiC brick for blast-furnace taphole.—73-14584
**Aoyama, Satoshi; Shibata, Noriyoshi**
Low-temperature deposition of SiC films by microwave plasma chemical vapor deposition.—73-16851
**Aoyama, Takahiro** See Kusaka, Tadaoki
**Aparma, Y.; Reddy, P. S.; Naidu, B. Srinivasulu; Reddy, P. J.**
Characterization of $n$-CdS/$p$-$CuGa_xIn_{1-x}Se_2$ thin-film heterojunctions.—73-11100
**Aparov, N. N.** See Naumov, I. I.
**Apelian, Minas R.; Degnan, Thomas F.; Fung, Anthony S.**
Method for producing zeolites with reduced surface acidity.—73-02049
**Apijok, J.** See Stakheev, A. Yu.
**Apiesnin, S. S.** See Petrakovskii, G. A.
**Apollonov, V. N.; Kudryavtseva, G. P.; Esimov, B. O.**
Processes of fusion, liquation, and crystallization of magnesia composition glass.—73-14480
**Apostol, M.** See Vasiliu-Dolog, L.
**Appell, J.** See Lebon, S.
**Apperley, David C.** See Hauck, Daniela S. B.; Sjoberg, Jorgen
**Appiano, S.; Vincenzini, P.**
Durability of zirconia thermal barrier coatings.—73-10218
**Applewhite-Ramsey, A.; Sproull, J. F.**
Waste acceptance product specifications for vitrified high-level waste forms.—73-08314
**Appolonia, L.** See Mirti, P.
**Apte, P. R.** See Pinto, R.
**Apte, P. S.** See Patterson, M. C.
**Arafat, A.; Jansen, J. C.; Ebaid, A. R.; Van Bekkum, Herman**
Microwave preparation of zeolite Y and ZSM-5.—73-09210
**Aragon, G.** See Molina, S. I.
**Arahori, Tadahisa** See Yamana, Kazuo
**Arai, E.** See Shimizu, K.

**Arai, H.** See Chai, Mao-Rong; Inoue, Takanori; Machida, M.
**Arai, Hiroaki** See Takahashi, Osamu
**Arai, Hiromichi** See Inoue, Takanori
**Arai, Hiroshi** See Ismail, Mohamed G. M. U.
**Arai, Kazuo** See Nonaka, Hidehiko
**Arai, Keiji** See Ogihara, Masahiro
**Arai, Kenji** See Suzuki, Kazuo
**Arai, Kiyoshi; Naka, Reishi**
Deodorant ceramic catalysts.—73-05165
**Arai, M.; Binner, J. G. P.; Bowden, A. L.; Cross, T. E.; Evans, N. G.; Hamlyn, M. G.**
Elevated temperature dielectric property measurements: results of a parallel measurement program.—73-05044
**Arai, M.; Binner, J. G. P.; Carr, G. E.; Cross, T. E.**
High-temperature dielectric property measurements of engineering ceramics.—73-05052
**Arai, M.; Yamada, K.; Hidaka, Y.; Itoh, S.; Bowden, Z. A.; Taylor, A. D.**
Anomaly of phonon state of superconducting $YBa_2Cu_3O_7$ studied by inelastic neutron scattering.—73-07987
**Arai, Shigehisa** See Miyake, Yasunari
**Arai, Shigehisa** See Shimomura, Kazuhiko
**Arai, T.** See Yazawa, Tetsuya
**Arai, T.**
Behavior of nucleation and growth of carbide layers on alloyed carbide particles in substrates in salt bath carbide coating.—73-09022
**Arai, Yasuhiro** See Muto, Norio
**Arai, Yasuo** See Aoki, S; Kojima, Yoshiyuki; Shinohara, A. H.; Uchida, Shunichiro; Yasue, Tamotsu
**Arai, Yasuo; Kanai, Kunio; Nitta, Hideo**
Floating magnetic head.—73-04663
**Arai, Yoshiaki** See Kida, Michio
**Arakawa, Hideo** See Kikuchi, Shigeru
**Arakawa, Masanori** See Hirose, Toshikazu
**Arakawa, Y.** See Nagamune, Y.
**Arakcheeva, A. V.; Karpinskii, O. G.; Lyadova, V. Ya.**
Crystal structure of aluminum-calcium ferrite phase with variable composition of $CaFe_3AlO_7$ type.—73-02188
**Arakcheeva, A. V.**
Crystal structure of new niobium oxide, $Nb_4O_5$.—73-16089
**Araki, H.** See Noda, T.
**Araki, H.; Noda, T.; Abe, F.**
Interfacial structure of chemical vapor infiltration carbon fiber/SiC composite.—73-06238
**Arakida, Tomohiro** See Endoh, Shigehisa
**Aramaki, Keizo; Okumura, Tomohiro**
Refractory for gas blowing for molten metal refining vessel.—73-04040
**Arami, Yoshiro; Koyama, Tadashi; Iwatsu, Osamu**
Properties of $Al_2O_3$- and $Y_2O_3$-dispersion-strengthened Ni powders prepared by the application of mechanical alloying process.—73-13886
**Araragi, Hiroyuki** See Fujita, Hideo
**Arashi, Haruo** See Yashima, Masatomo
**Arashi, Haruo; Naito, H.; Kaimai, A.**
Compressibility measurements of ß- and ß´´-alumina.—73-16064
**Arashi, Tomohiro** See Yamashita, Kimihiro
**Aratani, Kohryu** See Sakaguchi, Masayuki; Tsunetsugu, Kunio; Uzaki, Nobuyuki
**Aratani, M.** See Tazaki, Kazue
**Aratani, Shinichi; Ojima, Hidenori; Takayama, Kazuyoshi**
Effect of shock waves on fracture in tempered glass.—73-00463
**Aratani, Shinichi; Yamauchi, Yutaka; Kusumoto, Junichi; Takahashi, Kiyoshi**
Dynamic fracture process of thermally tempered glass studied by the method of caustics.—73-07014 & 73-14160
**Aratani, Shinichi; Yamauchi, Yutaka; Oginoh, Kiyoshi; Takahashi, Kiyoshi**
Generation of secondary cracks in tempered soda-lime-silica glass.—73-03790 & 73-14193
**Aratari, Roberto** See Lunney, James G.
**Arato, P.; Bartha, L.; Kuehne, A.**
Effect of post-HIP treatment on the properties of Y-SiAlON ceramics.—73-13015
**Arato, Toshiaki; Narisawa, Toshiaki; Koganezawa, Nobuyuki; Nonaka, Yasuhiko; Tochigi, K.**
Characterization of electrodeposited gels on the tungsten heater coil.—73-03565
**Arato, Toshiaki; Narisawa, Toshiaki; Koganezawa, Nobuyuki; Nonaka, Yasuhiko**
Forming of alumina insulation layers by double-step electrophoretic deposition.—73-02834 & 73-10951
**Araujo, Roger J.; Morgan, David W.**
Ultraviolet absorbing [borosilicate] glasses.—73-14561 & 73-10669
**Arbab, M.** See Chen, P. G.
**Arbuzov, V. I.; Belyankina, N. B.; Solov'eva, N. D.**
Effect of iron on formation of color centers in cerium-containing silicate glasses.—73-00457
**Arbuzov, V. I.; Elerts, M. A.**
Phototransfer of electrons between rare-earth coactivators in alkali silicate glasses.—73-14250
**Arbuzov, V. I.; Grabovskis, V. Ya.; Dzenis, Ya. Ya.**
Characteristics of excitation of X-ray luminescence of $Ce^{3+}$ and $Tb^{3+}$ ions in silicate glass.—73-14143
**Arcangeli, C.** See Ossicini, S.
**Archaimbault, F.; Choisnet, J.**
Defect solid solution $Na_{7/8}(Fe_{7/8-x}^{III})$- $(Ti_{9/8-2x}^{IV}Sb_x^{V})$.—73-03084
**Archer, N. A.; Palfrey, H. D.; Willoughby, A. F. W.**
Growth method, composition, and defect structure dependence of mercury diffusion in $Cd_xHg_{1-x}Te$.—73-13351
**Ardakani, H. Kordi; Shushtarian, S. S.; Kanetkar, S. M.; Karekar, R. N.; Ogale, S. B.**
Humidity sensitivity of $La^{3+}$-doped $BaTiO_3$ semiconductor thin film deposited by pulsed excimer laser ablation.—73-01190
**Ardashnikova, E. I.** See Fadeeva, E. E.
**Ardelean, I.** See Barbur, I.; Burzo, E.; Cozar, O.
**Ardelean, I.; Simon, S.; Simon, V.; Cozar, O.; Lupsa, I.**
Magnetic properties of $xCuO(1-x)[Bi_2O_3$·PbO] glasses.—73-07953
**Ardizzone, S.; Lazzari, P.; Sivieri, E.**
Temperature effects on rodlike zirconia particles: morphology, degree of crystallinity, and texture.—73-06296
**Arean, Carlos Otero; Blanco, Jose L. Rodriguez; Fernandez, Maria C. Trabajo**
Structural characterization of polycrystalline Ga-substituted magnesium ferrites ($MgFe_xGa_{2-x}O_4$) and zinc ferrites $Zn(Fe_xGa_{2-x}O_4)$.—73-07977
**Aref, Kh.** See Ganaga, P. N.
**Arekat, S.; Kevar, S. D.; Richmond, G. L.**
Threshold phenomena in nonlinear currents upon metallization of Si(001).—73-16641
**Arena, F.; Frusteri, F.; Mondello, N.; Giordano, N.; Parmaliana, A.**
Interaction pathway of chloride ions with $\gamma$-$Al_2O_3$: surface acidity and thermal stability of the Cl/$\gamma$-$Al_2O_3$ system.—73-08892
**Arent, D. J.** See Springthorpe, A. J.
**Arfsten, N. J.** See Beier, W.; Dislich, Helmut
**Argent, Ronald D.**
Advanced design electrode holders can make a difference.—73-01942
**Argent, Ronald D.**
Bubbler systems can abet melting operations.—73-10501; Doghouse.—73-08469
**Arghavani, R.** See Kuo, T. C.
**Arghavani, R.; Karunasiri, R. P. G.; Kuo, T. C.; Kim, Y. K.; Wang, K. L.**
Internal photoemission of CoGa/GaAs Schottky barriers, possible injection of electrons into the L valley.—73-01221
**Argillier, Jean-Francois; Tirrell, Matthew**
Manipulating solid-surface properties with polymeric agents.—73-09196
**Argoitia, Alberto; Angus, John C.; Wang, Long**
Diamond grown on single-crystal beryllium oxide.—73-03129
**Argon, A. S.** See Lev, L. C.
**Argyropoulos, S. A.** See Komorowski, P. G.
**Ariapour, A.; Alpas, A. T.**
Effect of SiC particles on age-hardening and mechanical properties of aluminum alloys.—73-09580
**Arias, J. M.** See Blazejewski, E. R.; Shin, S. H.; Zucca, R.
**Arias, J. M.; Pasko, J. G.; Zanadian, M.; Shin, S. H.; Williams, G. M.; Bubulac, L. O.**
MBE HgCdTe heterostructure *p*-on-*n* planar infrared photodiodes.—73-11306
**Arif, Mokhammad** See Orkina, T. N.
**Arif, Mokhammad; Tantsura, N. P.; Baidakov, L. A.; Ananichev, V. A.**
Coefficient of thermal expansion of glasses and melts of the Te-I system.—73-14144
**Arif, Mokhammad; Tantsura, N. P.; Baidakov, L. A.; Ananichev, V. A.**
Synthesis and thermal expansion of glasses and melts of the system Te-Cl.—73-14289; Thermal expansion coefficient of glass and melts of the system Te-Br.—73-00558
**Ariga, Kikuo** See Ozeki, Hidekichi
**Arima, T.** See Tokura, Y.
**Arima, Tadao** See Okamura, Kouji
**Arima, Yusuke** See Sato, Kazuhisa
**Aripova, M.** See Tylyaganov, D.
**Arizmendi, L.** See Alvarez-Bravo, J. V.; Carrascosa, M.
**Arkhangelskaya, V. A.; Shcheulin, A. S.**
Structure of color centers in $SrF_2$:Na crystals studied by optically induced dichroism.—73-02464
**Arkhincheeva, S. I.** See Bazarova, Zh. G.
**Arko, A. J.** See Dessau, D. S.; King, D. M.; Shen, Z.-X.
**Arlinghaus, H. F.; Spear, M. T.; Thonnard, N.; McMahon, A. W.; Tanigaki, T.; Shichi, H.**
Quantitative and sensitive profiling of dopants and impurities in semiconductors using sputter-initiated resonance ionization spectroscopy [SIRIS].—73-07752
**Arlt, G.** See Pertsev, N. A; Robels, U.
**Arman, M. B.; Haybat, H.**
Apatite in feldspars may be critical for glass quality.—73-14322
**Armas, B.** See Aspar, B.; Chehouani, H.
**Armenskaya, S. E.**
Improving the technology of manufacturing asbestos cement products using polyacrylamide.—73-13736
**Armitage, D. N.; Yates, H. M.; Williams, J. O.**
Characterization of ZnS grown by MOCVD on GaAs(100) using *t*-butyl mercaptan and dimethylzinc.—73-07412
**Armour, E. A.** See Guel, G.
**Armstrong, B.** See Fouche, P. M.
**Armstrong, George H.** See Parker, Anthony A.
**Armstrong, John A.**
Research and competitiveness: the problems of a new rationale.—73-09745
**Armstrong, T.** See Mook, H. A.
**Arnold, D.** See Dimaria, D. J.
**Arnold, George W.**
Electron irradiation effects in glasses and other insulators.—73-03725
**Arnold, J. A.** See Khlopkin, M. N.
**Arnold, Philip J., III; Pool, Christopher A.; Kneebone, Ronald R.**
Intensive ceramic production and Classic period political economy in the Sierra de los Tuxtlas, Veracruz, Mexico.—73-09786
**Arnold, W.** See Paul, M.
**Arof, Abdul Kariem; Kamaluddin, Burhanuddin; Radhakrishna, S.**
Performance characteristics of silver cerium vanadate batteries.—73-07349
**Aronin, A. S.; Kislov, V. A.; Kobelev, N. P.**
Features of manifestation of giant $\Delta E$-effect in amorphous Fe-B-P alloys.—73-02274
**Aronne, A.** See Cioffi, Raffaelle; Marotta, A.; Pernice, P.
**Aronne, A.; Catauro, M.; Pernice, P.; Marotta, A.**
Sol-gel processing and crystallization of lithium tetragermanate.—73-03020
**Aronson, Meredith A.; Fournier, Patricia**
Models for technological innovation: an ethnoarchaeological project in Pino Suarez, Mexico.—73-00011
**Aronzon, B. A.; Drichko, I. L.**
Metal-insulator transition in heavily doped InSb subjected to a magnetic field.—73-01244
**Arora, R.** See Kumar, S.
**Arrasmith, S. R.** See Kramer, M. J.
**Arribart, H.** See Creuzet, F.
**Arribere, A.** See Rodriguez, E.
**Arrigoni, E.; Strinati, G. C.**
Anomalous pressure dependence of the $La_2CuO_4$ superexchange interaction: an evidence of band antiferromagnetism.—73-15390
**Arrott, A. S.** See Templeton, T. L.
**Arroyo, Ruben** See Rodriguez, Rogelio
**Arseev, P. I.**
Possible mechanism for high-$T_c$ superconductivity.—73-04787
**Arsenault, B.** See Lambert, Paul
**Arsenault, C. J.** See Beaudoin, M.
**Arsenault, R. J.** See Shi, N.
**Arshak, K.; Perrem, R.**
Correlation of the electrical and optical properties of thin films of $V_2O_5$-$Bi_2O_3$.—73-12761
**Arshed, M.; Butt, N. M.; Siddique, M.; Anwarulislam, M.; Abbas, Tahir; Ahmed, Mushtaq**
Cation distribution in the Mn-Zn ferrites using Mossbauer effect.—73-05366
**Arslanbekov, A. Kh.; Misochko, O. V.; Sherman, E. Ya.**
Dependence of Raman light scattering line shape on scattering geometry in $YBa_2Cu_3O_{7-x}$.—73-15413
**Arsov, L. D.; Kormann, C.; Plieth, W.**
Electrochemical synthesis and in situ Raman spectroscopy of thin films of titanium dioxide.—73-02810
**Artamonov, V. V.; Baidullaeva, A.; Belyaev, S. V.; Vlasenko, A. I.; Gnatyuk, V. A.; Mozol, P. E.**
Effect of laser irradition on physical properties of high-resistivity ZnSe crystals.—73-14852
**Artamonov, V. V.; Valakh, M. Ya.; Gromashchevskii, V. L.; Nechiporuk, B. D.; Strelchuk, V. V.; Yukhimchuk, V. A.**
Raman scattering spectroscopy of ion-implantation-doped GaAs layers.—73-01297
**Artamonova, G. I.** See Raevskaya, E. I.
**Artamonova, M. V.** See Mashir, Yu. I.
**Artelt, Peter**
Recent findings in the development of magnesia-carbon brick.—73-10759
**Artem'ev, G. G.** See Moskvin, A. S.
**Artem'ev, G. G.; Vorob'ev, G. P.; Zorin, I. A.; Kadomtseva, A. M.; Kovalev, A. V.; Lukina, M. M.**
Magnetic anisotropy of dysprosium and terbium orthochromites.—73-15332
**Artemenko, S. N.** See Richard, J.
**Artemova, K. K.; Kotel'nikova, L. A.; Kononykhin, V. S.; Kutsiya, A. A.; Shvangiradze, P. P.**
Effect of $Ta_2O_5$ additions on phase formation during synthesis and sintering of ß-alumina-based ceramics.—73-02799
**Arthur, David J.; Swei, Gwo S.; Horn, Allen F., III; Kilhenny, Brett**
Low-volume-fraction ceramic filled fluoropolymeric composite material.—73-12373
**Arthur, J. R.** See Mokler, S. M.
**Artioli, Gilberto; Stahl, K.**
Fully hydrated laumontite: a structure study by flat-plate and capillary powder diffraction techniques.—73-08632
**Arts, A. F. M.** See Van Wijk, R. J.
**Artuso, Joseph F.; Franks, Larry A.; Hull, Kenneth L.; Symko, Orest G.**
Radiation detector using a bulk high-$T_c$ superconductor.—73-04871
**Artykbaev, M. T.** See Akhmedov, M. A.
**Aruchamy, A.; Kim, S. J.; Birnie, Dunbar P., III; Uhlmann, Donald R.**
Glass microstructure and initial crystallization of $Pb_{0.32}Bi_{1.68}Sr_{1.75}$- $Ca_2Cu_3O_x$.—73-06922
**Aruga, Atsushi; Nakamura, Yoshikazu; Aoi, Tsuneharu; Watanabe, Yoshihisa; Hirayama, Shigekazu; Fujimoto, Shirou**
Synthesis of $0.4Pb(Mg_{1/3}Nb_{2/3})O_3$-$0.3Pb(Mg_{1/2}W_{1/2})O_3$-$0.3PbTiO_3$ ceramics by metal alkoxide method, and its dielectric properties.—73-01031
**Arumugam, S.** See Natarajan, S.
**Arunachalam, V. S.** See Ramakrishnan, N.
**Arunajatesan, S.; Carim, A. H.; Yiin, T. Y.; Varadan, V. K.**
TEM investigation of microwave-joined Si-SiC/Si-SiC and α-SiC/Al/α-SiC.—73-00270
**Arutunian, V. V.; Gevorkian, V. A.; Grigorian, N. E.**
Radiation-stimulated change in the surface of corundum single crystals and optical functions in the vacuum ultraviolet region.—73-05625
**Arutyunyan, S. R.; Saakyan, S. R.; Pilosyan, S. Kh.**
Tunneling investigations of Bi-Pb-Sr-Ca-C-O films with $T_c$≈100 K.—73-08266
**Arutyunyan, V. E.; Dan'shin, N. K.; Kocharyan, K.; Kramarchuk, G. G.; Martirosyan, R. M.**
Dynamics of spontaneous spin reorientation in $Fe_3BO_6$.—73-16114
**Arvanitis, D.** See Zschech, E.
**Arvia, A. J.** See Zerbino, J. O.
**Arvot, Y. M.** See Albu-Yaron, Ana
**Arzumanyan, G. A.** See Ryadnov, S. N.
**Asada, Eiji; Ogino, Hiromi**
Sliding material.—73-10351
**Asada, Hiroki** See Ueda, Mitsuru
**Asada, Kazutoshi** See Yasuda, Kouichi

**Asada, M.** See Miyake, Yasunari

**Asada, S.; Ueki, Masanori; Sugiyama, M.**
$\sigma'$-$\beta'$ SiAlON ceramics.—73-09226

**Asada, Toshihiko** See Furukawa, Shigeru

**Asadov, S. K.; Zavadskii, E. A.; Rassokhin, S. N.**
$YBa_2(Cu_{1-x}Fe_x)_3O_{7-\delta}$ in strong magnetic fields.—73-08277

**Asadov, Yu. G.; Gasymov, G. B.; Dzhafarov, K. M.**
Structural transformations in $Cu_7Te_4$ single crystals.—73-02456

**Asaga, Kiyoshi** See Kato, Hideo

**Asaga, Kiyoshi; Fukuhara, Minoru; Goto, Seishi; Daimon, Masaki**
Reaction equation of $C_4AF$ hydration in the presence of gypsum.—73-10131

**Asahara, Y.** See Hiraga, H.

**Asahara, Yoshiyuki**
Glass and optical materials for lasers.—73-00489

**Asai, Emi** See Imaeda, Minoru

**Asai, H.** See Nakao, F.

**Asai, Hiromitsu** See Kawamura, Yuichi

**Asai, Sachio** See Itoh, Toshiaki

**Asai, Takashi** See Saito, Yuria; Takeuchi, Tomonari

**Asai, Youichi** See Yamada, Kazuo

**Asakai, Kenichi** See Umegaki, Takao

**Asakura, Etsuro** See Tobinai, Keishi; Yoshida, Hisatsugu

**Asakura, Etsuro; Yoshida, Hisatsugu; Nakae, Hidehiko**
Influence of superplasticizer on fluidity of fresh cement paste with different clinker phase composition.—73-10014

**Asanbekov, Kh. A.; Frankovskii, L. V.**
Influence of mass exchanging processes on forming of concrete structure under thermal-humid treatment.—73-00117

**Asano, Gota** See Yasue, Tamotsu

**Asano, H.** See Kanke, Y.; Pizarro, J. L.

**Asano, Hajime** See Hayakawa, Hiroshi; Kamiyama, T.

**Asano, Hidefumi** See Suzuki, Minoru; Tanabe, Keiichi

**Asano, Keisuke** See Aoyama, Kazuteru

**Asano, Keisuke; Ishii, Akio; Nakao, Jun**
Development of $Al_2O_3$-C refractories for iron-ore smelting reduction furnace.—73-00800

**Asano, Keisuke; Ishii, Akio; Tsutsui, Yasushi**
Reactivity between BN composite ceramics and molten stainless steel.—73-00848

**Asano, Keisuke; Ishii, Akio**
Near-net-shape casting and refractories needed to develop it.—73-00832

**Asano, Kiyomitsu** See Ezura, Eizi

**Asano, Sadame; Ichikawa, Kenji; Iwado, Hitoshi; Hisamoto, Takenao**
Reaction between chrome ore and slag.—73-00846

**Asano, Sadame; Ichikawa, Kenji; Tsukamoto, Noboru; Iida, Eishi; Morita, Akihiro; Inoue, Junichi**
Water model simulation on tundish sliding nozzle—fluid flow in submerged entry nozzle.—73-00883

**Asano, Setsuro** See Kubo, Yasunori

**Asano, Tetsuo** See Iio, Satoshi; Okada, Akira

**Asano, Tetsuo; Okada, Akira; Iio, Satoshi; Yoshimura, Masahiro**
Corrosion degradation behavior of [93 wt%] alumina ceramics in hot sulfuric acid.—73-06305 & 73-17219

**Asaro, R. J.; Ahzi, S.; Blumenthal, W.; DiGiovanni, A.**
Mechanical processing of high-$T_c$ BSCCO superconductors.—73-01601

**Asatryan, G. R.; Baranov, P. G.; Zhekov, V. I.; Murina, T. M.; Prokhorov, A. M.; Khramtsov, V. A.**
EPR of thermally populated $Er^{3+}$ excited states in garnets.—73-02270

**Asatsuma, T.; Dodd, P.; Donegan, J. F.; Lunney, James G.; Hegarty, J.**
$Er^{3+}$-doped silicon prepared by laser doping.—73-04326

**Asavafoengchai, C.** See Torrance, J. B.

**Asayama, Masahiro; Komatsu, Michiyasu; Kameda, Tsuneji; Sayano, Akio**
SiAlON type sintered bodies and method of producing the same.—73-02133

**Asbeck, Peter M.** See Chang, Mau-Chung F.

**Ascari, Guido** See Perbellini, Claudio

**Ascone, I.** See Codazzi, V.

**Asensi, J. M.** See Bertomeu, J.

**Ash, J. E.; Hall, M. G.; Langford, J. I.; Mellas, M.**
Estimations of degree of hydration of portland cement pastes.—73-03467

**Ash, J. E.; Mellas, M.**
Application of backscattered electron imaging to concrete materials.—73-08375

**Ashall, J.** See Norman, B. J.

**Ashbaugh, N.** See Boyle, M.

**Ashby, Michael F.** See Bannister, M.; Kaute, D. A. W.

**Ashcroft, I. A.; Derby, Brian**
Adhesion testing of glass-ceramic thick films on metal substrates.—73-06736

**Ashenford, D. E.** See Halsall, H. P.

**Ashenford, D. E.** See Halsall, M. P.

**Asher, S. E.** See Sheldon, P.; Venkatasubramanian, R.

**Ashfield, Adrian**
Polish glass industry heads for privatization.—73-13634

**Ashida, Toshifumi** See Matsushita, Isao

**Ashitani, Toshio** See Harato, Takuo

**Ashizawa, Toranosuke** See Kuwajima, Hidegi

**Ashizuka, Masahiro** See Bradt, Richard C.; Kubota, Yoshitaka

**Ashizuka, Masahiro; Honda, Takeshi; Kubota, Yoshitaka**
Effect of grain size on creep in mullite ceramics.—73-06378

**Ashizuka, Masahiro; Honda, Takeshi; Kubota, Yoshitaka**
Fatigue behavior of tetragonal polycrystals containing 4 mol% $Y_2O_3$.—73-03288

**Ashizuka, Masahiro; Kamiyoshikawa, Makoto**
Mechanical properties of SiC whisker-reinforced glass-ceramic composites: II, Effects of whisker diameter and carbon coating to whisker.—73-06482 & 73-10454

**Ashkinadze, G. Sh.** See Novikov, V. L.

**Ashley, Carol S.** See Brinker, C. Jeffrey

**Ashmontas, S.** See Lidorenko, N. S.

**Ashmontas, S.; Skuchene, A.**
Asymmetry of the percolation electrical conductivity of compensated *n*-type InP.—73-14778

**Ashok, S.** See Kar, S.

**Ashokan, R.; Singh, R.; Gopal, V.**
Structural characterization of photochemically grown silicon dioxide films by ellipsometry and infrared studies.—73-03198

**Ashour, S.; Alkunhaimi S.; Moutinho, H. R.; Matson, R.; Abou-Elfotouh, Fouad A.**
Junction formation and characteristics of CdS/CuInSe$_2$/metal interfaces.—73-05586

**Ashrit, P. V.** See Benaissa, K.; Benkhelifa, F.

**Ashtakhova, V. V.; Nikonorov, N. V.; Panysheva, E. I.; Savvin, V. V.; Tunimanova, I. V.; Tsekhomskii, V. A.**
Kinetics of photostimulated crystallization in multichromic glass.—73-14214

**Ashton, Steve**
Choosing a flat glass washing and drying system.—73-15709

**Ashworth, S.; Iaconis, C.; Votava, O.; Riedle, E.**
High-efficiency, high-power-difference frequency generation of 0.9–1.5-μm light in BBO ($\beta$-$BaB_2O_4$).—73-08879

**Asim, M. E.**
Blast-furnace slag processing for blended cements.—73-09831

**Asinovsky, L. M.**
Optimization of the polycrystalline silicon-on-silicon dioxide characterization using spectroscopic ellipsometry.—73-15828;:Polysilicon and SIMOX characterization using spectroscopic ellipsometry.—73-04150

**Askarova, L. Kh.** See Zhilyaev, V. A.

**Askarpour, V.** See Manghnani, M. H.

**Askarpour, V.; Manghnani, M. H.; Fassbender, S.; Yoneda, A.**
Elasticity of single-crystal $MgAl_2O_4$ spinel up to 1273 K by Brillouin spectroscopy.—73-08512

**Aslam, M.** See Pawlowski, C.; Rimai, L.

**Aslanov, G. K.; Tagiev, O. B.; Izzatov, B. M.**
Isothermal and thermally activated currents in $CaGa_2S_4$:Eu single crystals.—73-01225

**Aslanov, L. A.**
Influence of van der Waals forces on crystalline structure.—73-02295

**Asmonte, S.; Vingelis, L.**
Influence of the magnetic field on hole heating by microwave electric field in silica.—73-14987

**Asmussen, J., Jr.** See Manring, E. B.

**Asoka-Kumar, P.** See Umlor, M. T.

**Asokamani, R.; Subramoniam, G.; Mathi, Jaya S.**
Electronic structure, insulators, metal transition, and superconductivity in high-$T_c$ and related systems.—73-11747

**Asokan, S.** See Prasad, M. V. N.; Titus, S. S. K.

**Asokan, T.**
Grain-boundary properties of hot-pressed zinc oxide varistors.—73-14943; Inhomogeneous characteristics of fusion-cast refractories.—73-07217

**Asomoza, M.** See De la Olvera, M.

**Asomoza, R.** See Acosta, D. R.; De la Olvera, M.

**Asonen, H.** See Zhang, Gou-Dong

**Aspar, B.; Armas, B.; Combescure, C.; Figueras, A.; Rodriguez-Clemente, R.; Mazel, A.**
Oxygen and hydrogen effects on the chemical vapor deposition of aluminum nitride films.—73-05942

**Aspnes, D. E.** See Kamiya, Itaru

**Aspnes, D. E.; Kamiya, Itaru; Tanaka, H.; Bhat, R.**
Atomic layer epitaxy on (001)GaAs: real-time spectroscopy.—73-07387

**Aspnes, D. E.; Quinn, W. E.; Gregory, S.**
Real-time optical diagnostics for epitaxial growth.—73-01927

**Aspnes, D. E.**
New developments in spectroellipsometry: the challenge of surfaces.—73-15823

**Asrarov, Sh. A.; Charnaya, E. V.; Akhmedzhanov, F. R.; Vorob'ev, V. V.; Gabrielyan, V. T.**
Ionic mobility in sodium-doped $PbMoO_4$ crystals.—73-17083

**Assaf, H.** See Boehm, L.

**Asselmeyer, B.; Schneider, H.**
Impact of modern software technology on the man-machine interface in process control systems.—73-01788

**Astakhova, I. S.; Goryushkin, V. F.**
Periodicity in change of crystallographic properties of the lanthanide dichlorides.—73-12647

**Astratov, V. N.; Vlasov, Yu. A.**
Exciton photoluminescence [PL] of surface quantum wells in a GaAs/AlGaAs.—73-11202

**Asuha, Masayuki Nogami**
Preparation of $\gamma$-$Fe_2O_3$-containing silica glasses by the sol-gel process.—73-14474

**Aswarthy, S.** See Ganesan, V.

**Atabek, R.; Bouniol, P.; Vitorge, P.; Lebescoop, P.; Hoorelbeke, J. M.**
Cement use for radioactive waste embedding and disposal purposes.—73-04888

**Atake, Tooru** See Yamamoto, Naoki

**Atakishev, S. M.** See Kyazym-Zade, A. G.

**Atakul, Husnu** See Meinhold, Richard H.

**Atakuziev, T. A.** See Eminov, Aschrap M.

**Atanasov, R.; Bassani, F.**
Improved two-band model for quantum well excitons: asymmetric wells.—73-04362

**Atanassov, E. D.; Popova, L. I.; Kolev, D. I.**
Ir study of plasma-nitrided thermal $SiO_2$ and pure silicon.—73-05427

**Atanassov, George; Thielsch, Roland; Popov, Dimitar**
Optical properties of $TiO_2$, $Y_2O_3$, and $CeO_2$ thin films deposited by electron beam evaporation.—73-02655

**Atarashiya, Koji; Uda, Masahiro**
Joining of AlN plate and composite of the system Al-AlN using all ultrafine particle.—73-03612

**Athwal, I. S.; Ogryzlo, E. A.**
Comparison of three techniques for depositing DLC [diamondlike carbon] films at temperatures between 25° and 100°C.—73-16680

**Atik, M.** See Pinero, M.

**Atkarskaya, A. B.; Borul'ko, V. I.; Golkhman, V. Yu.**
Effect of *d*-elements on the spectral characteristics of thin films.—73-00450; Effect of *d*-elements on the spectroscopic characteristics of thin films.—73-02574; Effect of technological parameters on thin-film reflection.—73-00464; Electrical resistivity of oxide film coatings on glass.—73-07316; Interrelation of technology parameters and the quality of thin-layer coatings.—73-07041; Relationship between the composition and the reflection coefficient of thin films.—73-00542

**Atkarskaya, A. B.; Borul'ko, V. I.; Gojhman, V. Yu.; Jmyhov, G. V.; Zubanov, A. E.**
Glasses with monolayer oxide film coatings and their physical properties.—73-14199

**Atkarskaya, A. B.; Borul'ko, V. I.; Krivulya, V. A.**
Absorption of coloring impurities in FK-14 glass.—73-06991

**Atkarskaya, A. B.; Borul'ko, V. I.; Rastorguev, Yu. I.**
Absorption spectra of coloring impurities in glass from a synthetic batch.—73-06992

**Atkarskaya, A. B.; Lisogorskaya, V. G.; Shevchenko, Yu. V.**
Improving the quality of the charges of colored phosphate glasses.—73-07143

**Atkarskaya, A. B.; Mironenko, O. I.; Tkachenko, F. A.**
Obtaining photochromic glasses from synthetic batches.—73-07157

**Atkins, David T.; Pashley, Richard M.**
Surface forces between ZnS and mica in aqueous electrolytes.—73-07362

**Atkins, M.; Bennett, D. G.; Dawes, A. C.; Glasser, Fredrick P.; Kindness, A.; Read, D.**
Thermodynamic model for blended cements.—73-03547

**Atkins, M.; Lachowski, E. E.; Glasser, Fredrick P.**
Solid and aqueous chemistry of 10-year-old portland cement pastes: with and without silica modifier.—73-06718

**Atkins, M.; Macphee, Donald E.; Kindness, A.**
Solubility properties of ternary and quaternary compounds in the $CaO$-$Al_2O_3$-$SO_3$-$H_2O$ system.—73-00190

**Atkinson, A.** See Guppy, R. M.

**Atkinson, H. V.** See Greaves, I.; Han, Do-Suck

**Atleeri, S. N.** See Okada, H.

**Atluri, S. N.** See Perry, K. E.

**Atsuki, Tsutomu** See Sato, Yuichi

**Atsumi, Kiminori** See Sakuma, Shuji

**Atsumi, Kiminori; Saito, Tomoki; Komori, Masaaki**
Antibacterial calcium phosphate ceramic.—73-05189

**Atta, A. K.; Biswas, P. K.; Ganguli, D.**
Optical properties of sol-gel-based multilayer antireflective films on glass.—73-14246

**Atwater, H. A.** See Vahala, Kerry J.

**Atwell, William H.; Saha, Chandan K.; Zank, Gregg A.**
Porous silicon carbide ceramics using filled polysiloxanes.—73-12507

**Atzeni, C.; Massidda, L.; Sanna, U.**
Dimensional variations, capillary absorption, and freeze-thaw resistance of repair mortars admixed with polymers.—73-00065; Properties of gas concretes containing high proportions of PFA (pulverized fly ash).—73-00174

**Au, P.** See Beddoes, J.

**Au, W.-S.** See Ling, S.-H.

**Aubard, Xavier; Lamon, Jacques; Allix, Olivier**
Model of the nonlinear mechanical behavior of 2D SiC-SiC chemical vapor infiltration composites.—73-17400

**Auciello, O.** See Lichtenwalner, D. J.; Moreno-Marin, J. A.

**Auciello, O.; Kingon, A. I.; Krauss, A. R.; Lichtenwalner, D. J.**
Physical vapor deposition of multicomponent oxide thin films: techniques, basic deposition processes, and film processing–microstructure–property relationships.—73-05947

**Auciello, O.; Mantese, L.; Duarte, J.**
Synthesis and characterization of $Pb(Zr_xTi_{1-x})O_3$ thin films produced by an automated laser ablation deposition technique.—73-03037

**Audigier, D.** See Gonnard, P.

**Audurier, V.; Dementet, J. L.; Rabier, J.**
Dislocation substructures in plastically deformed AlN.—73-09444

**Auer, S.** See Poellmann, H.

**Auerbach, Assa** See Aharony, Amnon

**Auerbeck, Jiri** See Kucera, J.

**Auerbeck, Jiri**
Physical modeling.—73-14458

**Auf, M.** See Taha, S.

**Augustin, C. O.; Prabhakaran, D.; Srinivasan, L. K.**
Fabrication and characterization of $NiCr_2O_4$ spinel.—73-07322

**Augustin, C. O.**
Sintering behavior of NiO-$Fe_2O_3$ composites.—73-16993

**Augustyniak, M.** See Hilczer, W.

**Aulombard, R. L.** See Pelant, I.

**Ault, Neil N.** See Strock, Harold B.

**Ault, Neil N.; Crowe, John T.**
Silicon carbide.—73-12299

**Ault, Neil N.; Yeckley, Russell L.**
Silicon nitride.—73-12300

**Ault, Russell L.** See McBride, Merle F.

**Aum, P.** See Gu, Tieer

**Auret, F. D.** See Venter, A.

**Auret, F. D.; Barnard, W. O.; Meyer, W. E.; Myburg, G.**
Effect of electron-beam deposition rate on the electrical properties of Ti/ and Pt/*n*-GaAs contacts.—73-12771

**Auret, F. D.; Goodman, S. A.; Myburg, G.; Meyer, W. E.**
Electrical characteristics of Ar ion sputter-induced defects in epitaxially grown *n*-GaAs.—73-07484
**Auret, F. D.; Goodman, S. A.; Myburg, G.**
DLTS detection of hole traps in MBE-grown *p*-GaAs using Schottky barrier diodes.—73-11145
**Aus, M. J.** See El-Sherik, A. M.
**Auslender, M.; Hava, S.**
Calculation of alloy scattering relaxation time for ternary III-V and II-VI semiconductors.—73-14790
**Ausloos, M.** See Bougrine, H.; Hannay, C.
**Austel, P. O.; Carson, S. W.**
Improved container performance through strength enhancement coatings.—73-07142
**Austin, Gordon T.**
Diamond, industrial.—73-12267; Garnet, industrial.—73-12274
**Austin, J. C.** See Hughes, W. C.
**Austin, R. F.** See Becker, P. C.; Doran, J. P.; Feldman, R. D.; Sher, A.
**Austin, S. A.** See Robins, P. J.
**Autran, J. L.; Djahli, F.; Balland, B.; Plossu, C.; Gaborieau, L. M.**
Three-level charge pumping on submicronic MOS transistors.—73-01355
**Autran, J. L.; Seigneur, Frederic; Delmas, Jacques; Plossu, C.; Balland, B.**
Characterization of interface states in submicrometer MOS transistors by different charge pumping techniques.—73-14803
**Autran, J. L.; Seigneur, Frederic; Plossu, C.**
Characterization of Si-$SiO_2$ interface states: comparison between different charge pumping and capacitance techniques.—73-07410
**Auzel, F.** See Santa-Cruz, P.
**Avalle, L.; Santos, E.; Leiva, E.; Macagno, V. A.**
Characterization of $TiO_2$ films modified by platinum doping.—73-13380
**Avalos-Borja, M.** See Diaz, C.
**Avanesov, A. G.; Zhorin, V. V.; Malkin, B. Z.; Pisarenko, V. F.**
Crystal field in heterodesmic compounds.—73-16077
**Avelar, J.** See Greedan, J. E.
**Avella, F.** See Pasto, Arvid E.
**Aver'yanov, V. I.; Kalmykov, A. E.**
Confluence and movement of particles upon liquid phase decomposition.—73-13948
**Aver'yanov, V. I.; Kalmykov, A. E.**
Immediate direct EM examination of process of particle growth in glasses under phase separation.—73-14004
**Aver'yanov, V. L.; Zvonareva, T. K.; Lyubin, V. M.**
Electrical properties of a contact between modified and unmodified glassy $As_2Se_3$.—73-01146
**Averback, R. S.** See Hofler, H. J.
**Averback, R. S.; Hofler, H. J.; Tao, R.**
Processing of nanograined materials.—73-09280
**Averkiev, N. S.; Gutkin, A. A.; Osipov, E. B.; Reshchikov, M. A.; Sosnovskii, V. R.**
Symmetry of the $V_{Ga}Te_{As}$ complex in GaAs and its reorientation at low temperatures.—73-01339
**Averkieva, G. K.; Boiko, M. E.; Konstantinova, N. N.; Popova, T. B.; Prochukhan, V. D.; Rud, Yu. V.**
Solid solutions in CdTe-MnTe-MgTe system.—73-16306
**Averyanov, I. S.** See Trifonova, M. M.
**Averyanov, V. L.** See Sarsembinov, Sh. Sh.
**Avetisyan, G. K.** See Gorbylev, V. A.
**Avignant, D.** See Aamili, A.
**Avilov, A. S.; Parmon, V. S.**
Multiwave scattering processes of fast electrons in textured PbSe films.—73-15051
**Avita, J.** See Jimenez, I.
**Avnir, David; Ottolenghi, Michael; Bran, Sergei; Zusman, Rivka**
Doped sol-gel glasses for obtaining chemical interactions.—73-10625
**Avnir, David; Ottolenghi, Michael; Braun, Sergei; Zusman, Rivka**
Doped sol-gel glasses for obtaining chemical interactions.—73-10626
**Avouris, P.; Lyo, I.-W.; Hasegawa, Y.**
Scanning tunneling microscope tip-sample interactions: atomic modification of Si and nanometer Si Schottky diodes.—73-07782
**Avramov, I.; Gnappi, G.; Montenero, A.**
Structural relaxation of bismuth germanate glasses.—73-03762
**Avramov, I.**
Structural relaxation of glass-forming systems.—73-14098
**Avrutin, E. A.; Korol'kov, V. I.; Orlov, N. Yu.; Rozhkov, A. V.; Sultanov, A. M.**
Dynamics characteristics of high-power pulses generated in GaAs/AlGaAs superluminescent diodes.—73-01132
**Avrutskii, I. A.; Osaulenko, O. P.; Plotnichenko, V. G.; Pyrkov, Y. N.**
Determination of the homogeneity of quantum wells in the InGaAs/GaAs system from photomodulation spectra.—73-07442
**Awadelkarim, O. O.** See Gu, Tieer
**Awadelkarim, O. O.; Gu, Tieer; Ditizio, R. A.; Mikulan, P. I.; Fonash, S. J.; Rembetski, J. R.**
Creation of deep gap states in Si during $Cl_2$ or HBr plasma etch exposure.—73-07426
**Awai, Ikuo** See Fukuda, Koichi
**Awaji, Hideo** See Kohler, Nicola; Sakaida, Yoshihisa; Sato, Sennosuka
**Awaji, Hideo; Mizuno, Mineo; Yamada, Tatsuya; Okuda, Hirushi**
VAMAS fracture toughness round robin test on ceramics.—73-13608
**Awaji, Hideo; Nagano, Yasuo**
Compressive testing of ceramics.—73-08385 & 73-15782
**Awaji, Hideo; Sakaida, Yoshihisa**
V-notched technique for single-edge notched-beam and chevron notch methods.—73-03375
**Awaji, Hideo; Watanabe, Tadao; Yamada, Tatsuya; Sakaida, Yoshihisa; Tamiya, Hiromichi; Nakagawa, Heisaburou**
Evaluation of fracture toughness by a single-edge V-notched beam method.—73-03282
**Awaji, Hideo; Yamada, Tatsuya**
Impact strength of ceramics.—73-03310
**Awaji, S.** See Yamane, Hisanori
**Awana, V. P. S.** See Sen, Nirupa
**Awano, Masanobu** See Takao, Yasumasa
**Awano, Masanobu; Kani, Keiko; Takao, Yasumasa; Takagi, Hiroyoshi**
Synthesis of composite polycrystalline $Ba_2YCu_3O_{7-y}$ superconductor by the sol-gel method.—73-11925
**Awano, Masanobu; Kani, Keiko; Takoa, Yasumasa**
Synthesis of composite polycrystalline $Ba_2YCu_3O_{7-y}$ superconductor by the sol-gel method.—73-04817
**Awano, Masanobu; Takagi, Hiroyoshi**
Synthesis of PLZT ceramics by the coprecipitation method and the effects of grinding on synthesis and sintering behavior of powders.—73-06094
**Awano, Namoi** See Suzuki, Yasutoshi
**Awazu, Koichi; Harada, Koushi; Kawazoe, Hiroshi**
Structural imperfections in silica glasses with an optical absorption peak at 3.8 eV.—73-10485
**Awazu, Koichi; Muta, Kenichi; Kawazoe, Hiroshi**
Formation mechanism of hydrogen-associated defect with an 11.9-mT doublet in electron spin resonance and red luminescence in $9SiO_2{\cdot}GeO_2$ fibers.—73-07027
**Awazu, Koichi; Watanabe, Kikuo; Kawazoe, Hiroshi**
Generation mechanisms of paramagnetic centers by gamma-ray irradiation at and near the Si/$SiO_2$ interface.—73-07545
**Awazu, Tomoyuki** See Yamamoto, Susumu; Yamamoto, Takehisa
**Awschalom, D. D.** See Smyth, J. A.
**Axelbaum, R. L.; Bates, S. E.; Lawton, S. A.**
Wet chemistry and combustion synthesis of nanoparticles of $TiB_2$.—73-06134
**Axon, Sean A.; Klinowski, Jacek**
NMR studies of the synthesis of silicalite by the fluoride method.—73-12641
**Ayabe, Yoshinori** See Anzai, Masahiro
**Ayache, C.; Chaplygin, I. L.; Kirilyuk, A. I.; Kreines, N. M.; Kudinov, V. I.**
Spectrum of persistant photoconductivity in $YBa_2Cu_3O_{6.4}$ films.—73-01661
**Ayadi, A.** See Vanis, M.
**Ayano, Toshiki** See Okada, Mitsuyoshi
**Ayaz, D. M.** See Ellingson, William A.,
**Aydil, Eray S.; Giapis, Konstantinos P.; Gottscho, Richard A.; Donnelly, Vincent M.; Yoon, E.**
Ammonia plasma passivation of GaAs in downstream microwave and radio-frequency parallel-plate plasma reactors.—73-11064
**Aydin, E.** See Kuban, B.
**Aydinli, A.; Elliatioglu, R.; Allakhverdiev, K. R.; Elliatioglu, S.; Gasanly, N. M.**
Low-temperature phase transitions in $TlGaS_2$ layer crystals.—73-15024
**Aydinli, A.; Puente, G. Contreras; Bhat, A.; Compaan, A.; Chan, A.**
$ZnSe_xTe_{1-x}$ films grown by pulsed laser deposition.—73-03073
**Ayed, F.; Castanet, R.; Sorrentino, Francois P.**
Thermal behavior of mineralized portland cement raw meal.—73-10179
**Ayers, J. D.**
Glass fibers with fine conducting cores.—73-00636
**Ayers, M. E.** See Khan, M. S.
**Aylward, N. H.; Cable, M.**
Laboratory melting of glasses to commercial standards of homogeneity.—73-00651
**Aymerich, Xavier** See Martin, Ferran; Perez-Murano, F.
**Ayuzawa, Nobuo** See Nakayama, Susumu
**Ayyappan, S.** See Rao, C. N. R.
**Ayyappan, S.; Manivannan, V.; Subbanna, G. N.; Rao, C. N. R.**
Oxyanion derivatives of cuprate superconductors: superconducting thallium cuprate oxysulfate $Tl_{0.4}Pb_{0.5}Sr_4Cu_2(SO_4)O_x$.—73-15573
**Ayyub, P.** See Palkar, V. R.
**Azad, Abdul M.; Younkman, Lora B.; Akbar, Sheikh A.; Alim, Mohammad A.**
Characterization of $TiO_2$-based sensor materials using immittance spectroscopy.—73-06199
**Azadegan, M.** See Shirkhanzadeh, M.
**Azam Khosravi, Ali** See Mahamuni, Shailaja
**Azamar-Barrios, J. A.** See Sosa, Victor
**Azarenkova, L. E.** See Pitak, N. V.
**Azelmad, A.** See Bouchard, H.
**Azema, N.** See Cros, B.
**Azevedo, Antonio; Cinbis, C.; Kryder, M. H.**
Magnetic properties of praseodymium-substituted iron garnet films.—73-11663
**Azizkhodzhaeva, M. M.; Irkakhodzhaeva, A. P.; Sirazhiddinov, N. A.**
Use of a simplex-lattice experimental design for studying glasses.—73-07097
**Azmetova, G. V.** See Oliferenko, G. L.
**Azou, S. A.** See Kul'bachinskii, V. A.
**Azough, F.; Freer, R.; Petzelt, J.**
Raman spectral characterization of ceramics in the system $ZrO_2$-$TiO_2$.—73-02415
**Azoulay, Jacob**
In situ fabrication of high-$T_c$ Y-Ba-Cu-O thin film by resistive evaporation.—73-11797; Low-temperature solid-state reaction of in situ growth of $YBa_2Cu_3O_{7-\delta}$ thin films by resistive evaporation.—73-11818
**Azoulay, M.; George, M. A.; Burger, A.; Collins, W. E.; Silberman, E.**
Surface morphology study on CdZnTe single crystals by atomic force microscopy.—73-11467
**Azoulay, R.; Dugrand, L.; Israel, A.; Rao, E. V. K.; Mellet, R.; Pougnet, A. M.**
Selective growth of GaAs and GaAlAs by Cl-assisted OMVPE at atmospheric pressure.—73-15156
**Azuma, Masaki** See Hiroi, Zenji
**Azuma, Masaki** See Takeda, Yasuo
**Azuma, Masaki; Ikeda, Nariaki; Hiroi, Zenji; Takano, Mikio; Bando, Yoshichika; Ohtaka, Osamu**
Synthesis of infinite layered superconductor under high pressure.—73-01684
**Azuma, Yasuo; Nogami, Katsunori; Ohshima, Nobuo**
Coating of ferric oxide particles with silica by hydrolysis of TEOS.—73-02748
**Azuma, Yasuo; Nogami, Katsunori; Ohshima, Nobuo**
Coating of ferric oxide particles with silica by hydrolysis of TEOS.—73-10508
**Azzoni, C. B.; Paleari, A.; Scardina, F.; Krajewski, A.; Ravaglioli, A.; Meschke, F.**
EPR structural study on hydrothermally aged yttria-doped tetragonal zirconia polycrystals.—73-08615
**Azzoni, C. B.; Paleari, A.**
Annihilation of paramagnetic centers in yttria-stabilized zirconia.—73-03078; Paramagnetic defect kinetics in yttria-stabilized zirconia.—73-03105
**Baaklini, G. Y.** See Rokhlin, S. I.
**Baalbaki, Walid; Ballbaki, Moussa; Benmokrane, Brahim**
Influence of specimen size on compressive strength and elastic modulus of high-performance concrete.—73-06678
**Baars, J.; Brink, D.; Edwall, D. D.; Bubulac, L. O.**
Characterization of $Hg_{1-x}Cd_xTe$ [MCT] heterostructures by thermoelectric measurements.—73-11102
**Baatjer, Klaus**
Brickwork products.—73-03988
**Baazi, Tandjaoui; Knystautas, Emile J.**
Hexagonal boron nitride synthesis by nitrogen ion implantation of boron films.—73-16814
**Baba, H.** See Hayashi, Seijiro
**Baba, Hideyuki** See Sakai, Hitoshi; Shiraishi, Eiichi
**Baba, Kazutaka** See Sato, Takashi
**Baba, Kazuyoshi** See Takahashi, Minoru
**Baba, Kenzo** See Goto, Hideaki
**Baba, Nobuyoshi** See Masuda, Hideki
**Baba, S.** See Nakano, T.
**Baba, Toshihide; Akinaka, Noboru; Nomura, Mamoru; Ono, Y.**
Reversible redox behavior between silver cations and metal particles in hydrated Ag-Y zeolites.—73-13236
**Baba, Tsunetaka** See Muraoka, Susumu
**Baba, Yoko** See Takahashi, Hisakazu
**Babaev, A. A.; Mamontova, T. N.; Terukov, E. I.**
Features of photoluminescence of glasses of the system $(GeS_2)_{100-x}Bi_x$ and $(As_2S_3)_{100-x}Bi_x$.—73-14186
**Babaev, S.** See Allakhverdiev, K.
**Babaev, Sh. T.; Bashlykov, N. F.; Falikman, V. R.**
High-efficiency cementless binders made of ash and slag wastes of thermal power stations and concretes based on them.—73-00100
**Babaev, T. R.** See Kerimova, T. G.
**Babareko, A. A.; Shamrai, V. F.; Efimov, Yu. V.**
Method for determining the texture of Y and Bi high-temperature superconducting materials.—73-08133
**Babeanskas, E.; Balchyunas, V.; Balyavichyus, S.; Chenys, A.; Shiktorov, N.; Yasietis, V.**
Kinetics of nanosecond electrical "conditioning" of switching devices made of noncrystalline $Ge_xTe_{1-x}$ films.—73-01227
**Babenskas, E.; Balevichius, S.; Chenys, A.**
Nanosecond switching in submicron sandwich structures based on amorphous $Ge_xTe_{1-x}$ films.—73-04414
**Babentsov, V. N.** See Sochinskii, N. V.
**Babentsov, V. N.; Gorban, S. I.; Evtukhov, Yu. N.**
Low-temperature photoluminescence of single-crystal $Zn_xCd_{1-x}Te$ films grown by solid-phase substitution.—73-04388
**Babentsov, V. N.; Rashkovetskii, L. V.; Sal'kov, E. A.; Tarbaev, N. I.**
Luminescence profiling investigation of the transformation of defects in CdTe crystals by brief annealing.—73-04391
**Babentsov, V. N.; Zhovnir, G. I.; Rashkovetskii, L. V.**
Structural properties and low-temperature photoluminescence of cadmium telluride films produced by liquid phase epitaxy.—73-05646
**Baberschke, K.** See Zschech, E.
**Babic, D. I.; Dudley, J. J.; Shirazi, M.; Hu, E. L.; Bowers, John E.**
Sputter deposition of precision $Si/Si_3N_4$ Bragg reflectors using multitasking interactive processing control.—73-03025
**Babic, E.** See Kusevic, I.
**Babiev, V. G.** See Zel'tser, Yu. G.
**Babievskaya, I. Z.** See Otdel'nov, V. V.
**Babinskii, A. V.; Golovenchits, E. I.; Morozov, N. V.; Sanina, V. A.; Sapozhnikova, L. M.**
Magnetic properties of $Eu_2CuO_4$ single crystals.—73-15338
**Babizhetskii, V. S.; Orishchin, S. V.; Chikhrii, S. I.; Kuz'ma, Yu. B.**
New phosphide $CeNi_{1-x}P_3$ (x=0, 1) and its crystal structure.—73-16227
**Bablet, J.** See Bouchut, P.
**Babonas, G.-J.** See Dagys, R.
**Babonas, G.-J.; Dagys, R.; Kregzde, V.; Pukinskas, G.; Belokoneva, E.; Leonyuk, L.**
Relationship between microstructure and optical properties in high-$T_c$ superconductors.—73-11890
**Babonneau, Florence** See Dire, S.; Soraru, G. D.

**Babonneau, Florence; Bois, Laurence; Livage, Jacques; Dire, S.**
Structural investigation of sol-gel-derived hybrid siloxane-oxide materials using $^{29}$Si MAS-NMR spectroscopy.—73-05493

**Babonneau, Florence; Bois, Laurence; Livage, Jacques**
Silicon oxycarbides via sol-gel route: characterization of the pyrolysis process.—73-10596

**Babonneau, Florence; Soraru, G. D.**
Spectroscopic characterization of the nitridation process of polymeric precursors to Si-M-N-O systems (M=Ti, Zr, Al).—73-05484

**Babu, S. V.** See Seth, Jayshree

**Babu, T. G. N.; Greaves, C.**
Neutron powder diffraction study of the phase $Sr_5Pb_3CuO_{12}$.—73-02348

**Babu, V. Hari** See Kishore, K. Nanda; Muralidhar, M.

**Babushki, O.** See Niska, J.

**Babushkin, A. N.; Zlokazov, V. B.; Zlokazova, G. M.**
Electrical conductivity and Seebeck coefficient of smithite under pressure above 20 GPA.—73-16477

**Babushkin, A. N.**
Electrical conductivity and Seebeck coefficient of high-pressure phase of zinc sulfide.—73-16476

**Babushkina, N. A.** See Khlopkin, M. N.

**Babushkina, T. S.** See Aleshkin, V. Ya.

**Bach, H.** See Sprenger, D.

**Bachelard, Roland** See Disson, J. P.; Faure, Annick

**Bachelier, J.** See Waqif, Mohamed

**Bachmann, K. J.** See Choi, S. W.

**Bachmann, Peter K.**
Diamond and diamondlike layers.—73-12982

**Bachmann, S. E.** See Mall, S.

**Bachra, Bilber** See Wright, Adrian C.

**Backer, Gerald P.**
Method of making a cylinder head or other article with cast in situ ceramic tubes.—73-04995

**Backhaus-Ricoult, Monika; Hagege, S.; Peyrot, Aurelie; Moreau, Patrick**
Internal reduction of chromium-doped α-alumina.—73-06240

**Backhaus-Ricoult, Monika; Hagege, S.**
Internal reduction of (Mg, Cu)O.—73-08645

**Backhouse, C.** See Hui, D.

**Bacquet, G.** See Hassen, A.

**Bacsa, Gyorgy** See Batori, Jozsef

**Baczynski, R. J.** See Gazda, M.

**Badakhshan, Ali; Durbin, C.; Glosser, R.; Alavi, Kambiz; Pathak, R.**
Photoreflectance characterization of GaAs as a function of temperature, carrier concentration [CC], and near-surface electric field.—73-11390

**Badalyan, A. G.** See Baranov, P. G.

**Baddi, R.; Duclos, R.; Crampon, J.**
Neighbor switching by grain-boundary penetration during diffusional deformation of an alumina/zirconia composite.—73-09494

**Bader, C.** See Weyers, Richard E.

**Bader, G.** See Benaissa, K.; Benkhelifa, F.

**Badot, Jean-Claude** See Gacoin, T.

**Badot, Jean-Claude; Baffier, Noel**
Ionic conductivity and dielectric properties of vanadium pentoxide xerogels.—73-10964

**Badot, Jean-Claude; Fourier-Lamer, A.; Mhiri, T.; Colomban, P.**
Rf microwave dielectric relaxation and conductivity in $Cs_{1-x}M_xHSO_4$ disordered protonic conductors.—73-01021

**Badot, Jean-Claude; Gourier, D.; Bourdeau, F.; Baffier, Noel; Tabuteau, A.**
Electronic properties of $Na_{0.33}V_2O_5$ bronze obtained by the sol-gel process.—73-02608

**Badwal, S. P. S.** See Hughes, A. E.

**Badwal, S. P. S.; Bannister, M. J.; Hannink, Richard H. J.**
Science and Technology of Zirconia V.—73-09764

**Badzian, A. R.** See Yang, X.-Q.

**Bae, Byeong-Soo; Weinberg, Michael C.**
Ultraviolet optical absorptions of semiconducting copper phosphate glasses.—73-07853

**Bae, Seung-Young; Miyayama, Masaru; Yanagida, Hiroaki**
Electrical properties of ß-$Li_xV_2O_5$ thin layers prepared by the sol-gel process.—73-08855

**Bae, So-Ik; Baik, Sung-Gi**
Critical concentration of MgO for the prevention of abnormal grain growth in alumina.—73-16692; Sintering and grain growth of ultrapure alumina.—73-09506

**Bae, Sung-Joon** See No, Kwang-Soo

**Bae, Won-Tae** See Cho, Chull-Koo

**Bae, Won-Tae; Jung, Won-Do; Cho, Chull-Koo**
Nitridation behavior of kaolin with reduced alumina content obtained by acid treatment.—73-02907

**Baedecker, Phillip A.** See Jackson, Larry L.

**Baek, K.-K.** See Tuller, H. L.

**Baek, Kyung-Seon; Choi, Hyung; Youn, Hyun; Oh, H.-N.; Kim, C.-S.**
Crystallographic and magnetic properties of $Fe_{0.5}Cu_{0.5}Cr_2Se_xS_{4-x}$.—73-08592

**Baek, Y.-K.** See Park, S.-W.

**Baek, Yong-Kee; Kang, Eul-Son; Cheong, Dong-Ik**
Effect of grain size on the ballistic performance of aluminas.—73-06380

**Baenziger, N. C.** See Martinson, L. S.

**Baer, B. J.; Drickamer, H. G.**
Pressure effects on the thermoluminescence of quartz.—73-05620

**Baer, J. R.** See Allor, Richard L.

**Baer, Roy K.** See Strock, Harold B.

**Baetzold, R. C.; Grimes, Robin W.; Catlow, C. Richard A.**
Computational study of hole species in models of the cuprate superconductors.—73-15403

**Baev, V. M.** See Sierks, J.

**Baffier, Noel** See Badot, Jean-Claude; Gacoin, T.

**Bag, Fam-Kuang** See Plyutto, V. P.

**Bagaev, V. S.; Zaytsev, V. V.; Kalinin, V. V.; Oktyabrsky, S. R.; Plotnikov, A. F.**
Excitonic luminescence of CdTe and $Cd_{0.87}Zn_{0.13}$ submonolayers in ZnTe films grown by MBE.—73-11205

**Bagaiskov, Yu. S.; Krukhmaleva, G. P.; Kuiakova, L. D.**
Clay-graphite refractory crucibles containing variable amounts of silicon carbide.—73-00789

**Bagandova, E. D.; Belyustin, A. A.; Bychkov, E. A.**
$^{22}Na^+$ sorption from lithium-aluminosilicate solutions with electrode glass.—73-14046

**Baganich, A. A.** See Mikla, V. I.

**Bagdasarov, Kh. S.** See Antonov, E. V.; Lube, E. L.

**Bagdasarov, Kh. S.; Bolotina, N. B.; Kalinin, V. I.**
Photoinduced effects and real structure of yttrium-aluminum garnet crystals.—73-02665

**Bagdasarov, Kh. S.; Dodokin, A. P.; Kevorkov, A. M.**
Magnetic susceptibility, electron paramagnetic resonance, and thermal diffusivity of ytterbium-yttrium-aluminum garnet crystals.—73-02640

**Bagdasarov, Kh. S.; Munchaev, A. I.; Remizov, M. V.**
Defect structure and electrical properties of $Y_3Al_5O_{12}$ and $Y_3Al_5O_{12}$:$Nd^{3+}$ single crystals.—73-00945

**Bagdasaryan, R. I.** See Vardanyan, G. A.

**Bagieu, M.** See El Horr, N.

**Bagirova, E. M.** See Safarov, M. G.

**Bagley, Rodney D.**
Dome-shaped extrusion dies.—73-12076

**Baglio, J.** See Niu, C.-M.

**Bagnall, C. M.** See Laurie, J.

**Bagnall, Kate** See Sasaki, Katsuhiro

**Bagnato, V. S.** See Basmaji, Pierre

**Bagratashvili, V. N.; Tsypina, S. I.; Alimpiev, S. S.; Simanovskii, Ya. O.; Prokhorov, A. M.; Rybaltovskii, A. O.**
Uv-laser-induced decay of oxygen-deficient centers in silica glasses.—73-14307

**Bagrii, E. Ya.** See Kirillov, A. P.

**Bagulya, A. V.; Kazakov, I. P.; Negodaev, M. A.; Tsekhosh, V. I.; Voronov, V. V.**
In situ growth of superconducting Y-Ba-Cu-O thin films by ion-beam sputtering method.—73-11798

**Bah, K.; Czapla, A.; Pisarkiewicz, T.**
Simple method for optical parameter determination of inhomogeneous thin films.—73-15845

**Bahadur, D.** See Johri, U. C.

**Bahadur, Harish**
Hydroxyl defects and electrodiffusion (sweeping) in natural quartz crystals.—73-09411

**Bahadur, Shyam** See Zhou, Jian-Ren

**Bahar, Bamdad**
New developments in monitoring particulate emissions.—73-15736

**Bahke, E.**
New developments in belt conveyor systems.—73-12048

**Bahl, O. P.** See Raman, V.

**Bahnck, D.** See Ross, F. M.

**Bahr, Hans-Achim** See Schultrich, B.

**Bahr, Hans-Achim; Bahr, U.; Balke, H.; Maschke, H.; Petzold, A.; Weiss, Hans-Jurgen**
Multiple crack propagation under thermal load.—73-06493

**Bahr, Hans-Achim; Fett, Theo; Hahn, Iris; Munz, Dieter; Pflugbeil, I.**
Fracture mechanics treatment of thermal shock and the effect of bridging stresses.—73-06435

**Bahr, M.** See Kukla, Reiner

**Bahr, U.** See Bahr, Hans-Achim

**Bai, B. N. P.** See Ravikiran, A.

**Bai, B.** See Gao, Y.

**Bai, C.-S.; Soled, S.; Dwight, K.; Wold, A.**
Preparation and characterization of dispersed cobalt oxide supported on $\gamma$-$Al_2O_3$.—73-02675

**Bai, Chun-Li; Hashizume, Tomi; Jeon, Dong-Ryul; Sakurai, T.**
Geometric and electronic structures of Na/GaAs.—73-06220

**Bai, G. R.** See Foster, C. M.

**Bai, Guang** See Gan, Chang-Cheng

**Bai, Shr-Nan; Tseng, Tseung-Yuen**
Effect of grain boundaries on the electrical properties of zinc-oxide-based varistor.—73-11153; Influence of sintering temperature on electrical properties of ZnO varistors.—73-07602

**Bai, V. Seshu** See Ravi, S.

**Baibolov, S. M.** See Rumyantsev, B. M.

**Baidakov, L. A.** See Arif, Mokhammad; Orkina, T. N.

**Baidakov, L. A.; Buznik, V. M.; Kavun, V. Ya.; Kalenik, V. M.; Orkina, T. N.**
$^{19}F$ nuclear magnetic resonance investigation of the glass $[(Ga_2S_3)_{0.25}\text{-}(GeS_2)_{0.75}]_{0.75}(NaF)_{0.25}$.—73-13986

**Baidullaeva, A.** See Artamonov, V. V.

**Baidullaeva, A.; Bulakh, B. M.; Dauletmuratov, B. K.; Dhzumaev, B. R.; Korsunskaya, N. E.; Mozol, P. E.**
Influence of dislocations generated by laser radiation on electrophysical properties and luminescence of *p*-type CdTe.—73-01201

**Baidullaeva, A.; Dauletmuratov, B. K.; Vlasenko, A. I.; Gnatyuk, V. A.; Mozol, P. E.**
Photoelectric properties of CdTe films subjected to laser radiation.—73-15093

**Baidus, N. V.** See Bednyi, B. I.; Karpovich, I. A.

**Baier, H.-U.; Monch, W.**
Growth of AlN on GaAs(110) by reactive molecular beam deposition.—73-07553

**Baier, H.; Steffes-Tun, W.; Bambauer, H.-U.**
Granulometric determination of treated power plant fly ash.—73-12276

**Baijal, J. S.; Phanjoubam, Sumitra; Kothari, Deepika; Prakash, C.; Kishan, P.**
Hyperfine interactions and magnetic studies of $Li_{0.5-0.5x}Mg_x\text{-}Fe_{2.5-0.5x}O_4$.—73-01466

**Baik, S.** See Kim, S.-S.

**Baik, S.-K.** See Son, Gun-Suk

**Baik, S.; Lee, S.-M.; Min, B.-S.**
*R*-curve behavior of PZT ceramics near morphotropic phase boundary.—73-06508

**Baik, Sung-Gi** See Bae, So-Ik; Han, Dong-Bin; Kang, Young-Min; Kim, Sang-Sub

**Baik, Yong-Hyuck; Shin, Jong-Yoon; Chung, Chong-In**
Effect of $Al_2O_3$ and SiC whisker on sintering and mechanical properties of $Si_3N_4$-bonded SiC.—73-13505

**Baik, Yong-Hyuck; Shin, Jong-Yoon; Jung, Jong-In**
Effect of additives on sintering and mechanical properties of $Si_3N_4$-bonded SiC.—73-03262

**Baik, Young-Min; Shanker, K.; McDermid, Joseph R.; Drew, Robin A. L.**
Carbothermal synthesis of aluminum nitride using sucrose.—73-16663

**Baikie, Iain D.; Bruggink, Gerrit H.**
Characterization of oxides and thin films.—73-05024

**Baikov, M. V.** See Malchenko, S. N.

**Baikov, Yu. M.** See Belopol'skaya, T. V.; Egorov, V. M.; Kavokin, K. V.

**Baikova, L. G.; Fedorov, Yu. K.; Tolstoi, M. N.**
Fracture toughness of multicomponent phosphate glasses.—73-00487

**Baikova, L. G.; Pesina, T. I.; Pukh, V. P.; Davidovich, N. M.; Radeeva, E. N.**
Reduction of strength of optical quartz fibers upon removal of polymer coatings.—73-14267

**Baikova, L. G.; Ulmer, Kh.; Pukh, V. P.**
Determination of fatigue parameters of sodium calcium silicate glass on measurement of strength by different methods.—73-00446

**Baikova, L. G.; Ulmer, Kh.; Pukh, V. P.**
Determination of the fatigue parameters of soda-lime-silicate glass in measurement of strength by different methods.—73-00447

**Bailey, J. E.** See Henderson, E.

**Bailey, Joseph K.** See Ackerman, William C.; Huling, Jeffrey C.

**Bailey, Richard E.; Kimball, Foster M.; Leung, Eddie M.; McConnell, Robert D.**
Method for forming internally helixed high-temperature superconductor assembly.—73-01711

**Bailey, Sheila G.** See Hakimzadeh, Roshanak

**Bailey, Stephen** See Millar, Graeme J.

**Baillargeon, J. N.** See Higman, T. K.; Jackson, S. L.

**Baillif, Patrick** See Thirioux, Laurence

**Baines, Tim; Kay, John**
Manufacturing strategies in the ceramic sector.—73-04929

**Baird, Thomas; Denny, Patrick J.; Hoyle, Robert; McMonagle, F.; Stirling, D.; Tweedy, J.**
Modified ZnO absorbents for low-temperature gas desulfurization.—73-08518

**Baither, Dietmar** See Baufeld, Bernd

**Baitinger, E. M.** See Pesin, L. A.

**Baj, M.; Dmowski, L. H.; Slupinski, T.**
Direct proof of two-electron occupation of Ge-DX centers in GaAs codoped with Ge and Te.—73-11143

**Bajaj, J.** See Irvine, S. J. C.; Williams, G. M.

**Bajaj, J.; Blazejewski, E. R.; Williams, G. M.; DeWames, R. E.; Brown, M.**
Noise (1/*f*) and dark currents in midwavelength infrared PACE-I HgCdTe photodiodes.—73-07694

**Bajaj, J.; Irvine, S. J. C.; Sankur, H. O.; Svoronos, Spyros A.**
Modeling of in situ monitored laser reflectance during MOCVD growth of HgCdTe.—73-11318

**Bajaj, K. K.** See Gilliland, G. D.; Greene, Ronald L.

**Bajorek, Grzegorz**
Determination of water permeability coefficient of porous concrete for prefabricated drainage units.—73-09886

**Bajuk, Louis J.** See Chew, Wilbert; Vasquez, Richard P.

**Bakaev, V. A.; Steele, W. A.**
Computer simulation of the adsorption of argon on the surface of titanium dioxide: I, Crystalline rutile.—73-12757; Computer simulation of the adsorption of argon on the surface of titanium dioxide: II, Amorphous surface.—73-12758

**Bakalin, Yu. I.; Fedorova, L. S.**
Influence of deformation on the strength of enamel coatings.—73-00241

**Baker, D. M.** See Mahfuz, Hassan

**Baker, G.** See Palmer, G. B.

**Baker, J. E.** See Jackson, S. L.; Kish, F. A.

**Baker, Mark D.; Senaratne, Chandana; Zhang, Ji-Wu**
Effects of supporting electrolyte and zeolite Co cation on the electrochemical response of zeolite-modified electrodes.—73-07310

**Baker, Paul A.** See Zempolich, William G.

**Baker, Shenda M.; Rossman, George R.; Baldeschweiler, John D.**
Surface charge screening and Fermi level pinning on a synthetic, boron-doped diamond.—73-07823

**Bakhanov, V. A.** See Al'tshuler, G. B.; Roskova, G. P.

**Bakharev, O. N.; Volodin, A. G.; Duglav, A. V.**
NMR of Cu and Pr in the two-phase compound $Pr_{1.85}Ce_{0.15}CuO_{4-y}$.—73-05440

**Bakhirkin, Yu. A.; Bykovskii, Yu. A.; Ukraintsev, V. A.**
Powerful continuously tunable parametric generator of ir radiation on $LiNbO_3$ crystals with high optical homogeneity.—73-02674

**Bakhmatyuk, B. P.** See Koz'mik, I. D.

**Bakis, Charles E.** See Lewinsohn, Charles A.; Strait, S. Jared

**Bakker, H. J.; Hunsche, S.; Kurz, H.**
THz phonon-polariton beats in $LiTaO_3$.—73-09000

**Baklanov, K. A.; Krylov, I. P.**
Frozen-in photoconductivity in PbTe:O films.—73-05570

**Baklanov, M. R.; Grigor'ev, Yu. N.; Meleshko, S. V.**
Influence of mass transfer on homogeneity of etching in a planar reactor.—73-04366

**Bako, B.** See Neda, Z.

**Baksh, M. Safdar A.; Kikkinides, Eustathios S.; Yang, Ralph T.**
Characterization by physisorption of a new class of microporous adsorbents: pillared clays.—73-16419

**Baksh, M. Safdar A.; Yang, Ralph T.**
Unique adsorption properties and potential energy profiles of microporous pillared clays.—73-16645

**Baksheeva, V. S.** See Fedoruk, R. M.

**Bakshi, I. S.; Karachevtseva, L. A.; Lyubchenko, A. V.;**

**Petryakov, V. A.; Salkov, E. A.; Khizhnyak, B. I.**
Influence of compensating annealing on the 1/*f* noise in $Cd_xHg_{1-x}Te$.—73-07592

**Bakshi, I. S.; Salkov, E. A.; Khizhnyak, B. I.**
*1/f* noise in $Hg_{1-x}Cd_xTe$ converted from *n*- to *p*-type by narrative doping.—73-07631

**Bakuckas, J. G., Jr.; Prosser, W. H.; Johnson, W. S.**
Monitoring damage growth in titanium matrix composites [TMC's].—73-12167

**Bakulina, V. V.** See Shkol'nikov, E. V.

**Bakunov, O. V.; Borovkova, L. B.; Borodina, T. I.**
Tensile strength of a water-setting (hydration-hardening) zirconium-dioxide-based concrete in the 300–2300 K range.—73-00197

**Bakunov, O. V.; Pakhomov, E. P.**
Melting temperatures of the alkali-earth aluminates and their mixtures with $ZrO_2$ and $Al_2O_3$ in the atmosphere of combustion gases.—73-10741

**Bakuntseva, M. V.** See Gorbik, P. P.

**Bakuradze, G. V.** See Pronkin, A. A.

**Bal'makov, M. D.**
Development of the concept of R. L. Muller on the possibility of vitrifying melts.—73-14350

**Balachandran, Uthamalingam** See Haldar, Pradeep; Kirkpatrick, Kelly S.; See Varma, Hari Krishna

**Balachandran, Uthamalingam; Merkle, K. L.; Mundy, J. N.; Gao, Y.; Zhang, C.; Xu, D.**
Grain-boundary degradation of YBCO superconductors sintered in $CO_2$-containing atmospheres.—73-11774

**Balachandran, Uthamalingam; Zhong, W.; Youngdahl, C. A.; Poeppel, R. B.**
Microstructure and associated properties of YBCO superconductors prepared by melt-processing techniques.—73-*i*1834

**Balagurov, A. M.** See Lyubutin, I. S.

**Balagurov, A. M.; Mironova, G. M.**
Neutron diffraction studies on real-time scale.—73-02345

**Balaguru, P. N.** See Ezeldin, A. Samer; Maher, M. H.

**Balakauskas, S. I.; Lyutovich, K. L.; Pavasaris, Ch. I.**
Characteristics of graded-gap bipolar transistors on the basis of semiconductor structure of $Ge_xSi_{1-x}$.—73-01096

**Balakrishna, P.; Chakraborthy, K. P.; Narayanan, P. S. A.; Ramakrishnan, P.**
Cracking, end-capping, and other defects in pressed ceramic compacts.—73-12961

**Balakrishnan, G.** See El-Abbar, A. A.

**Balankin, A. S.; Levin, S. V.; Yanevich, G. N.**
Predicting the shock [impact] strength of targets made of brittle materials.—73-06502

**Balankina, E. S.**
Shear modulus and Poisson's ratio of $Bi_{1.6}Pb_{0.4}Sr_2Ca_{2.5}Cu_{3.5}O_x$.—73-15619

**Balashov, Yu. S.; Demeshko, A. N.; Makarov, V. N.**
Currents of thermostimulated depolarization and internal friction in sodium silicate glasses.—73-00316; Thermostimulated depolarization currents and internal friction in sodium silicate glasses.—73-00421

**Balasubramaniam, R.** See Bhaumik, S. K.

**Balasubramanian, N.** See Balasubramanian, Sathya

**Balasubramanian, Sathya; Kumar, Vikram;**

**Balasubramanian, N.**
Reverse-bias annealing kinetics of Mg-H complexes in InP.—73-11422

**Balasubramanian, Sathya; Rao, K. J.**
Preferential paths in alkali ion migration and the mixed alkali effect in silicate glasses.—73-06956

**Balasubramanian, T. V.** See Narashimha Rao, K.

**Balasubramanian, T.; Cao, Jian-Ming; Gao, Y.**
X-ray photoemission spectroscopy studies of cesium and oxygen on GaAs(100).—73-07865

**Balaya, P.; Sunandana, C. S.**
Crystallization studies of $30Li_2O$-$70TeO_2$ glass.—73-06901

**Balbashov, A. M.; Berezin, A. G.; Bobryshev, Yu. V.**
Orthogonal magnetic "impurity" ($Fe^{3+}$ in *c* positions) in orthoferrite $YFeO_3$.—73-07968

**Balcaitis, G.** See Comedi, D.; Qiu, C.

**Balcerak, Raymond; Brown, Lynette**
Mercury cadmium telluride material requirements for infrared systems.—73-07666

**Balchyunas, V.** See Babeanskas, E.

**Balchyunas, V.; Baleivichius, S.; Deksnys, A.**
Size effect of nanosecond switching in submicron coplanar structures based on amorphous semiconductors.—73-04483

**Balciuniene, M.** See Amulevicius, A.

**Balda, R.** See Macho, E.

**Balda, R.; De Pablo, A.; Fernandez Navarro, J. M.; Fernandez, J.**
Time-resolved spectroscopy of chromium-neodymium system in a fluorophosphate glass.—73-14299

**Balda, R.; Fernandez, J.; Boulard, B.; Jacoboni, C.**
Optical properties of $Cr^{3+}$ in thin-film lead-based fluoride glass.—73-07059

**Baldereschi, A.** See Resta, R.

**Baldeschweiler, John D.** See Baker, Shenda M.; Baselt, David R.

**Baldinozzi, G.; Sciau, P.; Buffat, P. A.**
Orthorhombic structures of $Pb_2MgWO_6$ and $Pb_2CoWO_6$.—73-08686

**Baldoni, Joseph G., II; Buljan, Sergej-Tomislav**
Silicon-nitride-based composite with improved fracture toughness.—73-05340

**Baldus, Hans-Peter** See Jansen, Martin

**Baldus, Hans-Peter** See Wannagat, Ulrich

**Baldus, Hans-Peter; Schnick, Wolfgang**
Production of $Si_{2-x}P_xN_{2+x}(NH1_{1-x})$, where $x$=0.1 to 1.—73-12513

**Baldwin, Leo B.**
Machine for video inspection of glass containers with intersecting light beams.—73-04981

**Bale, C. W.** See Berube, D.; Bouchard, D.

**Baleivichius, S.** See Balchyunas, V.

**Balek, V.; Dohnalek, J.**
Radiometric emanation method for monitoring morphology and porosity changes during radwaste cementation.—73-04895

**Balerna, A.; Bernieri, E.; Burattini, E.; Kuzmin, A.; Purans, J.**
Local environment around tungsten in mixed valence barium tungsten phosphate glasses [studied] by X-ray absorption spectroscopy.—73-14027

**Bales, P.**
New raw grinding plant with integral roller press at the Hualien cement works in Taiwan.—73-15738

**Balestra, C. L.** See Wang, C. W.

**Balestrino, G.** See Bottiglione, A.

**Balestrino, G.; Marinelli, M.; Milani, E.**
Effects of reducing and oxidizing thermal treatments on the transport critical current density in epitaxial $Bi_2Sr_{3-x}Ca_xCu_2O_{8+y}$ films.—73-01537

**Balevichius, S.** See Babenskas, E.

**Bali, H.** See Larbot, A.

**Baliga, Bantval J.; Alok, Dev; Bhatnagar, Mohit**
Method for forming a *p-n* junction in silicon carbide.—73-16001

**Baliga, Bantval J.; Bhatnagar, Mohit**
Method of fabricating silicon carbide field effect transistor.—73-15238

**Baliga, Bantval J.**
Silicon carbide field effect device.—73-15245; Silicon carbide power MOSFET with floating field ring and floating field plate.—73-01387

**Balik, Karel; Glogar, Petr; Hajek, Milan**
Composite carbon-carbon materials[—literature review].—73-12420

**Balinski, Daniel H.** See Hoang, Truc G. N.

**Balk, P.** See Meyer, R.

**Balkanli, Batu** See Ungan, Aydin

**Balkanski, M.** See Eddrief, M.; Julien, C.; Sacuto, A.

**Balke, H.** See Bahr, Hans-Achim

**Ball, C. A. B.** See Venter, A.

**Ball, M. J.; Murphy, N. A.; Shore, P.**
Ductile mode diamond grinding of optical glasses using electrolytic techniques.—73-14354

**Ball, Richard G.**
Computer simulation studies of alkali and alkaline-earth metal intercalation into uranium oxides.—73-12008

**Ball, S. D.** See Karim, R.

**Ballal, A. K.; Salamanca-Riba, L.; Taylor, C. A., II; Doll, Gary L.**
Structural characterization of preferentially oriented cubic BN films grown on Si(001) substrates.—73-06288

**Ballal, A. K.; Salamanca-Riba, L.**
Role of a nucleation layer in suppressing interfacial pitting in InAs films grown on (100)InP substrates.—73-04471

**Ballance, David S.; Michael, Keith W.**
Method of forming SI-O containing coatings.—73-14752

**Balland, B.** See Autran, J. L.; Plossu, C.

**Balland, B.; Bureau, J. C.; Plossu, C.; Botton, R.**
FTIR, SIMS, and electrical characterization of $Si_3N_4$ thin films obtained from CVD assisted by in situ electrical discharge.—73-04107

**Ballandras, S.; Bigler, E.**
Surface-acoustic-wave devices with low sensitivity to mechanical and thermoelastic stresses.—73-13599

**Ballard, Clifford P.** See Fanelli, Anthony J.

**Ballato, A.** See Yong, Y.-K.

**Ballbaki, Moussa** See Baalbaki, Walid

**Ballegeer, D. G.** See Agrawala, S.

**Ballegeer, D. G.; Agrawala, S.; Tong, M.; Nummila, K.;**

**Ketterson, A. A.; Adesida, I.**
Selective reaction ion etching [SRIE] in $SiCl_4/SiF_4$ plasmas for gate recess in GaAs/AlGaAs modulation-doped field effect transistors.—73-11440

**Ballentine, P. H.; Allen, J. P.; Kadin, A. M.; Mallory, D. S.**
Large-area sputtering of in situ superconducting $YBa_2Cu_3O_7$ films.—73-01584

**Baller, F.** See Buse, E.

**Ballingall, J. M.** See Chin, Albert; Wang, H. H.

**Ballingall, J. M.; Ho, P.; Mazurowski, J.; Lester, L.; Hwang, K. C.; Sutliff, J.**
$In_xGa_{1-x}As$ ($x$=0.25–0.35) grown at low temperature [LT].—73-14975

**Ballingall, J. M.; Martin, P. A.; Mazurowski, J.; Ho, P.;**

**Chao, P. C.; Smith, P. M.**
Pseudomorphic InGaAs high-electron-mobility transistors [HEMT's].—73-15126

**Ballivy, Gerard** See Breton, Dannys

**Balmer, Mari Lou; Lange, Fred F.; Levi, Carlos G.**
Metastable phase selection and partitioning for $Zr_{(1-x)}$

**Balmush, N. I.** See Klyukanov, A. A.

**Balogh, A. G.; Jaegermann, W.; Briere, M. A.**
Oxidation state of Cu ions in H-charged $YBa_2Cu_3O_{7-\delta}$ films.—73-11855

**Balooch, M.** See Moalem, M.

**Baloun, Zdenek** See Stejskalova, Eva

**Bals, A.; Kliava, J.**
ESR study of short-range ordering in oxide glasses: the role of next nearest neighbors.—73-13982

**Balta, P.; Radu, D.; Spurcaciu, C.**
Alternative model for alkali-borate glass structure.—73-13924

**Balta, P.; Radu, D.**
Useful new indicators for glass-melting tank furnaces.—73-15892

**Balter-Peterson, Aliza** See Bull, Jeffrey D.

**Baluev, A. V.** See Ganin, V. V.

**Balut, N.; Scalapino, D. J.**
Analysis of NMR data in the superconducting state of $YBa_2Cu_3O_7$.—73-11685

**Baluta, G.** See Pavel, E.

**Balyavichyus, S.** See Babeanskas, E.

**Balyunis, L. E.** See Topolov, V. Yu.

**Balzar, D.; Ledbetter, H.**
Microstrains and domain sizes in Bi-Cu-O superconductors: an X-ray diffraction peak-broadening study.—73-01605

**Balzaretti, N. M.; Denis, J. P.; Da Jornada, J. A. H.**
Variation of the refractive index and polarizability of sapphire under high pressures.—73-02722

**Bambauer, H.-U.** See Baier, H.

**Bamberger, Carlos E.; Haverlock, Tamara J.; Kopp, Otto C.**
Synthesis and characterization of $Sr_2Ce_2Ti_5O_{16}$ in the system $SrO$-$CeO_2$-$TiO_2$.—73-12710

**Bamberger, M.** See Boas, M.

**Bamburov, V. G.** See Andreev, O. V.

**Bamoteref, S. Kh.** See Tkachenko, T. V.

**Ban, Seiji** See Maruno, Shigeo

**Ban, Vladimir S.** See Park, Chin-Ho

**Banach, U.** See Hubert, T.

**Bancroft, G. M.** See Kasrai, Masoud; Li, Dien

**Bandara, K. M. S. V.** See Coon, D. D.

**Bandaranayake, P. W. S. K.** See Dissanayake, M. A. K. L.

**Bandini, Alessandro; Santini, Giampietro**
Melting of lead crystal with 24% PbO in electric glass-melting furnace with $SnO_2$ electrodes.—73-14426

**Bando, Y.** See Matsuda, Y.

**Bando, Yoshichika** See Azuma, Masaki; Hiroi, Zenji; Iijima, K.; Ikeda, Yasunori; Muranaka, Shigetoshi; Niinae, Toshinobu; Takada, Toshio; Takano, M.; Yoneda, Yasuhiro

**Bando, Yoshio** See Ishigaki, T.

**Bando, Yoshio**
Analysis of grain-boundary composition—recent development of analytical transmission electron microscopy.—73-05019

**Bandopadhyay, Amitava** See Breval, E.; DebRoy, Tarasankar

**Bandow, Shunji** See Ohkohchi, Masato

**Bandow, Shunji; Saito, Yahachi**
Encapsulation of ZrC and $V_4C_3$ in graphite nanoballs via arc burning of metal carbides/graphite composites.—73-12429

**Bandurko, L. V.** See Ivanovskaya, I. S.

**Bandyopadhyay, Gautam; French, Kenneth W.**
Effect of powder characteristics on injection molding and burnout cracking.—73-09086

**Bandyopadhyay, S. K.** See Rajasekar, P.

**Bandyopadhyay, S. K.; Berat, P.; Kar, S.; De, U.; Poddar, A.; Mandal, P.**
Increase in $T_c$ of $Bi_2Sr_2CaCu_2O_x$ due to alpha particle irradiation.—73-08103

**Bandyopadhyay, S.** See Barkakati, P.

**Banerjee, Aditi; DebRoy, Tarasankar**
Effect of pressure on plasma-assisted chemical vapor deposition of silicon oxide(s).—73-09088; Optical emission investigations of the plasma-enhanced chemical vapor deposition of silicon oxide films.—73-13157

**Banerjee, H. D.** See Bose, S.

**Banerjee, S.** See Lin, J.; Qian, R.; Ramanathan, S.; Sultan, Akif

**Banerjee, Sanjoy** See Soldati, Alfredo

**Banfi, GianPiero** See Agnesi, A; Danielius, R.

**Banfi, GianPiero; Degiorgio, Vittorio; Speit, Burkhard**
Neutron scattering investigation of the structure of semiconductor-doped glasses.—73-11346

**Banfi, GianPiero; Ghigliazza, M.; Ditrapani, P.**
Bandwidth and beam quality of barium borate parametric oscillator synchronously pumped by an active-passive mode-locked Nd:YAG laser.—73-08812

**Banfill, P. F. G.; Bellagraa, L.; Benaggoun, L.**
Properties of polymer-modified mortars made with blended cements.—73-06705

**Banfill, P. F. G.; Carter, R. E.; Weaver, P. J.**
Simultaneous rheological and kinetic measurements on cement pastes.—73-00188

**Bang, Christopher A.; Flik, Markus I.; Schmidt, Martin A.; Zhang, Zhou-Min**
Superconducting detector and method of making [the] same.—73-04875

**Bang, S.-H.** See Jeon, G.

**Bang, Se-Yoon; Roy, Subhransu; Modest, Michael F.**
Cw laser machining of hard ceramics: II, Effects of multiple reflections.—73-09055

**Bange, K.** See Wagner, W.

**Bange, Klaus** See Huppauff, Martin; Meyer, Ernst

**Bangert, H.** See Wang, H. F.

**Banholzer, William F.** See Anthony, Thomas R.; Bovenkerk, Harold P.; Spiro, Clifford L.

**Baniel, Pascal; Beloüet, Christian**
Gas film levitation: a unique containerless technique for the preparation of fluoride glass rods.—73-07132

**Bankert, R. J.** See Nimmer, Ronald R.

**Banner, D.** See Barton, J. L.; Langlais, C.

**Banner, Didier**
Radiative properties of glass and cast silicates. Modeling of heat transfer: IV, Measurement of infrared spectra. Determination of $n_\lambda$.—73-10476; Radiative properties of glass and cast silicates. Modeling of heat transfer: V, Diffusing media. Applications: fibrous insulation.—73-10477; Radiative properties of glass and cast silicates. Modeling of heat transfer: VI, Nondiffusing media. Application to sheet glass.—73-10478

**Bannister, M. J.** See Badwal, S. P. S.

**Bannister, M.; Shercliff, H. R.; Bao, G.; Zok, Frank W.;**

**Ashby, Michael F.**
Toughening in brittle systems by ductile bridging ligaments.—73-17448

**Banno, Hideo** See Suwa, Yoshiko

**Banno, Hisao; Ogura, Kohji**
Hydrostatic piezoelectric properties of "$d_{31}$-zero" 0-3

composite of polymer and ceramic powder mixture of PZT and $PbTiO_3$.—73-04555; Hydrostatic piezoelectric properties of "$d_{31}$-zero" 0-3 composite of polymer and ceramic powder mixture of PZT and $PbTiO_3$.—73-11583; Method for manufacturing low noise piezoelectric transducer.—73-04584; Piezoelectric composite material.—73-01446; Piezoelectric composite material.—73-15304

**Banno, T.** See Tsuzuki, K.

**Banos, L.** See Espinoza-Beltran, F. J.

**Banqueri, J.; Gamiz, F.; Carceller, J. E.; Cartujo, P.; Lopez-Villanueva, J. A.**
Influence of the interface-state density on the electron mobility in silicon inversion layers.—73-11274

**Bansal, C.** See Kannan, N.

**Bansal, Narottam P.** See Buzniak, Jan J.; Drummond, Charles H., III; Walters, Christopher

**Bansal, Narottam P.; Levine, Stanley R.; Sanders, William A.**
Sintering silicon nitride.—73-05342

**Bansal, Narottam P.**
Ceramic Transactions, Volume 38: Advances in Ceramic-Matrix Composites.—73-13652; Composition dependence of superconductivity in $YBa_2(Cu_{3-x}Al_x)O_y$.—73-01509; Method of producing a ceramic fiber-reinforced glass-ceramic matrix composite.—73-10646; Processing and properties of CVD SiC fiber-reinforced $BaAl_2Si_2O_8$ glass-ceramic matrix composites.—73-13216

**Bansenauer, Barbara A.** See Creighton, J. Randall

**Banthia, Nemkumar** See Bordeleau, Daniel

**Banthia, Nemkumar; Mani, Moussa**
Toughness indices of steel fiber-reinforced concrete [SFC] at subzero temperatures.—73-06728

**Banthia, Nemkumar; Trottier, Jean-Francois**
Deformed steel fiber—cementitious matrix bond under impact.—73-00055

**Banu, D.** See Feldman, D.

**Banys, Y.; Grigas, Y.; Wondze, F. R.**
Dielectric relaxation in $TlInS_2$ crystals with admixtures.—73-04545

**Bao, G.** See Bannister, M.

**Bao, G.; Song, Y.**
Crack bridging models for fiber composites with slip-dependent interfaces.—73-09552

**Bao, Man-Ling; Li, Wei-Dong; Zhu, Pei-Nan**
Dielectric properties of oxide-doped $Ba(Ti,Sn)O_3$ ceramics prepared from ultrafine powder.—73-16447

**Bao, Qin-Li** See Yasuda, Eiichi

**Bao, Qin-Li; Ohnishi, Kenji; Tanabe, Yasuhiro; Yasuda, Eiichi**
High-temperature creep of MgO single crystals with <100> axis at low stresses.—73-06450

**Bao, Qin-Li; Ohnishi, Kenji; Tanabe, Yasuhiro; Yasuda, Eiichi**
High-temperature creep of MgO single crystals with <100> axis at low stresses.—73-17344

**Bao, Wei; Broholm, C.; Carter, S. A.; Rosenbaum, T. F.; Aeppli, G.; Trevino, S. F.**
Incommensurate spin density wave in metallic $V_{2-y}O_3$.—73-16514

**Bao, Xiao-Hua; Metzger, Robert M.; Doyle, William D.**
Synthesis of high moment and high coercivity iron nitride particles.—73-04658

**Bao, Y.; Gawne, D. T.**
Plasma spraying of glass–polyamide composite coatings.—73-06839

**Bao, Zhi-Qin; Luo, Jie-Yao; Li, Jia-Zhi**
Texture and properties of cordierite glass-ceramics at elevated temperature.—73-14291

**Baptista, J. L.** See Ferreira, V. M.

**Baptizmanski, V. V.** See Chmel, A. E.

**Bar'yakhtar, V. G.; Takzei, G. A.; Surzhenko, A. B.; Gavrilenko, M. V.**
Low-temperature magnetic state of amorphous invarous iron-boron alloys.—73-15331

**Bar-Ad, S.; Bar-Joseph, I.**
Exciton spin dynamics in GaAs heterostructures.—73-07518

**Bar-Joseph, I.** See Bar-Ad, S.

**Bar-On, Isa** See Katz, R. N.; Quinn, George D.

**Baraban, A. P.** See Bota, S. A.

**Barabanenkov, Yu. A.; Val'kovskii, M. D.; Zakharov, N. D.**
Structure of tungsten oxide $WO_{2.625}(W_{32}O_{84})$.—73-12706

**Barabanenkov, Yu. A.; Zakharov, N. D.; Zibrov, I. P.; Filonenko, V. P.; Verner, P.**
High resolution electron microscopy structural study of tungsten oxide synthesized under high pressure.—73-16166

**Barabanov, Yu. P.** See Zadiraka, Yu. V.

**Barabash, I. V.; Solomatov, V. I.**
Intensive separating technology for the production of concretes with a filled lime binder.—73-13742

**Baraff, G. A.** See Spector, M.

**Barak, Miroslav**
Epoxy resins—materials for simulating the process of fritting.—73-00622

**Baran, E. J.** See Lavat, A. E.; Porta, P.

**Baran, E. J.; Vassallo, M. B.; Cascales, C.; Porcher, P.**
Vibrational spectra of double molybdates and tungstates of the type $Na_5Ln(XO_4)_4$.—73-12730

**Baranauskas, V.** See Varhue, W. J.

**Barankova, H.** See Bardos, L.; Carlsson, P.

**Baranov, A. I.** See Merinov, B. V.

**Baranov, A. N.** See Andaspaeva, A. A.

**Baranov, A. N.; Belkin, S. Yu.; Danilova, T. N.; Ershov, O. G.; Imenkov, A. N.; Yakovlev, Y. P.**
Nature of the long-wavelength shift of the spectrum of coherent radiation emitted from GaInAsSb.—73-07689

**Baranov, A. N.; Gorelenok, A. A.; Litvak, A. M.**
Equilibrium phase diagram of the system In-As-Pb.—73-12581

**Baranov, A. N.; Voronina, T. I.; Gorelenok, A. A.; Lagunova, T. S.; Litvak, A. M.; Sipovskaya, M. A.**
Structure defects in epitaxial InAs films.—73-01325

**Baranov, A. N.; Voronina, T. I.; Lagunova, T. S.; Sipovskaya, M. A.; Sherstnev, V. V.; Yakovlev, Y. P.**
Properties of epitaxial InAs doped with rare-earth elements.—73-15125

**Baranov, P. G.** See Asatryan, G. R.

**Baranov, P. G.; Badaiyan, A. G.**
Magnetic resonance and magnetic ordering in the oxygen-deficient $RBa_2Cu_3O_x$ superconductors.—73-04762

**Baranov, P. G.; Mashkov, I. V.; Romanov, N. G.; Lavallard, P.; Planel, R.**
Optically detected magnetic resonance excitons and carriers in pseudodirect GaAs/AlGaAs superlattices.—73-15075

**Baranowski, J. M.** See Trautman, P.

**Baranowski, J.** See Werner, P.

**Barash, E. G.; Kabin, A. Yu.; Lyubin, V. M.**
Pulsed vacuum uv irradiation of AsSe and $As_2S_3$ glassy chalcogenide semiconductor films.—73-04458

**Barash, I. S.; Kamzin, A. S.; Sapozhnikova, L. M.; Grigor'ev, L. A.; Sherman, A. B.**
Preparation of thin high-$T_c$ superconducting films doped by metal ions.—73-15598

**Barat, P.** See Rajasekar, P.

**Baraton, Marie-Isabelle** See Merle, Therese

**Baraton, Marie-Isabelle; Jaffrezic, N.; Quintard, P.**
FTIR spectroscopy of grafted surfaces: hydroxy- and chlorosilanes onto silicon nitride.—73-12591

**Baraton, Marie-Isabelle; Merle, Therese; Quintard, P.; Lorenzelli, V.**
Surface activity of a boron nitride powder: a vibrational study.—73-09513

**Baraton, Marie-Isabelle; Merle, Therese; Quintard, P.; Lorenzelli, V.**
Surface species on a submicronic boron nitride powder—a starting FTIR characterization.—73-13456

**Baraton, Marie-Isabelle; Verinaud, F.; Machet, J.; Quintard, P.**
Ion plating deposits of boron nitride, an FTIR structural characterization.—73-13106

**Barb, D.** See Pavel, E.

**Barba, A.** See Escardino, A.; Negre, F.

**Barba, A.; Negre, F.; Orts, M. J.; Escardino, A.**
Oxidation of black core during the firing of ceramic ware: III, Influence of the thickness of the piece and the composition of the black core.—73-15742

**Barba, M. F.; Caballero, Angel; Moya, J. S.; De Aza, Salvador; Chandramouli, M.; Thomas, Gareth**
Processing of high-purity mullite after reaction sintering with kaolin–alumina mixture.—73-06271

**Barbanyagre, V. D.; Shamshurov, V. M.; Timoshenko, T. I.**
Peculiarities of the process of cement clinker formation by changing the interaction sequence of reacting components.—73-10077

**Barber, David J.** See Reaney, Ian M.

**Barber, P. J.** See Sorokach, S. E.

**Barber, R.** See Fallahi, M.; Taylor, R. P.

**Barberis, G. E.** See Gennaro, A. M.

**Barbero, C. J.** See Liu, J.

**Barbero, C.** See Kotz, R.

**Barbero, Robert S.** See Devlin, David J.

**Barbeta, V. B.; Westphal, C. H.; Jardim, R. F.; Maple, M. B.; Obradors, X.**
Transport and magnetic properties of polycrystalline $Nd_{1.85}Ce_{0.15}CuO_{4-y}$ under applied magnetic fields.—73-04821

**Barbezat, G.; Nicoll, A. R.; Sickinger, A.**
Abrasion, erosion, and scuffing resistance of carbide and oxide ceramic thermal-sprayed coatings for different applications.—73-06734

**Barbieri, A.** See Weiss, Werner

**Barbieri, Luisa; Bianchi, Claudia L.; Bruni, Silvia; Cariati, F.; Leonelli, C.; Manfredini, T.**
Coloring inorganic oxides in $MgO-CaO-Al_2O_3-SiO_2$ glass-ceramic systems.—73-03715

**Barbieri, Luisa; Leonelli, C.; Manfredini, T.; Paganelli, M.; Pellacani, Gian Carlo**
Microstructure and thermal properties in the RO-MgO-$Al_2O_3$-$SiO_2$ (R=Ca, Sr, Ba, Zn) glass-ceramic systems.—73-14228

**Barbieri, Luisa; Leonelli, C.; Manfredini, T.; Siligardi, C.**
Influence of viscosity on the crystallization of some anorthite-diopside glass precursors.—73-00647

**Barbon, F.; Geotti-Bianchini, F.; Hreglich, S.; Scandellari, M. L.; Verita, M.**
Effect of the batch redox number and melting temperature on the redox equilibria in soda-lime industrial glass.—73-00617

**Barbosa, L. C.** See Medeiros Neto, J. A.

**Barbosa, P. C.** See De Oliveira, C. J.

**Barbour, J. C.** See Gorbatkin, S. M.

**Barbour, J. C.; Casalnuovo, S. A.; Kurtz, S. R.**
Advanced dielectrics for passivation of InSb.—73-04056

**Barbour, J. C.; Stein, H. J.; Popov, O. A.; Yoder, M.; Outten, C. A.**
Silicon nitride formation from a silane–nitrogen electron cyclotron resonance plasma.—73-03003

**Barboux, Philippe** See Faure, Sylvain P.; Gaucher, Philippe; Guzman, G.

**Barboux, Philippe; Campion, I.; Daghish, S.**
Synthesis of $YBa_2Cu_3O_{6+x}$ from coprecipitated hydroxides.—73-11928

**Barboux, Philippe; Tarascon, Jean-Marie; Shokoohi, F. K.**
Use of acetates as precursors for the low-temperature synthesis of $LiMn_2O_4$ and $LiCoO_2$ intercalation compounds.—73-03069

**Barbur, I.; Ardelean, I.**
Electron paramagnetic resonance study of paramagnetic centers in antiferroelectric $Pb_2MgWO_6$.—73-16486

**Barclay, S.** See McCarter, W. J.

**Barczynski, R. J.** See Murawski, L.

**Bardenshtein, A. L.; Bugaev, S. P.; Vaisburd, D. I.**
Temperature dependence of the threshold of brittle disintegration of quartz glass with a compact pulsed electron beam.—73-03814

**Bardo, R. D.** See Agassi, D.

**Bardos, L.; Berg, S.; Barankova, H.; Carlsson, Jan-Otto**
Reactive deposition of diamond and Si carbide films by hydrogen plasma etching of graphite and Si in the rf plasma jet.—73-02991

**Bardos, L.; Berg, S.; Barankova, H.**
Radio frequency plasma jet applied to coating of internal walls of narrow tubes.—73-09289

**Bardwell, J. A.** See Landheer, D.

**Barelli, N.** See Brito, G. E.

**Baribeau, J. M.** See Aebi, P.

**Baricco, M.; Battezzati, L.; Braglia, Marco; Cocito, G.; Kraus, J.; Modone, E.**
Crystallization behavior of fluorozirconate glasses.—73-06897

**Baril, D.; Tremblay, S. P.; Fiset, M.**
Silicon carbide platelet-reinforced silicon nitride composites.—73-13253

**Barilo, S. N.; Ges, A. P.; Guretskii, A. M.; Danshin, N. K.; Kramarchuk, G. G.; Luginets, A. M.**
Magnetic resonance in the vicinity of spin reorientation in $NdFeO_3$.—73-01471

**Barinov, Sergej M.** See Krylov, A. V.

**Barinov, Sergej M.; Ivanov, D. A.; Fomina, G. A.**
$K_R$-curve behavior in $Al_2O_3$-Cr ceramic-metal composites.—73-06812

**Barinov, Sergej M.; Malkov, M. A.**
Dynamic fatigue of beta tricalcium phosphate bioceramics.—73-09572

**Barinov, Sergej M.; Shevchenko, Vladimir Yu.**
McClintock's statistics and strength safety factor for ceramics.—73-06474; Universal *R*-curve of crack propagation resistance in ceramic composites.—73-06548

**Barinov, Sergej M.**
Development of experimental energy methods of fracture mechanics for certification of ceramics[—review].—73-08393; Memory effect and invariance of *R*-curves of crack propagation resistance in ceramics.—73-09645; Nonlinear fracture behavior of porous zirconia ceramics.—73-09655; Work-of-fracture determination for brittle materials.—73-06552

**Barinov, Yu. N.** See Bunin, V. M.

**Barinova, N. A.; Glebov, L. B.; Dokuchaev, V. G.; Savel'ev, V. L.**
Oriented color centers formed upon anisotropic action of optical irradiation on sodium silicate glass.—73-14061

**Barinova, N. A.; Volkova, V. V.; Glebov, L. B.; Dokuchaev, V. G.**
Uv absorption limit of glasses of the system $TeO_2$-$P_2O_5$.—73-14306

**Barkakati, P.; Bordoloi, D.; Bandyopadhyay, S.; Borah, U. C.**
Physicochemical characteristics of cement produced using sulfur-bearing fuels in the black meal process for cement manufacture.—73-13760

**Barkatt, Aaron** See Hojaji, Hamid

**Barkatt, Aaron; Sang, Jing-C.; Jakubik, Robert F.; Saad, Elie E.**
Oscillations in the dissolution kinetics of silica glass in tris-buffered aqueous media.—73-00383

**Barkauskas, Yu. K.** See Kraeiva, A. A.

**Barkay, Z.; Racah, D.; Grunbaum, E.; Deutscher, G.**
Effect of substrate defects on the properties of high-$T_c$ superconducting thin films.—73-08040

**Barker, A. P.** See Bland, C. H.

**Barker, C.** See Pierre, A. C.

**Barker, Dixie L.** See Nunn, Stephen D.; Tiegs, Terry N.

**Barker, Ronald**
Tundish cover layer containing flux ingredients and expandable graphite.—73-04041

**Barklage-Hilgefort, H.** See Enninga, Gerhard; Fleischmann, Bernhard

**Barklund, A. M.; Blom, H.-O.**
Influence of different etching mechanisms on the angular dependence of silicon nitride etching.—73-09173

**Barkovskii, N. V.** See Klinkova, L. A.

**Barkyoumb, John** See Kabacoff, Lawrence T.

**Barlingay, C. K.** See Dey, S.K.

**Barlow, Joel W.; Vail, Neal K.**
Method of producing high-temperature parts by way of low-temperature sintering.—73-12387

**Barlow, P. J.** See Withers, R. L.

**Barmatz, M.** See Jackson, H. W.; McDonough, C.

**Barna, P. B.** See Qiu, Hong

**Barna, S.; Cerchez, M.; Mihai, M.**
Use in the glass industry of some chemical industry byproducts containing $Na_2O$ and CaO.—73-14524

**Barna, S.; Grigoras, B.**
Research for improving solarization resistance of glass active laser media.—73-14274

**Barnard, W. O.** See Auret, F. D.

**Barner, J. B.** See Chan, Siu-Wai

**Barner, K.** See Trost, J.; Von Helmolt, R.

**Barnes, A. V.** See McKinley, J. T.

**Barnes, D. J.** See Nicholas, R. J.

**Barnes, P.** See Dimingo, M. T.

**Barnes, Paul N.** See Miyoshi, Kazuhisa

**Barnes, Paul** See Muhamad, M. N.; Rashid, S.; Turrillas, Xavier

**Barnett, S. A.** See Choi, C.-H.; Chu, X.; Thiele, E. S.

**Barney, C.; Beevers, C. J.; Bowen, P.**
Fatigue crack propagation in SiC-continuous-fiber-reinforced Ti-6Al-4V alloy metal-matrix composites.—73-03290

**Barnham, K. W. J.** See Nelson, J.

**Barniol, N.** See Perez-Murano, F.

**Baro, M. D.** See Deol, R. S.

**Baro, M. D.; Clavaguera-Mora, M. T.; Surinach, S.; Diego, J. A.; Otero, A.; Clavaguera, N.**
Nanocrystalline materials obtained by controlled crystallization of metallic glasses.—73-14435
**Baro, M. D.; Surinach, S.; Clavaguera-Mora, M. T.; Calventus, Y.; Rysava, N.; Clavaguera, N.**
Calorimetric and morphological study of the crystallization process in some chalcogenide glasses.—73-13932
**Baroni, S.** See McKinley, J. T.
**Barounig, J.** See Losbichler, P.
**Barr, T. L.** See Chen, L. M.
**Barr, T. L.**
Electron spectroscopic analysis of multicomponent thin films with particular emphasis on oxides.—73-06215
**Barrau, J.** See Hassen, A.
**Barreiro, M. M.; Vicente, E. E.**
Kinetics of isothermal phase transformations in a dental porcelain.—73-16192
**Barrie, James D.** See Derderian, Garo J.
**Barriere, A. S.; Mombelli, B.; Kim, B. Y.; Raoux, S.; Garcia, A.**
$Sr_{1-x}Er_xF_{2+x}$ luminescent thin films epitaxially grown on InP(100).—73-04489
**Barriere, A. S.; Mombelli, B.; Porte, B.; Raoux, S.; Guegan, H.; Reau, M.**
Characterization of $Ca_{1-x}Er_xFe_{2+x}$ solid solution thin films grown on Si(100) substrates.—73-03123
**Barriere, A. S.; Raoux, S.; Favennec, P. N.; L'Haridon, H.; Moutonnet, D.**
Effect of the $Er^{3+}$ concentration on the luminescence of $Ca_{1-x}Er_xF_{2+x}$ thin films epitaxially grown on Si(100).—73-04292
**Barrioulet, M.** See Saada, R.
**Barrioulet, M.; Saada, R.; Ringot, E.**
Quantitative structural study of fresh cement paste by image analysis: I, Image processing.—73-00176
**Barris, Marty A.** See Chung, H. Young
**Barron, Andrew R.** See MacInnes, Andrew N.
**Barron, Andrew R.; MacInnes, Andrew N.; Gilbert, Thomas H.**
Method of coating carbon fibers with a carbide.—73-02113
**Barrow, N. J.; Brummer, G. W.; Strauss, R.**
Effects of surface heterogeneity on ion adsorption by metal oxides and by soils.—73-16468
**Barry, Christopher J.** See Beason, W. Lynn
**Barry, J. C.** See Golden, S. J.
**Barshchevskii, B. U.; Loginov, V. M.**
Broken porcelain as filter material.—73-07236
**Barson, Todd** See Docktor, Thomas
**Barsoum, M.** See Brodkin, D.
**Barsukova, M. L.** See Nabakhtiani, G. N.
**Barsukova, V. A.** See Dzhurzha, V. V.
**Bart, L.** See Oskam, G.
**Bart, Stephen F.** See Flynn, Anita M.
**Bartak, J.** See Tucek, A.
**Barteau, M. A.** See Idriss, H.
**Bartel, Ulrich; Lange, Bernd**
Process for the preparation of glass fiber optical waveguides with increased tensile strength.—73-00758
**Bartenev, G. M.** See Lomovskoi, V. A.
**Bartenlian, B.** See Olivier, J.
**Barth, H.-J.; Gur, M.; Scholz, R.**
Interim report on the development of a ceramic hot-gas fan.—73-02083
**Barth, Howard G.; Sun, Shao-Tung**
Particle size analysis.—73-08429
**Barth, K.-L.; Bohme, D.; Kamaras, K.; Keilmann, F.; Cardona, M.**
Far-ir spectroscopic ellipsometer.—73-12139
**Barth, R.; Spangenberg B.; Langheinrich, W.; Albrecht, W.; Kurz, H.; Gieres, G.**
Fabrication of superconducting $YBa_2Cu_3O_{7-\delta}$ submicron structures.—73-11761
**Barth, W.; Lile, D.**
Role of the native oxide on indium antimonide surface properties.—73-07779
**Bartha, L.** See Arato, P.
**Bartha, Peter** See Klischat, Hans-Jurgen
**Bartholomaus, T.** See Kip, D.
**Bartholomew, D.** See Schiebel, R. A.
**Bartholomew, L. C.**
Alternative blending systems in the cement industry.—73-00023; Fluidized mixing—the efficient way to combine bulk powders.—73-04922
**Bartholomew, Roger F.** See Aitken, Bruce G.
**Barthomeuf, D.** See Derewinski, Miroslav
**Barthomeuf, Denise** See Jia, Chun-Juan
**Bartl, A.** See Boden, G.
**Bartlett, A.** See Golz, John W.
**Bartlett, A.; Evans, Anthony G.**
Effect of reaction products on the fracture resistance of a metal/ceramic interface.—73-03581
**Bartlett, Andrew H.; Maschio, Roberto Dal**
Mechanical properties and microstructural development during heat treatment of a plasma-sprayed thermal barrier coating: $ZrO_2$-8 wt% $Y_2O_3$.—73-06819
**Bartlett, T.** See Hainsworth, S. V.
**Bartnitskaya, N.; Bely, M.; Jablochkov, S.; Kopyshinskii, A.; Melnik, I.; Okhrimenko, B.**
Borate glasses with the $nd^{10}$ $(n+1)$ $S^2$-shell activators.—73-14138
**Bartoli, F. J.** See Hoffman, C. A.; Meyer, J. R.
**Barton, J. D.** See Nistor, L. C.
**Barton, J. L.; Banner, D.; Caurant, D.; Pincemin, F.**
Oxidation of ferrous iron in glass at high temperatures.—73-14451
**Barton, J. L.**
Innovation in glass melting.—73-12227; 73-14412
**Barton, J.** See Wood, R. A.
**Barton, Jan**
Environmental protection in the glass industry—program of waste management.—73-17477
**Bartos, Jozsef** See Schussler, Andreas
**Bartsch, Martin** See Baufeld, Bernd
**Bartur, Meir**
Superconductor structure.—73-01743
**Bartusch, R.** See Clauss, Ulrich; Petrov, Iwailo
**Bartusch, R.; Schulle, Wolfgang**
Special process features of isostatic pressing of whiteware bodies.—73-10898
**Bartuska, Miloslav; Hulinsky, Vaclav**
Volume stability of escolaite materials corroded by basalt melt.—73-04026
**Barvinok, G. M.; Sychev, M. M.; Zakharova, T. V.**
Characteristics of glassy material production in the $SiO_2$-$P_2O_5$ system by the sol-gel method.—73-13935
**Barwise, Christopher H.** See Simon, John M.
**Barybin, V. I.** See Valiev, E. Z.
**Barykin, B. M.** See Akopov, F. A.
**Baryshev, N. S.** See Trifonova, M. M.
**Barysheva, T. P.; Golubev, G. P.; Kaufman, I. Kh.**
Effect of surface roughness on thin-film optical properties.—73-02589
**Baryshevsky, V. G.; Korzhik, M. V.; Minkov, B. I.; Smirnova, S. A.; Fyodorov, A. A.; Dorenbos, P.**
Spectroscopy and scintillation properties of cerium-doped $YAlO_3$ single crystals.—73-16598
**Bas'yas, I. P.** See Farafonov, G. A.
**Basa, Kishor K.**
Drilling method of glass bead making.—73-09780
**Basaldella, Elena I.; Bonetto, Rita; Tara, Juan C.**
Synthesis of NaY zeolite on preformed kaolinite spheres. Evolution of zeolite content and textural properties with the reaction time.—73-06092
**Basantakumar, Sharma H.; Tandon, R. P.; Mansingh, Abhai; Rup, R.**
Dielectric and piezoelectric properties of sol-gel-derived barium titanate ceramics.—73-16443
**Baselt, David R.; Baldeschwieler, John D.**
Lateral forces during atomic force microscopy of graphite in air.—73-06241
**Basford, James A.; Boeckmann, Mark D.; Ellefson, Robert E.; Filippelli, A. R.; Holkeboer, D. H.; Lieszkovszky, L.**
American Vacuum Society Recommended Practice: recommended practice for the calibration of mass spectrometers for partial pressure analysis.—73-05018
**Basham, K. D.; Chong, K. P.; Boresi, A. P.**
New method to compute size-independent fracture toughness values for brittle materials.—73-13576
**Bashir, R.** See Yen, H.
**Bashkin, I. O.; Gurov, A. F.; Malyshev, V. Yu.; Ponyatovskii, E. G.**
Decomposition of monohydride and eutectoid transformation in Ti-H (D) system.—73-13656
**Bashkin, I. O.; Malyshev, V. Yu.; Myshlyaev, M. M.**
Reversible $\gamma \rightarrow \alpha + \delta$ transformation in zirconium deuteride.—73-16296
**Bashkirov, L. A.** See Mikhnevich, V. V.
**Bashkirov, Sh. Sh.; Liberman, A. B.; Sha, Ho-Sen**
Features of cation distribution in aluminum-substituted barium hexaferrites.—73-16147
**Bashlykov, N. F.** See Babaev, Sh. T.
**Basiev, T. T.; Ismailov, K. I.; Mamedov, A. A.; Smirnov, V. A.; Sokolov, V. V.**
Luminescence of $Nd^{3+}$ ions from levels $^2K_{13/2}$+$^2G_{9/2}$+$^4G_{7/2}$ in sulfide glasses.—73-14220
**Basilica, R. P.** See Sacks, R. N.
**Baskaran, G.; Zou, Z.; Anderson, P. W.**
Resonating valence bond state and high-$T_c$ superconductivity—a mean field theory.—73-15613
**Baskaran, Suresh; Halloran, John W.**
Fibrous monolithic ceramics: III, Mechanical properties and oxidation behavior of the silicon carbide/boron nitride system.—73-09597
**Baskaran, Suresh; Nunn, Stephen D.; Halloran, John W.**
Fibrous monolithic ceramics: IV, Mechanical properties and oxidation behavior of the alumina/nickel system.—73-09598
**Basmaji, Pierre** See Grivickas, V.; Notari, A. C.
**Basmaji, Pierre; Bagnato, V. S.; Grivckas, V.; Surdotovich, G. I.; Vitlina, R.**
Determination of porous silicon film parameters by polarized light reflectance measurements.—73-15788
**Basovich, A. J.; Gapanov, S. V.; Jastrabik, L.; Jelinek, M.; Kiselev, N. A.; Kluenkov, E. B.**
Laser deposition of Y-Ba-Cu-O on $ZrO_2$-coated sapphire substrates.—73-04754
**Bass, Jay D.** See Kalinichev, A. G.; Masnik, John E.; Zha, C. S.
**Bass, M.** See Zhang, X. X.
**Bassani, F.** See Atanasov, R.
**Bassas, Josep** See Palacin, Maria Rosa
**Bassat, J. M.** See Gervais, Francois
**Basset, D.** See Matteazzi, P.
**Bassett, W. A.; Weathers, M. S.; Wu, T.-C.; Holmquist, T.**
Compressibility of SiC up to 68.4 GPa.—73-08828
**Bassi, Carlo**
Glazing an inertized bisque.—73-14658
**Bassi, Paolo** See Tartarini, Giovanni
**Bassignana, I. C.** See Springthorpe, A. J.
**Bassous, E.** See Kesan, V. P.
**Bast, Ulrich**
Thermal shock and cyclic loading of ceramic parts in stationary gas turbines.—73-05662
**Bastard, G.** See Ferreira, R.
**Bastes, J. K.** See Feng, X.
**Bastow, Timothy J.; Moodle, Alec F.; Smith, Mark E.; Whitfield, H. J.**
Characterization of titania gels by $^{17}O$ NMR and electron diffraction.—73-08573
**Bastow, Timothy J.; Smith, Mark E.; Whitfield, H. J.**
Characterization of zirconia gels by $^{17}O$ nuclear magnetic resonance.—73-12550
**Basu, C.** See Mukherjee, S.
**Basu, S. N.** See Westerheim, A. C.
**Basun, S. A.; Kaplyanskii, A. A.; Feofilov, S. P.**
Ferroelectric-phase-transition-induced pseudo-Stark splitting in spectra of $Li_2Ge_7O_{15}$:$Cr^{3+}$ crystals.—73-15264
**Basyuk, E. V.; Dmitruk, N. L.; Maeva, O. I.**
Photosensitivity of surface-barrier InP structures with microrelief interface.—73-15101
**Bat'ko, I.; Farkasovsky, P.; Flachbart, K.; Konovalova, E. S.; Paderno, Y. B.**
Low-temperature resistivity of valence fluctuation compound $SmB_6$.—73-16531
**Batail, P.** See Coulon, C.
**Batalin, B. S.; Moskalets, N. B.**
Chemical resistance of facing plates based on alkali-silicate fluorine-containing slag.—73-06889
**Batalin, B. S.; Pravina, H. A.**
Adhesive strength of glass composite materials in the contact region.—73-06993; Adhesion influence on the formation of physicomechanical properties of the glass-composite materials.—73-14131
**Batchelor, A. W.** See Swick, K. J.
**Batchelor, D.** See Ren, Xiao-Wei
**Bates, Carl H.**
Nonporous diffusion furnace components.—73-12503
**Bates, J. B.** See Dudney, N. J.; Modine, F. A.; Wachs, A. L.
**Bates, J. K.** See Ebert, W. L.
**Bates, Philip J.; Charrier, Jean-Michel**
Method for continuously coating fibers.—73-01863
**Bates, S. E.** See Axelbaum, R. L.
**Bathias, Claude** See Liu, Xi-Cong
**Batich, Christopher D.** See Toreki, William
**Batista, Jurka; Kaucic, Venceslav; Rajic, Nevenka; Stojakovic, Djordje**
Formation of CoAPSO-44.—73-08626
**Batistic, I.** See Mustre de Leon, J.
**Batke, E.; Bollweg, K.; Merkt, U.; Kohler, K.; Ganser, P.**
Temperature-induced spin reversal in *n*-GaAs.—73-01347
**Batlle, Xavier** See Sandiumenge, F.
**Batlle, Xavier; Garcia del Muro, M.; Tejada, J.; Pfeiffer, H.; Gornert, P.; Sinn, E.**
Magnetic study of M-type doped barium ferrite nanocrystalline powders.—73-07958
**Batllo, Francois** See Freund, Friedemann
**Batlogg, B.** See Cava, R. J.; Takagi, H.
**Batori, Jozsef; Zsofi, Laszlo; Sulyok, Tamas; Bacsa, Gyorgy**
Heat recuperation system in the Hollohaza Porcelain Factory [Hungary].—73-00910
**Batra, Shubneesh** See Sultan, Akif
**Batra, Shubneesh; Jeng, Nan-Seng; Sultan, Akif; Picone, K.; Bhattacharya, S.; Park, K.-H.**
Effect of epitaxial realignment on the leakage behavior of arsenic-implanted, as-deposited polycrystalline Si–on–single-crystal Si diodes.—73-04288
**Batrak, A. G.** See Anders, E. E.
**Batrakov, V. G.; Fainer, M. Sh.**
Resource-saving effect of concrete modifiers.—73-00185
**Batrakov, V. G.; Falikman, V. R.; Kaimykov, L. F.**
Plasticizer for concretes on the basis of heavy resins of pyrolysis.—73-00164
**Batsanov, S. S.**
Atomic radii of the elements.—73-01886
**Batson, P. E.** See Morar, J. F.
**Battagin, A. F.**
Influence of degree of hydration of slag on slag cements.—73-13738
**Battagin, G.** See Bertoncello, R.; Caccavale, F.
**Battaglin, G.; De Marchi, G.; Gonella, F.; Losacco, A.; Mazzoldi, P.; Miotello, A.**
Electromigration process in glasses for optoelectronic applications.—73-14371
**Battezzati, L.** See Baricco, M.
**Battigelli, Jean** See Pasquier, Michel
**Battle, P. D.; Bollen, S. K.; Gibb, T. C.; Matsuo, M.**
Crystal and magnetic structures of $Ca_2Cr_{0.5}Fe_{1.5}O_5$ at 2.1 K.—73-02174
**Battle, P. D.; Jones, C. W.; Studer, F.**
Crystal and magnetic structures of $Ca_2NdRuO_6$, $Ca_2HoRuO_6$, and $Sr_2ErRuO_6$.—73-02175
**Battut, J. P.** See Granier, W.
**Batukova, L. M.** See Aleshkin, V. Ya.; Karpovich, I. A.
**Batyukhnova, O. G.** See Ozhovan, M. I.
**Batzar, Kenneth**
Cookware coating system.—73-03681
**Baucke, F. G. K.** See Pfeiffer, T.
**Baucke, F. G. K.; Duffy, J. A.**
Redox reactions between cations of different polyvalent elements in glass melts: an optical basicity study.—73-10398
**Baucom, Kevin C.** See Doll, Gary L.
**Baud, G.** See Caperaa, C.
**Baude, P. F.; Ye, C.; Tamagawa, T.; Polla, D. L.**
Fabrication of sol-gel-derived ferroelectric $Pb_{0.865}La_{0.09}Zr_{0.65}Ti_{0.35}O_3$ optical waveguides.—73-04551
**Bauer, A. J.; Wang, J.; Aderhold, W. R.; Burte, E. P.; Ryssel, H.**
Electrical properties of thin reoxidized dual-layer oxides.—73-07315
**Bauer, A.; Cuberes, M. T.; Prietsch, M.; Kaindl, G.**
Ballistic-electron emission microscopy [BEEM] at metal/GaP(110) interfaces: electron transport and Schottky barrier heights.—73-11079
**Bauer, E.; Mundschau, M.; Swiech, W.; Telieps, W.**
Low-energy electron microscopy of semiconductor surfaces.—73-01232
**Bauer, E.**
Operational assurance and quality improvement of high-performance ceramics: II, Introduction of a system into a firm.—73-01807
**Bauer, Gunther** See Koppensteiner, E.; Springholz, G.; Trofimov, V. T.; Yokoi, Hiroyuki
**Bauer, Hans J.; Katzenmeier, Bianca; Kuntz, Matthias**
Implant material—73-12372

**Bauer, J. C.; Lauterbach, C.; Romer, D.; Emeis, N.; Hoffmann, L.; Ebbinghaus, G.**
Monolithic integration of a waveguide InGaAs/InP *pin* photodiode with a locally ion-implanted JFE7 for receiver OEIC applications.—73-15047
**Bauer, Lawrence E.**
Can you teach your old kiln new tricks.—73-08464
**Bauer, M.** See Genzel, I.
**Bauer, M.; Genzel, L.; Habermeier, H.-U.**
Energy gap distribution in a $YBa_2(Cu_{1-0.04}Fe_{0.04})_3O_7$ film using the Si reflection Fabry-Perot method.—73-08059
**Bauer, M.; Kapsa, P.; Loubet, J. L.; Ramos, S. M. M.; Canut, B.; Gea, L.**
Tribological properties of niobium ion-implanted alumina.—73-17455
**Bauer, P.; Giethmann, C.; Kraus, M.; Marek, T.; Burger, J.; Kreiselmeyer, G.**
Depth-sensitive visualization of irradiation-induced columnar defects in the layered superconductor 2H-$NbSe_2$ via scanning probe microscopy.—73-08017
**Bauer, R. K.** See Bimberg, D.
**Bauer, Ralph** See Rue, Charles V.
**Bauer, S.** See Stanzl, H.
**Bauer, S.; Berger, H.; Link, P.; Gebhardt, W.**
Raman studies of the growth mechanism of ZnSe/GaAs(001) heterostructures.—73-07761
**Bauer, T. H.**
General analytical approach toward the thermal conductivity of porous media.—73-12805
**Bauer-Mayer, S.** See Graf, D.
**Bauerecker, Sigurd; Cammenga, Heiko K.**
Process for producing fluorescent or phosphorescent pigments coated with glass.—73-03960
**Baufeld, Bernd; Baither, Dietmar; Messerschmidt, Ulrich; Bartsch, Martin; Merkel, Ingolf**
In situ study on the generation of radiation damage in cubic-zirconia in the high-voltage electron microscope.—73-03152
**Baumann, J. A.** See Yellen, S. L.
**Baumann, S.** See Loboda, M. J.
**Baumard, J. F.** See Ferrato, M.
**Baumgarte, A.; Blachnik, R.**
Phase relations in the system titanium dioxide-diniobium-zinc hexoxide.—73-02387
**Baumgartel, G.** See Schmalian, J.
**Baumvol, I. J. R.** See Soares, M. R.
**Baur, G.; Solkner, G.; Glockle, W. G.; Pfleiderer, H. J.**
Elimination of phase noise of pulsed laser diodes in electrooptic sampling systems.—73-15260
**Baur, W. H.** See Bieniok, A.
**Bausa, L. E.** See Gouyot, Y.
**Bausells, J.** See Lang, W.
**Bauser, E.** See Konuma, M.; Snoke, D. W.
**Bautsch, H.-J.; Hertel, Gunter**
Red coloration of iron aventurine glazes.—73-10890
**Baxter, D. J.; Graziani, T.; Moretto, P.; Biasini, V.**
Corrosion and mechanical degradation of silicon nitride in a gas turbine environment.—73-13467
**Bayandin, D. V.** See Safonov, V. V.
**Bayard, Michel** See Kulkarni, Sudhakar
**Bayasi, Z.; Zhou, J.**
Properties of silica fume concrete and mortar.—73-13770
**Bayer, Michael; Nagl, Iris**
Molding composition for the production of inorganic sintered products.—73-05001; 73-05002
**Baykara, T.** See Eroglu, S.
**Bayon, J. F.** See Ibrahim, H.; Xie, W. X.
**Bayoux, J. P.** See Rettel, A.
**Bayoux, J. P.; George, C. M.; Letourneux, J. P.**
Theory and practice of fume silica–aluminous cement interactions.—73-03545
**Bayukov, O. A.; Buznik, V. M.; Goncharuk, V. K.; Lukiyanchuk, G. D.; Merkulov, E. B.; Savitskii, A. F.**
Mossbauer spectroscopy of glasses based on tin fluorides.—73-14045
**Bayya, S.** See De Marco, M.
**Baz-Dolle, C.** See Stachel, D.
**Bazan, J. C.** See Montani, R. A.
**Bazanov, M. A.** See Aleksandrov, A. S.
**Bazant, Zdenek P.; Murphy, Walter P.; Xi, Yun-Ping**
Mechanism of drying creep of cement-based materials: diffusion processes and microcracking.—73-10038
**Bazarian, E. Robert; Eleazer, Prince B.; Slavejkov, Aleksandar G.**
Economics drive the conversion of glass tanks to oxy-fuel.—73-08470
**Bazarov, B. G.** See Bazarova, Zh. G.
**Bazarova, Zh. G.; Mokhosoev, M. V.; Arkhincheeva, S. I.; Tsyrenova, G. D.; Bazarov, B. G.**
Phase equilibria in systems $Tl_2WO_4$-AO-$WO_3$, $Cs_2O(Cs_2CO_3)$-AO-$WO_3$ (A=Mg, Mn, Ni, Co, Zn, Cu).—73-02377
**Bazhenov, A. V.** See Abrosimov, N. V.
**Bazhenov, A. V.; Gorbunov, A. V.; Timofeev, V. B.**
Photoinduced reflection of light in single crystal of $La_2CuO_{4+\delta}$.—73-11861
**Bazhenov, A. V.**
Fine structure of ir reflection spectra of $YBa_2Cu_3O_{6+\delta}$ single crystals.—73-08080
**Bazhenov, Yu. M.; Anosova, G. V.; Evorenko, G. I.**
Increasing efficiency of concrete by admixture of modified lignosulfonates.—73-00109
**Bazil, M. A.; Shifton, A.**
Pewabic pottery—historic and contemporary: I.—73-09736; Pewabic pottery—historic and contemporary: II.—73-09737
**Bazovkin, V. M.; Kovalevskaya, T. E.**
Surface photo-EF in MOS structures on InAs.—73-04493
**Bazylev, A. G.** See Malashkevich, G. E.
**Bazylev, A. G.; Voltovich, A. P.; Demidovich, A. A.; Kalinov, V. S.; Timoshechkin, M. I.; Shkadarevich, A. P.**
Laser performance of $Cr^{3+}$:$(Gd,Ca)_3(Ga,Mg,Zr)_2Ga_3O_{12}$.—73-08897
**Bdikin, I. K.** See Afonikova, N. S.
**Beales, Timothy P.** See Harrison, Martin R.; Hood, Christopher
**Beall, Douglas M.** See Pantano, Carlo G.
**Beall, George H.** See Aitken, Bruce G.; Quinn, Candace J.
**Beall, George H.; Monahan, Beth C.; Quinn, Candace J.**
Bioabsorbable chlorophosphate glasses and bioabsorbable glass-polymer blends made therefrom.—73-03903
**Beall, George H.; Pierson, Joseph E.**
Zinc sulfophosphate glasses.—73-14562
**Beall, George H.**
Design of glass-ceramics.—73-03782
**Beall, M. W.; Fish, J.; Shephard, M. S.; Dvorak, G. J.; Shek, K. L.; Wentorf, R.**
Computer-aided modeling tools for composite materials.—73-17469
**Beam, D. Chris** See Andrews, Mary K.; Jantzen, Carol M.
**Beam, E. A., III** See Celii, F. G.
**Beaman, Donald R.** See Hwang, C. James; Pyzik, Aleksander J.
**Bean, J. C.** See Ross, F. M.
**Bean, J. C.**
Techniques for the growth of crystalline films by molecular beam deposition.—73-06108
**Bear, John** See Shrivastava, Keshav N.
**Beard, D.** See Fitch, J. T.
**Beardsley, Brad** See Wesling, Kevin F.
**Beardsley, M. B.** See Ilavsky, J.
**Beasley, M. R.** See Ma, Zheng-Xiang
**Beason, W. Lynn; Barry, Christopher J.**
Development of a new glass thickness selection procedure.—73-13614
**Beauchamp, K. M.** See Achutharaman, V. S.
**Beaud, P.** See Bi, J. Q.
**Beaudoin, James J.** See Fu, Yan; Gu, Ping; Low, Norman M. P.; Ping, Xie; Pye, G. B.; Xie, Ping; Xu, Zhong-Zi
**Beaudoin, James J.; Ramachandran, V. S.; Feldman, Raouf F.**
Identification of hydration reactions through stresses induced by volume change: I, $C_3A$ systems.—73-00108; Identification of hydration reactions through stresses induced by volume change: II, $C_4AF$ systems.—73-03481
**Beaudoin, James J.; Ramachandran, V. S.**
New perspective on the cement hydration characteristics of cement phases.—73-10067
**Beaudoin, M.; Meunier, M.; Muschik, T.; Schwarz, R.; Arsenault, C. J.; Beaulieu, M.**
Effective interfaces and Urbach slope in a-Si:H/a-$SiN_x$:H multilayers.—73-08839
**Beauger, A.**
Physicochemical control of $BaTiO_3$ powders and incidence on the quality of ceramic capacitors.—73-10982
**Beaulieu, M.** See Beaudoin, M.
**Beaulieu, Y.** See Xu, Yao-Zhu
**Beaumont, S. P.** See Taylor, R. P.
**Beauprez, E.** See Derep, J. L.
**Beaurepaire, E.; Lewoncyuk, S.; Ringeissen, J.; Parlebas, J. C.; Uozumi, T.; Okada, K.**
Comparison between BIS and Ti *K*-XAS for $TiO_2$: experimental and theoretical study.—73-16059
**Bebenin, N. G.** See Loshkareva, N. N.
**Bechara, Rafeh; Aboukais, Antoine; Bonnelie, Jean-Pierre**
XPS study of a Cu-Al-O catalyst under $H_2$ or CO atmosphere.—73-12734
**Becher, Paul F.** See Alexander, Kathleen B.; Dauskardt, R. H.; Kim, Dae-Joon; Lin, H. T.; Wang, Xun-Li
**Becher, Paul F.; Lin, H. T.; Hwang, S. L.; Hoffmann, M. J.; Chen, I-Wei**
Influence of microstructure on the mechanical behavior of silicon nitride ceramics.—73-06233
**Becher, Paul F.; Warwick, Wilbur H.**
Factors influencing the thermal shock behavior of ceramics.—73-05565; Fracture strength-fracture resistance response and damage resistance of sintered $Al_2O_3$-$ZrO_2$ (12 mol% $CeO_2$) composites.—73-17331
**Becher, Paul F.**
Advances in the design of toughened ceramics.—73-03234
**Bechinger, C.; Oefinger, G.; Herminghaus, S.; Leiderer, P.**
Fundamental role of oxygen for the photochromic effect of $WO_3$.—73-12804
**Bechstedt, F.; Del Sole, R.; Cappellini, G.; Reining, L.**
Efficient method for calculating quasi-particle energies in semiconductors.—73-04298
**Becia, P.; Motakef, S.; Koehler, T.**
Long-wavelength HgMnTe avalanche photodiodes.—73-07640
**Beck, Gerard; Gobin, P. F.**
Research on intelligent materials developed in relationship with the National Center for Scientific Research (CNRS), France.—73-06591
**Beck, Jeff** See Melendez, Jose L.
**Beck, Kerstin; Pfeifer, Harry; Staudte, Brigitte**
Diffuse reflectance FTIR studies of H adsorbed on Na zeolites.—73-13387
**Beck, R. B.; Brozek, T.; Ruzyllo, J.; Houssain, S. D.; Tressler, Richard E.**
Effect of carbon on thermal oxidation of silicon and electrical properties of $SiO_2$-Si structures.—73-05545
**Beck, S. E.** See Collins, S. M.
**Beck, Uwe; Reiners, Georg; Urban, I.**
Evaluation of optical properties of decorative coatings by spectroscopic ellipsometry.—73-12800
**Beckendorf, Otto**
Total quality management and world-class quality.—73-15757
**Becker, E.; Dorn, G.; Stammberger, K.**
Gear units for the cement industry—experience, developments, and trends.—73-12030
**Becker, F.-P.** See Maier, P.
**Becker, H.-J.** See Lentes, F.-T.
**Becker, K. D.; Vom Wurmb, V.; Litterst, F. J.**
Disorder and diffusional motion of cations in magnetite, $Fe_{3-\delta}O_4$, studied by Mossbauer spectroscopy at high temperatures.—73-12573
**Becker, P. C.; Lee, D.; Johnson, A. M.; Prosser, A. G.; Feldman, R. D.; Austin, R. F.**
Femtosecond dynamics of resonantly excited RT excitons in II-III CdZnTe/ZnTe quantum wells.—73-07527
**Becker, Philippe C.** See Kim, Hong-Koo
**Becker, Winfried** See Lang, Christoph
**Beckers, Lucas J. A. M.; Cillessen, Johannes F. M.; Ouwerkerk, Martin**
Potassium-lithium-niobate crystals and the manufacture thereof.—73-15951
**Beckloff, B. N.** See Lackey, W. J.
**Becla, P.** See Shih, O. W.; Terry, I.
**Becla, P.; Witt, A. F.; Dewey, C. F.**
Nonlinear optical effects in rotationally twinned CdTe and CdMnTe crystals.—73-07696
**Bedair, Salah M.** See Dip, A.; Gong, J. R; He, Y.
**Bedair, Salah M.**
Atomic layer epitaxy for heterostructures.—73-07386
**Beddoes, J.; Au, P.; Van de Mosselaer, L.; Zhao, L.; Wallace, W.**
Effect of heat treatment on the microstructure of near-γ-TiAl powder alloys.—73-06773
**Bedel, E.** See Goiran, M.
**Bedford, G.**
Rapid cool forehearth.—73-01826; Universal arch blocks for adaptable forehearths.—73-10778
**Bednarska, Lilia; Radzieciak, Radeusz**
Industrial tests of belite clinker production and evaluation of properties of cements obtained with this clinker.—73-10000
**Bednorz, G.** See Williams, T.
**Bednorz, J. G.** See Maletta, H.
**Bednorz, J. G.; Mannhart, Jochen D.; Mueller, Carl A.**
Method for making a superconducting field effect transistor with inverted MISFET structure.—73-11964
**Bednyi, B. I.; Baidus, N. V.; Belich, T. U.; Karpovich, I. A.**
Influence of sulfiding on the state of the surface and photoelectric properties of InP and GaAs.—73-01208
**Bednyi, B. I.; Baidus, N. V.**
Effect of the recombination in the space charge region of the illuminance characteristics of the surface photo-emf of GaAs and InP.—73-11168
**Bednyi, B. I.; Suslov, L. A.; Baidus, N. V.; Karpovich, I. A.**
Electron state of a surface in InP modified by treatment in sulfur vapor.—73-07494; 73-01157
**Bedo, Maria** See Muntean, Marcela
**Beecroft, Laura L.** See Knudsen, Arne K.
**Beeghly, Craig W.; Ahuja, Deepak P.; Mehrotra, Pankaj K.; Niebauer, Kenneth L.**
Ceramic cutting tool with chip control.—73-15980
**Beele, Wolfram** See Knotek, Otto
**Beelen, Theo P. M.** See Wijnen, Peter W. J. G.
**Beemink, Kevin J.** See Coleman, James J.
**Beer, H.** See Schops, W.
**Beer, Kenneth D.** See Klett, Michael W.
**Beerens, J.** See Aktik, C.
**Beerkens, I. R.**
Dutch goals for glass recycling.—73-10519
**Beerkens, Rudd G. C.** See Faber, Anne J.; Kalnitsky, A.; Wondergem-de Best, A.
**Beerkens, Rudd G. C.; Muysenberg, Hendrikus P. H.**
Comparative study on energy-saving technologies for glass furnaces.—73-03825
**Beerkens, Rudd G. C.; Van der Heijden, T. C. M.; Muysenberg, Hendrikus P. H.**
Model study on degassing of sulfate-refined glass melts.—73-14432
**Beese, W.; Hose, H.**
[Cement] raw meal production with twin roll presses—a report on two years of operation experience.—73-09843
**Beevers, C. J.** See Allen, R. F.; Barney, C.; Ibbotson, A. R.
**Beger, V. N.; Sechkarev, A. V.; Zemskii, I.**
Luminescence spectra of porous silicate glass excited by laser radiation in the transparency range of $SiO_2$.—73-01234; Fluorescence of silicate fine-pored glasses activated by fractal clusters of organic-dye molecules.—73-14189
**Begg, B. D.; Vance, Eric R.; Cassidy, David J.; Nowotny, J.; Blairs, S.**
Particle size effect on the room temperature structure of barium titanate.—73-12646
**Beghi, M.** See Palladino, M.
**Begley, E. F.; Lindsay, Curtis G.**
Multimedia tutorial on phase equilibria diagrams.—73-06581
**Beguchev, V. P.; Mechetin, A. M.; Kondrat'eva, O. G.; Neustroev, L. N.**
Dark current and noise factor of "staircase" avalanche photodiodes.—73-01118
**Beguin, F.** See Seron, A.
**Behfar-Rad, A.; Wong, S. S.**
Monolithic AlGaAs-GaAs single quantum-well ridge lasers fabricated with dry-etched facets and ridges.—73-01253
**Behl, Sanjay** See Moudgil, Brij M.
**Behner, H.**
Reoxidation of silicon substrates during the sputter deposition of oxide thin films.—73-06020
**Behrendt, D. R.** See Singh, M.
**Behrens, Gesa** See Kaliszewski, Mary S.
**Behrens, R. K.** See Zeppenfeld, K.
**Behzadi, Amrollah** See Saasen, Arild
**Beie, H. J.** See Schwab, R. G.
**Beier, T.** See Kerschner, M.
**Beier, W.** See Wellbrock, U.
**Beier, W.; Arfsten, N. J.; Wurz, U.**
Structural evolution of sol-gel solutions and thin films by means of X-ray diffraction methods.—73-14092
**Beigang, R.** See Nebel, A.

**Beigh, S.** See Raina, U.
**Beilharz, Rebecca L.**
Tile applications in public buildings.—73-07276
**Beille, J.** See Laborde, O.; Rotger, A.
**Beisswenger, Siegfried** See Beister, Gunter; Kukla, Reiner
**Beister, Gunter; Beisswenger, Siegfried; Brauer, Gunter; Dietrich, Eckhard; Kukla, Reiner; Szczyrbowski, Joachim**
Advanced layer systems and coating techniques for large-area glass coatings by means of high-rate sputtering.—73-07106
**Bekka, A.** See Nicolopoulos, S.
**Bekker, H. G.** See Wijers, C. M. J.
**Bekki, Katsutoshi; Sugimoto, Jun**
Insert for identifying an implantable ceramic joint head.—73-02045
**Bel'maz, N. S.** See Nemets, I. I.
**Bel'skii, N. K.** See Ezerskaya, N. A.
**Bel'tyukova, S. V.; Egorova, A. V.; Kravchenko, T. B.**
Luminescent determination of Tm in lanthanide oxides.—73-02634
**Bel'yaninov, Yu. N.**
Correcting for nonlinearity in thermal aspects of electrical glass melting.—73-00604
**Belcher, Richard W.** See Schrantz, Gregory A.
**Beldi, N.** See Kechouane, M.
**Beldon, H. S.** See Lane, D. W.
**Belich, T. U.** See Bednyi, B. I.
**Belik, P. I.** See Girshtel, G. B.
**Belikov, A. P.** See Aksenov, V. S.
**Belitskus, David**
Fiber and Whisker Reinforced Ceramics for Structural Applications.—73-13654
**Belitsky, V. I.** See Sapega, V. F.
**Belkin, S. Yu.** See Baranov, A. N.
**Belkind, A.** See Koss, V. A.
**Belkind, A.; Laird, R.; Orban, Z.; Rafalko, P. W.**
Serial cosputtering of mixed Al/Zr and $Al_2O_3/ZrO_2$ films.—73-10274
**Belkind, A.**
Cosputtering and serial cosputtering using cylindrical rotatable magnetrons.—73-09051
**Bell, A. J.** See Iddles, D. M.
**Bell, A. T.** See Ginter, D. M.
**Bell, Andrew** See Weiss, Erelin
**Bell, B. C.; Glocker, D. A.**
In situ measurements of film stress in AlN sputtered onto moving substrates.—73-01906
**Bell, D. A.**
Thermomechanical behavior of refractory linings.—73-04024
**Bell, G. M. M.; Bensted, John; Glasser, Fredrick P.**
Instrumental investigations of hydration of Class J oil well cement.—73-06679
**Bell, J. M.** See Anast, M.
**Bell, James A. E.; De Barbadillo, John J.; Smith, Gaylord D.; Cushine, Kirt K.**
Gas turbine cooling.—73-10312
**Bell, Nelson** See Nunn, Stephen D.
**Bell, R. G.; Jackson, R. A.; Catlow, C. Richard A.**
Lowenstein's rule in zeolite A: a computational study.—73-12624
**Bell, T. J.** See Anast, M.; Savvides, N.
**Bell, T. J.; Field, J. S.; Swain, Michael V.**
Elastic-plastic characterization of thin films with spherical indentation.—73-13522
**Bell, T.** See Sun, Y.
**Bellagraa, L.** See Banfill, P. F. G.
**Bellani, V.** See Coffa, S.
**Bellessa, G.** See Vernier, N.
**Bello, I.** See Chang, W. H.; Williston, L. R.
**Bello, J. M.** See Lopez, V.
**Belloc, Albert** See Larrard, Francois
**Bellosi, A.** See Graziani, T.; Sglavo, V. M.
**Bellosi, A.; Graziani, T.; Guicciardi, Stefano; Tampieri, Anna**
Characteristics of $TiB_2$ ceramics.—73-02742
**Bellouard, C.** See Mirebeau, I.
**Bellussi, Giuseppe** See Millini, Roberto
**Bellussi, Giuseppe; Giusti, Aldo; Esposito, Antonio; Buonomo, Franco**
Synthetic, crystalline, porous material containing silicon oxide, titanium oxide, and aluminum oxide.—73-02071
**Belnap, J. Daniel** See Tsai, Jing-Fong
**Belogorokhov, A. I.**
Behavior of the absorption coefficient due to valence band transitions in CdTe in the temperature range of 5–400 K.—73-14784
**Belokeitseva, G. M.** See Solov'ev, S. A.
**Belokon, S. A.; Vereshchagina, L. N.; Ivanchik, I. I.; Ryabova, L. I.; Khokhlov, D. R.**
Nature of changes in the properties of PbTe:Ga due to changes in the degree of doping.—73-07687
**Belokoneva, E. L.** See Genkina, E. A.
**Belokoneva, E. L.; Mill, B. V.**
Crystal structure of α-TlSbOGeO$_4$—high-temperature modification of KTiOPO$_4$.—73-12560
**Belokoneva, E. L.; Slovokhotova, O. L.; Antipin, M. Yu.**
Features of the crystal structure of KTiOPO$_4$ and KFeFPO$_4$ at 110 K.—73-05399
**Belokoneva, E. L.; Smirnitskaya, Yu. Ya.; Tsirel'son, V. G.**
Distribution of electron density in the dioptase $Cu_6Si_6O_{18}{\cdot}6H_2O$ according to the results of precision X-ray diffraction investigation.—73-16112
**Belokoneva, E. L.; Sokolova, N. V.; Dorokhova, G. I.**
Crystal structure of natural Na,Ca scapolite—intermediate member of the marialite-meyonite family.—73-02202
**Belokoneva, E. L.; Tsirel'son, V. G.**
Distribution of electron density in magnetite $Fe_3O_4$ as a result of a precision X-ray diffraction investigation.—73-11651
**Belokoneva, E.** See Babonas, G.-J.
**Belokrys, G. A.** See Shevtsov, A. L.
**Belonogov, A. G.** See Chetkin, M. V.
**Belopol'skaya, T. V.; Tsereteli, G. I.; Filatov, S. K.; Semin, V. V.; Baikov, Yu. M.; Smirnova, O. I.**
Relaxation of the HTSC $YBa_2Cu_3O_x$ ceramics after heat treatment in hydrogen.—73-15610
**Belostotskii, V. I.; Solinov, V. F.**
Spectroscopic investigation of structural reorganization of surface layers of quartz glass under the action of ion implantation.—73-00400
**Belostotskii, V. I.; Solinov, V. F.**
Spectroscopic studies of the structural reorganization of the surface layer of vitreous silica after ion implantation.—73-00402
**Belot, V.; Corriu, R.; Leclercq, D.**
Preparation of oxynitride silicon glasses. Nitridation of functional silica xerogels.—73-10583
**Belotelov, S. V.** See Andrukhiv, M. G.; Virt, I. S.
**Belouet, Christian** See Baniel, Pascal
**Belouet, Christian**
Method of manufacturing a component of the tape or filament kind out of a material based on a superconducting oxide having a high critical temperature, and a component obtained thereby.—73-11972
**Belousov, I. I.; Gritsenko, V. A.; Efimov, V. M.**
Electronic structure and conductivity of $SiO_2$ layers obtained at 100°C.—73-05558
**Belousov, M. V.; Chudnovskii, F. A.; Davydov, V. Yu.; Elkin, B. S.; Shokhor, S. L.; Velichko, V. Y.**
Raman scattering and resistivity measurements for ion-irradiated $YBa_2Cu_3O_7$ epitaxial films.—73-01643
**Belousov, M. V.; Ignat'ev, I. V.; Orekhova, N. V.; Davydov, V. Yu.**
Effect of disorder in oxygen sublattice on Raman spectra of $YBa_2Cu_3O_x$ crystals. Experiment and calculations.—73-15425
**Belousov, O. K.; Kovneristyi, Yu. K.; Osipov, K. A.**
Effect of Hf, Nb, Ta, and Zr nitrides on $T_c$ of some high-temperature superconducting systems.—73-01529
**Belousov, V. V.; Ananichev, V. A.; Kovalgin, A. Yu.**
Vitrification and structure of glasses of the $GeSe_2$-$GeBr_4$ system.—73-00424
**Belousov, Yu. L.; Akulova, M. V.**
Estimate of the temperature dependence of the viscosity of vitreous melts of the system $R_2O$-$SiO_2$ and RO-$SiO_2$.—73-14376
**Belousov, Yu. L.; Firsov, V. A.; Shutov, A. I.**
Temperature dependence of the modulus of elasticity of industrial glasses.—73-07084
**Belousov, Yu. L.**
Effect of annealing of vials on glass-dust contamination of medical preparations.—73-07123
**Belousova, G. V.** See Rabukhin, A. I.
**Belsick, J. R.; Krupanidhi, S. B.**
Electron cyclotron resonance plasma-assisted radio-frequency-sputtered strontium titanate thin films.—73-13043
**Belsue, M.** See Gardziella, A.
**Belton, David N.; Schmieg, Steven J.**
Low-temperature oxidation and reduction of ceria particles on Rh(111).—73-06816
**Beltram, T.; Kosec, M.; Stavber, S.**
Reactions taking place during the sol-gel processing of PLZT.—73-06014
**Beltz, G. E.; Wang, J.-S.**
Crack direction effects along copper/sapphire interfaces.—73-13814
**Beltz, Kenneth A.**
Heat-resistant hermetic packages for electronic components.—73-01053
**Belu, A. M.** See Venkatesan, Vasudev
**Belushin, A. V.; Tomkinson, J.; Shuvalov, L. A.; Fedosyuk, R. M.**
First observation of the increase in atomic mean square displacements upon glass formation: inelastic neutron scattering study of $K_{1-x}(NH_4)_xH_2PO_4$ mixed crystals.—73-00342
**Bely, M.** See Bartnitskaya, N.
**Belyaev, A. P.; Rubets, V. P.; Kukushkin, S. A.**
Specific features of nucleation and growth of solid solution $(Zn_{1-x}Cd_xTe)_{1-y}(In_2Te_3)_y$ films.—73-05483
**Belyaev, A. P.; Rubets, V. P.; Toshkhodzhaev, Kh. A.; Kalinkin, I. P.**
Injection-contact phenomena in a heterostructure made of disordered ZnSe.—73-07609
**Belyaev, A. P.; Rubets, V. P.; Toshkhodzhaev, Kh. A.**
Current transport processes in an $In_2O_3$-ZnSe-In heterostructure with a submicron ZnSe layer.—73-01117
**Belyaev, S. V.** See Artamonov, V. V.
**Belyaeva, A. G.** See Pankova, N. A.
**Belyaeva, A. I.; Vojtsenya, S. V.; Yuriyev, V. P.; Obolenskii, M. A.; Bondarenko, A. V.**
Twin boundaries' role in superconducting properties' formation of single-crystal $YBa_2Cu_3O_{7-x}$.—73-04823
**Belyaeva, O. Yu.** See Zarembo, L. K.
**Belyakov, A. V.** See Tarasovskii, V. P.
**Belyakov, S. V.** See Belyakova, E. D.
**Belyakova, E. D.; Belyakov, S. V.; Berman, L. S.; Gorelenok, A. T.; Karimov, I. N.; Karzhavin, R. V.**
Features of plasma-grown native oxides on indium phosphide.—73-04102; Influence of hydrogen plasma treatment upon native oxides plasma grown on InP.—73-04117
**Belyakova, L. A.** See Varvarin, A. M.
**Belyakova, L. A.; Varvarin, A. M.; Sidorchuk, V. V.; Simurov, A. V.; Tertykh, V. A.**
Interaction of 1-olefins with silica surface.—73-17150
**Belyankina, N. B.** See Arbuzov, V. I.
**Belyi, M. U.; Zelenskii, S. E.; Kopyshinskii, A.**
Effect of uv irradiation on luminescence of sodium borate glasses activated by indium.—73-00468
**Belyi, Ya. I.; Koleda, V. V.; Suistun, V. M.**
Liquid-phase sintering of a silicon-nitride-based ceramic.—73-02886
**Belykh, L. I.** See Vanchikova, E. V.
**Belyustin, A. A.** See Bagandova, E. D.
**Bemelmans, C.** See Dattilo, M.
**Ben Taarit, Y.** See Tuel, A.
**Ben'kov, V. N.; Sergeeva, E. S.**
Influence of temperature and time on stresses in congealed concrete under thermal cycling.—73-00124
**Ben-Shalom, A.; Kaplan, L.; Boxmann, R. L.; Goldsmith, S.; Nathan, M.**
$SnO_2$ transparent conductor films produced by filtered vacuum arc deposition.—73-13276
**Benabbas, A.; Borel, M. M.; Grandin, A.; Chardon, J.; Leclaire, A.; Raveau, B.**
Niobium phosphate bronze $\beta$-$K_2Na_{2-x}Nb_8P_8O_{34}$, second form of the first member of the series $(K_3Nb_6P_4O_{26})_nKNb_2PO_8$.—73-02358
**Benabbas, A.; Borel, M. M.; Grandin, A.; Leclaire, A.; Raveau, B.**
$Na_{2+x}Nb_8P_4O_{26}$: a novel niobium phosphate bronze isotopic of the $m$=3 member of the $MPTB_P$ family.—73-02340; Niobium phosphate bronze closely related to the $Ba_3Nb_6Si_4O_{26}$ structure: $Na_6Nb_8P_8O_{35}$.—73-02359
**Benaggoun, L.** See Banfill, P. F. G.
**Benaissa, Abdelatif; Morlier, Pierre; Viguier, Claude**
Microstructure of sand concrete.—73-03500
**Benaissa, K.; Ashrit, P. V.; Bader, G.; Girouard, F. E.; Truong, V.-V.**
Electrical and optical properties of $LiNbO_3$.—73-15259
**Benander, Robert E.; Dyer, Paul N.; Holzl, Robert A.; Magnotta, Vincent L.; Tilley, Benjamin H.**
Oxidation-resistant carbon and method for making [the] same.—73-05323
**Benbow, John J.; Blackburn, S.; Lawson, T. A.; Oxley, E. W.; Bridgwater, John**
Causes and prevention of defects during ceramic forming.—73-02734
**Benbow, John J.; Bridgwater, John**
Paste Flow and Extrusion (Oxford Series on Advanced Manufacturing, Vol. 10).—73-17534
**Bendavid, A.; Martin, P. J.; Netterfield, R. P.; Sloggett, G. J.; Kinder, T. J.; Andrikidis, C.**
Deposition of niobium, NbN, and $Nb_2O_5$ films by filtered arc evaporation.—73-02768
**Bendeliani, N. A.** See Gladkaya, I. S.; Otroshchenko, L. P.
**Bender, A.; Gerber, T.; Albrecht, H.; Himmel, B.**
X-ray reflectivity study of rf-sputtered thin $SiO_2$ films.—73-07103
**Bender, Barry A.** See Jessen, Todd L.; Nazeri, Azar
**Bender, Barry A.; Rayne, Roy J.; Jessen, Todd L.**
Processing, microstructure, and mechanical properties of zirconium phosphate/mullite whisker composites.—73-16953
**Bender, D.** See Markiewicz, D. J.
**Bender, Willi**
Large scale mixing—according to the mixing bed technique.—73-12040
**Benderskaya, L. P.; Voloshinovskii, A. S.; Novikova, T. P.; Pidzyrailo, N. S.; Pashchuk, I. P.**
Luminescence of yttrium- and gadolinium-doped lanthanum cerium terbium phosphate.—73-08908
**Bendovskii, E. B.; Karnaukhov, B. G.; Parkhaev, B. V.**
Grain-size composition of mullite silica fibers.—73-03149; Granulometric composition of mullite-silica fibers.—73-01786
**Bendovskii, E. S.; Mosin, Yu. M.**
Influence of shaping method on the strength of ceramics.—73-09177
**Bene, R. W.** See Nam, H. G.
**Benedetti, A.** See Albertini, G.
**Benedetto, Joseph M.; Moore, Randall A.; McLean, F. Barry**
Fast decay component of the remanent polarization in thin-film PZT capacitors.—73-11573
**Benedict, K.** See King, P. J.
**Benenati, J. A.** See Acocella, J.
**Benes, L.** See Lostak, P.
**Benet, S.** See Chehouani, H.
**Benfield, Charles W.** See Snaper, Alvin A.
**Bengisu, M.** See Inal, O. T.
**Bengtsson, Stefan** See Kim, A. S.
**Bengtsson, Stefan**
Semiconductor wafer bonding: a review of interfacial properties and applications.—73-15159
**Benguigui, L.; Weil, R.; Muranevich, E.; Chack, A.; Fredj, E.; Zunger, Alex**
Ferroelectric properties of $Cd_{1-x}Zn_xTe$ solid solutions.—73-07889
**Benhamada, L.; Grandin, A.; Borel, M. M.; Leclaire, A.; Raveau, B.**
Mixed valence vanadium phosphate with a tunnel structure: $Rb_6V_6P_6O_{31}$.—73-02330; New vanadium(III) potassium phosphate with a cage structure: $K_6V_2P_4O_{16}$.—73-02356
**Benhenda, S.** See Hultma□, L.
**Benier, G.; Cristol, B.**
Mathematical modeling of an alumina hydrate grinding station.—73-01796
**Benino, Y.; Soga, Naohiro; Hirao, Kazuyuki**
Structure and vibrational states of [molecular dynamics] MD-simulated silica glass.—73-14104
**Benitah, L.** See Dancygier, M.
**Benitez, Adrian** See Agudo, Antonio Lopez
**Benjaballah, S.** See Lebullenger, R.
**Benke, Laszlo** See Leweringhaus, Manfred
**Benker, Werner; Schmidt, Juregen**
Process for producing moldings from silicon-infiltrated silicon carbide.—73-16013
**Benkhelifa, F.; Ashrit, P. V.; Bader, G.; Girouard, F. E.; Truong, V.-V.**
Electrical and optical properties of thermally evaporated

$LiBO_2$ films.—73-12784; Near-room-temperature deposited indium tin oxide films as transparent conductors and counterelectrodes in electrochromic systems.—73-14720

**Benmokrane, Brahim** See Baalbaki, Walid

**Bennahmias, M.; Radousky, H. B.; Goodwin, T. J.; Shelton, R. N.**
Superconductivity and magnetism in niobium-doped $YBa_2Cu_3O_7$-related high-$T_c$ ceramics.—73-11918

**Bennemann, K. H.** See Schmalian, J.

**Bennerova, Lenka** See Skrovankova, Dana

**Bennert, D. M.** See Compton, K. L.

**Bennert, D. M.; Overcamp, T. J.; Sargent, T. N., Jr.; Resce, J. L.; Bickford, Dennis F.**
Pilot-scale vitrification laboratory for treatability studies on hazardous and mixed wastes.—73-09739

**Bennett, D. G.** See Atkins, M.

**Bennett, J. M.; Kirchner, R. M.**
Structure of calcined $AlPO_4$-31: a new framework topology containing one-dimensional 12-ring pores.—73-05501

**Bennett, J. P.** See Hoyer, J. L.

**Bennett, J.; Dagata, J. A.**
Time-of-flight secondary ion mass spectrometry study of $P_2S_5/(NH_4)_2S$-treated and ultraviolet/ozone-treated GaAs.—73-15212

**Bennett, Jean M.**
Precision metrology for studying thin films and surfaces.—73-13440

**Bennett, K. W.** See Brody, P. S.

**Bennett, L. H.** See McMichael, R. D.; Shull, R. D.

**Bennett, Randy L.; Powers, Dale R.**
Method for coating optical fibers.—73-03942

**Bennett, Terry L.** See Rose, Malcolm F., Jr.

**Bennewart, W.** See Bier, L.

**Benninghoven, A.** See Schroder, F.

**Bennouna, A.; Laaziz, Y.; Idrissi, M. A.**
Influence of thickness and index inhomogeneities on the transmission of semiconductor thin films.—73-07942

**Benoit, A.** See Mailly, D.

**Benoit, W.** See D'Anna, G.

**Benouis, C. E.** See Akani, M.

**Bens, Petr** See Kolar, Petr

**Bensaada, A.; Cochrane, R. W.; Masut, R. A.**
Growth efficiency and distribution coefficient of GaInP-InP epilayers and heterostructures.—73-07549

**Bensaoula, A. H.** See Freundlich, A.

**Bensaoula, A. H.; Rossignol, V.; Freundlich, A.**
Chemical beam epitaxy of $In_xAs_{1-x}P$/InP strained single- and multiquantum well structures.—73-11108

**Bensch, W.; Worner, E.; Hug, P.**
Electronic structure of the channel compound $TlCr_3Se_8$: an XPS study.—73-05393

**Bensebaa, Farid; Hankiewicz, Janusz; Kevan, Larry**
Low-frequency and low-magnetic-field effects on the alternating current volume susceptibility of cuprate superconductors.—73-11817

**Bensitel, Mohammed** See Waqif, Mohamed

**Benson, J. David; Dhar, N. K.; Martinka, M.; Boyd, P. R.; Dinan, J. H.; Benz, R. G**
Selected-area epitaxy of CdTe.—73-07790

**Benson, T. M.; Kendall, P. C.**
Equipartition method for the analyses of two nonidentical closely separated rib waveguides.—73-14893

**Bensted, John** See Bell, G. M. M.

**Bensted, John; Callaghan, Ian C.; Lepre, Anne**
Comparative study of the efficiency of various borate compounds as set-retarders of Class G oilwell cement.—73-00044

**Bensted, John**
API Class A and Class B oil well cements.—73-03435; Microfine cements.—73-03498; Simple retarder response test for oil well cements at high temperatures.—73-13778; Special oil well cements.—73-03538; Use of ferrophosphorus [FP] as a heavyweight additive for API oil well cements.—73-06731

**Benton, J. L.; Eaglesham, D. J.; Almonte, M.; Citrin, P. H.; Marcus, M. A.; Adler, D. L.**
Correlation of electrical, structural, and optical properties of erbium in silicon.—73-04277

**Bentson, Larry D.; Price, Robert J.; Purdy, Mark J.; Stover, Edward R.**
Moisture- and oxidation-resistant carbon/carbon composites.—73-12498

**Bentur, Arnon** See Goldman, A.; Stav, E.

**Bentur, Arnon; Cohen, Menashi D.**
Microstructure and properties of expansive cement mortar with silica fume.—73-10051

**Bentz, Dale P.** See Garboczi, Edward J.; Lewis, Jennifer A.; Skamser, Daniel J.

**Bentz, Joseph C.; Carroll, John T., III; Shinosawa, Katsuhiro; Genter, David P.**
Mechanically retained wear-resistant ceramic pad.—73-10321

**Benvenutti, Edison V.; Gushikem, Yoshitaka; Davanzo, Celso U.; Decastro, S. C.; Torriani, I. L.**
Antimony(V) oxide grafted onto a silica gel surface: acidic properties and thermal stability.—73-05533

**Benyattou, T.** See Souifi, A.

**Benyattou, T.; Seghier, D.; Bremond, G.; Moneger, S.; Kalboussi, A.; Marrakchi, G.**
Electrical and optical properties of Yb-, Er-doped GaAs.—73-04302

**Benz, K. W.** See Eiche, C.

**Benz, R. G** See Benson, J. David; Rajavel, D.

**Benz, R. G.; Wagner, B. K.; Conte, A.; Summers, C. J.**
CdTe and HgTe surface growth kinetics for molecular and metallorganic molecular beam epitaxy.—73-11093

**Benzaquen, R.** See Roth, A. P.

**Benzohra, M.** See Akani, M.

**Beppu, Henry; Kusuhara, Toshi; Nomura, Aki**
Ceramic glass integrated circuit package with integral ground and power planes.—73-04191

**Beppu, Kiyoshi** See Mizoguchi, Kenji

**Ber, B. Ya.; Bystrov, S. D.; Zushinskii, D. A.; Kornyakova, O. V.; Tuan, L.; Novikov, S. V.**
Feasibility of formation of $In_{0.52}Al_{0.48}As$ films isoperiodic with the InP substrate by LPE at low temperature (≈650°C).—73-11212

**Bera, Japes**
Structure analysis of ß´´-alumina in syntaxy with ß-alumina by two-stage powder XRD.—73-08756

**Bera, M.** See De, S. S.

**Beran, Anton** See Gutzov, Stoyan

**Beranek, Frantisek** See Fanderlik, Ivan

**Beranek, Michal** See Hanykyr, Vladimir

**Beranek, Petr**
Atmosphere protection in the glass industry and its relation to new legislation.—73-06558

**Berard, M. F.** See No, K.

**Berastegui, Pedro** See Litvinchuk, A. P.

**Berastegui, Pedro; Kakihana, Masato; Yoshimura, Masahiro; Mazaki, Hiromasa; Yasuoka, Hiroshi; Johansson, Lars-Gunnar**
Polymerized complex synthesis of a pure 93-K $Y_2Ba_4Cu_7O_{15-\delta}$ superconductor without the need of high oxygen pressure and additive catalysts.—73-01631

**Berat, P.** See Bandyopadhyay, S. K.

**Beratan, Howard R.** See Douglas, Monte A.

**Berbenni, V.** See Marini, A.

**Berbenni, V.; Massarotti, V.; Capsoni, D.; Riccardi, R.; Marini, A.; Antolini, E.**
Structural and microstructural study of the formation of the solid solution $Li_xNi_{1-x}O$.—73-06286

**Berbezier, I.** See Souifi, A.

**Bercha, A. I.** See Bobiitskii, Ya. V.

**Bercha, A. I.; Korbutyak, D. V.; Kryuchenko, Yu. V.**
Optical amplification in quantum superlattices $GaAs/Al_xGa_{1-x}As$ [x=0.35].—73-15068

**Berdan, Clarke, II** See Schelhorn, Jean E.

**Berding, M. A.; Van Schilfgaarde, M.; Sher, A.**
Defect equilibrium in HgTe.—73-07436; $Hg_{0.8}Cd_{0.2}Te$ native defects: densities and dopant properties.—73-13352

**Berdinskikh, T. G.** See Torchinskaya, T. V.

**Beregulin, E. V.** See Andrianov, A. V.

**Berek, H. E.; Jensen, E. M.**
Electric field strength/power density and temperature measurements in an electromagnetic field.—73-05043

**Berenshtein, P. I.; Il'ina, V. P.**
Frit making (frit melting) during inclined flow of the charge.—73-00632; Frit melting in a moving charge along a ramp.—73-00633

**Beresnevich, L. A.** See Afonina, G. A.

**Beretka, Julius; De Vito, B.; Santoro, L.; Sherman, N.; Valenti, G. L.**
Hydraulic behavior of calcium sulfoaluminate-based cements derived from industrial process wastes.—73-13731

**Beretka, Julius; Santoro, L.; Sherman, N.**
Synthesis and properties of low-energy cements based on $C_4A_3\bar{S}$ [tetracalcium trialuminate sulfate].—73-13785

**Berezhinskii, L. I.; Klimenko, V. A.; Korotkov, P. A.; Lisitsa, M. P.**
Overdamped lattice vibration of silicon carbide.—73-02366

**Berezin, A. G.** See Balbashov, A. M.

**Berezin, A. V.** See Chernik, I. A.; Nemov, S. A.; Ravich, Yu. I.

**Berezin, A. V.; Zhitinskaya, M. K.; Nemov, S. A.; Chernik, I. A.**
Impurity states of InGeTe.—73-01196

**Berezkin, V. G.; Sorokina, E. Yu.**
Molecular sieve surface-layer adsorbents for gas chromatography—review.—73-12166

**Berezkina, L. G.; Sarycheva, E. A.; Mel'nikova, S. V.; Kuznetsov, A. A.**
$Ca(H_2PO_4)_2{\cdot}H_2O$ dehydration under equilibrium conditions.—73-16039

**Berezkina, L. G.; Sarycheva, E. A.; Sukhodolova, V. I.; Kuznetsov, A. A.**
Kinetics of $Ca(H_2PO_4)_2{\cdot}H_2O$ thermal dissociation.—73-16191

**Bereznyak, E. P.** See Shevyakova, E. P.

**Berg, Gunnar** See Grau, Peter

**Berg, Jack** See Hindman, Gregory

**Berg, S.** See Bardos, L.; Carlsson, P.

**Berge, B.** See Dolino, Gerard; Vallade, M.

**Bergemont, Albert M.** See Yoon, Eui-Sik

**Bergen, George J.** See Harris, Robert

**Berger, A.**
Prolate silver particles in glass surfaces.—73-14482

**Berger, G.** See Ravaglioli, A.; Steinborn, G.

**Berger, H.** See Almeras, P.; Bauer, S.; Tang, H.

**Berger, Iris** See Palzer, Simone

**Berger, Iris**
Localized behavior of metallic contamination in fine ceramic silicate bodies.—73-01795; Microprocesses during formation of glaze layers.—73-10868

**Berger, M. H.; Bunsell, A. R.**
Thin foil preparation of small-diameter ceramic or glass fibers for observation by TEM.—73-08451

**Berger, Paul R.; Chu, S. N. G.; Logan, R. A.**
Substrate orientation effects on dopant incorporation in InP grown by metallorganic chemical vapor deposition.—73-01331

**Berger, R.** See Eriksson, L.; Haddad, M.; Mueller, P.

**Berger, R.; Haddad, M.; Servant, Y.; Levasseur, A.; Menetrier, M.**
ESR [electron spin resonance] centers in thioborate and oxyborate glasses.—73-13981

**Berger, R.; Haddad, M.; Servant, Y.**
Electron paramagnetic resonance of X-irradiated lithium thioborate glasses.—73-03726

**Bergholz, A.; Ferber, C.**
Importance of the flow technology for the drying of ceramic products.—73-12035

**Bergman, J. P.** See Lundstrom, T.

**Bergman, L.** See Stoner, B. R.

**Bergman, L.; Stoner, B. R.; Turner, K. F.**
Microphotoluminescence and Raman scattering study of defect formation in diamond films.—73-03102

**Bergmann, C. P.**
Influence of thermal conductivity of the spray powder on the adherence of plasma-sprayed ceramic coatings.—73-09182

**Bergmann, H. W.** See Jaschek, R.; Schubert, E.

**Bergmann, O. R.**
New electroconductive ceramic powders.—73-14721

**Bergstrom, L.** See Schilling, C. H.

**Bergstrom, Lennart**
Sedimentation of flocculated alumina suspensions: γ-ray measurements and comparison with model predictions.—73-09312

**Bergstrom, T. B.; Hall, C.; Scrivener, Karen L.**
Interstitial material in oil well cements: evidence from X-ray microanalysis.—73-10020

**Bergstrom, T. B.; Jennings, Hamlin M.**
Formation of bonds in tricalcium silicate pastes as observed by scanning electron microscopy.—73-03470

**Berjoan, R.** See Cros, B.; Maline, M.

**Berke, N.** See Tourney, P.

**Berkey, George E.**
Method of doping porous glass preforms.—73-00743

**Berkovits, V. L.; Gusev, A. O.; L'vova, T. V.**
Anisotropy of the optical reflection of GaAs in the region of its fundamental absorption edge.—73-01076

**Berkovits, V. L.; Ivantsov, L. F.; Makarenko, I. V.; L'vova, T. V.; Khasieva, R. V.; Safarov, V. I.**
STM investigation of the surface of GaAs passivated in aqueous solution of $Na_2S$.—73-01320

**Berkovits, V. L.; Paget, D.**
Reflectance anisotropy spectroscopy [RAS]: a new method for semiconductor surface chemistry investigation.—73-15842

**Berkowitz, A. E.** See Borchers, J. A.; Carey, M. J.

**Berkstresser, G. W.** See O'Bryan, Henry M.

**Berlin, Carl W.; Isenberg, John K.**
Refractory overcoat for semiconductor devices.—73-04531

**Berlov, P. A.; Bulanyi, M. F.; Kovalenko, A. V.**
Photoluminescence spectra of plastically deformed ZnS crystals.—73-11387

**Berman, L. S.** See Belyakova, E. D.

**Bermudez, O.** See Driessens, F. C.

**Bermudez, O.; Boltong, M. G.; Driessens, F. C.; Planell, J. A.**
Compressive strength and diametral tensile strength of some calcium-orthophosphate cements: a pilot study.—73-17254

**Bernache-Assollant, D.; Ababou, A.; Heughebaert, M.**
Influence of the calcination temperature and atmosphere on the morphological evolution of a powder of hydroxyapatite.—73-13102

**Bernache-Assollant, D.**
Bioceramics: elaboration and properties.—73-12541

**Bernage, P.** See Xie, W. X.

**Bernard, James E.** See Osorio, Roberto

**Bernard, P.** See Ferrer, A.

**Bernard, Vladimir** See Matej, Jiri

**Bernard, Vladimir; Matej, Jiri; Novak, Ladislav**
Current density and temperature distribution along a horizontal electrode in an all-electric glass-melting furnace.—73-12212

**Bernasek, S. L.** See Peters, C. H.

**Bernat, Dan; Cibulka, Jan; Matousek, Ivo**
Contribution to the axial annealing of molds.—73-14343

**Berndt, C. C.** See Ilavsky, J.; Lin, C. K.; Treadway, P. M.

**Berndt, Heinz** See Martin, Andreas

**Bernede, J. C.; Alaoui, Z. K.; Manai, N.**
Films of molybdenum trioxide obtained from $MoTe_2$-oriented films.—73-13061

**Berner, U. R.**
Thermodynamic modeling of cement degradation: impact of redox conditions on radionuclide release.—73-03548

**Bernhard, C.** See Niedermayer, C.

**Bernhardt, Claus** See Kobayashi, Katsuhiro

**Bernholc, J.** See Wang, C.; Yi, Jae-Yel

**Bernier, A.; Admaiai, L. F.; Grange, P.**
Synthesis and characterization of titanium pillared clays: influence of the temperature of preparation.—73-03038

**Bernier, J. C.** See Guille, J. L.; Henz, P.

**Bernier, M.-A.** See Gauvin, R.

**Bernieri, E.** See Balerna, A.

**Bernik, S.** See Hrovat, M.

**Bernstein, E.; Blanchin, Marie-Genevieve; Ravelle-Chapuis, R.**
Structural studies of phase transformations in ultrafine zirconia powders.—73-06290

**Bernstein, J. B.; Gleason, Edward F.; Wetsel, A. E.; Liu, E. Z.; Wyatt, P. W.**
Anomalous behavior of semiinsulating silicon-rich amorphous silicon nitride.—73-04242

**Berra, M.; Mangialardi, T.; Paolini, A. E.**
Critical evaluation of accelerated test methods for detecting the alkali reactivity of aggregates.—73-12123

**Berret, J.-F.; Ravy, S.; Hennion, B.**
Diffuse scattering in $K_{1-x}(ND_4)_xI$ mixed crystals.—73-05383

**Berriche, R.; Holt, R. T.**
Effects of prior cyclic loading on the strength of HIPed silicon nitride.—73-17300

**Berriche, R.; Parameswaran, V. R.; Immarigeon, J.-P.; Jamarani, F.**
Micromechanical properties of thermal barrier coatings using depth-sensing indentation.—73-06828

**Berroug, H.** See Fayeulle, S.

**Berry, Celia A.** See Fleming, Michael P.

**Berry, Frank J.; Booth, Mark W.; Marquis, P. M.; Mortimer, M.; Piramoon, M. R.; Ponton, C. B.**
Formation of mullite from hydrothermally processed sols: an X-ray powder diffraction and magic angle spinning NMR investigation.—73-08627

**Berry, Frank J.; Gibbs, C. D.; Greaves, C.**
Structural properties of the molybdenum-ruthenium telluride of composition $Mo_{4.5}Ru_{1.5}Te_8$.—73-02451
**Berry, R. A.** See Lee, Y.-M.
**Berry, S. D.** See Krebs, J. J.; Lind, D. M.
**Bershov, L. V.** See Mineeva, R. M.
**Bershtein, V. A.** See Egorov, V. M.; Ryzhov, V. A.
**Bershtein, V. A.; Dotsenko, A. V.; Egorova, L. M.; Egorov, V. M.; Tsekhomskii, V. A.**
Analysis of submicrocrystals of the photochromic phase in glass using a differential scanning calorimeter.—73-13925
**Bershtein, V. A.; Egorova, L. M.; Elliott, S. R.; Kolobov, A. V.**
Structural changes in thin As-Se films: DSC and EXAFS studies.—73-14090
**Bershtein, V. A.; Egorova, L. M.; Kolobov, A. V.; Ryzhov, V. A.**
Structural transformation in thin films of the system As-Se investigated by the method of differential scanning calorimetry.—73-16327
**Bershtein, V. L.** See Zdorov, A. I.
**Bersiner, L.** See Hempelmann, U.
**Bert, N. A.; Garbuzov, D.; Zhuravkevich, E. V.**
Electron microscope studies of liquid-phase epitaxy of InGaAsP/GaAs structures with thin (<10 nm) layers.—73-04310
**Bert, N. A.; Pogrebitskii, K. Yu.; Soshnikov, I. P.**
Sputtering of GaAs(001) by $Ar^+$ ions with energies of 1–9 keV.—73-04488
**Berta, Yolande** See Lin, Wen-Yi; Shin, Hyun-Ho
**Berthaud, Yves**
Damage measurement in concrete via an ultrasonic technique: I, Experiment.—73-00054
**Berthier, S.; Peiro, J.; Khodja, K. D.**
Influence of morphology on the optical properties of nanocermets and granular inhomogeneous media.—73-13847
**Bertho, D.** See Briot, N.
**Berthold, L.** See Haefke, H.
**Berthold, T.**
$NdGaO_3$ substrates with defined grain boundaries prepared by welding or soldering.—73-13148
**Bertin, F.** See Tosan, Jean-Luc
**Bertness, K.** See Alonso, R. G.
**Bertocchi, Ruggero** See Zybell, Paul
**Bertolin, M.**
Inductively coupled plasma for glass analysis: results from a practical experience.—73-15806;Modern spectrophotometers and data processing for glass manufacturing control and optimization.—73-14433;Spectrophotometry as a tool for redox process control.—73-00705
**Bertolotti, M.** See Michelotti, F.
**Bertolotti, M.; Chumash, Y.; Fazio, E.; Ferrari, A.; Sibilia, C.**
Nonlinear Fabry-Perot cavity with chalcogenide glass thin films.—73-07056
**Bertomeu, J.; Puigdollers, J.; Asensi, J. M.; Andreu, J.; Delgado, J. C.**
Persistent photoconductivity [PPC] in undoped a-Si:H/a-SiC:H multilayers.—73-05611
**Bertoncello, R.; Glisenti, A.; Granozzi, G.; Battaglin, G.; Caccavale, F.; Cattaruzza, E.**
Chemical interactions in titanium- and tungsten-implanted fused silica.—73-06888
**Bertone, D.**
Atomic layer epitaxy of InP.—73-14779
**Bertoni, S.** See Spaggiari, C.
**Bertoti, I.** See Szepvolgyi, J.
**Bertram, Rainer** See Seefeld, Verena
**Bertran, E.** See Campmany, J.; Canillas, A.; Costa, J.; Dubray, J. J.
**Berube, D.; Schumaker, P.; Bale, C. W.**
Thermodynamic analysis of Al-Mg-Si-C-O interactions in aluminum matrix composites.—73-06865
**Berube, M. A.** See Fournier, B.
**Beruto, Dario; Capurro, M.**
Autostresses induced by point defects in sintering phenomena: effect on mass transport and sintering stress.—73-09389
**Beruto, Dario; Searcy, Alan W.; Botter, Rodolfo; Giordani, M.**
Thermodynamics and kinetics of $H_2O(v)$ chemisorption and solubility in nanometric and single-crystal MgO particles during sintering.—73-08781
**Berz, Martin W.; Houdre, R.; Steigmeier, Edgar F.; Reinhart, F. K.**
Optical anisotropy due to exciton polaritons in $Al_{1-x}Ga_xAs$-GaAs quantum wells.—73-04427
**Bescher, Eric** See Nazeri, Azar
**Besedina, S. A.** See Stolyar, S. V.
**Besmann, Theodore M.** See Gallois, Bernard M.
**Besmann, Theodore M.; McLaughlin, J. C.; Starr, Thomas L.**
Scaleup and modeling of forced chemical vapor infiltration.—73-16979
**Besmann, Theodore M.; Miller, James H.; Cooley, Kevin M.; Lowden, Richard A.; Starr, Thomas L.**
Chemical vapor infiltration of $TiB_2$-matrix composites.—73-16674
**Besnard, Marie-Madeleine; Brenner, Fabrice; Knipper, Magali**
Insulating shaped articles comprising inorganic fibrous matrices and xanthan gum/cationic starch binders.—73-10781
**Bespalov, V. P.** See Savina, I. M.
**Bespalova, L. L.; Mandryka, L. A.; Kozhanova, A. A.; Voloskova, M. V.**
X-ray fluorescence analysis of solutions in the production of zeolites.—73-02545
**Besse, J. P.** See Caperaa, C.; Moneyron, J. E.
**Bessolov, V. N.; Lebedev, M. V.; L'vova, T. V.**
Sulfide passivation of $A^3B^5$ semiconductors: model description and experiment.—73-15191
**Bessolov, V. N.; Lebedev, M. V.; Novikov, E. B.; Tsarenkov, B. V.**
Sulfide passivation of III-V semiconductors: kinetics of the photoelectrochemical reaction.—73-11465
**Besson, Jean-Louis** See Rouxel, Tanguy
**Bessonova, T. S.** See Samsonov, A. L.
**Best, T. E.; Pickles, C. A.**
Carbothermal production of aluminum nitride.—73-09026
**Bestaoui, N.; Prouzet, E.; Deniard, P.; Brec, R.**
Structural and analytical characterization of an iridium oxide thin layer.—73-12693
**Beton, P. H.** See Henini, M.
**Betoule, O.** See Coudert, J. F.; Planche, M. P.
**Betz, J.** See Piehler, A.
**Betzholz, S.** See Mennig, M.
**Betzler, K.** See Schlarb, U.
**Beumer, B.** See Lauhoff, H.
**Beutel, Tilman; Knozinger, Helmut; Siborov, Aleksei V.; Zaikovskii, V. I.**
Metal-promoter interactions in vanadium-oxide-promoted $Rh/SiO_2$ catalysts.—73-16213
**Bevan, D. J. M.** See Schweda, E.
**Bevz, V. A.; Khranovskaya, T. M.**
Properties of suspensions of electrocorundum and materials based on it.—73-01017; 73-03346; Slip-cast glass-silica materials.—73-00701
**Bewtra, Naveen** See Tan, Gen-Lin
**Beyer, W.** See Nickel, N. H.
**Beyers, J. N.** See Lenoe, E. M.
**Beyers, Robert B.** See Ahn, Byung T.; MacManus-Driscoll, Judith L.
**Beynon, J.** See Al-Saie, A. M.; Steele, C. B.
**Beynon, J.; Al-Ani, S. K. J.; El-Samanoudy, M. M. A. G.**
Optical properties of $Al_2O_3$ thin films prepared by reactive evaporation.—73-02652
**Bezel, A. V.; Lobach, V. A.**
Charge states of anion vacancy in magnesium oxide.—73-03081
**Bezerra Sombra, A. Sergio** See De Oliveira, C. J.
**Bezhevol'nov, V. B.** See Yafyasov, A. M.
**Bezinger, A.** See Nemirovsky, Y.
**Bezlepkin, L. A.** See Sorokina, T. P.
**Bezlyudnaya, V. S.** See Gorokhovskii, A. V.
**Bezryadin, N. N.** See Mittov, O. N.; Sysoev, B. I.
**Bhaduri, S. B.** See Radhakrishnan, R.
**Bhaduri, S. B.; Radhakrishnan, R.; Linch, D.**
Synthesis of nanocrystalline alumina and alumina-zirconia composites by a combustion-assisted process.—73-17041
**Bhagat, Sudhir S.** See Meshri, Dayal T.
**Bhalla, Amar S.** See Jin, Byung-Moon; Li, J. F.; Liu, D.-H.; Randall, C. A.
**Bhalla, Amar S.; Nair, K. M.; Lloyd, Isabel K.; Yanagida, Hiroaki; Payne, D. A.**
Ceramic Transactions, Volume 43: Ferroic Materials: Design, Preparation, and Characteristics.—73-17523
**Bhan, Cheon-Su; Kim, Yun-Gi; Kim, Byeong-Yeol**
Isolation method in a semiconductor device.—73-04517
**Bhardwaj, Mahesh** See Kulkarni, Nagraj
**Bhargava, A.** See Golden, S. J.
**Bhargava, R.** See Ali, M. M.; Raina, K.; Sharma, K. M.
**Bhargava, S. C.** See Chakrabarty, J. S.
**Bhargava, S. C.; Chakrabarty, J. S.; Jhans, H.; Malik, S. K.**
Mossbauer study of the 2212 phase of the bismuth superconductor.—73-08139
**Bhargava, S. C.; Sequeira, A.; Chakrabarty, J. S.; Rajagopal, H.; Sinha, S. K.; Malik, S. K.**
Characterization of lead-free 2212 phase of Bi superconductor with $T_c$ of 93 K.—73-04679
**Bhasin, Kul B.** See Levenson, L. L.; Warner, Joseph D.
**Bhasin, Kul B.; Warner, Joseph D.; Miranda, F. A.; Gordon, W. L.; Newman, Harvey S.**
Measuring microwave conductivities of superconducting films.—73-11828
**Bhasin, Kul B.; Warner, Joseph D.**
Fabrication of high-$T_c$ superconducting integrated circuits.—73-11760
**Bhaskar Raju, G.; Subrahmanyam, T. V.; Sun, Z.; Forsling, W.**
Shear flocculation of quartz.—73-01997
**Bhat Yajnavalkya, S.** See Das, Jagannath
**Bhat, A.** See Aydinli, A.
**Bhat, H. L.** See Sekar, M. M. A.
**Bhat, Ishwara B.** See Akram, Salman; Han, K. J.; Johs, Blaine; Karam, N. H.; Wang, Wen-Sheng
**Bhat, Ishwara B.; Ehsani, Hassan; Wang, W. S.; Ghandhi, S. K.; Karam, N. H.**
Low-temperature epitaxy of HgTe, CdTe, and HgCdTe using flow modulation techniques.—73-07646
**Bhat, R.** See Aspnes, D. E.; Kamiya, Itaru
**Bhat, S.** See Raina, U.
**Bhat, Thirumaleswara S. G.** See Choudary, Venkateswartu N.
**Bhat, V.; Rao, C. N. R.; Honig, J. M.**
Fluorination of $La_2NiO_4$ and $La_2CuO_{4+\delta}$.—73-08081
**Bhatnagar, A. K.** See SenGupta, A.
**Bhatnagar, Mohit** See Baliga, Bantval J.
**Bhatt, D** See Westerheim, A. C.
**Bhatt, H.; Donaldson, Kimberly Y.; Hasselman, D. P. H.**
Effect of HIPing on the effective thermal conductivity/diffusivity and the interfacial thermal conductance of uniaxial SiC fiber-reinforced RBSN.—73-05546
**Bhatt, Ramakrishna T.** See Harding, David R.; Hilmas, G. E; Rokhlin, S. I.; Sathish, Shamachary; Singh, Dileep
**Bhattacharjee, S.; Paria, M. K.; Maiti, H. S.**
Polyvinyl butyral [PVB] as a dispersant for barium titanate in a nonaqueous suspension.—73-16900
**Bhattacharya, A. K.**
Microstructure and mechanical properties of 2.5 yttria partially stabilized zirconia-reinforced molybdenum disilicide composites.—73-09650
**Bhattacharya, D.** See Gupta, S.; Mishra, S. K.; Rao, M. V.
**Bhattacharya, H.; Gupta, Pradeep**
Change in design reduces preheater disturbance—an experience.—73-05103
**Bhattacharya, P. K.** See Gupta, S.; Li, S. H.
**Bhattacharya, S.** See Batra, Shubneesh; Li, Qi; Sultan, Akif; Venkatesan, T.
**Bhattacharya, Utpal; Darshane, Vishnu S.**
Spin-glass behavior of the system $CoFe_{2-x}Ga_xO_4$.—73-05486
**Bhattacharyya, B. D.**
Infrared and Raman scattering studies of apex anharmonicity in high-$T_c$ cuprates.—73-11807
**Bhattacharyya, D. K.; Dutta, N. C.**
Immobilization of barium, cadmium, and antimony over titania.—73-02290
**Bhattacharyya, K.; Goodnick, Stephen M.; Wager, J. F.**
Monte Carlo simulation of electron transport in alternating-current thin-film electroluminescent devices.—73-03103
**Bhatti, A. R.**
Processing and characterization of monolithic molybdenum disilicide and silicon carbide fiber-reinforced $MoSi_2$ matrix composites.—73-16947
**Bhatty, Javed I.; Malisci, Abe; Iwasaki, Iwao**
Sludge ash pellets as coarse aggregates in concrete.—73-06717
**Bhaumik, S. K.; Balasubramaniam, R.; Upadhyaya, G. S.**
Oxidation behavior of hard and binder phase-modified WC-10Co cemented carbides.—73-00254
**Bhave, Ramesh R.** See Morgart, James R.
**Bhide, V. G.** See Goyal, D. J.;Rozati, S. M.
**Bhola, Rakesh; Dasgupta, Sankar; Jacobs, James K.**
Ceramic compositions for wear-resistant applications.—73-15938
**Bhushan, B.** See Dugger, M. T.
**Bhushan, Bharat; Subramaniam, Vish V.; Maishe, Ajay; Gupta, B. K.; Ruan, Juai**
Tribological properties of polished diamond films.—73-09688
**Bi, J. Q.; Hodel, W.; Beaud, P.; Schutz, J.; Weber, H. P.; Proctor, M.**
Bulk GaAlAs mirror as a saturable absorber for subpicosecond pulse generation around 835 nm.—73-01086
**Bi, Ling-Song** See Nakano, Aichiro
**Bi, Xiang-Xin; Eklund, Peter C.**
Polaron contribution to the ir optical response of $La_{2-x}Sr_xCuO_{4+\delta}$ and $La_{2-x}Sr_xNiO_{4+\delta}$.—73-15583; Synthesis of nanocrystalline Fe-based particles by $CO_2$ laser pyrolysis.—73-06090
**Bi, Y. J.; Wellhofer, F.; Day, M. J.; Abell, J. S.**
Microstructural study of melt-processed $YBa_2Cu_3O_{7-\delta}$ thick films on yttria-stabilized zirconia.—73-11833
**Biaggio, I.** See Zgonik, M.
**Bialkowski, Stephen E.** See Kalaskar, Shashi
**Bialopiotrowicz, Tomasz; Leclercq-Priat, Marie-Noelle**
Dynamic adsorption on inorganic membranes.—73-16452
**Bialota, J.** See Laczka, M.
**Bian, Qing-Han; Wu, Xue-Quan; Tang, Ming-Shu**
High-strength alkali-steel–iron-slag binder.—73-13729
**Bianchi, Claudia L.** See Barbieri, Luisa
**Bianconi, M.; Correra, L.; Nicoletti, S.**
Structural and electrical characterization of $YBa_2Cu_3O_{7-x}$ thin films grown on different substrates.—73-01664
**Biasini, V.** See Baxter, D. J.
**Biasiol, G.** See Franciosi, A.
**Biasiol, G.; Sorba, L.; Bratina, G.; Nicolini, R.; Franciosi, A.; Peressi, M.**
Microscopic capacitors and neutral interfaces in III-V/IV/III-V semiconductor heterostructures.—73-07340
**Biazzi, Roberto; Zucchinali, Alberto**
Optical fiber promises wiring system and private network applications.—73-09734
**Bibaev, V. M.** See Romanovskii, L. B.
**Bibik, E. E.; Gribanov, N. M.; Naumov, V. N.**
Coprecipitation of two insoluble products of chemical reactions.—73-16689
**Bibi, M. A. K.**
Innovative high-deposition-rate plasma-transferred arch [PTA] surfacing technique.—73-08346
**Bible, D. W.** See Lauf, R. J.
**Bibler, Ned E.** See Andrews, Mary K.; Crawford, Charles L.; Jantzen, Carol M.
**Bicelli, L. P.** See Torsi, Luisa
**Bich, George J.** See Gupta, Tapan K.
**Bich, V. G.** See Chukalkin, Yu. G.
**Bichile, G. K.; Raibagkar, R. L.; Jadhav, K. M.; Kuberkar, D. G.; Kulkarni, R. G.**
Suppression of superconductivity in $Er_{1-x}Ca_xBa_2Cu_3O_y$ by hole doping and pair breaking.—73-15640
**Bichri, A.; Hunderi, O.; Lafait, J.; Wold, E.**
Characterization of radiative surface modes and anisotropy in $Ag/SiO_2$ multilayers, by visible and ir ellipsometry.—73-13378
**Bickford, Dennis F.** See Bennert, D. M.; Compton, K. L.; Cook, James R.; Oksoy, Dolun; Varshneya, Arun K.
**Bickley, R. I.; Gonzalez-Carreno, T.; Lees, J. S.; Palmisano, L.; Tilley, R. J. D.**
Structural investigation of titanium dioxide photocatalysts.—73-02448
**Bickmore, Clint R.** See Laine, Richard M.
**Bicknell-Tassius, R. N.** See Hellmann, R.
**Biel, John P.** See Aghajanian, Michael K..; Kuszyk, Jack A.
**Bieniok, A.; Baur, W. H.**
Large volume contraction accompanies the low-temperature to high-temperature phase transition of zeolite Sr-rho.—73-02314
**Bienk, E.-J.; Jensen, H.; Pedersen, G. N.; Sorensen, G.**
Effect of reactive gas mass flow on the composition and structure of AlN films deposited by reactive sputtering.—73-09093

**Bier, L.; Sauer, H.; Bennewart, W.**
Construction and operation of a hydrated lime plant for flue gas desulfurization of the Siersdorf power station.—73-09868
**Bierlein, J. D.** See Roelofs, M. G.
**Biermann, D.** See Weinert, K.
**Biers, William R.**
Archaic plastic vases from Isthmia.—73-09776
**Bierstedt, P. E.** See Sleight, A. W.
**Bifano, T.** See Welch, E.
**Bigelow, C. A.**
Micromechanics-based strength prediction methodology for notched metal-matrix composites.—73-03341; Thermal residual stresses in SiC/Ti (0/90) laminate.—73-13902
**Bigham, J. M.** See Rhoton, F. E.
**Bigler, E.** See Ballandras, S.
**Bigorajski, Gunter** See Falz, Wolfgang
**Bigot. J.-Y.; Daunois, A.; Oberle, J.; Merle, J. C.**
Femtosecond dephasing in $CdS_xSe_{1-x}$ mixed crystals: the role of localized biexcitons.—73-14921
**Bihuniak, Peter P.** See Shackelford, James F.; Varshneya, Arun K.
**Bijen, J. M. J. M.** See Su, Z.
**Bijen, J. M. J. M.; Van Selet, R.**
Cement equivalence factors for fly ash [FA].—73-13687
**Bik, W. M. Arnold** See Cros, Y.
**Bikbayev, V.** See Grivickas, V.
**Bikkin, Kh. M.** See Titkov, A. N.
**Bikmetov, I. F.** See Sobolev, A. B.
**Bikyashev, E. A.; Lupeiko, T. G.; Tsirkunov, A. G.**
Phase formation in the processes of synthesis of lead magnoniobate.—73-02383
**Bilgrien, Carl J.** See Chandra, Grish
**Bilige, Normin** See Zhao, Feng-Qi
**Billard, T.** See Waechter, D.
**Billingham, J.; Conveney, D. V.**
Simple chemical clock reactions: application to cement hydration.—73-10152
**Billings, Garth W.** See Halverson, Danny C.
**Billings, S. J. L.** See Kwei, G. H.
**Bilodeau, A.** See Douglas, E.
**Bilurkar, P. G.** See Ogale, S. B.
**Bimberg, D.** See Bohrer, J.; Bottcher, E. Holger; Grundmann, M.
**Bimberg, D.; Heinrichsdorff, F.; Bauer, R. K.; Gerthsen, D.; Stenkamp, D.; Mars, D. E.**
Binary AlAs/GaAs versus ternary GaAlAs/GaAs interfaces: a dramatic difference of perfection.—73-07393
**Binari, Steven C.** See Marchywka, Mike
**Binchkauskas, V. Sh.; Vlasov, A. S.**
Activating the sintering process of the ceramic bodies based on loess-like loamy clays.—73-00585;Intensification of sintering of ceramic mass based on loess loams.—73-02879
**Bindal, A.; Rovedo, N.; Restivo, J.; Gaili, C.; Ogura, S.**
Fabrication of extremely thin [<1000 Å] silicon-on-insulator [SOI] for fully depleted CMOS applications.—73-14908
**Binder, B.** See Fluck, D.
**Binder, Dieter; Kleinschmit, Peter; Birtigh, Gerhard; Zetzmann, Klaus**
Method and apparatus for the semicontinuous melting and discharging of ceramic material in an induction melting furnace with sintering crust crucible.—73-04984
**Binder, I. L.; Hanratty, T. J.**
Use of Lagrangian statistics to describe slurry transport.—73-15759
**Binder, R.** See Fluegel, B. D.; Wang, Hai-Lin
**Bindilatti, V.** See Vu, T. Q.
**Bindilatti, V.; Oliveira, N. F., Jr.; Shapira, Y.; Vu, T. Q.;**
**Heiman, D.; Demjaniuk, M.**
Magnetization step of isolated $Co^{2+}$ ions in hexagonal $Cd_{1-x}Co_xS$ and $Cd_{1-x}Co_xSe$.—73-15031
**Bing, Lu** See Yitai, Qian
**Binggeli, M.; Christoph, R.; Colchero, J.**
Friction force measurements on potential controlled graphite in an electrolyte environment.—73-15800
**Bingyeli, M.** See Hanni, W.
**Binner, J. G. P.** See Arai, M.
**Binner, Jon**
Microwave sintering.—73-05927
**Binninger, U.** See Niedermayer, C.
**Bintz, W. J.** See McGruer, N. E.
**Birch, J.** See Wahab, Q.
**Birchall, James D.** See Alford, Neil McN.; Clegg, William J.; Stanley, David R.
**Birchall, James D.**
Lessons from biology for materials scientists.—73-06242
**Bird, D. A.; Churchill, D.**
Fuel flow metering.—73-01951
**Bird, Nick**
Future in multicolor-coated packaging.—73-10537
**Birgeneau, R. J.** See Falck, J. P.; Matsuda, Masaaki
**Biriukov, A. S.; Dianov, E. M.; Golant, K. M.; Khrapko, R. R.; Koropov, A. V.; Perov, A. N.**
Microwave-induced atmospheric pressure plasma application to fabrication of fluorine-doped silica glass.—73-14430
**Birkby, I.** See Dimingo, M. T.
**Birla, N. C.** See Eroglu, S.
**Birmingham, Scott D.**
Scandia.—73-12295
**Birnie, Dunbar P., III** See Aruchamy, A.; Kim, Seong-Jin
**Birot, M.** See Pillot, J. P.
**Birtigh, Gerhard** See Binder, Dieter
**Biryukov, A. G.** See Ganaga, P. N.
**Bisaro, R.** See Olivier, J.
**Bischoff, E.** See Kim, Nam-Kyun
**Bischoff, E.; Sauter, M.; Worner, Wolfgang**
Distribution analysis of sinter additives in ceramic powders using scanning electron microscopy and quantitative image analysis.—73-09073
**Bishara, Safwat W.**
New, simple, rapid, and reliable method for determining sulfur trioxide and phosphorus pentoxide in portland cement and classes C and F fly ash.—73-06693
**Bishop, A. R.** See Mustre de Leon, J.
**Bishop, David J.** See Gammel, P. L.; Safar, H.
**Bishop, David J.; Gammel, P. L.; Huse, David A.**
Resistance in high-temperature superconductors.—73-04801
**Bishop, Ken P.** See Milner, Lisa M.
**Bisi, O.** See Ossicini, S.
**Bissinger, Melinda; Prakash, Om; Sarkar, Partho; Nicholson, Patrick S.**
High-temperature strength and toughness of electrophoretically deposited alumina/lanthanum aluminate laminates.—73-17348
**Bisson, G.; Themines, D.**
Study by finished elements of the behavior of refractive pieces thermally solicited.—73-00873
**Bist, H. D.; Datta, T.; Little, T. S.**
Fourier transform Raman spectroscopy of superconducting $YBa_2Cu_3O_{7-\delta}$ films on strontium titanate and magnesium oxide substrates.—73-15484
**Biswal, Madan** See Gadepally, Kamesh
**Biswas, N. C.** See Mitra, B. L.
**Biswas, P. K.** See Atta, A. K.
**Biswas, S. N.** See Ghatak, K. P.
**Bitsadze, D. D.** See Adamashvili, G. T.
**Bitsis, M. S.** See Chryssikos, G. D.
**Bittner, Hans-Georg; Halex, Gunter; Alten, T.**
Walking a tightrope or modern methods for kiln linings.—73-01973
**Bittner, Hans-Georg; Halex, Gunter; Kobras, Udo**
Modern fast firing of whiteware products—effects on product quality.—73-10871
**Bjerle, J.**
Flue gas cleaning with limestone.—73-01783
**Bjorgvinsson, M.** See Gong, W. H.
**Bjorklund, H.; Falk, L. K. L.; Wasen, J.; Adlerborn, J. E.; Larker, H. T.**
Grain morphology and intergranular structure of $Si_3N_4$-based ceramics formed by HIP.—73-06222
**Bjorkman, C. H.; Shearon, C. E.; Ma, Y.; Yasuda, T.;**
**Lucovsky, G.; Emmerichs, U.**
Second harmonic generation [SHG] in Si-$SiO_2$ heterostructures formed by chemical, thermal, and plasma-assisted oxidation and deposition processes.—73-06029; :Influence of surface roughness on the electrical properties of Si-$SiO_2$ interfaces and on second harmonic generation at these interfaces.—73-12817
**Bjorn, J. A.** See Onsgaard, J.
**Bjorseth, Alf** See Joshi, Ashok V.
**Blachnik, R.** See Baumgarte, A.
**Black, C. J.** See Macphee, D. E.
**Black, D. R.** See Long, Gabrielle G.
**Black, W. Murray** See Ahmad, Iftikhar; Saadaldin, Hussamaldin S.
**Blackburn, J.; Tipton, B.; Tench, K.**
Integrated [computer numerical control] CNC—plasma spray workcell for machinery components.—73-08347
**Blackburn, J.**
Are furnace repairs hazardous to health.—73-10496
**Blackburn, R.** See Durrani, S. K.
**Blackburn, S.** See Benbow, John J.
**Blackford, Mark G.** See Vance, Eric R.
**Blackstead, H. A.; Pulling, D. B.; Horwitz, J. S.; Chrisey, D. B.**
Giant flux flow in superconducting $YBa_2Cu_3O_{7-\delta}$ films.—73-15491
**Blackstead, H. A.**
Current and angular-dependent transport in the mixed state of $Bi_2Sr_2Ca\text{-}Cu_2O_{8+\delta}$.—73-15409
**Blackwell, B. Q.; Pettifer, K.**
Alkali reactivity of greywacke aggregates in Maentwrog Dam (North Wales).—73-13674
**Blades, B.; Sohr, J. M.**
Water jet coating removal applications: aircraft engines and beyond.—73-08370
**Blaev, B. Kh.** See Vlasov, V. V.
**Blahova, O.** See Musil, J.
**Blain, S.** See Aktik, C.
**Blair, A. J.; Metzger, G.; Fiedderman, C. B.**
Optical absorption spectroscopic diagnostics during sputter deposition of Y-Ba-Cu oxide.—73-11849
**Blair, J. A.; Duffy, J. A.**
Optical basicity study of metal carboxylate glasses at ambient and elevated temperatures.—73-10462
**Blairs, S.** See Begg, B. D.
**Blake, R. D.; Katz, Joel D.**
Microwave sintering of large alumina bodies.—73-05924
**Blakely, J. M.** See Umbach, C. C.
**Blalock, Guy T.** See Mathews, Viju K.
**Blamey, J. M.; Parry, T. V.**
Effect of processing variables on the mechanical and electrical properties of barium titanate positive temperature coefficient of resistance ceramics: I, Additives and processing prior to sintering.—73-09091
**Blamey, J. M.; Parry, T. V.**
Effect of processing variables on the mechanical and electrical properties of barium titanate positive temperature coefficient of resistance ceramics: II, Sintering atmosphere.—73-09092;Strength and fracture toughness of barium titanate ceramics.—73-13591
**Blanchard, Cheryl R.** See Bose, Animesh; Schwab, Stuart T.
**Blanchard, Cheryl R.; Schwab, Stuart T.**
X-ray diffraction analysis of the pyrolytic conversion of perhydropolysilazane into silicon nitride.—73-12731
**Blanchard, Gilbert; Chopin, Thierry**
Supported catalysts.—73-02070
**Blanchet-Fincher, Graciela B.; Fincher, Curtis R., Jr.;**
**Herron, Norman**
Process for making superconductor Tl-Pb-Sr-Ca-Cu-O films.—73-04866
**Blanchette, Curtis N.; Maddex, David P.; Shimek, Richard F.**
Alumina material useful with thin-film heads.—73-05188
**Blanchin, Marie-Genevieve** See Bernstein, E.; Yan, Yong
**Blanck, D.** See Wewel, M.
**Blanck, M.**
New ways of energy management to increase productivity of energy in the [cement] factory.—73-00151
**Blanco Varela, M. T.** See Puertas, F.
**Blanco, Jose L. Rodriguez** See Arean, Carlos Otero
**Blanco, M. T.** See Gimenez, S.; Puertas, F.
**Bland, C. H.; Sharp, J. H.; Barker, A. P.**
Electron probe microanalysis of gasifier slag cement pastes.—73-09943
**Blandin, Yannick; Sainte-Fot, Daniel; Mosnier, Francis**
Method of and an apparatus for forming fibers.—73-12085
**Blank, A. B.; Il'chenko, O. P.; Litvinov, L. A.; Pishchik, V. V.; Pulyaeva, I. V.; Filippovich, L. I.**
Chemical stability of leucosapphire and ruby laboratory ware.—73-08821
**Blank, Paul** See Krell, Andreas
**Blank, V. D.; Malyushitskaya, Z. V.**
Structural mechanisms of phase transformations of Si(Ge)I-III: I, Silicon.—73-16324
**Blankova, E. B.; Yanushkevich, T. M.; Zyuzin, I. V.; Skripov, V. N.**
Special traits of the defect structure of $LiNbO_3$ single crystals and their effect on the optical properties of titanium-diffusion waveguides.—73-11617
**Blanks, D.** See Schiebel, R. A.
**Blanpain, B.** See De Kempeneer, E. H. A.
**Blanpain, B.; Celis, J. P.; Roos, J. R.; Ebberink, J.; Smeets, J.**
Comparative study of the fretting wear of hard carbon coatings.—73-03246
**Blanquet, Elisabeth** See Harding, David R.
**Blanton, T. N.** See Chen, Samuel
**Blasco, T.** See Franco, M. J.
**Blasingame, Margaret C.** See Van Hove, J. M.
**Blasse, G.** See Brixner, L. H.; Dirksen, G. J.L.; Emond, M. H. J.; Hazenkamp, Menne F.; Meijerink, A.; Meulenkamp, E. A.; Schipper, W. J.; Van Schaik, W.; Verwey, J. W. M.; Wiegel, M.
**Blasse, G.; Schipper, W. J.; Huntelaar, M. E.; Ijdo, D. J. W.**
Luminescence of $SrZrSiO_2O_7$.—73-12829
**Blatov, V. A.** See Ivanenko, A. A.
**Blatter, A.** See Ortiz, C.
**Blatter, Gianni; Ivlev, Boris**
Quantum melting of the vortex lattice in high-$T_c$ superconductors.—73-15606
**Blau, Peter J.** See Srinivasan, Sreeram R.
**Blau, Peter J.**
Friction microprobe investigation of particle layer effects on sliding friction.—73-05049
**Blau, W.** See Mosel, G.
**Blaz, T.** See Stoch, A.
**Blazejewski, E. R.** See Bajaj, J.; Williams, G. M.
**Blazejewski, E. R.; Arias, J. M.; Williams, G. M.; McLevige, W.; Zandian, M.; Pasko, J. G.**
Bias-switched dual-band HgCdTe infrared photodetector.—73-07391
**Blazek, Antonin** See Endrys, Jiri
**Blazewicz, Marta; Blazewicz, Stanislaw; Wajler, Cezary**
Carbon materials in medicine.—73-08527
**Blazewicz, Stanislaw** See Blazewicz, Marta; Chlopek, Jan
**Blazey, K. W.** See Muller, K. A.
**Blazhku, A. I.; Dzhuadi, D.; Kasiyan, V. A.; Moseichuk, G. S.; Nedeogio, D. D.**
Transport properties of *n*-type ZnSe crystals with radiation defects.—73-03116
**Bleam, William F.; Welhouse, Gereon J.; Janowiak, Mark A.**
Surface coulomb energy and proton coulomb potentials of pyrophyllite {010}, {110}, {100}, and {130} edges.—73-12883
**Bleay, S. M.** See Pearson, G. P.; Scott, V. D.
**Blech, Ilan A.; Wood, Peter**
Linear thermal expansion coefficient and biaxial elastic modulus of diamondlike carbon [DLC] films.—73-08900
**Bledowski, A.** See Otten, J.
**Bleier, Alan** See Alexander, Kathleen B.
**Bleiler, Roger J.** See Goldstein, Michael
**Bleise, Detlef; Steinbrech, Rolf W.**
Flat *R*-curve from stable propagation of indentation-cracks in course-grained alumina.—73-06422
**Blendell, John E.** See Kim, Doh-Yeon
**Blessing, G. V.** See Slotwinski, J. A.
**Bletry, J.**
From local chemical order to long-range site percolation in glasses.—73-13990
**Blez, Monique; Mathoorasing, Dean; Kazmierski, Christophe; Quillec, M.; Gilleron, M.; Landreau, J.**
Very low chirping of InGaAs-InGaAlAs MQW, DFB, BRS lasers under 10 Gbit/s modulation.—73-15225
**Blinc, R.** See Dolinsek, J.
**Blinder, A. V.; Bolgar, A. S.; Molseev, N. V.**
Thermodynamic properties of vanadium diboride in wide temperature ranges.—73-16378
**Blinkin, V. A.** See Kolotii, O. D.
**Blinkin, V. A.; Pashkevich, Yu. G.; Eremenko, V. V.**
Antiferromagnetic resonance in $Nd_2CuO_4$.—73-08553
**Bliss, D. E.; Walukiewicz, W.; Haller, E. E.**
Annealing of $As_{Ga}$-related defects in LT [low-temperature] GaAs: the role of gallium vacancies.—73-14773
**Block, Christian**
Ceramic coaxial resonator.—73-14744
**Block, T. R.; Neikirk, D. P.; Streetman, B. G.**
Molecular beam epitaxial growth condition dependence of reflection high energy electron diffraction dampening and quantum well photoluminescence.—73-11325
**Bloech, H.; Kappelmann, W.; Rensinghoff, W.**
Design, construction, and first experiences with a production line of plasterboards.—73-00056

**Blom, H.-O.** See Barklund, A. M.

**Blom, P. W. M.; Van Hall, P. J.; Smt, C.; Cuypers, J. P.; Wolter, J. H.**
Selective exciton formation in thin $GaAs/Al_xGa_{1-x}As$ quantum wells.—73-11439

**Blomacher, Martin; Weinand, Dieter**
Progress in the development of binders: I, The process.—73-13220

**Blomberg, A.** See Erickson, L. C.

**Blonski, R. P.**
Effect of zircon dissolution on the color stability of glazes.—73-07249; Higher-chroma zircon colors for glaze applications.—73-07260

**Blood, P.** See Rees, P.

**Bloom, Ira D.** See Krumpelt, Michael

**Bloom, R.** See Lange, David A.

**Bloom, Richard L.; Ista, Troy K.; Smith, Mark P.**
Diesel particulate trap of perforated tubes having laterally offset cross-wound wraps of inorganic yarn.—73-02033

**Bloomer, Tamara E.** See Golden, Steve J.

**Bloshenko, V. N.** See Merzhanov, A. G.

**Blot, J.** See Lucchese, P.

**Blouet, J.** See Liu, G. H.

**Bloyce, D. M.** See Tuffe, S.

**Bloyce, D. M.; Ham-Su, R.; Plucknett, Kevin P.; Wilkinson, David S.**
Tape casting of SiC platelet-reinforced alumina.—73-09370

**Bloyer, Donald R.; Cho, Jaephil; Martin, Steve W.**
Infrared spectroscopy of wide composition range $xNa_2S+(1-x)B_2S_3$ glasses.—73-00354

**Blue, Craig A.; Lin, Ray Y.**
Rapid infrared joining [RIJ] of titanium alloys and titanium matrix composites.—73-00261

**Bluhm, A.** See Lochel, B.

**Blum, Joseph** See D'Emic, Christopher P.

**Blum, Yigal**
Hydridosiloxanes as precursors to ceramic products.—73-02099

**Blum, Yigal**
Hydridosiloxanes as precursors to ceramic products.—73-15994

**Blumenfeld, R.** See Bowen, Chris

**Blumenthal, Michael**
Use of scrap tires in the U.S. cement industry.—73-03554

**Blumenthal, Roc** See Olowplafe, J. O.

**Blumenthal, W.** See Asaro, R. J.

**Blunt, D. P.** See Patat, S.

**Blunt, R.** See Pickering, C.

**Bo, Bian; Jian, Yie; Yi, Cao; Wu, Z.-Q.**
Transmission electron microscopy of annealed a-$Si_{1-x}C_x$:H/Al films with different Al grain sizes.—73-09518

**Boas, M.; Bamberger, M.**
Structural characterization of laser-processed WC/Co layers.—73-10279

**Boatner, Lynn A.** See Jandl, S.; Rankin, Janet; Steadman, Gregg W.

**Boatner, Lynn A.; Sales, Brian C.; Franco, Sofia C. S.**
Alkali-lead-iron phosphate glass and associated method.—73-10621

**Boattini, P.** See Romero, M.

**Boaz, Premakaran T.**
Glass sheets having painted exterior surfaces.—73-14542

**Bobadilla, M.** See Urrutia, C.

**Bobe, J. M.; Senegas, J.; Reau, J. M.; Poulain, M.**
Ionic conductivity and $^{19}F$ NMR investigation of some series of $ZrF_4$-based fluoride glasses containing $LaF_3$ or $YF_3$.—73-07042

**Bober, Reinhard** See Voigt, Manfred

**Boberski, C.** See Herrmann, M.

**Bobiitskii, Ya. V.; Bercha, A. I.; Dmitruk, N. L.; Korbutyak, D. V.; Fidrya, N. A.**
Photoluminescence and FTIR investigation of laser gettering of GaAs.—73-07723

**Bobinski, W.** See Sloczynski, J.

**Bobinski, W.; Ziolkowski, J.**
Anisotropy of thermal expansion of the Brannerite-type $MnV_2O_6$—effect of doping with $MoO_3$ and $Li_2O$: theoretical predictions, verification, new rules.—73-02552

**Bobkova, M. V.** See Kutvitskii, V. A.

**Bobkova, N. M.** See Dyatlova, E. M.; Zapol'skii, V. A.

**Bobkova, N. M.; Silich, L. M.**
Ir spectroscopic study of glass structures by the method of recording the second derivative.—73-14021;Principles involved in the formation of solid solutions of glass-ceramics in the strontium-barium system.—73-09275

**Bobkova, N. M.; Stepanchuk, A. A.; Deshkovets, A. V.**
Improving the thermal shock resistance of ceramics based on silicon nitride.—73-02082; Increasing heat resistance of ceramic materials based on silicon nitride.—73-02619

**Bobkova, N. M.**
Corrections to the phase diagram of the $MgO-Al_2O_3-SiO_2$ system.—73-08581; Problems in producing a thermally stable, high-strength, heat-resistant ceramic.—73-08520; Properties and structure of boron molybdate glasses.—73-14258

**Bobrov, A. V.; Plate, S. E.; Kadushin, A. A.; Kimelfeld, Y. M.; Seleznev, V. A.; Tulenin, Y. P.**
Raman spectra of ethane and ethylene adsorbed of surfaces of catalyst $Sm_2O_3/MgO$ at high temperatures.—73-12670

**Bobrov, V. S.** See Stukan, L. V.

**Bobrov, V. S.; Lebyodkin, M. A.**
Twins and properties of classical and high-$T_c$ superconductors.—73-08270

**Bobrov, V. S.**
Deformation, structure, and properties of ceramics and crystals of high-$T_c$ superconductors.—73-08015

**Bobryshev, Yu. V.** See Balbashov, A. M.

**Bobrysheva, N. P.** See Chezhina, N. V.; Yablokov, Yu. V.

**Bobrysheva, N. P.; Chezhina, N. V.; Mouron, P.**
Magnetic dilution of $La_{1.85}Sr_{0.15}CuO_{4-\delta}$ in $K_2NiF_4$-type diamagnetic $LaSrAlO_4$.—73-07950

**Boca, R.; Kniep, R.**
Electronic structure of $Ca_3AuN$.—73-16133

**Bocanegra, M. H.**
Break point in the pressure–density curve of magnesia prepared by the seawater magnesia process.—73-09025

**Boccaccini, Aldo R.; Ondracek, Gerhard**
Thermal shock resistance and microstructure of sintered glass matrix composites.—73-14296; Viscous sintering of nonspherical borosilicate glass powder.—73-10617

**Boccaccini, Aldo R.**
Anisotropic densification during sintering of glass powder compacts.—73-09018; Effective elastic moduli of porous ceramic materials—comment.—73-17297

**Boccara, A. C.** See Fabre, J. C.; Jin, G.

**Bocci, A.** See Alessandrini, G.

**Boch, Philippe** See Nadaud, Nicolas

**Bocharov, L. D.** See Andrievskikh, L. I.; Kulebakin, V. G.

**Bocharov, L. D.; Yarushina, T. V.; Koptelov, V. N.**
Refractories based on hollow periclase-containing granules.—73-00851

**Bocharov, N. A.; Rossovskii, V. N.; Kuznetsova, Tamara V.**
Peculiarities of separate preparation of concrete mixes.—73-00160

**Bochkareva, L. V.** See Andrukhiv, M. G.; Kuznetsov, V. S.; Zimin, S. P.

**Bochkariov, V. B.** See Shepilov, M. P.

**Bochynek, Georg** See Forkel, Klaus

**Bochynski, Zenon**
Structural modeling of molecular correlation of water-gel interface.—73-14096

**Bock, B.**
Distance between operator and process increases—how to solve the problem.—73-01776

**Bock, Joachim** See Preisler, Eberhard

**Bock, Joachim; Preisler, Eberhard**
High-temperature superconductor comprising barium sulfate, strontium sulfate or mixtures thereof, and a process for its preparation.—73-11957

**Bockelmann, U.** See Brunner, K.

**Bocker, Wolfgang D. G.** See Aldinger, Fritz

**Bocquet, J. F.** See Pommier, C.

**Bocquillon, G.; Loriers-Susse, C.; Loriers, J.**
Synthesis of cubic boron nitride using Mg and pure or M´-doped $Li_3N$, $Ca_3N_2$, and $Mg_3N_2$ with M´=Al, B, Si, Ti.—73-09354

**Boczar, Bruce P.** See Scharpf, William J., Jr.

**Boczar, M.** See Datka, Jerzy

**Bodak, O. I.** See Levin, E. M.; Pavlyuk, V. V.

**Boddenberg, B.** See Grosse, R.

**Bode, Michael H.; Ourmazd, A.**
Interfaces in GaAs/AlAs: perfection and applications.—73-07616

**Boden, G.; Bartl, A.; Koch, W.**
Electron paramagnetic resonance measurements on activated silicon nitride powders.—73-09114

**Bodet, Raphael** See Jia, Nan-Ying

**Bodnar, I. V.** See Gremenok, V. F.; Kindyak, V. V.; Molochko, A. P.; Solovei, N. P.

**Bodnaruk, O. A.; Gorbatyuk, I. N.; Ostapov, S. E.; Rarenko, I. M.**
Intrinsic carrier density and effective mass of electrons in $Mn_xHg_{1-x}Te$.—73-07622

**Boechat, A. A. B.** See Su, D.

**Boecker, Wolfgang D. G.** See Chia, Kai Y.; Frechette, Francis J.

**Boeckmann, Mark D.** See Basford, James A.

**Boehm, L.; Assaf, H.**
Crystallization of doped chalcogenide glasses.—73-13953

**Boeing, Raymond** See Schmidt, Michael

**Boek, Heather** See Dickinson, James E.

**Boelens, S.; Bolder, A.; Van Herten, R.**
Dutch glassmaker's survey of energy-saving technology.—73-10518

**Boercker, D. B.** See Falabella, S.

**Boes, Josef; Sarls, Leo**
Vacuum-molded ceramic fiber electric radiant heating unit with resistance heating coils internally free of fibers.—73-12252

**Boettger, J. C.**
New model for the shock-induced α-quartz→stishovite phase transition in silica.—73-12639

**Boettger, J. M.; Ker, M. K.; Shore, P.; Stephenson, D. J.**
Influence of ductile mode grinding on the strength of silicon-based ceramics.—73-06459

**Bogatov, Yu. E.** See Kurilkin, V. V.; Safronenko, M. G.

**Bogatov, Yu. V.** See Levashov, E. A.

**Bogatyreva, Zh. D.** See Kosinskaya, A. V.

**Bogdan, M. M.; Kovalev, A. S.; Stepanov, A. A.**
Hole frustration contribution to the magnetic susceptibility of $CuO_2$ layers in high-temperature superconductors.—73-08097

**Bogdanov, E. V.** See Akimov, B. A.

**Bogdanov, S. G.** See Valiev, E. Z.

**Bogdanov, S. V.; Grun, M.; Kalt, H.; Klingshirn, C.**
Optical gain in CdSe epitaxial layers on GaAs.—73-04429

**Bogdanov, V. L.** See Ekzekov, M. Kh.; Mitrofanov, V. V.

**Bogdanov, Z.** See Gredic, T.

**Bogdanova, G. A.** See Entelis, F. S.

**Bogdanova, Kh. G.; Golenishchev-Kutuzov, V. A.; Kurkin, M. I.; Medvedev, L. I.; Nizamiev, I. P.; Tankeev, A. P.**
Magnetoelastic channel for nuclear-spin excitation in $FeBO_3$.—73-15348

**Bogdanova, Kh. G.; Golenishchev-Kutuzov, V. A.; Medvedev, L. I.; Shakirzyanov, M. M.**
Manifestation of $FeBO_3$ domain structure in [NMR] signals in strong rf fields.—73-01473

**Bogdanova, V. A.; Semikolenova, N. A.**
Photoluminescence of heavily doped GaAs with an ordered distribution of impurity complexes.—73-01281

**Bogdanovich, M. P.**
Effect of porosity on magnetic and electrical properties of lithium ferrite.—73-15319

**Bogdanow, Christina** See Winter, Wolfgang

**Boger, D. V.** See Leong, Y. K.

**Bogle, E.** See Carter, J. B.

**Bogoboyashchii, V. V.** See Gasan-Zade, S. G.

**Bogomaz, V. I.** See Gerashchenko, I. I.

**Bogomolov, V. N.; Efimov, A. N.; Ivanova, M. S.**
Structure and optical properties of one-dimensional selenium atom chain in cancrinite channels.—73-16332

**Bogomolov, V. N.; Kumzerov, Yu. A.; Razumov, S. V.; Romanov, S. G.**
Fine structure of *I-V* characteristics and microwave response of high-$T_c$ films on insulating substrates.—73-01553

**Bogomolova, L. D.** See Pavlushkina, T. K.; Yunusov, M. Yu.

**Bogoslovskaya, A. B.; Kolchanova, N. M.; Manyakhin, F. I.; Popov, A. A.; Sukach, G. A.**
Impurity distribution near *p*-GaInAsSb/*p*-GaAlAsSb heterojunctions.—73-11260

**Bogusz, W.** See Krok, F.; Rog, G.

**Bogy, D. B.** See Feng, Z.

**Bohac, Petr** See Suzuki, Ryosuke O.

**Bohlen, James W.** See Carpenter, Harry W.

**Bohlmann, K.** See Lembke, U.

**Bohm, Alfred**
Sensor system [with $ZrO_2$ sensor].—73-15244

**Bohm, G.** See Brunner, K.; Wendel, M.

**Bohme, D.** See Barth, K.-L.

**Bohmer, R.; Gerhard, G.; Drexler, F.; Loidl, A.; Ngai, K. L.; Pannhorst, Wolfgang**
Single-particle jumps and correlated ionic motions in glass-ceramics.—73-00544

**Bohner, B.; Wildbrett, G.; Gmeiner, M.**
Cleanability of slip-resistant tile.—73-00900

**Bohrer, J.; Krost, A.; Bimberg, D.**
Spatially indirect intersubband transitions of localized electrons and holes at the staggered band lineup $In_{0.52}Al_{0.48}As/InP$ interface.—73-11450

**Boichinova, E. S.** See Simanova, S. A.

**Boike, Martin; Hilpert, Klaus; Muller, Franz**
Thermodynamic activities in $B_2O_3-SiO_2$ melts at 1475 K.—73-00420

**Boiko, B. T.; Kopach, V. R.; Melentjev, S. M.; Pancheha, P. A.; Pozdeev, Y. L.; Starikov, V. V.**
Comparison of the degradation modes in sandwich structures including amorphous oxides of niobium and tantalum.—73-09440

**Boiko, G. G.; Parkachev, A. V.**
Thermodynamic properties of melts of sodium metasilicate according to data from the method of molecular dynamics.—73-00565

**Boiko, M. E.** See Averkieva, G. K.

**Boiko, M. P.** See Andronik, K. I.

**Boiko, R. M.; Derbeeva, T. A.; Lameko, E. V.**
Raising transmission in optically transparent lithium aluminum.—73-00695

**Boiko, R. M.; Derbeneva, T. A.; Tseitlin, P. A.**
Physicochemical characteristics of the hydroxopolymer method of synthesizing glass batches of multicomponent compositions.—73-00679

**Boiko, S. I.; Gorban, I. S.; Krokhmal, A. P.; Osinskii, V. I.; Rozhko, I. A.**
Polariton luminescence near the surface of GaAs.—73-11397

**Boiko, V. S.; Sidorenko, I. N.; Mazilova, T. I.**
Computer simulation of the atomic structure of twin boundaries in HTS $YBa_2Cu_3O_7$.—73-08009

**Boiko, Yu. P.** See Ovramenko, N. A.

**Boikov, Yu. A.; Esayan, S. Kh.**
Effect of substrate on crystallization of PZT films prepared by laser sputtering.—73-16742

**Boikova, Alexandra I.** See Luginina, I. G.; Moranville-Regourd, Micheline

**Boikova, Alexandra I.; Fomicheva, O. I.; Grishchenko, L. V.**
Effect of $SO_3$ and MgO on phase relations and crystal chemical state of phases in belite–aluminoferrite clinkers.—73-09917

**Boilot, Jean-Pierre** See Caboche, G.;Renoult, Oliver; Smaihi, M.

**Boily, S.** See Chaker, M.; El Khakani, M. A.

**Bois, Laurence** See Babonneau, Florence

**Bois, P.** See Larive, M.

**Boisen, M. B., Jr.; Gibbs, G. V.**
Modeling of the structure and compressibility of quartz with a molecular potential and its transferability to cristobalite and coesite.—73-08669

**Boissier, G.** See Leclercq, J. L.

**Boissonnat, Philippe** See Roncato, Giordano

**Boitsov, S. K.** See Vul, A. Ya.

**Boitsov, S. K.; Makarova, T. L.; Osipov, V. Yu.**
Tunneling through intermediate (19–50 Å) oxide layer of silicon semiconductor–tunneling transparent insulator–semiconductor structure.—73-15218

**Boivin, J. C.** See Iharada, T.

**Bojan, V.** See Verita, M.

**Bojinov, M.; Geronov, Y.; Pistoia, G.; Pasquali, M.**
Impedance of the Li electrode in $Li/Li_xMnO_2$ accumulators at open-circuit voltage.—73-06803

**Bok, J.** See Soret, J. C.

**Bokhigas, Kh.** See Sorokin, N. I.

**Bokhonov, B. B.; Nemudry, A. P.; Pavlukhin, Yu. T.; Boldyrev, V. V.**
Electron microscopic study of the interaction of $YBa_2Cu_3O_6$ with iodine.—73-04713

**Bokii, V. A.** See Merzhanov, A. G.

**Bokov, A. A.; Shonov, Y. Y.; Rayevsky, I. P.; Gagarina, E. S.; Kupriyanov, M. F.**
Compositional ordering and phase transitions in $Pb(Yb_{0.5}Nb_{0.5})O_3$.—73-07871

**Bokov, A. A.; Shpak, L. A.; Rayevsky, I. P.**
Diffuse phase transition in $Pb(Fe_{0.5}Nb_{0.5})O_3$-based solid solution.—73-05382

**Bokov, N. A.**
Temperature dependence of intensity of scattering of visible light in transition of glasses to the state of metastable liquid.—73-00553; Visible light scattering intensity as a function of the temperature in transition of glasses to the state of a metastable liquid.—73-00579
**Boksay, Zoltan; Bouquet, Gusztav; Hari, Erzsebet; Rohonczy, Janos**
Composition fluctuation in an alkali silicate glass.—73-06891
**Boksay, Zoltan; Bouquet, Gusztav; Hari, Jozsefne**
Inhomogeneity of silicate glasses.—73-10382
**Boland, R.** See Strutt, P. R.
**Bolder, A.** See Boelens, S.
**Boldyrev, A. S.; Volzhenskii, A. V.; Iskhakova, A. A.**
Building materials based on industrial wastes.—73-01978
**Boldyrev, V. V.** See Bokhonov, B. B.
**Boldyreva, G. V.; Kozlov, A. F.; Strygina, N. I.**
Developing a production procedure for VK94-1 ceramics using silicon oxide.—73-01773
**Bolen, Wallace P.**
Perlite.—73-12292
**Bolesta, I. M.; Futei, A. V.**
Electron diffraction and electron microscopy studies of phase transitions in thin $Ag_2CdI_4$ films.—73-16129
**Bolesta, I. M.; Savitskii, I. V.; Futei, A. V.; Kovalisko, V. I.**
Phase transition and optical properties of thin films of $Ag_2CdI_4$ superionics.—73-02390
**Bolgar, A. S.** See Blinder, A. V.
**Bolger, J. A.; Kar, A. K.; Wherrett, B. S.; Desalvo, R.; Hutchings, D. C.; Hagan, D. J.**
Nondegenerate two-photon absorption spectra of ZnSe, ZnS, and ZnO.—73-04419
**Bolgov, S. S.; Kislyi, V. P.; Malyutenko, V. K.; Savchenko, A. P.**
Pressure dependence of the luminescence of $Cd_xHg_{1-x}Te/CdTe$ heterostructures.—73-15116
**Bolin, James A.**
Glassware forming machine with cooling system.—73-15767
**Bolis, Vera** See Fubini, Bice; Morterra, Claudio
**Bolis, Vera; Morterra, Claudio; Fubini, Bice; Ugliengo, P.; Garrone, E.**
Temkin-type model for the description of induced heterogeneity: CO adsorption on group IV transition metal dioxides.—73-08770
**Bollen, S. K.** See Battle, P. D.
**Bollin, Glen E.**
Development of precision and bias statements for testing drilled cores in accordance with ASTM C-42.—73-09890
**Bollong, Charles A.; Vogel, John C.; Jacobson, Leon**
Direct dating and identity of fiber temper in precontact Bushman (Basarwa) pottery.—73-03422
**Bollweg, K.** See Batke, E.
**Bolmont, D.** See Kafader, U.; Wetzel, P.
**Bolognesi, C. R.** See Nguyen, Chanh
**Bolognesi, C. R.; Seia, I.; Ibbetson, J.; Brar, Berinder; Kroemer, Herbert; English, J. H.**
Interface structure in InAs/AlSb quantum wells grown by molecular beam epitaxy.—73-11280
**Bologova, A. V.** See Lube, E. L.; Ryadnov, S. N.
**Bolotina, N. B.** See Bagdasarov, Kh. S.; Merinov, B. V.
**Bolotina, N. B.; Dmitrieva, M. T.; Rastsvetaeva, R. K.**
Modulated structure of new natural member of hollandite family.—73-16221
**Bolotina, N. B.; Rastsvetaeva, R. K.; Andrianov, V. I.**
Refinement of modulated crystals. Structure of kimrite.—73-02423
**Bolotov, A. M.; Bychkov, E. A.; Vlasov, V. G.; Rozenkov, S. B.; Khalifa, F.**
New chalcogenide glass with conductivity due to copper ions.—73-14233
**Boltong, M. G.** See Bermudez, O.; Driessens, F. C.
**Bolwerk, Richard**
Reduction of dioxin in connection with the use of waste-derived fuels in the cement industry.—73-10133
**Bolz, Armin; Schaldach, Max**
Plasma-enhanced chemical vapor deposition process for producing an amorphous semiconductive surface coating.—73-01382
**Boman, Mats** See Westberg, Helena
**Bommersbach, W. M.** See Teowee, G.
**Bommier, Christophe** See Salem, Jean
**Bommier, Christophe; Chareire, Jean-Louis**
Friction elements of composite carbon material and of differential texture.—73-02096
**Bona, Gian-Luca** See Martin, Olivier J. F.; Unger, Peter
**Bonamartini Corradi, Anna** See Andreola, Fernanda
**Bonanos, Nicholas** See Knight, Kevin S.; Slade, Robert C. T.
**Bonanos, Nicholas; Ellis, B.; Mahmood, M. N.**
Construction and operation of fuel cells based on the solid electrolyte $BaCeO_3$:Gd.—73-00944
**Boncoeur, M.** See Alexandre, N.; Lointier, P.
**Boncoeur, Marcel** See Renoult, Oliver
**Bondarenko, A. V.** See Belyaeva, A. I.
**Bondarenko, E. I.** See Khutsishvili, A. N.
**Bondarenko, E. I.; Topolov, V. Yu.; Turik, A. V.**
Inner mechanical stresses and electrical breakdown of crystalline dielectrics.—73-14710
**Bondarenko, G. P.; Karaseva, L. G.**
Cu(I) content in high-temperature superconducting materials [determined] using neocuproine.—73-15408
**Bondarenko, M. A.; Kol'tsova, T. N.; Sergievskii, V. V.**
Electrochemical investigation of oxides of high-temperature superconductors with different types of conductivity.—73-04712
**Bondarev, V. N.; Zhukov, V. M.**
Theory of cation substitution effect in ionic conductors.—73-01037
**Bondareva, O. S.** See Fedorov, P. P.; Golubev, A. M.; Malinovskii, Yu. A.; Popolitov, V. I.
**Bondor, George D.**
Method for auditing suppliers' quality systems.—73-17494
**Boneberg, J.** See Leiderer, P.
**Bonelli, M.** See Elena, M.; Laidani, N.
**Bonen, David** See Diamond, Sidney
**Bonen, David; Cohen, Menashi D.**
Magnesium sulfate attack on portland cement paste: II, Chemical and mineralogical analyses.—73-10030
**Bonen, David; Diamond, Sidney**
Interpretation of compositional patterns found by quantitative energy dispersive X-ray analysis for cement paste constituents.—73-10019; Occurrence of large silica-fume-derived particles in hydrated cement paste.—73-10071
**Bonen, David; Sarkar, Shondeep L.**
Replacement of portlandite by gypsum in the interfacial zone and cracking related to crystallization pressure.—73-03529
**Bonen, David**
Calcium hydroxide [CH] deposition in the near interfacial zone in plain concrete.—73-03438; Microstructural study of the effect produced by magnesium sulfate on plain and silica-fume-bearing portland cement mortars.—73-06688
**Bonesteel, N. E.; Rice, T. M.; Zhang, F. C.**
Spin-orbit coupling and spirals in doped $LaCuO_4$.—73-08738
**Bonetti, G.**
Electrical resistivity as a control parameter for glass manufacturing process: I.—73-03838
**Bonetto, Rita** See Basaldella, Elena I.
**Bonevich, J. E.** See Harada, K.
**Bonevich, J. E.; Marks, L. D.**
Sintering behavior of ultrafine ceramic particles.—73-06054
**Boney, C.** See Ren, J.
**Bongiovanni, G.** See Anedda, Alberto
**Bongiovanni, G.; Staehli, J. L.**
Spontaneous emission of highly excited GaAs/(Ga,Al)As quantum wells.—73-01319
**Boni, P.** See Golosovsky, I. V.
**Bonini, Julius J.** See Rostoker, William
**Bonino, C.** See Sarda, C.
**Bonk, K.** See Weiand, Werner
**Bonn, D. A.** See Hardy, W. N.; Homes, C. C.
**Bonn, D. A.; Dosanjh, P.; Liang, R.; Hardy, W. N.**
Evidence for rapid suppression of quasi-particle scattering below $T_c$ in $YBa_2Cu_3O_{7-\delta}$.—73-08066
**Bonne, Ulrich** See Cole, Barrett E.
**Bonneau, P.; Garnier, P.; Calvarin, G.; Husson, E.; Gavarri, J. R.; Hewat, A. W.**
X-ray and neutron diffraction studies of the diffuse phase transition in $PbMg_{1/3}Nb_{2/3}O_3$ ceramics.—73-02541
**Bonnell, D.** See Nowakowski, M.
**Bonnell, Dawn A.** See Rohrer, Gregory S.
**Bonnelle, Jean-Pierre** See Bechara, Rafeh
**Bonnet, Dieter; Henrichs, Beate; Jager, Karlheinz; Richter, Illimar**
Methods of making *pn* CdTe/CdS thin film solar cells.—73-11534
**Bonnet, J. J.** See Schirm, K. M.
**Bonnet, J. P.** See Las, W. C.; Lu, Zhi-Gao; Santilli, C. V.
**Bonnet, J. P.; Neuber, J.**
Babcock-BSH supplies for new plasterboard works.—73-13680
**Bonquet, Gusztav** See Boksay, Zoltan
**Bons, Anton-Jan P.** See Lievens, Jan L.
**Bonvalot, Marceline; Kevan, Larry**
Conduction electron spin resonance in the $Nd_{1.85}Ce_{0.15}CuO_{4-y}$ superconductor.—73-04685
**Bonvalot, Marceline; Puri, Micky; Kevan, Larry**
Low-field microwave absorption of $Nd_{1.85}Ce_{0.15}CuO_{4-y}$ superconducting system.—73-08124
**Book, P. O.** See Farmer, S. C.
**Bookbinder, Dana C.** See Aitken, Bruce G.
**Boone, B. G.** See Grabow, B. E.
**Boone, J. L.** See Wang, C. W.
**Boonyapiwat, A.; Fathi, Zak; Folz, D. C.; Clark, David E.**
Repair of glass by sol-gel coating using either conventional or microwave heating.—73-03884
**Boonyapiwat, A.; Mecholsky, J. J., Jr.; Clark, David E.**
Repair of glass by sol-gel coating and heating with microwave or conventional techniques.—73-14488
**Boorse, R. Samuel** See Alemany, Pere
**Booske, John H.** See Freeman, S. A.; Reardon, Brian J.
**Booth, Andrew S.; Ellis, M.; Roberts, Steven G.; Hirsch, P. B.**
Dislocation-controlled stable crack growth in Mo and MgO.—73-09570
**Booth, Andrew S.; Roberts, Steven G.**
Dislocation activity, stable crack motion, and the warm-prestressing effect in magnesium oxide.—73-13504
**Booth, Mark W.** See Berry, Frank J.
**Booth, Roy E.; Shuford, David M.; Linck, John S.**
Conversion coating on carbon/carbon composites with controlled microstructure.—73-15984
**Boothe, David T.; Severin, Harold; Braine, Clint**
Recycling of electrostatic precipitator dust from glass furnaces.—73-07169
**Boothroyd, A. R.** See Kalnitsky, A.
**Boothroyd, A. T.** See Mook, H. A.
**Boothroyd, S. A.** See Simkin, D. J.
**Borade, Ramesh B.** See Shea, Wei-Lu
**Borah, U. C.** See Barkakati, P.
**Borchardt, Gunter** See Chaissac, Martine; Kiessling, Uta; Mishin, Yu. M.
**Borchelt, Fred** See Rice, Roy W.
**Borchers, J. A.** See Lind, D. M.
**Borchers, J. A.; Carey, M. J.; Erwin, R. W.; Majkrzak C. F.; Berkowitz, A. E.**
Propagation of antiferromagnetic order across paramagnetic layers in CoO/NiO superlattices.—73-04641; Spatially modulated antiferromagnetic order in CoO/NiO superlattices.—73-15364
**Bord, Claude** See Verney, Serge
**Bordeleau, Daniel; Pigeon, Michel; Banthia, Nemkumar**
Comparative study of latex-modified concretes and normal concretes subjected to freezing and thawing in the presence of a deicer salt solution.—73-00043
**Borderiou, Arnaud** See Petitcollin, Jean-Marc
**Bordet, P.** See LePage, Y.; Rouco, A.
**Bordier, G.; Noguera, C.**
Electronic structure of a metal-insulator interface.—73-00963
**Bordiga, Silvia** See Marchese, Leonardo; Scarano, D.; Zecchina, A.
**Bordoloi, D.** See Barkakati, P.
**Borel, M. M.** See Benabbas, A.; Benhamada, L.; Costentin, G.
**Boresi, A. P.** See Basham, K. D.
**Boretius, M.** See Lugscheider, E.
**Borger, Manfred; Hahn, Dieter**
Screen printing a glass pane with a decorative coating including blowing away or sucking printing ink from the edge of the glass pane.—73-03429
**Borges, H.** See Laborde, O.
**Borges, N. M.** See Gouveia, E. A.
**Borghesi, A.; Guizzetti, G.; Patrini, M.; Caligiore, A.; Chen, R. C.; Pellegrino, S.**
Infrared study and characterization of Zn diffused InP.—73-07605
**Borghesi, A.; Sassella, A.; Rojas, S.**
Ellipsometric characterization of hydrogen-rich oxynitride films.—73-16490
**Borgholm, H. E.**
Reducing environmental pollution by using fly ash as a raw meal component.—73-03527
**Boris, A. V.; Bredikhin, S. I.**
Photoinduced currents in superionic conductor $RbAg_4I_5$.—73-14723
**Borisenko, N. V.; Piyute, Yu. V.; Chuiko, A. A.**
Benzene adsorption on silica, modified by chromium oxochloride.—73-16414
**Borisov, A. A.** See Bychkov, A. M.
**Borisov, V. G.** See Kuznetsov, G. I.
**Borisov, V. G.; Semenova, O. N.**
Heat treatment of resin-bonded refractories in an atmosphere of volatilization and decomposition products of the binder.—73-04006
**Borisov, V. I.; Gorelenok, A. T.; Dmitriev, S. G.; Lyubchenko, V. E.; Rekhviashvili, D. N.; Rogashkov, A. S.**
Gunn diodes made of *n*-InGaAs/*n*$^+$-InP heterostructures.—73-07556
**Borisov, V.** See Borisov, Y.
**Borisov, Y.; Borisov, V.; Korzhyk, V.; Golnik, V.; Lugscheider, E.; Jokiel, P.**
Plasma coatings of FeMoCrNiB alloy with amorphized structure.—73-09499
**Borisov, Y.; Borisova, A.**
Application of self-propagating high-temperature synthesis in thermal spraying technology.—73-08318
**Borisova, A.** See Borisov, Y.
**Borisova, N. V.** See Ushakov, V. M.
**Borisova, N. V.; Ushakov, V. M.**
Enthalpy of formation of alkali borosilicate glass.—73-00335
**Borisovskii, E. S.** See Kuznetsov, G. I.
**Borisovskii, E. S.; Kuznetsov, G. I.; Tsiporina, S. Z.; Aleksandrov, B. P.; Kazakov, S. V.**
Effect of iron oxides on the service life of periclase-spinellide refractories.—73-14586
**Borisovskii, E. S.; Kuznetsov, G. I.; Tsiporina, S. Z.**
Effect of iron oxides on the service life of periclase-spinellide refractories.—73-10722
**Borisovskii, K. E.; Dedyk, A. I.; Prodan, A. M.**
Size effect of electrocaloric cooling in strontium-titanate-based structure.—73-16595
**Borjesson, L.** See Litvinchuk, A. P.
**Borka, S. A.** See Varadarajan, V.
**Borkovskaya, O. Yu.** See Breza, Yu.
**Borkovskaya, O. Yu.; Dmitruk, N. L.; Mishchuk, O. N.**
Photosensitivity of Au-GaAs Schottky barriers with a surface microrelief (fundamental optical absorption reaction).—73-01283
**Borman, Mats** See Westberg, Helena
**Borman, V. D.** See Aksenov, V. S.
**Bormotunov, K.** See Budov, V. V.
**Bornemann, H. J.** See Winterer, M.
**Bornhoft,** See Klug, Thomas
**Borodai, F. Ya.**
Ceramic materials based on amorphous silicon oxide.—73-07111
**Borodich, F. M.**
Decomposition energy of fractal cracks propagating in concrete or rocks.—73-03447
**Borodina, T. I.** See Bakunov, O. V; Borovkova, L. B.
**Borodzinski, Janusz J.** See Jerkiewicz, Gregory
**Borovinskaya, I. P.** See Adadurov, G. A.; Padyukov, K. L.
**Borovinskaya, I. P.; Ratnikov, V. I.; Vishnyakova, G. A.**
Chemical aspects of forced SHS compaction.—73-16052
**Borovkova, L. B.** See Bakunov, O. V.
**Borovkova, L. B.; Borodina, T. I.; Val'yano, G. E.**
Improving the composition and investigating the properties of modified zirconia concrete by hydration hardening for high-temperature linings.—73-00825
**Borovskaya, T. N.; Butman, L. A.; Tsirel'son, V. G.**
Electron density distribution in $CdCr_2S_4$ and $CdCr_2Se_4$ crystals: precise X-ray diffraction study.—73-02254
**Borovskii, E. S.; Ragozina, G. E.; Voitovich, A. I.; Rakhmanko, E. M.; Gulevich, A. L.**
Potentiometric determination of boron in borophosphosilicate glasses.—73-00391
**Borowiec, K.; Kolbrecka, K.**
Oxygen potentials corresponding to the $YBa_2Cu_3O_{6+x}$ phase in the [CuO-rich part of the] Y-Ba-Cu-O system.—73-01625

**Borowiec, M. T.; Kozankiewicz, B.; Lukasiewicz, T.; Zmija, J.**
Photochromic absorption in molybdenum-doped sillenites $Bi_{12}GeO_{20}$.—73-12857
**Borrego, P. M.** See Pingitore, Nicholase E., Jr.
**Borrelli, Nicholas F.; Lapp, Josef C.; Morgan, David W.**
Polarizing glasses.—73-03959
**Borrelli, Nicholas F.; Morgan, David W.; Prassas, Michel; Smith, Dennis W.**
Colored glasses and method.—73-10624
**Bors, S. L.** See Headinger, M. H.
**Borsa, F.** See Chou, F. C.
**Borsa, F.; Rigamonti, A.; Corti, M.; Zioli, J.; Hyun, O. B.; Torgeson, D. R.**
Magnetic field on $^{63}Cu$ nuclear relaxation rates in $YBa_2Cu_3O_7$ and in $La_{1.85}Sr_{0.15}CuO_4$ above and below $T_c$.—73-11819
**Borschensky, V. V.; Brinkevich, D. I.; Petrov, V. V.; Prosolovich, V. S.**
Monocrystal dislocationless Si:Ge, grown from the melt with Gd impurity.—73-04411
**Borsella, E.; Botti, S.; Alexandrescu, R.; Morjan, I.; Dikonimos-Makris, T.; Giorgi, R.**
Nanocomposite ceramic powder production by laser-induced gas-phase reactions.—73-13144
**Borthakur, P. C.** See Misra, K. C.
**Borul'ko, V. I.** See Atkarskaya, A. B.; Minakova, A. A.; Zhmykhov, G. V.
**Borutskii, B. E.** See Rastsvetaeva, R. K.
**Borzenkova, M. P.** See Fadeeva, E. E.
**Borzilova, V. D.; Tkacheva, I. I.**
Oxidation resistance of the hot-pressed silicon-nitride-based materials at high temperatures.—73-13487
**Bosak, Andrea L.** See Singh, Jitendra P.
**Boscolo, M.** See Messaddeq, Y.
**Boscolo-Boscoletto, A.** See Caccavale, F.
**Bose, Animesh; Lankford, James; Page, Richard; Blanchard, Cheryl R.**
Fiber- and whisker-reinforced composites and method for making the same.—73-01855
**Bose, Frank** See Patrick, Roger
**Bose, K.** See Mollah, S.
**Bose, S. S.** See Heyd, A. R.
**Bose, S.; Acharya, H. N.; Banerjee, H. D.**
Electrical, thermal, thermoelectric, and related properties of magnesium silicide semiconductor prepared from rice husk.—73-11184
**Bosio, C.; Czaja, W.**
Fundamental absorption edge of crystalline and amorphous $SiO_2$.—73-16159
**Boskovic, S.; Lee, K. J.; Tien, Tseng-Ying**
Reaction sintering of ß-$Si_3N_4$/α′-SiAlON ceramics.—73-06012
**Bosler, Paul, Jr.**
Advantages that synthetic fabrication lubricants provide the metal finisher.—73-13795
**Bossi, D. E.** See Sacks, R. N.
**Bossler, F.; Escure, P.; Lejeune, M.**
Piezoelectric properties of $PbMg_{1/3}Nb_{2/3}O_3$-based perovskites.—73-11599
**Bostrem, I. G.; Sinitsyn, E. V.**
Appearance of competing magnetic anisotropy in nonmagnetic substitutions of 3*d* ions in [rare-earth] orthoferrites.—73-01449
**Boswell, R. W.** See Charles, C.
**Bota, S. A.; Morante, J. R.; Baraban, A. P.; Bulavinov, V. V.; Konorov, P. P.**
Characterization of the degradation processes in $SiO_2$-Si structure by means of electrolyte-insulating-semiconductor systems.—73-05025
**Botaki, A. A.** See Ul'yanov, V. L.
**Botha, P. J.; Chiang, J. C. H.; Comins, J. D.; Mjwara, P. M.; Ngoepe, P. E.**
Behavior of elastic constants, refractive index, and lattice parameter of cubic zirconia at high temperatures.—73-08813
**Bothe, J. V., Jr.** See Brown, Paul W.; Grusczscinski, E.
**Bottani, C. E.** See Elena, M.
**Bottazzi, Piero** See Ottolini, Luisa
**Bottcher, E. Holger; Kuhl, Detlef; Hieronymi, Frank; Droge, E.; Wolf, T.; Bimberg, D.**
Ultrafast semiinsulating InP:Fe-InGaAs:Fe-InP:Fe MSM photodetectors: modeling and performance.—73-01360
**Botter, Rodolfo** See Beruto, Dario
**Bottger, D.; Jansen, Heinz A.; Raw, P.**
Use of platinum in glass feeder systems.—73-14526
**Botti, S.** See Borsella, E.
**Bottiglione, A.; Epifani, M.; Balestrino, G.; Milani, E.; Montuori, M.; Maritato, L.**
Feasibility of a high-temperature bolometer based on $Bi_2Sr_2CaCu_2O_{8+x}$ superconducting films.—73-08078
**Bottner, R.** See Ratz, S.; Schroeder, N.
**Botto, I. L.** See Porta, P.
**Botton, R.** See Balland, B.
**Botts, David M.** See Vermes, Sheldon A.
**Bouamrane, F.** See Khawaja, E. E.
**Boubekeur, K.** See Coulon, C.
**Bouchalkha, Abdelatif** See Kim, Dai-Sik
**Bouchard, D.; Bale, C. W.**
Novel applications of silver beta-alumina in galvanic cell sensors.—73-07347
**Bouchard, H.; Azelmad, A.; Currie, John F.; Meunier, M.**
Variations of the stress of silicon glass during annealing.—73-07099
**Boucher, F.** See Evain, M.
**Boucher, H.** See Villegier, J. C.
**Boucherle, J. X.** See Marin, C.
**Bouchut, P.; Destefanis, G.; Million, A.; Colin, T.; Bablet, J.**
Low-threshold injection laser in HgCdTe.—73-11300
**Boud, F.** See Pashby, I. R.
**Bouffakhreddine, B.** See Dumas, P.
**Bougauchi, Takehito** See Fukui, Takehisa
**Bougher, A. Kenneth**
Maximizing the performance of a sanitary ware formula.—73-07264; Redeveloping a sanitary ware formula for optimum performance.—73-07269
**Bougrine, H.; Sergeenkov, S.; Ausloos, M.; Mehbod, M.**
Thermal conductivity of twinned $YBa_2Cu_3O_{7-\delta}$ and tweeded $YBa_2(Cu_{0.95}Fe_{0.05})_3O_{7-\delta}$ in a magnetic field: evidence for intrinsic proximity effect.—73-08254
**Bouillon, F.** See Maoujoud, M.
**Boujdaria, K.; Scalbert, D.; Laguillaume, C. B. A.**
High excitation effects in type II GaAs/AlAs superlattices.—73-01184
**Boukamp, B. A.** See Chen, C. S.; Van Hassel, B. A.
**Boulanger, Jean** See Marple, B. R.
**Boulard, B.** See Balda, R.
**Boulay, C.** See Ross, P.
**Boulon, G.** See Grinberg, M.; Lupei, V.
**Boulos, M. I.** See Ishigaki, T.; Jurewicz, J.
**Boulton, J. M.** See Teowee, G.; Uhlmann, Donald R.
**Bouniol, P.** See Atabek, R.
**Bouquet, Gusztav** See Boksay, Zoltan
**Bour, David P.; Treat, David W.; Thorton, Robert L.; Seels, R. S.; Welch, D. F.**
Drift leakage current in AlGaInP quantum well lasers.—73-14843
**Bourdeau, F.** See Badot, Jean-Claude
**Bourdie, E.** See Huttel, Y.
**Bourdillon, A.; Tan Bourdillon, N. X.**
High Temperature Superconductors: Processing and Science.—73-17530
**Boureau, G.** See Tetot, R.
**Bouree, Vigneron F.** See Moze, O.
**Bourget, L. P.** See Paisley, M. J.
**Bourgoin, J. C.** See Zaidi, M. A.
**Bourgois, T.** See Ouellet, R.
**Bourne, Orson L.; Hart, D'Arcy; Rayner, David M.; Hackett, P. A.**
Digital etching of III-V multilayered structures combined with laser ionization mass spectroscopy [LIMS]: photon-assisted depth profiling.—73-11141
**Bouroushian, M.; Loizos, Z.; Spyrellis, N.; Maurin, G.**
Influence of heat treatment on structure and properties of electrodeposited CdSe or Cd(Te, Se) semiconductor coatings.—73-07593
**Bourret, A.** See Rouviere, J.-L.
**Bourret, D.** See Marillet, J.; Sempere, R.
**Boursier, D.** See Hudner, J.
**Boury, Gerard R. M.; Ricoult, Daniel L. G.**
Lead-free enamel compositions for the decoration of low-expansion glass-ceramics.—73-14546
**Bousfield, Brian**
Ceramic surface preparation—microscopy analysis.—73-05023
**Boussant-Roux, Y.; Zanoli, A.**
Improvements of basic knowledge of heat transfer in regenerators based on industrial-scale experiments.—73-15878
**Boussetta, H.; Tabet, N.; Monty, C.**
Cobalt and magnesium impurity diffusion in $N_{1-\delta}O$ single crystals.—73-13340
**Bouteillon, J.; Poignet, J. C.; Rameau, J. J.**
Cathodic phenomena in aluminum electrowinning.—73-07285
**Bouthegourd, Jacques** See Grivon, Fernand
**Boutinaud, P.** See Zhang, H. J.
**Boutinaud, P.; Duloisy, E.; Pedrini, C.; Maine, B.; Parent, C.; Leflem, G.**
Fluorescence properties of $Cu^+$ ion in phosphate glasses of the $BaLiPO_4$-$P_2O_5$ system.—73-00482
**Boutz, Michel R.** See Chen, C. S.
**Boutz, Michel R.; Chen, Shu-Sheng; Winnubst, Louis; Burggraaf, Anthonie J.**
Characterization of grain boundaries in superplastically deformed Y-TZP ceramics.—73-17116
**Bouzouita, K.** See Helali, D.
**Bovenkerk, Harold P.; Anthony, Thomas R.; Fleischer, James F.; Banholzer, William F.**
CVD diamond by alternating chemical reactions.—73-12459
**Bovenkerk, Harold P.**
Thermally stable dense electrically conductive diamond compacts.—73-04237
**Bovier, C.** See Othmani, A.
**Bowan, B. W.; Brandys, M. M.; Mohr, R. K.; Pegg, Ian L.; Macedo, P. B.**
Design of a vitrification process for the stabilization of mixed wastes at the Fernald Environmental Management Project.—73-09711
**Bowan, B. W.; Mohr, R. K.; Brandys, M. M.; Macedo, P. B.**
Design of a vitrification process for the destruction of asbestos wastes.—73-09710
**Bowden, A. L.** See Arai, M.; Pigram, A. J.
**Bowden, C. M.** See Haus, J. W.
**Bowden, Edmond F.** See Collinson, Maryanne
**Bowden, Z. A.** See Arai, M.
**Bowen, Chris; Hunter, D. L.; Blumenfeld, R.; Jan, N.**
Magnetism and high-$T_c$ superconductors.—73-01596
**Bowen, H. Kent** See Higgins, Richard J.
**Bowen, P.** See Allen, R. F.; Barney, C.; Cotterill, P. J.; Ibbotson, A. R.
**Bowen, Paul** See Ampuero, Silva
**Bower, Nathan W.** See Thomas, William J.
**Bowers, J.** See Tan, I.-H.
**Bowers, John E.** See Babic, D. I.; Cheng, Wood-Hi
**Bowers, K. A.** See Doty, F. P.; Ren, J.; Vaudo, R. P.
**Bowes, Carol L.; Ozin, Geoffrey A.**
Nanomaterials: tin(IV) sulfide endo- and exosemiconductors.—73-04413
**Bowler, Ann M.; Hermanson, J. C.; LaFemina, John P.; Duke, C. B.**
Surface atomic structure and bonding of GaAs(110)-$p(1\times1)$-Bi (1 ML).—73-07822
**Bowler, G.**
Deterioration of mortar by chemical and physical action.—73-13702
**Bowler-Reed, J.**
Calculating the optical properties of coated glasses.—73-10419
**Bowles, Anthony J. G.** See Galloway, Terry R.
**Bowley, R. M.** See King, P. J.
**Bowman, Keith J.** See Lee, Farn-Jeng; Sandlin, Michael S.
**Bowman, Richard**
Will the proposed ISO ceramic tile standards meet consumer expectations.—73-07280
**Bown, P.** See Brett, R. L.
**Boxleitner, W.** See Wirner, C.
**Boxmann, R. L.** See Ben-Shalom, A.
**Boyarskaya, Yu. S.; Grabko, D. Z.; Lavrovskaya, N. A.**
Relaxation processes during microindentation of ionic crystals.—73-16587
**Boyce, J. B.** See Troger, L.
**Boyce, P. J.** See Halsall, H. P.
**Boyd, Gary L.** See Carruthers, William D.
**Boyd, I. W.** See Craciun, V.
**Boyd, Joseph T.** See Ramabadran, Uma B.
**Boyd, M. E.** See Johnson, S. M.
**Boyd, P. R.** See Benson, J. David
**Boyer, A.** See Cheron, J. P.
**Boyer, G. R.** See Gomes, A. S. L.
**Boyer, Michelle** See Lewis, Jennifer A.
**Boyle, M.; Khobaib, M.; Coker, D.; Ashbaugh, N.**
Sustained load behavior of off-axis SCS-6/TIMETAL 21S composites.—73-10282
**Boyn, R.** See Lobe, K.
**Boysen, H.** See Lerch, M.
**Bozack, Michael J.**
Reaction of tungsten hexafluoride with Si and TiN surfaces.—73-13228
**Bozdech, G.** See Ernst, N.; Melmed, A. J.
**Bozhevolnov, V. B.** See Yafyasov, A. M.
**Bozovic, I.** See Eckstein, J. N.; Rogers, C. T.
**Brabenec, Miloslav** See Cerna, Eva
**Brachthauser, M.** See Chang, C.-K.
**Brada, M. P.** See Ellingson, William A.,
**Bradaric, I.** See Gajic, R.
**Bradbury, M. H.** See Sarott, F.-A.
**Braden, M.** See Buchner, B.
**Braden, Stephen** See Stein, Joel A.
**Bradley, C. R.** See Ebert, W. L.
**Bradley, D. J.** See Donald, I. W.; Metcalfe, B. L.
**Bradley, I. V.** See Gillin, W. P.
**Bradley, J. A.** See Gilliland, G. D.; Northrop, G. A.
**Bradley, Piero J.** See Campi, Domenico
**Bradt, Richard C.** See Li, Hong; Li, Zhuang; Sakai, Tatsuo; Schultz, Richard A.; Senda, Tetsuya; Watari, Takanori
**Bradt, Richard C.; Ashizuka, Masahiro; Easler, T. E.; Ohira, Hiroyuki**
Statistical aspects of the thermal shock damage and the quench strengthening of ceramics.—73-05642
**Brady, A. Patrick** See Sheth, Satish
**Brady, M. A.; Price, B. J.**
Rapid analysis of cement to ASTM: C-114.—73-03525
**Brafman, O.**
Strained epitaxial layers [studied] by Raman techniques.—73-07815
**Braghini, Marco** See Gusmano, Gualtiero
**Bragin, V. B.** See Sankov, V. E.
**Braglia, Marco** See Baricco, M.; Terranova, M. L.
**Braglia, Marco; Cocito, G.; De Franceschi, Roberto**
Method of fabricating integrated optical guides of glass.—73-03945
**Braine, Clint** See Boothe, David T.
**Braithwaite David,** See Reimer, Robert F.
**Brake, Bobby G.** See Totten, Patty L.
**Bran, Sergei** See Avnir, David
**Brand, J.** See Knotek, Otto
**Branda, F.** See Tomasi, A.
**Branda, F.; Costantini, A.; Buri, A.**
Thermal and electrical properties of $Ag_2O$-$xB_2O_3$ ($Al_2O_3$, $Ga_2O_3$)-$(1.5-x)P_2O_5$ glasses.—73-00554
**Branda, F.; Costantini, A.; Catauro, M.; Buri, A.**
$T_g$ and electrical conductivity of $Ag_2O$-$B_2O_3$-$P_2O_5$-AgI glasses.—73-14290
**Brandenburg, Kathryn L.; Strauss, Carl R.**
Glass fiber insulation bonded with a uv-cured system.—73-10629
**Brandenburger, T.**
Nonthermal builtup granulation as an alternative to spray-dry particle method.—73-01804
**Brandon, J. R.** See Taylor, R.
**Brandow, Susan L.** See McGuire, G. E.
**Brandriss, Sergio; Margel, Shlomo**
Synthesis and characterization of self-assembled hydrophobic monolayer coatings on silica colloids.—73-07181
**Brandstetr, J.** See Douglas, E.
**Brandt, L.** See Johansson, Per G.
**Brandt, N. B.; Skipetrov, E. P.; Khorosh, A. G.**
Resonant energy band of radiation defects in *p*-type $Pb_{1-x}Sn_xTe$ ($x$=0.2) alloy irradiated with electrons.—73-03110
**Brandt, N. Gunnar; Wiman, Jorgen V.**
Ceramic whisker-reinforced cutting tool with preformed chipbreakers for machining.—73-02032
**Brandt, O.** See Lomascolo, M.
**Brandys, M. M.** See Bowan, B. W.
**Branislav, Zivanovic** See Ranogajec, Jonjaua
**Branitskii, G. A.** See Ivanovskaya, M. I.
**Brannon, Robert C.**
Glass size compositions and glass fibers coated therewith.—73-03925
**Brantervik, Kjell; Niklasson, G. A.**
Circuit models for cement-based materials obtained from impedance spectroscopy.—73-00041

**Brar, Berinder** See Bolognesi, C. R.; Kroemer, Herbert; Nguyen, Chanh

**Braski, D. N.; Osborne, M. C.**
In situ fracture and Auger analysis of Nicalon fibers.—73-15804

**Bratina, G.** See Biasiol, G.; Franciosi, A.

**Bratsberg, H.** See Johansen, T. H.

**Bratt, J. Stephen** See Cooper, John

**Bratthall, J.** See Erickson, L. C.

**Bratton, Graham J.; Mills, Brian J.; Parsonage, J. R.; Thomas M. J. K.; Vidgeon, E. A.**
Silica gel and process for making it from polysilicic acid.—73-10664

**Bratu, I.** See Cozar, O.

**Brauchle, G.** See Goll, G.

**Braue, W.** See Liu, J.

**Braue, W.; Quinn, George D.**
Partial devitrification of sintered silicon nitride during static fatigue testing.—73-06268

**Brauer, Gunter** See Beister, Gunter

**Braun, Linda M.** See Xu, Hockin H. K.

**Braun, Paul V.** See Keddie, Joseph L.

**Braun, Sergei** See Avnir, David

**Braunisch, W.** See Buchner, B.

**Braunisch, W.; Knauf, N.; Kataev, V.; Neuhausen, S.; Grutz, A.; Kock, A.**
Paramagnetic Meissner effect in Bi high-temperature superconductors.—73-08160

**Braunstein, Gabriel; Paz-Pujalt, Gustavo R.**
Single-crystal $SrTiO_3$ produced by the method of metallorganic decomposition.—73-09321

**Bravman, John C.** See MacManus-Driscoll, Judith L.

**Bravo, D.; Lopez, F. J.**
Identification of $Cr^{3+}$ impurities in heavily Cr-doped $Bi_4Ge_3O_{12}$ single crystals.—73-05417

**Bravo, D.; Martin, A.; Lopez, F. J.**
EPR characterization of Co impurities doping $Bi_4Ge_3O_{12}$ single crystals.—73-05394

**Brawner, D. A.; Ong, N. P.**
Scanning Hall microprobe measurements of magnetization profiles in $YBa_2Cu_3O_{7-y}$ single crystals.—73-01653

**Brawner, D. A.; Schilling, A.; Ott, H. R.; Haug, R. J.; Ploog, K.; Von Klitzing, K.**
Vortex fluctuations in the cuprate superconductor $Bi_2Sr_2CaCu_2O_8$.—73-15665

**Bray, Donald J.**
Silicon carbide whiskers.—73-12298

**Braymen, Steve D.**
Aluminum nitride deposition using an AlN/Al sputter cycle technique.—73-01043

**Brazdeikis, A.; Gaponov, S.; Yukna, A.**
Optical transmittance and reflectance on the $YBa_2Cu_3O_{7-x}$ (x=0, 1) thin films.—73-05607

**Brazhkin, V. V.; Demishev, S. V.; Kosichkin, Yu. V.; Lunts, D. G.; Lyapin, A. G.; Popova, S. V.**
Anomalies in the structural and electrophysical properties of the amorphous semiconductor a-GaSb:Ge.—73-11069

**Brazhkin, V. V.; Demishev, S. V.; Kosichkin, Yu. V.**
Metal-insulator transition in a-GaSb:Cu.—73-04135

**Brazis, R.; Safonova, L.**
Electromagnetic wave dispersion in semiconductor-dielectric structures at frequencies below the plasma frequency.—73-04308

**Brebner, J. L.** See Gagnon, G.; Tran, C. A.

**Brebrick, R. F.** See Chen, Kuo-Tong

**Brec, R.** See Bestaoui, N.; Evain, M.; Jobic, S.; Ouvrard, G.; Sourisseau, C.

**Bredbenner, C. N.** See McNevin, S. C.

**Bredell, Lorus** See Gao, Chao

**Breder, Kristin** See Persson, J.; Strobel, Tina M.; Wereszczak, A. A.

**Breder, Kristin; Tennery, Victor J.**
Comparison of the dynamic fatigue behavior of two monolithic SiC and an $Al_2O_3$/SiC composite.—73-17253

**Bredikhin, S. I.** See Boris, A. V.

**Breen, Kathleen R.**
Weak-beam stereomicrography of defects in GaAs/$In_xGa_{1-x}As$ interfaces.—73-15227

**Breeuwer, Rene** See Fleischmann, Bernhard

**Bregeault, Jean-Marie** See Doremieux-Morin, Claudine

**Breguet, J.; Umyskov, A. F.; Semenkov, S. G.; Luthy, W.; Weber, H. P.; Shcherbakov, I. A.**
Comparison of threshold energy of selectively excited $YAlO_3$:Er and YAG:Er lasers.—73-08826

**Brehm, Peggy** See Cuccio, John

**Brehmer, Dan** See Allen, S. James

**Breininger, Shannon** See Drogue, Sophie

**Breit, Henry F.; Forster, James A.**
Circuit units, substrates therefor, and method of making.—73-11009

**Breitenbaumer, C.**
Operating results and $NO_x$ emissions with the ROTAFLAM burner at the Retznei cement factory.—73-03510

**Breiter, M. W.** See Durakpasa, H.

**Breivik, L.** See Tuzemen, S.

**Brekhovskikh, S. M.**
Functional classification of vitreous, vitrocrystalline, and ceramic materials.—73-03392

**Bremer, J.** See Wold, E.

**Bremond, G.** See Benyattou, T.; Souifi, A.

**Brener, Igal** See Planken, Paul C. M.

**Brener, R.** See Edelman, F.

**Brenier, A.** See Grinberg, M.

**Brenn, R.** See Samlenski, R.

**Brennan, A. B.** See Al-Assafi, S.

**Brennan, Danny**
Resisting the heat.—73-04947

**Brennan, John J.** See Sun, Ellen Y.

**Brennan, John J.; McCarthy, Gerald**
Interfacial studies of refractory glass-ceramic-matrix/advanced-SiC-fiber-reinforced composites.—73-17151

**Brennan, T. D.; Alcandri, L. E.; Ibers, J. A.**
Synthesis and structure of $Ln_2Ta_2Se_2O_8$ (Ln=La, Ce, Pr, Nd).—73-02492

**Brennan, T. M.** See Hammons, B. E.

**Brenner, A.** See Halasz, I.

**Brenner, Fabrice** See Besnard, Marie-Madeleine

**Bresler, M. S.** See Gusev, O. B.

**Bresler, M. S.; Gusev, O. B.; Mikhailova, M. P.; Sherstnev, V. V.; Yakovlev, Yu. I.; Yassievich, L. N.**
Interface luminescence due to above-barrier reflection in an isotypic *p*-InAs/*P*-InAsPSb heterostructure.—73-01219

**Bresler, M. S.; Gusev, O. B.; Titkov, A. N.; Cheban, V. N.; Yakovlev, Y. P.; Hulicius, E.**
Radiation recombination in type-II *n*-GaInAsSb/*n*-GaSb heterojunctions.—73-15133

**Breslin, Michael C.; Daehn, Glenn S.; Fraser, Hamish L.**
Transformation kinetics and properties of co-continuous ceramic composites.—73-10292

**Breslin, Michael C.; Ringnalda, J.; Seeger, J.; Marasco, A. L.; Daehn, Glenn S.; Fraser, Hamish L.**
Alumina/aluminum co-continuous ceramic composite (C4) materials produced by solid/liquid displacement reactions: processing kinetics and microstructures.—73-13797

**Bressers, J.** See Martins, C. Saraiva

**Bressler, P. R.; Klopper, T.; Gumlich, H.-E.**
Valence band structure and Mn 3*d*-derived density of states in epitaxially grown zinc blende MnSe.—73-11503

**Bressler-Hill, V.** See Pond, K.; Wang, X.-S.

**Bressler-Hill, V.; Wassermeier, M.; Pond, K.; Maboudian, R.; Briggs, G. A. D.; Petroff, P. M.**
Atom-resolved imaging and spectroscopy on the GaAs(001) surface using tunneling microscopy.—73-07385

**Brest, V. A.; Shelyubskii, V. I.**
Forecasting working life for glass components under persistent fluctuating loads.—73-00483; Prediction of durability of glass articles under the action of variable loading.—73-00531; Strength of glass under a prolonged load.—73-00547

**Bretagnon, T.** See Dannefaer, S.

**Bretagnon, T.; Dannefaer, S.; Kerr, D.**
Indium vacancy in as-grown InP: a positron annihilation study.—73-03097

**Breton, Dannys; Carles-Gibergues, Andre; Ballivy, Gerard; Grandet, J.**
Contribution to the formation mechanism of the transition zone between rock-cement paste.—73-00049

**Bretschneider, E.** See Rees, William S., Jr.

**Bretschneider, J.**
Interferometric determination of the homogeneity of float glass.—73-14413

**Brett, M. J.** See Konevecki, M. W.

**Brett, R. L.; Bown, P.**
Fracture toughness assessment of silicon-carbide-based ceramics and particulate-reinforced composites.—73-03299

**Breunig, T. M.; Nichols, M. C.; Gruver, J. S.; Kinney, J. H.; Haupt, D. L.**
Servo-mechanical load frame for in situ, noninvasive, imaging of damage development.—73-15844

**Breunig, T. M.; Stock, S. R.; Guvenilir, A.; Elliott, J. C.; Elliott, J. C.; Anderson, P.**
Damage in aligned-fiber SiC/Al quantified using a laboratory X-ray tomographic microscope.—73-00217

**Breval, E.** See Shrivastava, O. P.

**Breval, E.; Bandopadhyay, Amitava; DebRoy, Tarasankar**
Directed oxidation of Al alloy into sintered $Al_2O_3$.—73-06771

**Breval, E.; Harshe, Girish; Agrawal, Dinesh K.**
Sintering studies of NZP materials.—73-09328

**Breval, Else; Hammond, Michael; Pantano, Carlo G.**
Nanostructural characterization of silicon oxycarbide glasses and glass-ceramics.—73-14047

**Brewer, J. H.** See Franck, J. P.

**Brewer, L.** See Leonard, S. R.

**Brewster, J. R.** See Steadman, Gregg W.

**Breza, Martin**
Axial oxygen position in Y-Ba-Cu-O superconductors.—73-07993; Electronic structure of Bi-Sr-(Ca)-Cu-O systems.—73-05392; Electronic structures of lanthanide analogs of Y-Ba-Cu-O superconductors.—73-08055

**Breza, Yu.; Borkovskaya, O. Yu.; Dimitruk, N. L.**
Interphase interactions in thin-film Pt-GaAs surface-barrier structures.—73-04374

**Brezny, Rasto**
Porous ceramic beads.—73-16007

**Briat, B.** See Moya, E.

**Bricault, Raymond J., Jr.** See Sioshansi, Piran

**Briceno, Jose** See Nanko, Makoto

**Bridge, B.** See Kathrina, T.

**Bridgwater, John** See Benbow, John J.

**Bridgwater, John**
Ceramic foaming—the effect of material components and processing on properties.—73-09032

**Bridou, F.** See Parjadis de Lariviere, G.

**Bridoux, E.** See Kastelik, J. C.

**Brien, V.** See Macklin, W. J.

**Briend, Marguerite** See Derewinski, Miroslav

**Briere, M. A.** See Balogh, A. G.

**Brierly, S. K.** See Hoke, W. E.

**Briggs, G. A. D.** See Bressler-Hill, V.; Lawrence, C. W.

**Briggs, G. A. D.; Knall, J.; Mayne, A. J.**
STM study of the Si(001)-(2×1) and GaAs(001)-(2×4) surfaces—73-15180

**Briggs, G. A. D.; Lawrence, C. W.; Scruby, C. B.**
Acoustic microscopy of ceramic-fiber composites.—73-03118

**Bright, A. A.**
Helium plasma-enhanced chemical vapor deposited oxides and nitrides: process mechanisms and applications in advanced device structure.—73-02850

**Brignon, A.; Wagner, K. H.**
Polarization state evolution and eigenmode switching in photorefractive BSO.—73-16571

**Brik, A. B.** See Gamarnik, M. Ya.; Gokhman, V. L.

**Brill, R. H.; Weintraub, S.**
Chemical analysis of some stained glass windows in Leon Cathedral.—73-13663

**Brillson, L. J.** See Chang, S.; Raisanen, A.; Vitomirov, I. M.

**Brimacombe, J. Keith** See Cockcroft, Steven L.; Davies, C. H. J.

**Brindley, William J.** See Miller, Robert A.

**Bringer, A.** See Gil, L.

**Bringhurst, Shane** See Janas, Victor F.

**Bringhurst, Shane; Iskander, Magdy F.; Andrade, Octavio M.**
New metallized ceramic coaxial probe for high-temperature broad band dielectric property measurements.—73-05072

**Bringley, J.** See Bularzik, J.

**Bringmann, U.** See Weber, A.

**Brink, D.** See Baars, J.

**Brink, Reinhold; Lange, Horst**
Process for the production of sintering-active $Si_3N_4$ powders.—73-05331

**Brinker, C. Jeffrey** See Ackerman, William C.; Huling, Jeffrey C.

**Brinker, C. Jeffrey; Hurd, A. J.; Frye, G. C.; Schunk, P. R.; Ashley, Carol S.**
Sol-gel thin film formation.—73-03195

**Brinker, C. Jeffrey; Hurd, A. J.; Schunk, P. R.**
Review of sol-gel thin-film formation.—73-13237

**Brinker, C. Jeffrey; Warren, W. L.; Logan, Monica N.; Ashley, Carol S.**
Amorphous sol-gel insulating films.—73-04057

**Brinkevich, D. I.** See Borschensky, V. V.

**Brinkevich, D. I.; Kazuchits, N. M.; Petrov, V. V.**
Epitaxial layers Si:(Sn,Yb) produced by the crystallization from the melt solution on the basis of Sn.—73-04322

**Brinkman, A. W.** See Illingsworth, J.

**Brinkman, Charles R.** See Ding, Jow-Lian

**Brinkman, Charles R.; Duffy, Stephen F.**
Life Prediction Methodologies and Data for Ceramic Materials (ASTM Special Technical Publication 1201).—73-17531

**Brinkman, Hendrik W.** See Cao, Guo-Zhong

**Brinkmann, D.** See Wang, G.

**Brinkmann, R.; Sohler, W.; Suche, H.; Wersig, C.**
Fluorescence and laser operation in single-mode Ti-diffused Nd:MgO:$LiNbO_3$ waveguide structures.—73-01167

**Briones, F.** See Molina, S. I.; Spitzer, J.

**Briot, N.; Cloitre, T.; Briot, O.; Gil, B.; Bertho, D.; Jouanin, C.**
Low-pressure MOVPE [LP-MOVPE] growth of ZnSe, ZnTe, and ZnSe/ZnTe strained-layer superlattices.—73-04385

**Briot, O.** See Briot, N.; Pelant, I.

**Briscoe, B. J.; Luckham, P. F.; Ren, S. R.**
Setting of spheres in clay suspensions.—73-13251

**Brisset, C.** See Dollfus, P.

**Britel, R.** See Saint-Paul, M.

**Brito, G. E.; Pulcinelli, S. H.; Santilli, C. V.; Barelli, N.**
Effect of $Nb_2O_5$ on crystallite growth during sintering of $SnO_2$ ceramics.—73-09081

**Brito, G.** See Adkins, D. F.

**Brito, Manuel E.** See Hirao, Kiyoshi; Yasuoka, Masaki

**Britsis, D. I.; Kovaleva, N. S.; Roguiis, U. T.; Tolstoi, M. N.; Troksh, Ya. S.**
Photostimulated formation of paramagnetic centers in phosphate glasses, both pure and activated by iron ions.—73-14071

**Britun, V. F.; Erin, O. N.; Lanin, A. G.**
Structure of deformed polycrystalline zirconium carbide.—73-12704

**Britun, V. F.; Kurdyumov, A. V.; Petrusha, I. A.**
Structural features of boron nitride dense phase formation from rhombohedral modification under high static pressure.—73-17200

**Brivot, Francoise** See Dron, Roger

**Brixner, L. H.; Blasse, G.**
Ultraviolet luminescence from hafnium pyrophosphate ($HfP_2O_7$).—73-02719

**Brochu, R.** See Alami, M.

**Brock, Tim** See Chau, Hin-Fai

**Brocklesby, W. S.** See Wang, J.

**Brodersen, K.; Nilsson, K.**
Pores and cracks in cemented waste and concrete.—73-03519

**Brodeur, Russell P.; Gachigi, Kamau Wa; Pruna, Philip M.; Shrout, Thomas R.**
Ultrahigh strain ceramics with multiple field-induced phase transitions.—73-15299

**Brodhag, C.** See Descemond, M.

**Brodie, D. E.** See Zhang, D. H.; Zhang, S.

**Brodie, I.** See Spindt, C. A.

**Brodkin, D.; Barsoum, M.; Zavaliangos, A.; Kalidindi, S.**
Processing-structure properties' relations in titanium boron carbon ceramic-ceramic composites produced by transient plastic phase processing.—73-16954

**Brodovoi, A. V.** See Lashkarev, G. V.

**Brodwin, M.** See Moukwa, M.

**Brody, John F.** See Johnson, Jack W.

**Brody, P. S.; Rod, B. J.; Bennett, K. W.; Cook, Lawrence P.; Schenck, P. K.; Vaudin, Mark D.**
Preparation, microstructure, and ferroelectric properties of laser-deposited thin $BaTiO_3$ and lead zirconate titanate films.—73-11603

**Broers, J. W.** See Schoonman, J.

**Brog, T. K.** See Chen, Ning-Wei; Krutyholowa, M. W.; Reed, C. T.

**Broholm, C.** See Bao, Wei

**Brohs, Friedrich** See Schmid, Wolfgang

**Broitman, E.** See Varhue, W. J.

**Brom, H. B.**
Incommensurabilities in high-$T_c$ superconducting oxides.—73-04741

**Bromley, Anthony P.** See Egerton, Terence A.
**Bron, W. E.** See Smith, G. O.
**Brondsted, Paul; Heredia, Fernando E.; Evans, Anthony G.**
In-plane shear properties of 2-D ceramic matrix composites.—73-17355
**Bronic, Josip** See Kosanovic, Cleo
**Bronson, Lance A.; Moore, Scott P.; Shriver, John A., III**
Pinned ceramic chip carrier.—73-11042
**Brook, R. G.** See Passing, G.
**Brook, Richard J.** See Riedel, R.
**Brooks, Keith** See Reaney, Ian M.
**Brooks, Rodney A.** See Flynn, Anita M.
**Brooman, Eric W.** See Wu, Han
**Brosch, Eric J.; Limmer, Randy A.; Lafayette, William M.**
Apparatus for producing glass filaments.—73-01844
**Brosha, Eric L.; Garzon, Fernando H.; Raistrick, Ian D.; Davies, Peter K.**
Low-temperature synthesis and phase equilibria in the Y-Cu-O binary system.—73-08658
**Brosnan, Denis A.**
Implications of toughening of clay brick on performance.—73-03980
**Brossard, L.** See Dumont, H.
**Brost, George A.**
Numerical analysis of photorefractive grating formation dynamics at large modulations in BSO ($Bi_{12}SiO_{20}$).—73-08930
**Broszeit, E.** See Matthes, B.
**Brotikovskii, O. I.**
ESR method of studying the glass-formation process in chemically synthesized lead silicate batches.—73-00623
**Broto, J. M.** See Osofsky, M. A.
**Brotz, Gregory R.**
Process for making silicon carbide foam.—73-02123
**Brouder, C.** See Schille, J. P.
**Broudic, J. C.** See Werckmann, J.
**Brough, Adrian R.** See Richardson, I. G.
**Brough, Adrian R.; Dobson, Christopher M.; Richardson, I. G.; Groves, G. W.**
Application of selective $^{29}Si$ isotopic enrichment to studies of the structure of calcium silicate hydrate (CSH) gels.—73-05358
**Broussard, P. R.; Allen, L. H.; Cestone, V. C.; Wolf, S. A.**
$YBa_2Cu_3O_{7-x}/Y_2BaCuO_5$ composites: growth and characterization.—73-08279
**Broussard, P. R.; Cestone, V. C.**
Modification of the X-ray photoemission spectrum of in situ deposited thin films of $Y_1Ba_2Cu_3O_{7-y}$ for various oxygen treatments.—73-15559
**Broussaud, A.**
Conception of grinding circuits assisted by an ordinater.—73-01769
**Brousseau, R.** See Gu, Ping; Ping, Xie
**Brouxel, M.**
Alkali-aggregate reaction rim: $Na_2O$, $SiO_2$, $K_2O$, and CaO chemical distribution.—73-00020
**Brow, R. K.; Kovacic, Larry**
High-thermal-expansion sealing glass.—73-03933
**Brow, R. K.; Saha, S. K.; Goldstein, J. I.**
Interfacial reactions between titanium and borate glass.—73-00245
**Brown, A. S.** See Metzger, R. A.; Zakharov, N. D.
**Brown, A. S.; Metzger, R. A.; Henige, J. A.**
Growth and properties of AlInAs-GaInAs alloys and quantum wells on (110)InP.—73-11227
**Brown, David D.; Green, David J.**
Strut crack formation in open cell alumina ceramics.—73-13288
**Brown, David R.** See Rhodes, Christopher N.
**Brown, Duncan W.** See Kirlin, Peter S.
**Brown, G. A.** See Revesz, A. G.
**Brown, G. E., Jr.** See Combes, J. M.
**Brown, G.** See Lengel, G.
**Brown, H. W., III** See Pagano, N. J.
**Brown, Heidi**
UK glass sector update.—73-17511
**Brown, I. D.**
Influence of internal strain on the charge distribution and superconducting transition temperature in $Ba_2YCu_3O_x$.—73-01575
**Brown, Ian G.** See Alshawa, A. K.; Anders, Andre; Feng, Z.; Lozykowski, H. J.; MacGill, R. A.
**Brown, Ian G.**
Metal ion implantation for large-scale surface modification.—73-08351; Rare-earth doping by ion implantation and related techniques.—73-04464
**Brown, Jesse J.** See Gonzales, Sandra
**Brown, Jesse J.; Hirschfeld, Deidre A.; Li, Ting-Kai**
Alkali corrosion-resistant coatings and ceramic foams having superfine open cell structure and method of processing.—73-05186
**Brown, John T.; Coppin, William P.; Stephens, Alan; Marshall, Richard W.**
Status report on the development of an oxygen-fuel-fired forehearth.—73-08487
**Brown, Kevin G.**
Product composition control system at Savannah River: statistical process control algorithm.—73-08306
**Brown, Lynette** See Balcerak, Raymond
**Brown, M.** See Bajaj, J.
**Brown, Michael** See Weyers, Richard E.
**Brown, N. M.** See Tweed, J. D.
**Brown, N. R.** See Ebert, W. L.
**Brown, Nancy** See Gonzales, Sandra
**Brown, P. J.** See Hayden, S. M.
**Brown, Paul W.** See Gruszczscinski, E.; Ma, Wei-Ping; Martin, R. I.
**Brown, Paul W.; Bothe, J. V., Jr.**
Stability of ettringite.—73-06719
**Brown, Paul W.; Shi, De-Xiang**
Model for the variations in solution chemistry during tricalcium silicate hydration.—73-10055
**Brown, Paul W.**
Cements Research Progress 1990.—73-09760; Hydroxyapatite formation.—73-08516; Kinetics of tricalcium aluminate and tetracalcium aluminoferrite hydration in the presence of calcium sulfate.—73-00130
**Brown, Peter W.; Sambasivan, S.**
MOCVD of beta-alumina.—73-16872
**Brown, R. A.** See Wang, C. A.
**Brown, R. K.**
Bonding in simple phosphate glass.—73-13930
**Brown, Robert T.**
0–1 GHz waveguide 10.6 μm GaAs electrooptic modulator.—73-01368
**Brown, S. E.** See Zhang, J.
**Brown, S. K.** See Solomah, A. G.
**Brown, Sherman D.** See Wallenberger, Frederick T.
**Brown, Thomas S., III** See Sandifer, Jerry B.
**Brown, William D.** See Ang, S. S.; Mauskaar, Ashutosh; Naseem, H. A.; Sidhwa, A. J.
**Brown, William D.; Khaliq, Muhammad A.**
Silicon nitride for application as the gate dielectric in MOS devices.—73-04232
**Browne, Joanne** See Wang, Da-Yu
**Brownie, P. M.; Ponton, C. B.; Marquis, P. M.**
Zirconia sol coating of single-crystal ceramic fibers.—73-09387
**Browning, J.** See McGruer, N. E.
**Brownlow, Darryl L.** See Gupta, Prabhat K.
**Brox, Steven J.**
Diamond film cutting tool.—73-15989
**Brozek, T.** See Beck, R. B.
**Brozek, V.** See Hubacek, M.
**Brozek, V.; Buzek, V.; Kolman, B.; Chraska, P.**
Ceramic membranes produced by APS [air plasma spraying] technology.—73-09033
**Brozel, M. R.** See Tuzemen, S.
**Bruce, Allan J.** See Rabinovich, Eliezer M.
**Bruce, Allan J.; Rabinovich, Eliezer M.**
Sol-gel method of making multicomponent glass.—73-03968
**Bruce, P. G.** See Abrahams, I.
**Bruce, P. G.; Abrahams, I.**
Defect cluster model for ion migration in solid electrolytes.—73-03083
**Bruce, Robert** See Ivey, Douglas C.
**Bruck, S.** See Kasemann, R.
**Bruckenstein, S.** See Brzezinska, K.
**Bruckner, A.; Luck, R.; Wieker, W.; Fahlke, B.; Mehner, H.**
EPR study on the incorporation of Fe(III) ions in ZSM-5 zeolites in dependence on the preparation conditions.—73-05395
**Bruckner, A.; Luck, R.; Wieker, W.; Winkler, A.; Andreae, C.; Mehner, H.**
Redox reactions proceeding during the hardening process of sulfide-containing cement.—73-10132
**Bruckner, H. J.; Olzhausen, H. J.; Zengerle, R.**
Fabrication of nonlinearly shaped optical waveguide tapers on InP with precise design parameter control.—73-14911
**Bruckner, Rolf** See Deubener, J.; Habeck, A.; Klug, Thomas; Lembke, U.
**Bruckner, Rolf; Hessenkemper, H.**
Influence of water content and basicity on redox ratio—consequences on radiation heat absorption and emission of glass melts during fusion and processing.—73-10556
**Bruckner, Rolf**
Glass composites.—73-14392
**Bruckner, Sergio; Lusvardi, Gigliola; Menabue, Ledi; Saladini, M.**
Effect of $Cu^{2+}$ on the structural stability of synthetic hydroxyapatite.—73-08604
**Bruckner, W.** See Griessmann, H.
**Bruckner, W.; Griessmann, H.; Monch, J. I.; Schubert, G.; Heinrich, A.**
High-temperature stability of CrSi(W)-N films.—73-12810
**Bruckner, W.; Griessmann, H.; Schreiber, H.; Vinzelberg, H.; Heinrich, A.**
Degradation of CrSi(W)-O resistive films.—73-07293
**Bruckner-Foit, Angelika; Heger, Armin; Munz, Dietrich**
Effect of proof testing on the failure probability of multiaxailly loaded ceramic components.—73-17292
**Brudnyi, V. N.; Kolin, N. G.; Potapov, A. I.**
Deep trapping centers in *n*-type GaAs bombarded with fast neutrons.—73-14826
**Brugan, J. M.**
State of the art in raw meal grinding [in cement industry].—73-10162
**Brugger, T.; Schreiner, T.; Roth, G.; Adelmann, P.; Czjzek, G.**
Heavy-fermion-like excitations in metallic $Nd_{2-y}Ce_yCuO_4$.—73-16503
**Bruggink, Gerrit H.** See Baikie, Iain D.
**Bruha, Richard; Kadlec, Vaclav; Lins, Antonio P. C.**
Bending glass sheets.—73-04959
**Bruisten, P. M.; Van Dam, H. B. B.**
Viscosity measurement of quartz glass.—73-01938
**Bruley, John** See Cuomo, Jerome J.; Kleebe, Hans-Joachim; Tanaka, Isao
**Bruley, John; Hoche, Thomas; Kleebe, Hans-Joachim; Ruhle, Manfred**
Recent attempts to detect magnesium in a heavily doped sapphire bicrystal by spatially resolved electron energy loss spectroscopy.—73-17192
**Brull, P.** See Leiderer, P.
**Brull, W.** See Frese, E.
**Brummer, G. W.** See Barrow, N. J.
**Brun, Milivoj K.** See Luthra, Krishan L.
**Brunard, N.** See Guth, J. L.
**Brune, M.** See Collot, L.
**Bruneel, C.** See Kastelik, J. C.
**Bruneel, Dominique** See Harmand, Helene
**Brunel, M.** See Bruyere, Jean-Claude
**Brunet, S.** See Chehouani, H.
**Bruneton, E.** See Colomban, P.
**Bruni, Silvia** See Barbieri, Luisa; Narducci, D.
**Brunkov, P. N.; Gaibullaev, S.; Konnikov, S. G.; Nikitin, V. G.; Papentsev, M. I.; Sobolev, M. M.**
Deep-level defects in GaAs grown from a molten Ga-Bi solution.—73-01119
**Brunner, B.** See Pechen, E. V.
**Brunner, Elke**
Limitations of resolution in the $^1H$ MAS-NMR spectroscopy of zeolites—further results.—73-12621
**Brunner, G. O.**
Proposal for a mechanism of nucleation in zeolite synthesis.—73-06003; Quantitative zeolite topology can help to recognize erroneous structures and to plan syntheses.—73-08715
**Brunner, J.; Nutzel, J.; Gail, M.; Menczigar, U.; Abstreiter, G.**
Luminescence studies of confined excitons in pseudomorphic Si/SiGe quantum wells grown by solid-source molecular beam epitaxy [SSMBE].—73-11305
**Brunner, K.; Bockelmann, U.; Abstreiter, G.; Walther, M.; Bohm, G.; Trankle, G.**
Photoluminescence from a single GaAs/AlGaAs quantum dot.—73-07725
**Bruno, G.** See Cicala, G.
**Bruno, Salvatore A.; Burn, Ian**
Cog dielectric with high K.—73-01047
**Bruno, Salvatore A.; Monson, William L.**
Process for preparing crystalline mixed metal oxides.—73-02060
**Brusatin, G.** See Guglielmi, M.
**Brusentsova, V. N.** See Govorukhina, O. A.
**Bruskov, V. A.** See Gubich, I. B.
**Brustel, U.** See Heinrich, A.
**Bruvo, M.** See Kotur, B. Ya.
**Bruyere, Jean-Claude** See Jousse, Didier; Savall, C.
**Bruyere, Jean-Claude; Reynes, B.; Savall, C.; Roch, C.**
Annealing of silicon nitride thin films prepared by plasma-enhanced chemical vapor deposition with helium dilution.—73-12919
**Bruyere, Jean-Claude; Savall, C.; Reynes, B.; Brunel, M.; Ortega, L.**
Density of as-deposited and annealed thin silicon nitride films.—73-02566
**Bruynseraede, Y.** See Gao, Z. X.
**Bruzzichelli, Chiara**
More ceramics and natural stone at Cevisama.—73-17495; Spotlight on Acimac.—73-17503; Successful Ceramitec.—73-17505; Tecnargilla expanding.—73-17507
**Bryan, William J.; Fuhrman, Nathan; Jones, David C.**
Borate glass containing boron carbide burnable poison coating.—73-02023
**Bryan, William J.; Jones, David C.**
Wear-resistant coating for fuel cladding.—73-05249
**Bryanov, D. I.; Kosichkin, Yu. V.; Mel'nichuk, I. M.; Murzin, V. N.; Svistov, A. E.; Chizhevskii, E. G.**
Magnetoresistivity of $A^4B^6$-based microcontacts.—73-15035
**Bryant, Frank R.** See Hodges, Robert L.
**Bryant, Frank R.**
Method of forming an integrated circuit capacitor dielectric and a capacitor formed thereby.—73-04220
**Bryant, R. D.** See Laishley, E. J.
**Bryant, R. G.** See Sur, Sandip K.
**Bryden, R. H.; Deveau, M.; Konsztowicz, K. J.; Caley, William F.; Kingston, P. W.**
Industrial minerals as strengthening agents in ceramic matrix composites.—73-09170
**Bryden, R. H.; Konsztowicz, K. J.; Caley, William F.**
Dispersion stability of alumina–wollastonite aqueous suspensions.—73-05746
**Bryden, W. A.** See Kistenmacher, T. J.
**Bryden, W. A.; Morgan, J. S.; Fainchtein, R.; Kistenmacher, T. J.**
Effects of AlN nucleation layer on magnetron-sputtered indium nitride films.—73-08840
**Bryja, L.; Jezierski, K.; Misiewicz, J.**
Optical properties of $Zn_3P_2$ thin films.—73-08935
**Brylicki, W.; Malolepszy, J.; Stryczek, S.**
Alkali-activated slag cementitious material for drilling operation.—73-13675
**Brylinski, C.** See Pinkse, P. W. H.
**Bryson, Nathan; Seyferth, Dietmar; Tracy, Henry J.; Workman, David P.**
Ceramic synthesis by pyrolysis of metal-containing polymer and metal.—73-15981
**Brzezinska, K.; Bruckenstein, S.; Klemptner, L. J.; Hodge, J. D.**
Effect of carbon dioxide on the reaction of $YBa_2Cu_3O_{6.5+x}$ with water vapor.—73-11731
**Bsiey, A.** See Aktik, C.
**Bu, Y.; Ma, L.; Lin, M. C.**
Laser-assisted chemical vapor deposition of InN on Si(100).—73-17152
**Bubelo, V. V.; Timofeev, V. M.; Parshintsev, N. V.; Kumpan, V. P.; Deigraf, V. D.**
Development and application of multimeasured control of thermal-humid treatment of concrete.—73-00059
**Bublik, V. T.; Morozov, A. N.; Smirnov, V. M.; Mil'vidskaya, A. G.; Kolchina, G. P.; Safonov, Yu. S.**
Intrinsic point defects and microdefects in GaSb single crystals doped by electrically active impurities (Si, Ge, Te).—73-17082; Nonstoichiometry and intrinsic point defects [and microdefects] in GaSb.—73-17089
**Bublik, V. T.; Tkalich, A. K.; Shupegin, M. L.**
Nature of centers of domain wall fixing in nonstoichiometric ferrite-garnet films.—73-01475
**Bubnik, Jiri**
Polarographic determination of small amounts of nickel and cobalt in glasses and in some glass raw materials.—73-12178

**Bubnov, M. M.; Dianov, E. M.; Semyonov, S. L.; Guryanov, A. N.; Devyatykh, G. G.**
Static fatigue of metal-coated fibers.—73-14279
**Bubnova, R. S.; Filatov, S. K.; Ponomarev, V. I.**
Refinement of structure of $(Na,Li)_2V_2O_6$ at 293, 600, and 800 K.—73-16292
**Bubulac, L. O.** See Arias, J. M.; Baars, J.; Edwall, D. D.; Irvine, S. J. C.; Shin, S. H.
**Bubulac, L. O.; Edwall, D. D.; Cheung, J. T.; Viswanathan, C. R.**
Compositional analysis of HgCdTe epitaxial layers using secondary ion mass spectrometry.—73-07419
**Bucci, C.**
Magnetic properties of high-$T_c$ superconductors studied by means of positive muons.—73-01595
**Buchal, C.** See Copetti, C. A.; Fluck, D.; Lubig, A.
**Buchanan, B.** See Namavar, Fereydoon
**Buchanan, D. A.** See Marwick, A. D.
**Buchanan, F. J.; Little, J. A.**
Glass sealants for carbon-carbon composites.—73-00494
**Buchanan, M.** See Allard, L. B.; Campbell, J. W. M.
**Buchanan, R. C.; Roseman, R. D.; Kim, J.**
Effects of grain-boundary structure on the resistivity phenomenon in doped $BaTiO_3$.—73-11565
**Buchel'nikov, V. D.; Bychkov, I. V.; Shavrov, V. G.**
Coupled oscillations of iron, rare-earth, and elastic subsystems in orthoferrites with Kramers rare-earth ions.—73-04597; Magnetoelastic waves in orthoferrites with non-Kramers rare-earth ions.—73-07964
**Buchenau, U.** See Gil, L.
**Bucher, B.; Steiner, P.; Karpinski, J.; Kaldis, E.; Wachter, P.**
Influence of the spin gap on the normal state transport in $YBa_2Cu_4O_8$.—73-15516
**Bucher, C.; Sainte-Catherine, C.; Jeandin, M.**
Microstructural study of tungsten-carbide-reinforced Ni-based superficial composite obtained by laser melt–particle injection processing.—73-13872
**Buchgeister, M.** See Clinton, T. W.
**Buchholz, D. B.** See Duray, S. J.
**Buchinskaya, I. I.** See Fedorov, P. P.
**Buchner, B.; Cramm, M.; Braden, M.; Braunisch, W.; Hoffels, O.; Schnelle, W.**
Competition between structural and superconducting transition in (LaNd)-Sr-Cu-O.—73-04682
**Buchner, Peter** See Burckhardt, Wolfgang
**Buchting, H.** See Steinborn, G.
**Buchwald, W.** See Flemish, J. R.
**Buck, E. C.** See Ebert, W. L.
**Buck, Gregory M.; Vasquez, Peter**
Ceramic slip casting technique.—73-04964
**Buckermann, Wilhelm-August; Muller-Warmuth, Werner; Frischat, G. H.**
Further $^{29}Si$ MAS NMR study on binary alkali silicate glasses.—73-10378
**Buckle, K. A.; Pastor, K.; Constantine, C.; Johnson, D.**
Parametric evaluation of electon cyclotron resonance deposited $SiO_2$ using a multicusp plasma applicator.—73-09230
**Buckley, John D.** See Haertling, Gene H.
**Buckneltassius, R. N.** See Yakovlev, D. R.
**Buckner, John P.** See Mroz, Thomas J.
**Buckwald, W.** See McLane, G. F.
**Bud'ko, S. L.; Tao, Y. K.; Wang, Y. Q.; Chu, C.-W.; Hor, P. H.**
Nonlinear pressure dependence of the transport $J_c$ in BSCCO 2223 tapes.—73-04778
**Budaguan, B. B.** See Kudoyarova, V. K.
**Budaguan, B. G.** See Aivazov, A. A.
**Budai, J. D.** See McCamy, J. W.; Steadman, Gregg W.
**Budantsev, M. V.; Kvon, Z. D.; Pogosov, A. G.**
Negative longitudinal magnetoresistance of δ-doped layers in GaAs.—73-01256
**Buddhudu, S.** See Annapurna, K.
**Budesheim, Carsten** See Lang, Christoph
**Budhani, R. C.** See Zhu, Yi-Mei
**Budhani, R. C.; Liou, S. H.; Cai, Z. X.**
Diminishing sign anomaly and scaling behavior of the mixed-state Hall resistivity in $Tl_2Ba_2Ca_2Cu_3O_{10}$ films containing columnar defects.—73-15419
**Budhani, R. C.; Suenaga, M.; Liou, S. H.**
Giant suppression of flux-flow resistivity in heavy-ion-irradiated $Tl_2Ba_2Ca_2Cu_3O_{10}$ films: influence of linear defects on vortex transport.—73-09408
**Budhani, R. C.; Suenaga, M.**
Heavy ion irradiation and vortex glass description of the mixed state in $YBa_2Cu_3O_7$ epitaxial films.—73-04732
**Budiansky, Bernard** See Cui, Ying-Qing
**Budiansky, Bernard; Truskinovsky, Lev**
Mechanics of stress-induced phase transformation in zirconia.—73-08665
**Budianu, E.** See Rusu, E.
**Budinski, Kenneth G.**
Wear resistance of diffusion-treated surfaces.—73-06877
**Budishevskii, V. S.; Zhuravlev, Yu. F.; Krivolapov, N. N.**
Transformations of the Ge-GaAs system under rapid thermal treatment by electron beam.—73-04500
**Budnlok, A.** See Olesky, M.
**Budov, V. V.; Fetikov, V. I.**
X-ray spectral analysis of sulfur in the technology of hollow glass microspheres.—73-06990
**Budov, V. V.; Sarkisov, P. D.; Bormotunov, K.; Trofimov, N.; Khazanov, V. E.; Shaina, Z.**
Oxynitride glasses—the material for prospective glass fibers.—73-14452
**Buechele, A. C.** See Wang, E.
**Buechele, A. C.; Wang, E.; Fu, S. S.**
Composition effects on microstructure in heat-treated Fernald waste glasses.—73-09706
**Bueno, I.; Parada, C.; Monge, A.; Valero, C. R.**
Crystal growth and structural study of the new series $Y(OH)CrO_4$, $Dy\text{-}Lu(OH)CrO_4$: crystal structure of $Er(OH)CrO_4$.—73-02177
**Buerhop, Claudia** See Helebrant, A.
**Buerhop, Claudia; Lutz, Norbert; Weissmann, Rudolf; Tomandl, Gerhard**
Surface treatment of glass and ceramics using XeCl excimer laser radiation.—73-07178
**Buerhop, Claudia; Weissmann, Rudolf**
Precise marking of silicate glass by excimer-laser and TEA-$CO_2$-laser irradiation.—73-14466
**Buesking, Kent W.** See Sullivan, Brian J.
**Buesking, Kent W.; Sullivan, Brian J.**
Evaluation and selection of joint designs for a carbon-carbon satellite truss.—73-12430
**Buesking, Kent W.**
Effects of weave geometry on properties of Nicalon-reinforced ceramic matrix composites.—73-13037
**Buettiker, Paul**
Spout bowl for molten glass feeder.—73-15774
**Buevich, A. V.** See Shevelevich, R. S.
**Buffat, P. A.** See Baldinozzi, G.
**Bugnev, A. A.; Stankevich, A. L.**
Two-photon absorption of semiconductor microcrystals under space limitation.—73-15221
**Bugnev, S. P.** See Bardenshtein, A. L.
**Bugiel, E.** See Lubnow, A.
**Bugli, G.** See Shin, C. H.
**Buhay, H.** See Sinharoy, S.
**Buhay, H.; Sinharoy, S.; Francombe, M. H.; Kasner, W. H.; Talvacchio, J.; Park, B. K.**
Pulsed laser deposition (PLD) of oriented bismuth titanate films for integrated electronic applications.—73-11608
**Buhler, M.; Fausch, T.; Umlauf, E.**
Measurement of spin-lattice relaxation times at millikelvin temperatures.—73-08663
**Buhler, P.; Weissmann, Rudolf**
Thermodynamics of the $Fe^{2+}$-$Fe^{3+}$ equilibrium in glass melts.—73-14519
**Bui, R. T.** See Kiss, L. I.; Ouellet, R.
**Buijs, Maarten; Korpel-Van Houten, K.**
Model for lapping of glass.—73-07051; Model for three-body abrasion of brittle materials.—73-07052; Three-body abrasion of brittle materials as studied by lapping.—73-07092
**Buijs, Maarten; Martens, E. A. A. G.**
Grinding of glass: interaction of single events.—73-14401
**Buijs, Maarten**
Erosion of glass as modeled by indentation theory.—73-10439
**Buil, M.** See Adenot, F.
**Buinov, N. S.; Myasoedov, A. V.; Chernyshev, A. F.**
Phase transition in lead germanate in strong electromagnetic field.—73-16264
**Bujok, V.** See Leiderer, P.
**Bukharaev, A. A.; Kazakov, V. A.; Manapov, R. A.**
Magnetic and optical properties of $SiO_2$ surface layers containing small α-Fe ferromagnet particles produced by ion bombardment.—73-02636
**Bukhtoyarov, O. I.; Voronova, L. I.**
Aspects of computer simulation of glass-forming melts.—73-13927
**Bukofsky, S.** See Fuentes, Ricardo I.
**Bukovec, N.** See Orel, B.
**Bulaevskii, L. N.; Kolesnikov, N. N.; Schegolev, I. F.; Vyaselev, O. M.**
Effect of vortex fluctuations on $^{205}Tl$ spin-lattice relaxation in mixed states of $Tl_2Ba_2CuO_6$.—73-15439
**Bulaevskii, Lev** See Tesanovic, Zlatko
**Bulakh, B. M.** See Baidullaeva, A.
**Bulakh, V. L.** See Aksel'rod, E. I.; Portnova, A. I.
**Bulakh, V. L.; Rud, R. F.; Frolova, L. S.**
Different forms of refractories for the service conditions in coke ovens.—73-00801
**Bulakh, V. L.; Sizintseva, L. G.; Aksel'rod, E. I.**
Siliceous articles with improved thermal stability for coke furnace.—73-00864
**Bulakh, V. L.; Vol'fovskii, G. M.**
Change in properties of dinas parts in service in the lining of large coke ovens.—73-00785; Effect of thermal cycling on the strength of dinas used in coke oven.—73-00809
**Bulanyi, M. F.** See Berlov, P. A.
**Bularzik, J.; Navrotsky, A.; DiCarlo, J.; Bringley, J.; Scott, B.; Trail, S.**
Energetics of $La_{2-x}Sr_xCuO_{4-y}$ solid solutions ($0 \le x \le 1$).—73-02264
**Bulat, E. S.; Tabasky, M.; Tweed, B.; Herrick, C.; Hankin, S.; Lewis, N. J.**
Fabrication of waveguides using low-temperature plasma processing techniques.—73-07526
**Buliavinov, V. V.** See Bota, S. A.
**Buler, P. I.** See Konaicheva, N. V.
**Buley, Todd W.** See Sandhu, Gurtej S.
**Bulga, Z.; Maczek, R.; Witek, E.; Wrona, J.**
Technical question—emission reduction of $NO_x$ formation in gas-fired furnaces.—73-14515
**Bulga, Z.; Trzeciak, Z.; Maczek, R.; Witek, E.**
Pilot electrode furnace for hand manufacturing of glass tableware containing fluoride.—73-15889
**Bulga, Z.; Wrona, J.; Maczek, R.**
Influence of knot construction, skimming-tank neck, and mechanical mass stirring on the quality of furnace operation for sheet glass production.—73-15883
**Bulgakov, E. Kh.**
Electrochemical method of controlling the technological process during manufacture of gypsum and gypsum concrete products.—73-13718
**Bulger, Mark L.** See McBride, Merle F.
**Buljan, Sergej-Tomislav** See Baldoni, Joseph G., II
**Buljan, Sergej-Tomislav; Lingertat, Helmut; Wayne, S. F.**
Alumina ceramic-metal articles.—73-03670
**Buljan, Sergej-Tomislav**
Reinforced alumina ceramic-metal bodies.—73-10345
**Bulka, G. R.** See Akkerman, V. A.
**Bull, Jeffrey D.; Rasky, Daniel J.; Tran, Huy K.; Balter-Peterson, Aliza**
Material response of diboride matrix composites to low-pressure-simulated hypersonic flows.—73-12435
**Bullard, Jeffrey W.** See Searcy, Alan W.
**Bullard, Jeffrey W.; Glaeser, Andreas M.; Searcy, Alan W.**
Shape changes by {100} lithium fluoride ridge-channel arrays and of lithium fluoride particles at sintering temperatures.—73-17198
**Bullard, R. L.; Cheng, P. C.; Schiefer, B. F. J.**
Long-term casting with zirconia nozzles.—73-14600
**Bullock, E. L.** See Gota, S.
**Bullock, Ronald E.**
Method of forming coatings by plasma spraying magnetic cerment dielectric composite particles.—73-15380
**Bullough, T. J.** See Joyce, T. B.
**Bulou, A.; Coudreuse, A.; Fornoni, M.; Rousseau, M.; Formier, A.; Poignant, H.**
Nondestructive concentration measurements of rare-earth ions in doped glasses.—73-06944
**Bulsink, H.**
Adhesion of glass to metals as a production problem.—73-14314
**Bultitude, John** See Hood, Christopher
**Bultman, J. E.** See Walck, S. D.
**Bum, Park-Hyu** See Kim, Si-Joong
**Bumai, Yu. A.; Malakhovskaya, V. E.; Ul'yashin, A. G.; Shlopak, N. V.; Samoilyuk, T. T.; Nikitina, T. D.**
Influence of double implantation of Si and F atoms on the electrical parameters of semiinsulating GaAs.—73-01203
**Bundschuh, W.** See Zum Gahr, Karl-Heinz
**Bunin, V. M.; Barinov, Yu. N.; Amosova, R. R.**
Interaction of magnesium polyboride and zinc chloride.—73-16179
**Bunina, L. K.; Kudzin, A. Yu.; Sokolyanskii, G. Kh.; Yudin, A. S.**
Description of experimental *I-V* characteristics of $Bi_{12}SiO_{20}$ crystals using analytical approximations of theory of space-charge-limited currents.—73-16439
**Bunkin, A. Yu.; Nishnevich, M. B.; Ryzhkov, S. E.**
Macrodefect formation in single crystals of lead germanate, $Pb_5Ge_3O_{11}$, during their layer-by-layer growth from melt.—73-17085
**Bunsell, A. R.** See Berger, M. H.
**Bunshah, Rointan F.** See Cha, Y. H. C.; Yoon, Jong-S.
**Bunt, Nancy E.**
Advanced techniques for measuring rheology of cement-based refractories.—73-08371
**Bunuel, M. A.; Alcala, R.; Cases, R.**
Time-resolved spectroscopy of Ni-doped fluorozirconate glasses.—73-07093
**Buonomo, Franco** See Bellussi, Giuseppe
**Burak, Ya. V.** See Malovichko, G. I.
**Burappa, K.; Shekar, K. V.; Rodriguez-Clemente, R.**
Hydrothermal synthesis and morphology of lithium tetraborate crystals.—73-09463
**Burattini, E.** See Balerna, A.; Kisiel, A.
**Buratto, Steven K.; Shykind, David N.; Weitekamp, Daniel P.**
Can nuclear magnetic resonance resolve epitaxial layers.—73-08377
**Buravlev, A. V.; Vyatkin, A. F.; Zuev, A. P.**
Point-defect–flux-stimulated solid phase recrystallization of amorphous silicon and structure modification in ion-implanted layers.—73-06173
**Buravova, N. D.** See Akmoulin, I. A.
**Burchell, Timothy D.** See Varacalle, D. J., Jr.
**Burckhardt, Hans-Georg; Gora, Frieder; Guldner, Karl-Heinz; Dehoust, Jurgen; Modes, Christina; Schmidt, Joachim**
Resistor composition and its use.—73-01068
**Burckhardt, Wolfgang; Buchner, Peter**
Dispersion behavior of alkali-silicate glasses as a function of short-range structural units.—73-00449
**Burckhardt, Wolfgang; Rudolph, Bernd**
Ion-conducting glasses—potential solid electrolytes for dry cell batteries.—73-00983
**Burdette, Harold E.** See Li, Zhao-Hui
**Burdette, Rex M.**
Key factors in obtaining maximum results from statistical process control.—73-15732
**Burdge, Geoffrey L.** See Joneckis, Lance G.
**Burdon, Jeremy; Calvert, Paul**
Control of particle size and orientation during in situ precipitation of oxides in polymers.—73-05720
**Bureau, J. C.** See Balland, B.
**Bureev, A. V.** See Georgobiani, A. N.
**Burer, Aubrey M.** See Crownover, Joseph W.
**Burger, A.** See Azoulay, M.
**Burger, Dale R.; Ong, Tiong-P.**
Treating surfaces to obtain narrow band thermal emission.—73-13903
**Burger, J.** See Bauer, P.
**Burgess, James F.** See Iacovangelo, Charles D.
**Burggraaf, Anthonie J.** See Boutz, Michel R.; Cao, Guo-Zhong; Chen, C. S.; Den Exter, Pete; Koebrugge, Gerald W.; Kumar, Krishnankutty-Nair P.; Mercera, P. D. L.; Van Hassel, B. A.
**Burgie, R. F.** See Gorbatkin, S. M.
**Burgio, N.** See Magini, M.
**Buri, A.** See Branda, F.
**Burk, Johst H.** See Vreugdenhil, Willem
**Burkarth, Nadine; Marty, Christian**
Method of making a complex ceramic core for use in metal casting process.—73-04035
**Burkat, T. M.; Dobychin, D. P.; Onokhov, A. P.; Pak, V. N.; Pal'tiel, L. R.**
Effect of laser treatment on the structure and optical properties of the surface of polished quartz glass.—73-00460

**Burkat, T. M.; Dobychin, D. P.**
Macrokinetics of the etching of porous glass by alkali.—73-14419

**Burkat, T. M.; Kostyuk, G. K.; Yakovlev, E. B.**
Structural anisotropy and birefringence in porous glass plates.—73-00405; Structural anisotropy and double refraction in lamina of porous glass.—73-00406

**Burke, R.** See Vallier, L.

**Burke, S. V.** See Rees, P.

**Burkett, Cecil G., Jr.; West, James W.; Crum, James R.**
Measuring inhomogeneities in thermocouple wires.—73-12163

**Burkhard, D. J. M.; Hanson, B.; Ulmer, G. C.**
$ZrO_2$ oxygen sensors: an evaluation of behavior at temperatures as low as 300°C.—73-01369

**Burkhard, D. J. M.; Hanson, B.; Ulmer, G. C.**
$ZrO_2$ oxygen sensors: an evaluation of behavior at temperatures as low as 300°C.—73-04185

**Burkhard, H.** See Dinges, H. W.

**Burlachkov, L.** See Klein, L.

**Burlak, A. V.; Zotov, V. V.; Ignatov, A. V.; Tyurin, A. V.; Tsukerman, V. G.**
Special features of electrophysical characteristics of thin PbS films with a low concentration of an oxidant.—73-04486

**Burlet, H.** See Provot, X.

**Burlew, Joan V.** See Fanelli, Anthony J.

**Burlitch, James M.** See Alemany, Pere; Park, Dong-Gon

**Burma, N. G.; Gakduk, A. L.; Zherlitsyn, S. V.**
Elastic and magnetic properties of $La_2CuO_{4-\delta}$ single crystals.—73-08843

**Burmester, C. P.** See Adelman, D.

**Burmistrov, S. A.; Yalyshev, Yu. I.; Pokazan'ev, V. G.**
Oscillation spectrum of asymmetric domain walls in ferrite-garnet films.—73-07969

**Burmistrov, V.** See Klestchov, D.

**Burn, Ian** See Bruno, Salvatore A.

**Burn, Ian**
Low-fire X7R compositions.—73-11024

**Burnham, N. A.; Colton, R. J.; Pollock, H. M.**
Interpretation of force curves in force microscopy.—73-15809

**Burns, D.; Hay, G. G.; Sibbett, W.**
Pulse asymmetry in actively mode-locked InGaAsP lasers.—73-01293; 73-07748

**Burns, James A.; Gleason, Edward F.**
Effects of silicon source gas on PECVD $SiO_2$ properties.—73-03837

**Burns, P. C.** See Sherriff, B. L.

**Burns, Paul C.** See Kolos, Raymond M.

**Burovova, N. D.** See Ivanova, L. P.

**Burri, G.** See Tang, H.

**Burrows, S.; Holland, D.; Davis, A.; Howarth, O.**
NMR study of organically modified silicates.—73-03746

**Burrows, V. A.** See Yota, J.

**Burshtein, Z.; Shimony, Y.; Morgan, S.; Henderson, D. O.; Mu, R.; Silberman, E.**
Symmetry lowering due to site occupation disorder in vibrational spectra of gehlenite $Ca_2(AlSi)AlO_7$.—73-12709

**Burshteyn, Alexander** See Siiman, Olavi

**Bursi, Tiziano**
Innovative strategies for the ceramic machinery industry.—73-17489

**Burte, E. P.** See Bauer, A. J.; Rausch, N.

**Burton, Benjamin P.** See Rawn, Claudia J.

**Burton, Julie D.; Fiddyment, Phil J.; Robertson, Michael J.; Sully, P.**
Monolithic InGaAsP-InP laser amplifier gate switch matrix.—73-15046

**Burzo, E.; Ardelean, I.; Matulescu, D.**
Magnetic properties of $x CeO_2$–$(1-x)(3B_2O_3$·PbO) glasses.—73-00512

**Burzo, E.; Ardelean, I.**
Magnetic properties of $x Ho_2O_3(1-x)[3B_2O_3$·PbO] glasses.—73-11661

**Burzo, E.; Pop, V.; Matulescu, D.**
Magnetic properties of $Y_{1-x}Er_xBa_2Cu_3O_{7-\delta}$ compounds.—73-04761

**Busby, Terry**
Hotter refractories increase the risk of downward drilling.—73-10735

**Busca, Guido** See Del Arco, Margarita; Delmastro, Alessandro

**Busca, Guido; Lorenzelli, V.; Ramis, G.; Saussey, J.; Lavalley, J. C.**
FTIR spectra of ethylene molecularly adsorbed on metal oxides.—73-12590

**Busca, Guido; Lorenzelli, V.; Ramis, G.; Willey, Ronald J.**
Surface sites on spinel-type and corundum-type metal oxide powders.—73-08763

**Busch, James T.** See Eidolloth, Walter

**Busch, R.; Ries, G.; Werthner, H.; Kreiselmeyer, G.; Saemannischenko, G.**
New aspects of the mixed states from six-terminal measurements on $Bi_2Sr_2CaCu_2O_x$ single crystals.—73-08142

**Buschow, K. H. J.** See Coene, W.

**Buse, E.; Baller, F.; Pankrath, R.; Hesse, H.; Kratzig, E.**
Photorefractivity and related properties of $Ba_{0.984}Sr_{0.016}TiO_3$.—73-16567

**Buse, K.** See Sochava, S.

**Bush, A. A.** See Aminov, B. A.

**Bush, A. A.; Goncharuk, I. N.; Kitaev, Yu. E.; Limonov, M. F.; Markov, Yu. F.; Evarestov, R. A.**
Manifestation of superconducting transition in Raman spectra of bismuth-based (4413) crystals.—73-15550

**Bush, A. A.; Goncharuk, I. N.; Kitaev, Yu. E.**
Quasi-2-D nature of the phonon subsystem of Bi superconductors.—73-08182

**Bush, A. A.; Kitaev, Yu. E.; Kulikov, M. A.; Limonov, M. F.; Markov, Yu. F.; Novikov, A. A.**
Optical vibrations in $Bi_{1-x}(Sr_{1-y}Ca_y)_xO_{1.5-y/2}$ crystals.—73-16240

**Bush, D. R.**
Designing ceramic components for structural applications.—73-12322

**Bush, Edward A.; Frost, Rodney I.**
Expansion reduction of cordierite.—73-12363

**Bush, Gary G.**
Complex permeability of a high-purity yttrium iron garnet (YIG) sputtered thin film.—73-04593

**Bush, Gary G.**
Temperature dependence of the variation in the complex permeability of yttrium iron garnet (YIG) with applied magnetic field.—73-04660

**Bush, Timothy S.; Catlow, C. Richard A.; Chadwick, Alan V.; Cole, M.; Geatches, R. M.; Greaves, G. N.**
Cation dopant sites in metal oxides [studied] by EXAFS and computer simulation techniques.—73-12543

**Bushev, Vladimir P.** See Kantcheva, Margarita M.

**Bushlaibi, A. H.** See Alshamsi, A. M.

**Bushnell, S. E.** See Dorsey, P. C.

**Bushueva, S. K.; Epanchintsev, O. G.**
Measurement of the hardness of metal/high-temperature superconductor contact joints.—73-11827

**Busta, H. H.; Pogemiller, J. E.; Chan, W.; Warren, G.**
Experimental and theoretical determination of gate-to-emitter stray capacitances of field emitters.—73-11206

**Bustarret, E.** See Savall, C.

**Bustert, Karl** See Grunewald, Herbert

**Butashin, A. V.** See Genkina, E. A.; Mill, B. V.; Stefanovich, S. Yu.

**Butcher, B. M.** See Fouche, P. M.

**Butera, A.** See Zysler, R. D.

**Butkus, Lawrence M.; Holmes, John W.; Nicholas, Theodore**
Thermomechanical fatigue [TMF] behavior of a silicon carbide fiber-reinforced calcium aluminosilicate composite.—73-03368

**Butler, B. D.; Welberry, T. R.; Withers, R. L.**
Oxygen vacancy ordering and the incommensurate structure of mullite.—73-16243

**Butler, Barry L.**
Piezoelectric measurement of bulk modulus.—73-11598

**Butler, David L.** See Mathisen, Melvin P.

**Butler, Donald P.** See Maung, Win-Naing

**Butler, E. G.** See Illston, T. J.

**Butler, J. E.** See Qadri, S. B.

**Butler, J. F.** See Doty, F. P.

**Butler, Leslie G.** See Schilling, Paul J.

**Butler, M. A.; James, P. F.**
Preparation of amorphous silica powder by sol-gel methods.—73-03870

**Butler, Michael A.; Land, Cecil E.; Martin, Stephen J.; Pfeifer, Kent B.**
Ferroelectric optical image comparator.—73-04578

**Butler, S. W.** See Henck, Steven A.

**Butler, T., Jr.** See Mallik, R. R.

**Butman, L. A.** See Borovskaya, T. N.; Kodess, B. N.

**Butorin, S. M.; Galakhov, V. R.; Kurmaev, E. Z.; Glazyrina, V. I.**
Soft X-ray CuL spectra and copper-oxygen bond covalency in high-$T_c$ superconductors.—73-08199

**Butorin, S. M.; Galakhov, V. R.; Kurmaev, E. Z.; Poltoratskii, Y. B.; Tolochko, S. P.**
Soft X-ray emission study of $YBa_2Cu_4O_8$.—73-11900

**Butorina, O. O.** See Vlasov, A. N.

**Butt, Darryl P.; Wantuck, Paul J.; Sappey, Andrew D.**
Laser diagnostics of zirconium carbide vaporization.—73-13477

**Butt, N. M.** See Arshed, M.; Khan, J. A.

**Butterfield, D.** See Gee, M. G.

**Buttery, D. J.** See Tranquada, J. M.

**Button, C. C.** See Nelson, J.; Thirstrup, Christen

**Button, T. W.** See Clegg, William J.

**Buttrey, D. J.** See Sullivan, J. D.

**Butusov, D. M.; Kudryashov, N. A.; Kucherenko, S. S.; Ryvkin, B. S.**
Mechanisms of optical nonlinearity in waveguide *p-i-n* structures under conditions of electroabsorption of light.—73-15038

**Buyanov, A. V.; Gasan-Zade, S. G.; Zhad'ko, I. P.; Zinchenko, E. A.; Romanov, V. A.; Fridrikh, E. S.**
Spectral dependence of the photoconductivity and photomagnetic effect in epitaxial $Cd_xHg_{1-x}Te$/CdTe films with an anodically oxidized free surface.—73-01317

**Buyanova, I. A.; Ostapenko, S. S.; Sheinkman, M. K.**
EL2 center family [studied] by polarization-luminescence methods.—73-07478

**Buydens, L.** See Vermaerke, F.

**Buzare, J. Y.** See Legein, C.

**Buzek, V.** See Brozek, V.

**Buzniak, Jan J.; Lagerlof, K. Peter D.; Bansal, Narottam P.**
Hot-pressing and high-temperature mechanical properties of $BaAl_2Si_2O_8$ (BAS) and $SrAl_2Si_2O_8$ (SAS).—73-09614

**Buznik, V. M.** See Baidakov, L. A.; Bayukov, O. A.; Vopilov, V. A.

**Byars, E. A.** See Dhir, R. K.

**Bychko, G. V.** See Grozhik, V. A.

**Bychkov, A. M.; Borisov, A. A.; Khramov, D. A.**
Changes in the valence and structural state of the iron ion upon melting of $Ba_2FeSi_2O_7$.—73-08566

**Bychkov, E. A.** See Bagandova, E. D.; Bolotov, A. M.; Seleznev, B. L.; Vlasov, Yu. G.

**Bychkov, I. V.** See Buchel'nikov, V. D.

**Bydanov, N. N.** See Maksimov, B. A.

**Bye, A. D.** See Donald, I. W.

**Byeon, Soon-Cheon** See Je, Hae-June

**Byers, Charles H.** See Harris, Michael T.

**Bykov, A. B.** See Maksimov, B. A.

**Bykov, A. M.; Korenivskii, V. N.; Ul'yanov, A. N.; Yuzhelevskii, Yu. I.**
Entropy of mixed state of the superconducting ceramic $Bi_2Sr_2Ca_2Cu_2O_x$.—73-15460

**Bykov, A. M.; Yuzhelevskii, Ya. I.**
Entropy of $YBa_2Cu_3O_{7-\delta}$ mixed state.—73-01546

**Bykov, I. I.; Krasnoshchekov, M. M.**
Influence of the structure of stone casting materials on bending strength.—73-03318

**Bykov, I. I.**
Corrosion resistance of stone castings.—73-03221; Corrosion stability of cast stone.—73-03222

**Bykov, I. P.; Glinchuk, M. D.; Skorokhod, V. V.**
EPR study of excess impurity charge compensation mechanisms in $PbZr_{1-x}Ti_xO_3$ ceramics.—73-16141

**Bykov, V. N.; Kotel'nikov, O. E.**
Structure and molar volumes of alkali silicate glasses.—73-00414

**Bykovskii, Yu. A.** See Bakhirkin, Yu. A.

**Byrne, Christine J.; Kutney, Steve G.; Pipoly, Richard A.**
Effect of glaze composition on the color and stability of chrome tin pink pigments.—73-07248; How glaze composition affects chrome-tin pinks.—73-10855

**Bystrov, S. D.** See Ber, B. Ya.

**Bystrov, S. D.; Kreshchuk, A. M.; Novikov, S. V.; Polyanskaya, T. A.; Savel'ev, I. G.**
Quantum and classical relaxation times and properties of a heterojunction in selectively doped $InP/In_{0.53}Ga_{0.47}As$ heterostructures.—73-15130

**Bystrova, A. A.** See Krivandina, E. A.

**Byun, Il-Kyun**
Glass industry in Asia is full-speed ahead in all areas.—73-17482

**Byun, Jae-Dong; Kim, Jin-Kwan; Kim, Sae-Ho; Song, Ki-Yong**
Phase transition and electrical conductivity of La-Ni-O system.—73-02389

**Byun, S.-H.** See Song, J.-T.

**Byungsung, O.** See Coon, D. D.

**Caballero, Angel** See Barba, M. F.; Gonzalez-Elipe, A. R.; Liu, Kuo-Chung

**Caballero, Luis X.**
Method for treating diamonds to produce bondable diamonds for depositing [the] same on a substrate.—73-12491

**Cabarrocas, P. R. I.** See Layadi, N.

**Cabeza, O.; Pomar, A.; Diaz, A.; Toron, C.; Veira, J. A.; Maza, J.**
Measurements of the thermopower coefficient above the superconducting transition in polycrystalline $YBa_2Cu_3O_{7-\delta}$: absence of appreciable fluctuation effects.—73-01598

**Cable, M.** See Aylward, N. H.; Fernandes, M. H.; Frade, Jorge R.

**Cable, M.; Meghirditchian, J. J.**
Extinction coefficient of the cupric ion and the cuprous-cupric equilibrium in soda-lime-silica glasses.—73-13985

**Cable, M.; Smedley, J. W.**
William Vernon Harcourt: pioneer glass scientist and founder of the British Association.—73-06598

**Cable, M.; Xiang, Z. D.**
Optical spectra of copper ions in alkali-lime-silica glasses.—73-03747

**Cable, M.; Yang, Y. X.**
Crystallization in glasses of the system $Na_2O$-$K_2O$-CaO-$Al_2O_3$-$SiO_2$.—73-06898

**Caboche, G.; Chaput, F.; Boilot, Jean-Pierre; Niepce, J. C.**
Fine-grain barium titanate for dielectric application.—73-10948

**Cabrera, J. M.** See Olivares, J.

**Caccavale, F.** See Bertoncello, R.; Gonella, F.; Guglielmi, M.; Terranova, M. L.

**Caccavale, F.; Mazzoldi, P.; Tramontin, L.; Battaglin, G.; Boscolo-Boscoletto, A.**
Chemical and physical modifications in ion-implanted glasses.—73-13938

**Caceres, Carlos H.** See Plucknett, Kevin P.

**Caceres, J.** See Garcia, J.

**Caceres, J.; Garcia Hernandez, J.; Rincon, J. M.; Callejas, P.; Jurado, J. R.; Sanz, E.**
Characterization and electrical properties of some materials obtained from natural beach sand of the Canary Islands.—73-15897

**Caceres, J.; Garcia Hernandez, J.; Rincon, J. M.; Callejas, P.**
Characterization of different glass mineral fibers obtained from igneous rocks of the Canary Islands.—73-15898

**Caceres, J.; Garcia-Hernandez, J. E.; Callejas, P.; Rincon, J. M.**
Microstructural and analytical characterization of some commercial and experimental mineral glass fibers.—73-10457

**Caceres, Pablo G.; Schmid, Herbert K.**
Morphology and crystallography of aluminum nitride whiskers.—73-08670

**Caddock, Richard B., Jr.**
Film-type electrical resistor combination.—73-04208

**Cadillon Costa, Luis; Mendiratta, Sushil Kumar**
Dielectric relaxation in glasses: $x Eu_2O_3$·$PbO$-$2B_2O_3$.—73-14154

**Cadogan, J. M.** See Li, Hong-Shuo

**Cadogan, J. M.; Li, Hong-Shuo; Campbell, S. J.; Jing, J.**
Mossbauer study of spin-reorientation in $YCo_4B$.—73-02334

**Cady, P. D.** See Weyers, Richard E.

**Cagliostro, D. E.** See Chung, G. Y.

**Cagliostro, D.; Riccitiello, Salvatore R.; Ren, Jian; Zaghi, Farshad**
Comparison of the pyrolysis products of dichlorodimethylsilane in the chemical vapor deposition of silicon carbide on silica in hydrogen or argon.—73-16679

**Cahen, David** See Moons, Ellen

**Cahill, David G.; Feenstra, R. M.**
Carrier injection and scanning tunneling microscopy at the Si(111)-2×1 surface.—73-04259

**Cahill, Thomas A.** See Shackelford, James F.

**Cai, Chuan-Bing; Yang, Hong-Chuan; Fu, Yao-Xian**
Anisotropy of magnetic $J_c$ for YBaCuO superconductor

prepared by melt-texture-growth (MTG) process.—73-11688

**Cai, Ding-Yong**
Fast firing of copper luster glaze in roller kilns.—73-10845

**Cal, Hong-Da** See Guiberteau, Fernando

**Cal, Jie** See Zeng, Shao-Xian

**Cai, Jie; Tian, Yong-Lai; Guo, Jing-Kun**
Microwave joining of Bi-based 2223 superconductor and its microstructure features.—73-04774

**Cal, Jie; Xie, Xiao-Ming; Zhang, Liu-Wan; Li, Xiang-Ting; Tian, Yong-Lai; Chen, Ting-Guo**
Microwave joining of yttrium-based superconductor and its microstructure features.—73-08135

**Cal, Ke-Feng; Yuan, Run-Zhang; Nan, Ce-Wen; Min, Xin-Hin**
Microstructure of (Nb,Ti)C-Ni composite.—73-06832

**Cal, Mei-Liang** See Xie, G.-S.

**Cai, Pei-Xin; Chen, Jian-Min; Gu, Wei-Fang**
Infrared absorption bands of Cu–O stretching vibration in $YBa_2Cu_3O_{7-\delta}$.—73-15517

**Cai, W.-Z.** See Li, Z.-S.

**Cai, Wei-Yan** See Ishikawa, Tatsuo

**Cai, Xiao-Lan** See Liu, Yu

**Cai, Xiu-Ming** See Yang, Zhan-Ming

**Cai, Y.-M.** See Zeng, You-Yi

**Cai, Ye-Ping; Ozkan, Umit S.**
Vanadia/titania catalysts in selective catalytic reduction of nitric oxide with ammonia.—73-02535

**Cai, Z. X.** See Budhani, R. C.; Zhu, Yi-Mei

**Cai, Z.** See El-Sherif, M. A.

**Cai, Z.-G.** See Fang, Chang-Ming

**Caignaert, V.** See Labbe, P.; Michel, C.; Mirebeau, I.

**Caignaert, V.; Retoux, R.; Hervieu, M.; Michel, C.; Raveau, B.**
$Sr_4Nd_3Cu_4O_{17}$: an intergrowth of the 123-phase and rock-salt-type structure.—73-02441

**Cailleau, H.; Ecolivet, C.**
Introduction to physical properties of incommensurate structures: from modulated to composite structures.—73-12611

**Calabrese, J. C.** See McCarron, E. M.

**Calabrese, J. J.; Dubson, M. A.; Garland, J. C.**
Critical current of $Ag/YBa_2Cu_3O_{7-\delta}$ random bulk composites.—73-11712

**Calamiotou, M.; Raptis, Y. S.; Anastassakis, E.; Lagadas, M.; Hatzopoulos, Z.**
XRD and Raman studies of low-temperature-grown GaAs epilayers.—73-15231

**Calatroni, Jose** See Castell, Ricardo

**Calawa, D. R.** See Wang, C. A.

**Calcagnile, L.** See Lomascolo, M.

**Calderon, F.** See Portelles, J.

**Caldwell, Karin D.; Gao, Yu-Shu**
Electrical field-flow fractionation [EFFF] in particle separation: I, Monodisperse standards.—73-08397

**Caldwell, P. J.** See Zhang, Tong

**Cale, Timothy S.** See Raupp, Gregory B.; Zirkle, Thomas E.

**Cales, B.; Gey, B.**
Ceramics in the equipment for metal transformation—interest in an electroerodable ceramic material.—73-02006

**Caley, William F.** See Bryden, R. H.

**Caley, William F.; Kipouros, George J.; Kingston, P. W.**
Potential application of natural minerals in ceramic and metal matrix composites.—73-13169

**Caligiore, A.** See Borghesi, A.

**Calile, A.** See Thibaudeau, C.

**Callaghan, Ian C.** See Bensted, John

**Callahan, D. L.; Thomas, Gareth; Moya, J. S.; Pena, P.**
Reaction sintering of $Ca_3SiO_4$-$CaZrO_3$ composites.—73-13230

**Callcott, T. A.** See Lee, Sun-Woo

**Calle, F.** See Vina, L.

**Calleja, J. M.** See Vina, L.

**Callejas, P.** See Caceres, J.; De Vicente, I.; Romero, M.

**Calliari, L.** See Laidani, N.

**Calomino, Anthony M.**
Controlled crack growth testing of brittle materials.—73-15784

**Calov, Ursula** See Forkel, Klaus

**Calugar, D.** See Iliescu, T.

**Calvani, Paolo; Lupi, Stefano**
Extra-Drude absorption and $T_c$ in superconducting cuprates.—73-08071

**Calvani, Riccardo** See Campi, Domenico

**Calvarin, G.** See Bonneau, P.

**Calventus, Y.** See Baro, M. D.

**Calvert, Paul** See Burdon, Jeremy

**Calzada, M. L.; De Frutos, J.**
Chemical processing and microstructure of piezoelectric lead titanate ceramics.—73-15251; Mechanism of formation of ferroelectric lead-titanate-based ceramics by wet chemical methods.—73-07899

**Calzada, Maria L.** See Phillips, Nicolas J.

**Calzada, Maria L.; Milne, Steven J.**
Lead zirconate titanate films from a diol-based sol-gel method.—73-09191

**Calzada, N.** See Portelles, J.

**Calzona, V.; Cimberle, M. R.; Ferdeghini, C.; Grasso, G.; Livanov, D. V.; Marre, D.**
Fluctuation conductivity and magnetoconductivity in 2/2/1/2-phase $Ni_2Sr_2CaCu_2O_{8+\delta}$ epitaxial films.—73-15473

**Camagni, P.; Galinetto, P.; Samoggia, G.; Zema, N.**
Optical properties of cubic-stabilized zirconia.—73-05605

**Camara, Boubacar** See Schels, Thomas

**Camara, S.** See Kaneko, Katsumi

**Camarillo, E.** See Gouyot, Y.; Vergara, I.

**Camblor, M. A.; Perez-Pariente, J.; Fornes, Vicente**
Synthesis and characterization of gallosilicates and galloaluminosilicates isomorphous to zeolite beta.—73-06077

**Cameron, Craig P.; Lau, John W.**
Reaction processing of AlN/$B_4C$ composites.—73-05334

**Cameron, D. C.; Karim, M. Z.; Hashmi, M. S. J.**
Properties of mixed-phase BN films deposited by rf PACVD.—73-12870

**Cameron, J.** See Pickles, C. A.

**Cammenga, Heiko K.** See Bauerecker, Sigurd

**Camp, R. W.; Stanley, H. D.**
Advances in measurement of surface area by gas adsorption.—73-01881

**Campa, J. A.; Gutierrez-Puebla, E.; Monge, M. A.; Rasines, I.; Valero, C. R.**
Novel $R_2Ba_{1.25}NiO_{5.25}$ (R=Tm, Yb, Lu) structure type.—73-02363

**Campabadal, F.** See Martin, Ferran

**Campano, R.; Del Pennino, U.; Mariani, Carlo**
1-D "dislocation"-related electronic states in GaAs(110)×Bi(1×1) interface.—73-07701

**Campbell, A. M.** See Doyle, R. A.

**Campbell, B.** See Wang, X. W.

**Campbell, G. H.** See King, Wayne E.

**Campbell, I. H.** See Yang, K.

**Campbell, J. C.** See Srinivasan, A.; Tsai, C.

**Campbell, J. W. M.; Guillon, F.; D'Iorio, M.; Buchanan, M.; Stoner, R. J.**
Characterization of the surface-acoustic-wave-induced potential in a GaAs/AlGaAs heterostructure.—73-04267

**Campbell, S. A.** See Higman, T. K.; Lee, K. H.

**Campbell, S. A.; Lee, G. R.; Crayston, Joe A.**
Ac impedance spectroscopy of $Nb_2O_5$ thin films: evidence for a distributed resistance network.—73-03706

**Campbell, S. J.** See Cadogan, J. M.

**Campbell, S. S.; Gonczy, Stephen T.**
In situ formation of boron nitride interfaces on Nextel 312 continuous ceramic fiber: I, Nitriding process and Blackglas ceramic matrix composite properties.—73-17353; In situ formation of boron nitride interfaces on Nextel 312 continuous ceramic fiber: II, Oxidation of Blackglas ceramic matrix composites.—73-17354

**Campet, G.; Han, S. D.; Wen, S. J.; Manaud, J. P.; Portier, J.; Xu, Y.**
Electronic field of $Ti^{4+}$, $Zr^{4+}$, and $Ge^{4+}$ dopings upon the physical properties of $In_2O_3$ and Sn-doped $In_2O_3$ ceramics: application to new highly transparent conductive electrodes.—73-07321

**Campi, Domenico; Bradley, Piero J.; Calvani, Riccardo; Caponi, R.**
Modeling of nonlinear absorption and refraction in quantum well structures for all-optical switching.—73-15043

**Campideli, Y.** See D'Avitaya, F. Arnaud

**Campillo, A. J.** See Justus, Brian L.

**Campion, I.** See Barboux, Philippe

**Campisi, Isidoro Enrico**
Results of the Workshop on Microwave-Absorbing Materials for Accelerators [MAMA]: a personal view.—73-05629

**Campmany, J.** See Canillas, A.; Costa, J.

**Campmany, J.; Canillas, A.; Andujar, J. L.; Costa, J.; Bertran, E.**
Composition analysis of rf plasma-deposited amorphous silicon oxynitride thin films by spectroscopic phase-modulated ellipsometry.—73-05374; n situ real-time ellipsometric study of the growth of rf plasma-deposited amorphous hydrogenated silicon oxynitride thin films.—73-05857; Thin films of transparent electronic materials [studied] by phase-modulated spectroellipsometry.—73-15856

**Campo, A.; Cardinaud, C.; Turban, G.; Dubon-Chevallier, C.; Amarger, V.; Etrillard, J.**
Surface characterization of GaAs after the reactive ion etching of GeMoW ohmic contact in radio-frequency $SF_6$-$O_2$ plasma.—73-15193

**Campos, B.** See Orts, M. J.

**Campos, Francis X.; Weaver, Gabriela C.; Waltman, Curtis J.; Leone, S. R.**
Enhanced etching of Si(100) by neutral chlorine beams with kinetic energies up to 6 eV.—73-04318

**Campos, J.** See Nair, P. K.; Sebastian, P. J.

**Camus, Gerald** See Filipuzzi, Ludovic; Lamouroux, Franck; Proubet, Stephane

**Camus, P. P.** See Melmed, A. J.

**Canaday, J. D.** See Ahmad, A; Chehab, S. F.; Komorowski, P. G.

**Canaday, J. D.; Chehab, S. F.; Kuriakose, A. K.; Ahmad, A.; Wheat, T. A.**
Protonic conductivity of Hyceram, a bonded hydronium Nasicon.—73-04158

**Canale, P.** See Douy, Andre

**Caneau, C.** See Martin, Jaime M.

**Caneiro, A.; Serafini, D.; Prado, F.; Ferrai, H.; Jimenez-Crespo, A.; Abriata, J. P.**
Oxygen content, microstructure, and $T_c$ variation of $La_{1.84}Sr_{0.16}CuO_y$.—73-15574

**Caneiro, A.; Vallet-Regi, M.; Ramirez, J.; Crespo, P.; Gonzalez-Calbet, J. M.**
Stability range and $T_c$ variation of superconducting $Bi_{1.92}Sr_{1.89}Ca_{0.04}Cu_2O_y$.—73-08206

**Canet, R.** See Dubois, C.

**Caneve, L.; Scaglione, S.; Martelli, S.; Emiliani, G.**
Effect of deposition parameters on the optical properties and microstructure of radio frequency magnetron sputtered ZnSe films.—73-02782

**Canfield, P. C.** See Miljak, M.; Reyes, A. P.

**Canillas, A.** See Campmany, J.; Costa, J.

**Canillas, A.; Campmany, J.; Andujar, J. L.; Bertran, E.**
Effect of hydrogen dilution on the growth of hydrogenated amorphous silicon studied by in situ phase-modulated ellipsometry.—73-06210

**Canillas, A.; Pascual, E.; Drevillon, B.**
Ir phase-modulated ellipsometer using a Fourier transform spectrometer for in situ applications.—73-12150

**Cannas, M.** See Anedda, Alberto

**Cannelli, G.; Cantelli, R.; Cordero, F.; Trequattrini, F.; Ferretti, M.**
Mobility and short-range ordering of oxygen in $RBa_2Cu_3O_{6+x}$ by anelastic relaxation and possible correlation with the 90-K and 60-K superconducting phases.—73-08138

**Cannon, R. M.** See Kleebe, Hans-Joachim

**Cannon, Rowland M. Jr.,** See Vetrano, J. S.; Card, J. C.; Chiang, Yet-Ming; Handwerker, Carol A.; Ritchie, R. O.

**Cannon, W. Roger** See Skandan, Ganesh

**Cant, Noel W.,** See Yong, You-Sing

**Cantavella, V.** See Monros, G.

**Cantavella, V.; Carda, J.; Monros, G.; Tena, M. A.; Escribano, P.; Alarcon, J.**
$Zr^{4+}$ and $Ti^{4+}$ substitution in gallium garnets.—73-12741

**Cantelli, R.** See Cannelli, G.

**Cantrell, John H.** See Sathish, Shamachary

**Cantwell, G.** See St. John, W. D.

**Canut, B.** See Bauer, M.

**Cao, G. Z.** See Van Den Berg, P. H. J.

**Cao, G. Z.; Metselaar, R.; Haije, W. G.**
Neutron diffraction study of yttrium α′-SiAlON.—73-08676

**Cao, G. Z.; Metselaar, R.; Zeigler, G.**
Effects of the characteristics of silicon nitride powders on the preparation of α′-SiAlON ceramics.—73-05782

**Cao, Gou-Hui; Ma, Ru-Zhang; Shen, Min-Zhu; Li, Y.; Wu, Y.-H.; Wang, G.-M.**
Lattice softening on Bi system superconductor [studied] by means of $^{119}Sn$ Mossbauer spectroscopy.—73-08123

**Cao, Guo-Zhong; Meijerink, Joan; Brinkman, Hendrik W.; Devries, K. J.; Burggraaf, Anthonie J.**
Growth of thin dense gas-tight (Tb, Y)-$ZrO_2$ films by electrochemical vapor deposition.—73-09159

**Cao, Heng-Chu; De Graef, Marc; Evans, Anthony G.**
Structure and properties at the ferroelectric/electrode interface between lead zirconate titanate and copper.—73-01434

**Cao, Heng-Chu; Evans, Anthony G.**
Electric-field-induced fatigue crack growth in piezoelectrics.—73-11570

**Cao, Hong** See Yin, Sheng

**Cao, Jian-Ming** See Balasubramanian, T.

**Cao, Lei** See Kong, Lin-Shu; Shen, Bao-Gen

**Cao, Lie-Zhao** See Zeng, Xing-Lin

**Cao, R.** See Kendelewicz, T.; Kim, Chang-Young; Wu, J.; Yang, X.

**Cao, R.; Yang, X.; Pianetta, P.**
Atomic and electronic structure of B/Si(100).—73-12539

**Cao, R.; Yang, X.; Pianetta, P.**
Characterization of the B/Si surface electronic structures.—73-09438

**Cao, Shi-Pu**
New type [of] hydraulic pusher.—73-12173

**Cao, Shi-Xun; He, Yu-Sheng; Chen, Li-Quan**
Experimental study of the precrystallization process in the amorphous fast ionic conductor $0.6AgI$-$0.25Ag_2O$-$0.15P_2O_5$.—73-00967

**Cao, Wan-Peng** See Zeng, Shao-Xian

**Cao, Wen-Wu** See Jiang, Qi-Yue; Randall, C. A.; Zhang, Q.-M.

**Cao, Wen-Wu; Zhang, Q.-M.; Cross, L. Eric**
Theoretical study on the static performance of piezoelectric ceramic–polymer composites with 1-3 connectivity.—73-11625

**Cao, X. W.** See Ho, J. C.; Lin, J. G.

**Cao, Xian-Cheng; Huang, Yi-Hao; Weng, Ya-Ying**
Measurement of charge transport parameter of photorefractive crystal barium strontium titanate ($Ba_{1-x}Sr_xTiO_3$, BST).—73-02642

**Cao, Xiao-An; Ding, Song-Jun; Zhang, Qi-Feng**
Imitation agate red ceramic pigment of rare earths.—73-10856

**Cao, Xiao-Wen; Tang, Yuan-Ji; Wu, Chang-Yao**
Comparative study between $(RE_{1-x}Pr_x)Ba_2Cu_3O_{7-\delta}$ with $x$=0 or 0.3.—73-08004

**Cao, Xin-Chun**
Fabrication of giant redware pot with loop handle.—73-10838

**Cao, Yan** See Yang, Yu

**Cao, Yong-Min** See Wang, Li-Jiu

**Capano, M. A.** See Eyink, K. G.

**Cape, Thomas W.; Charles, Harry R.**
Phosphate coating composition and method of applying a zinc-nickel-manganese phosphate coating.—73-00290

**Capelletti, R.** See Laidani, N.

**Caperaa, C.; Baud, G.; Besse, J. P.; Jacquet, M.**
Dielectric properties of Ge-Pb-O thin films obtained by rf sputtering.—73-00948

**Capezzuto, P.** See Cicala, G.

**Capitan, Maria Jose** See Alvarez, Luis Javier

**Capmas, A.** See Rettel, A.

**Capobianco, J. A.** See Cormier, G.

**Caponi, R.** See Campi, Domenico

**Cappelli, M. A.** See Islam-Raja, M. M.; Kim, J. S.

**Cappellini, G.** See Bechstedt, F.

**Capponi, J. J.** See Laborde, O.

**Capra, A.**
Dry preparation of powders for dust pressing.—73-12025

**Capsoni, D.** See Berbenni, V.; Marini, A.

**Capuder, K.** See McKee, Mark A.

**Capurro, M.** See Beruto, Dario

**Carabe, J.** See Gandia, J. J.

**Caracci, S. J.** See Kish, F. A.

**Caracoche, Maria C.** See Scian, Alberto N.

**Carani, G.** See Esposito, Leonardo

**Carani, G.; Tucci, A.; Generali, P.; Esposito, Leonardo; Nuzziello, S.**
Surface degradation and Vickers indentation hardness of glazed ceramic tiles.—73-07273

**Carati, Angela** See Millini, Roberto

**Carbery, M.** See Roberts, L.

**Carceller, J. E.** See Banqueri, J.
**Carchano, H.** See Lalande, F.
**Carciello, N.** See Sugama, T.
**Card, J. C.; Cannon, Rowland M., Jr.; Dauskardt, R. H.; Ritchie, R. O.**
Stress-corrosion cracking at ceramic-metal interfaces.—73-00268
**Carda, J.** See Cantavella, V.; Monros, G.; Sales, M.
**Carda, J.; Monros, G.; Tena, M. A.; Escribano, P.; Rincon, J. M.**
Composition microheterogeneity of uvarovite-grossularite garnets.—73-16060
**Cardinaud, C.** See Campo, A.; Charles, C.
**Cardona, M.** See Barth, K.-L.; Echegoin, P.; Friedl, B.; Gubarev, S. I.; Humlicek, J.; Jandl, S.; Kircher, J.; Leach, D. H.; Litvinchuk, A. P.; Mirlin, D. N.; Ruf, T.; Spitzer, J.; Thomsen, C.
**Cardone, F.** See Kuech, T. F.
**Cardoso, C. X.; Messaddeq, Y.; Nunes, L. A.; Aegerter, M. A.**
Optical properties of pure, $Nd^{3+}$-doped, and $Pr^{3+}$-doped fluoroindate glasses.—73-07060
**Cardova, M.** See Sapega, V. F.
**Careem, M. A.** See Dissanayake, M. A. K. L.
**Carey, David H.**
Method of forming recessed patterns in insulating substrates.—73-01059
**Carey, J. W.**
Heat capacity of hydrous cordierite above 295 K.—73-08634
**Carey, M. J.** See Borchers, J. A.
**Carey, M. J.; Berkowitz, A. E.**
CoO-NiO superlattices: interlayer interactions and exchange anisotropy with $Ni_{81}Fe_{19}$.—73-04595
**Cariati, F.** See Barbieri, Luisa; Narducci, D.
**Caridade, M. D.** See Delben, A.
**Carim, A. H.** See Arunajatesan, S.; Kelkar, G. P.
**Carini, G. F.; Anderson, H. U.; Nasrallah, M. M.; Sparlin, D. M.**
Defect structure, nonstoichiometry, and phase stability of Ca-doped $YCrO_3$.—73-03085
**Carius, Alan C.; Connors, Edward J.; Riehle, Daniel R.**
Process for making coated abrasives for grinding wheels.—73-09773
**Carius, R.** See Meyer, R.
**Carkner, Don; Kitai, Adrian H.; Young, Richard**
Cesium coating of thin-film zinc sulfide cold cathodes.—73-11094
**Carl, G.** See Holand, Wolfram; Wange, P.
**Carl, M.; Heidenreich, E.; Kittel, T.**
Production of fluorophosphate glasses for high-efficiency optics by use of a "glove-box" melting furnace.—73-03878
**Carlan,** A. See Desrousseaux, G.
**Carle, Richard C.** See Dillaman, Larry
**Carles, R.** See Goiran, M.; Hillel, R.; Landa, G.
**Carles-Gibergues, Andre** See Breton, Dannys
**Carles-Gibergues, Andre; Saucier, F.; Grandet, J.; Pigeon, M.**
New-to-old concrete bonding: influence of sulfate type of new concrete on interface microstructure.—73-03505
**Carleton, James J.; Green, Deborah A.**
Compliance's contribution to quality and productivity.—73-17468
**Carleton, Samuel A.** See Renardus, Max L. P.
**Carlin, J. F.** See Pavesi, L.
**Carline, R. T.** See Nayar, V; Pickering, C.
**Carlos, W. E.** See Zvanut, M. E.
**Carlotti, G.** See Xia, Hua
**Carlson, Joseph W.** See Kaufman, Leon
**Carlson, Steven K.**
Method for brazing tungsten carbide particles and diamond crystals to a substrate and products made therefrom.—73-05308
**Carlsson, Jan-Otto** See Bardos, L.; Westberg, Helena
**Carlsson, P.; Nender, C.; Barankova, H.; Berg, S.**
Reactive sputtering using two reactive gases, experiments and computer modeling.—73-09296
**Carman, Lee A.**
Glass-ceramic bonded abrasive articles.—73-13658
**Carmona, F.** See Dubois, C.
**Carnera, A.** See Coffa, S.
**Carns, T. K.; Zheng, X.; Wu, B. J.; Wang, K. L.**
Enhancement of Hall mobility in coupled delta-doped layers grown by molecular beam epitaxy.—73-11196
**Caro, Jurgen** See Werner, Lutz
**Caron-Popowich, R'Sue** See Agrawal, Anoop
**Carountzos, George** See Kontoyannis, Christos G.
**Carpenter, Harry W.; Bohlen, James W.**
Fiber coating of unbonded multilayers for toughening ceramic fiber-matrix composites.—73-12364
**Carpenter, Joseph A., Jr.; Evans, John; Hakim, Edward B.; Lyke, James; Naclerio, Nicholas J.; Pagel, Charles**
Overview of U.S. government advanced packaging programs.—73-06585
**Carpenter, R. W.** See Liu, J.; Ma, H.; Maracas, G. N.
**Carpio, Juan** See Hachani, Leila
**Carpio, Ronald A.; Mariscal, Rene; Welch, John**
Determination of boron and phosphorus in boron phosphosilicate thin films on silicon substrates by capillary electrophoresis.—73-12127
**Carr, D.** See Hartley, R. H.
**Carr, G. E.** See Arai, M.
**Carr, P. W.** See Lorenzano Porras, C. Francisco
**Carr, Walter J., Jr.** See Mole, Cecil J.
**Carrascosa, M.** See Alvarez-Bravo, J. V.
**Carrascosa, M.; Arizmendi, L.**
High-temperature photorefractive effects in $LiNbO_3$:Fe.—73-01418
**Carrascosa, M.**
Photorefractive phase conjugation of an image field: fidelity analysis.—73-02667
**Carrasquillo, Ramon** See Garner, Andre
**Carre, Alain; Roger, Francoise; Varinot, Christelle**
Acid/base properties of oxide, oxide glass, and glass-ceramic surfaces.—73-02549
**Carreau, P. J.; Chhabra, R. P.; Cheng, J.**
Effect of rheological properties on power consumption with helical ribbon agitators.—73-15721
**Carretta, P.; Corti, M.**
$^{89}Y$ NMR observation of Knight shift anisotropy and motional line narrowing in $YBa_2Cu_3O_{7-\delta}$.—73-11942
**Carrico, A.** See Paz De Araujo, C. A.
**Carrillo, C. S.** See Seidler, G. T.
**Carrillo-Cabrera, Wilder** See Edstrom, Kristina
**Carrington, A.** See Mackenzie, A. P.
**Carrington, A.; Mackenzie, A. P.; Lin, C. T.; Cooper, J. R.**
Temperature dependence of the Hall angle in single-crystal $YBa_2(Cu_{1-x}Co_x)_3O_{7-\delta}$.—73-08248
**Carroll, Alan F.; Kuno, Hideaki**
Automotive glass thick film conductor paste.—73-11001
**Carroll, Alan F.; Kuno, Hideaki**
Automotive glass thick film conductor paste.—73-11002
**Carroll, D. L.** See Xiong-Skiba, P.
**Carroll, D. L.; Doering, D. L.; Xiong-Skiba, P.**
Electronic trapping mechanisms in an irradiated single crystal of quartz.—73-08612
**Carroll, D. R.** See Dharani, L. R.
**Carroll, Daniel P.** See Pyzik, Aleksander J.
**Carroll, John T., III** See Bentz, Joseph C.
**Carruthers, William D.; Boyd, Gary L.**
High-temperature turbine engine structure.—73-10318
**Carson, S. W.** See Austel, P. O.
**Carsughi, F.** See Albertini, G.
**Carswell, Martin G.; Schweizer, Steven E.; Sullivan, John D.**
Tensile behavior of ceramic/ceramic composites before and after exposure to high-temperature combustion environment.—73-17440
**Carter, Adrian C.** See Majetich, Sara A.
**Carter, Adrian C.; Majetich, Sara A.**
Surface effects on the properties of cadmium selenide quantum dots.—73-04492
**Carter, C. Barry** See Norton, M. Grant; Summerfelt, S. R.; Tietz, Lisa A.
**Carter, Emily A.** See Carter, Lawrence E.
**Carter, G. M.** See Guillou, M. O.
**Carter, J. B.; Holland, J. P.; Peltzer, E.; Richardson, B.; Bogle, E.; Nguyen, H. T.**
Transformer coupled plasma etch technology for the fabrication of subhalf micron structures.—73-08368
**Carter, J. N.** See Lauder, R. D.
**Carter, J. R.** See Hoke, W. E.
**Carter, J.** See Pan, N.
**Carter, Kevin; Friedman, Stephen**
Rapid immunoassay field screening methods for the detection of PCB's, pentachlorophenol, and petroleum fuels in soil—73-12183
**Carter, Lawrence E.; Weakliem, Paul C.; Carter, Emily A.**
Temperature- and composition-dependent structures of $Si_xGe_{1-x}$/Si and $Si_xGe_{1-x}$/Ge superlattices.—73-08772
**Carter, Michael C.** See Schuette, George F.
**Carter, Michael C.**
Apparatus and methods for producing ceramic products.—73-01842
**Carter, R. E.** See Banfill, P. F. G.
**Carter, S. A.** See Bao, Wei
**Carter, S.; Rawlings, R. D.; Rogers, P. S.**
Abrasion testing of glass-ceramics.—73-00432
**Carter, W. B.** See Hill, D. N.
**Carter, W. B.; Papageorge, Marc V.**
Titanium and tantalum coatings on aluminum nitride.—73-10289
**Cartianu, Serban-Dan**
Temperature dependence of the electrical conductivity of monocrystalline oxide semiconductors [studied] through the dependence on temperature of the electronic bands on collective excitations.—73-11477
**Cartier, C.** See Schille, J. P.
**Cartier, Claude-Bernard** See Garcin, Eric
**Cartier, E.** See Dimaria, D. J.; See Eklund, E. A.
**Cartledge, F. K.** See Akhter, H.
**Cartlidge, S.; Nissen, H. U.; Shatlock, M. P.; Wessicken, R.**
Solid-state and catalytic characterization of intergrown zeolite structures based on six-membered rings.—73-08733
**Cartujo, P.** See Banqueri, J.
**Carturan, G.** See Dire, S.
**Cartwright, C. M.** See Soutar, C.
**Carulli, J. M.** See Varhue, W. J.
**Carvalho, B. R.** See Robert, M. H.
**Carvalho, M. G.; Nogueira, M.**
Analysis of furnace performance through 3-D physically based modeling.—73-14319; Energy efficiency of furnaces for firing ceramics.—73-05112; Evaluation of glass quality via 3-D mathematical modeling of glass-melting furnaces.—73-00624
**Casadio, Sergio**
Materials for structural and functional components in fission and fusion nuclear power reactors.—73-08300
**Casagrande, L. G.** See Fanning, T.
**Casalnuovo, S. A.** See Barbour, J. C.
**Casalta, H.** See Alloul, H.
**Casamassima, Giuseppe** See Quaranta, Fabio
**Casanove, M. J.** See Alimoussa, A.
**Casas, L. M.** See Lim, S.
**Casas-Ruiz, M.** See Ligero, R. A.
**Cascales, C.** See Baran, E. J.
**Casciola, M.** See Skou, E.
**Casciola, M.; Palombari, R.**
Proton-metal ion conduction in monoalkali salt forms of α-zirconium phosphate.—73-04155
**Case, Eldon D.** See Chiu, Chin-Chen;Kim, Y.
**Case, Eldon D.; Kim, Y.; Lee, W.-J.**
Cyclic thermal shock in SiC whisker-reinforced alumina and in other ceramic systems.—73-05539
**Case, F. C.**
Novel deposition technique for switchable vanadium sesquioxide ($V_2O_3$) thin films.—73-02910
**Casero, R. P.** See Rano, L.
**Cases, R.** See Bunuel, M. A.; Martin, I. R.; See Orera, V. M.
**Cases, R.; Chamarro, M. A.**
Judd-Ofelt analysis and multiphonon relaxations of rare-earth ions in fluorohafnate glasses.—73-00508
**Cases, R.; Griscom, David L.**
Electron spin resonance characterization of nonbridging oxygen-hole centers in alkali silicate glasses.—73-13975
**Caseweli, Bill**
Particle size analysis by laser diffraction.—73-05077
**Casey, Jon A.** See Adair, James H.
**Casey, Jon A.; DeCarr, Sylvia M.; Reddy, Srinivasa S. N.; Shinde, Subhash L.; Sura, Vivek M.; Tummala, Rao R.**
Toughened glass-ceramic substrates for semiconductor devices subjected to oxidizing atmospheres during sintering.—73-11056
**Casey, Jon A.; DeCarr, Sylvia M.**
Ceramic composite body.—73-03908
**Casoli, A.** See Mirti, P.
**Cass, Richard B.; Loh, Roland; Luke, John**
Recent developments, performance improvements, and new ceramic fibers produced by the viscous suspension spinning process.—73-16972
**Cassani, Giuseppe**
Range of Sacmi presses.—73-08360
**Cassidy, Daniel T.** See Colbourne, Paul D.
**Cassidy, David J.** See Begg, B. D.; Vance, Eric R.
**Cassidy, Robert**
New near-field microscope offers many potential uses.—73-05073; Pick the right probe for your SPM (scanning probe microscopy) needs.—73-12176
**Castagnos, Jacques** See Lucchese, P.
**Castaing, Jacques** See Djemel, A.; Lagerlof, K. Peter D.; Patriarche, G.
**Castanet, R.** See Ayed, F.
**Castano, Victor M.** See Saniger, Jose M.
**Castelan, P.; Ai, Bui; Loubiere, A.**
Aging study of nickel-copper-manganite negative temperature coefficient thermistors by thermopower measurements.—73-11062
**Castell, Ricardo; Di Giampaolo, Ana Rita; Perrin, Herve; Sainz, Carmen; Guerrero, Antonio; Calatroni, Jose**
Sol-gel transition in ceramic systems [studied] by high-resolution refractometry.—73-03024
**Castelli, Vincent** See Sorathia, Usman A. K.
**Castellini, Carlo** See Daneo, Antonio
**Castiaux, A.** See Lambin, P.
**Castro, L. F.** See Prieto, P.
**Castro, M. S.; Perissinotti, L.; Aldao, C. M.**
Cooling rate effects in ZnO varistors.—73-04276
**Castro, R. A.** See MacGill, R. A.
**Castro, R. G.** See Rigney, Joseph D.
**Castro, T.** See Chen, Samuel
**Castro-Rodriguez, R.; Pena, J. L.**
Close-spaced vapor transport combined with free evaporation for doping of semiconductor thin films.—73-07414
**Catalano, I. M.** See Cingolani, R.; See Tommasi, R.
**Catauro, M.** See Aronne, A.; Branda, F.
**Catauro, M.** See Marotta, A.
**Catchen, Gary L.** See Adams, James M.
**Cather, R.**
How to get better curing.—73-09983
**Catlow, C. Richard A.** See Baetzold, R. C.; Bell, R. G.; Bush, Timothy S.; Collins, David R.; Hill, S. E.; Nada, R.; Sayle, T. X. T; Vessal, Behnam
**Cattan, E.; Agius, B.; Achard, H.; Cheang Wong, J. C.; Ortega, C.; Siejka, J.**
Physical properties of radio-frequency magnetron-sputtered Pb(Zr, Ti)$O_3$ thin films: direct determination of oxygen composition by Rutherford backscattering spectroscopy and nuclear reaction analysis.—73-15279
**Cattaneo, A.** See Groppetti, R.
**Cattaruzza, E.** See Bertoncello, R.
**Catti, M.** See Cazzanelli, E.
**Cauchetier, Michel; Croix, Odette; Herlin, Nathalie; Luce, Michel**
Nanocomposite Si/C/N powder production by laser-aerosol interaction.—73-09219
**Cauchetier, Michel; Croix, Odette; Herlin, Nathalie**
Preparation and characterization of ceramic poders—powders-laser: balance and perspectives.—73-13171
**Caufin, B.** See Papo, Adriano
**Caulfield, T.** See Acocella, J.
**Caullet, P.; Hazm, J.; Guth, J. L.; Joly, J. F.; Lynch, J.; Raatz, F.**
Synthesis of zeolite beta from nonalkaline fluoride aqueous aluminosilicate gels.—73-06102
**Caurant, D.** See Barton, J. L.
**Causse, J.**
Approach and realizations in the domain of quality assurance.—73-03380
**Cauville, Roland**
Forty years of ceramic development in France 1950-1990.—73-13621; 73-06569
**Cava, R. J.** See Takagi, H.
**Cava, R. J.; Siegrist, T.; Hessen, B.; Krajewski, J. J.; Peck, W. F.; Batlogg, B.**
New homologous series of lanthanum copper oxides.—73-02350
**Cavadias, S.** See Mataras, D.
**Cavagnat, R.** See Sourisseau, C.
**Cavaleiro, A.; Vieira, M. T.; Lemperiere, G.**
Influence of deposition conditions on the morphology of sputtered W-C-(Co) films.—73-06808
**Cavaleiro, A.; Vieira, M. T.**
Characterization of a sputtered amorphous W-C-Co coating annealed in air.—73-03564

**Cave, Julian** See Lambert, Paul
**Cavenago, Alberto** See Fubini, Bice
**Cavicchi, R. E.** See Poirier, G. E.; Vetrone, Jim
**Cavin, O. Burl** See Cozzi, A. D.; Lara-Curzio, Edgar; Park, Dong-Gon
**Cawley, James D.** See Park, Eun-Sung; Pujar, Vijay V; Unal, Ozer
**Cawley, James D.; Unal, Ozer; Eckel, A. J.**
Oxidation of carbon in continuous fiber-reinforced ceramic matrix composites.—73-09532
**Cawley, Jeffery L.**
Short run SQC (statistical quality control) charting methods for monitoring laboratory repeatability.—73-12194
**Cazzanelli, E.; Mariotto, G.; Catti, M.; Mari, C. M.**
Raman spectroscopy of $HTaMo_6{\cdot}xH_2O$ (M=W and Te) pyrochlores and their potassium precursors.—73-02417
**Cazzato, A.; Faber, K. T.**
Multiple cracking and interface debonding in a brittle film on a ductile rod.—73-08423
**Ceccarelli, Christopher** See Garg, Diwakar
**Celli, F. G.** See Kao, Y. C.
**Celli, F. G.; Files-Sesler, L. A.; Beam, E. A., III; Liu, H. Y.**
In situ detection of InGaAs strained layer relaxation by laser light scattering [LLS].—73-07579
**Celli, F. G.; Kao, Y. C.; Beam, E. A., III; Duncan, Walter M.; Moise, T. S.**
Molecular beam epitaxy flux transient monitoring and correction using in situ reflection mass spectrometry [REMS].—73-11332
**Celis, J. P.** See Blanpain, B.; De Bruyn, K.; Vancoille, E.
**Celis, J. P.; Drees, D.; Maesen, E.; Roos, J. R.**
Quantitative determination of through-coating porosity in thin ceramic physically vapor-deposited coatings.—73-06273
**Celis, J. P.; Roos, J. R.; Vancoille, E.**
Development of (Ti,Al)N and (Ti,Nb)N ceramic coatings produced by steered arc ion plating.—73-10215
**Cellucci, Fabio; Cignini, Pier Luigi; Gozzi, Daniele; Tomellini, M.**
Heterogeneous equilibrium between $YBa_2Cu_3O_{7-\delta}$ and oxygen gas studied by a kinetic approach.—73-05414
**Cen, Wei; Fehlner, Thomas P.; Kalenik, Zbigniew; Wolf, Eduardo E.**
Evaluation of the catalytic activity of a high-surface-area, regular, porous solid formed from the clusters of clusters, $M^{II}_4O[(CO)_9Co_3CCO_2]_6$, M=Co, Zn.—73-05561
**Cendlewska, B.** See Rojek, A.
**Centeno, M. A.** See Alvarez, Luis Javier
**Cerchez, M.** See Barna, S.
**Cerchez, M.; Trifu, E.**
Increasing of the glass articles' mechanical shock resistance related to their technological history.—73-14206
**Cerdeira, F.** See Lemos, V.
**Cerezo, E.; Jaramillo, D.; Hallen, J. M.**
Effect of microstructure on the fracture mechanisms of SiC/Al composites obtained by dynamic compaction.—73-09446
**Cerio, F. M.** See Reeve, S. W.
**Cerkanowicz, Anthony E.; Wecharatana, Methi; Liskowitz, John W.; Jaturapitakkul, Chai**
Coal combustion fly ash utilization in concrete formulation.—73-03444
**Cerna, Eva; Kirsch, Roland; Brabenec, Miloslav**
Experimental reconstruction of medieval glass technology.—73-13668
**Cernansky, Marian; Smrcok, Lubomir**
Experimental apparatus for polycrystalline X-ray diffraction methods.—73-01897
**Cernik, R. J.** See Darlington, C. N. W.
**Cernosek, Z.** See Lostak, P.; Solc, Zdenek
**Cernoskova, E.** See Lostak, P.
**Cerofolini, G. F.** See Spaggiari, C.
**Cerrato. Guiseppina** See Morterra, Claudio
**Cerrina, F.** See White, V.
**Cerstvy, R.** See Musil, J.
**Certon, D.** See Feuillard, G.
**Cerullo, G.** See Koetke, J.
**Cerva, H.** See Grundmann, M.
**Cervinka, Tomas**
Identification of defects in glass.—73-14003
**Cesakova, Emilie** See Vacek, Milan
**Cesar, C. L.** See Medeiros Neto, J. A.
**Cestone, V. C.** See Broussard, P. R.
**Ceulemans, Arnout; Fowler, Patrick W.**
Bonding in $Ti_8C_{12}$ and the substantial Jahn-Teller effect.—73-08556
**Cha, Chin Y.** See Ghosh, Asish
**Cha, K.-H.; Kim, Y.-W.; Park, H.-C.; Kim, K.-H.**
Hydrogen gas sensing characteristics of the Pd-doped $SnO_2$ thin films prepared by sputtering.—73-11254
**Cha, Y. H. C.; Jou, S.; Prakash, S.; Doerr, H. J.; Bunshah, Rointan F.**
Synthesis of ß-SiC thin films for high-temperature sensors by the activated reactive evaporation process.—73-09352
**Chaalial, O.** See Lessard, M.
**Chabal, Y. J.**
Infrared spectroscopy of semiconductor surfaces: H-terminated silicon surfaces[—review].—73-07604
**Chabala, J. M.** See Soni, K. K.
**Chabanenko, V. V.** See D'yachenko, A. I.
**Chabert, Francois** See Chatain, Dominique
**Chack, A.** See Benguigui, L.
**Chacon, M.** See Prieto, P.
**Chad, Kuei-Jung** See Lievens, Jan L.
**Chaddah, P.** See Kumar, Shailendra
**Chadwick, Alan V.** See Bush, Timothy S.; Christy, R. K.
**Chadwick, Alan V.; Francklin, A. J.**
Thermoelectric power studies of bismuth oxides and mixed oxides based on bismuth oxides.—73-12898
**Chae, Kwang-Pyo** See Lee, Sung-Ho
**Chaffee, K.** See Krus, D., Jr.
**Chaffin, John H., III**
Method for hardening zinc selenide and zinc sulfide.—73-02110
**Chai, B. H. T.** See Zhang, X. X.
**Chai, Chang-Qing; Wang, Hao**
Once setting-firing of surplus heat firing perforated brick of coal gangue.—73-08354
**Chai, Jun-Lan; Chen, Zhao-You**
Effects of rare-earth oxides and silica on sintering and microstructure of $Al_2O_3$-$ZrO_2$-$SiO_2$ (AZS)-40 brick.—73-10725
**Chai, Mao-Rong; Sekizawa, Koshi; Machida, M.; Eguchi, K.; Arai, H.**
Preparation of heat-resistant microporous ceramic membranes for selective gas permeation.—73-05973
**Chai, Y. H.** See Goodhue, W. D.
**Chaikina, E. I.** See Kudryavtsev, Yu. A.
**Chaillan, M. H.**
Fast drying and firing process of heavy clay with bars dryer and bars kiln.—73-10682
**Chaim, R.; Ezer, Y.**
Fabrication and characterization of $YBa_2Cu_3O_{7-x}$/Sn composite superconductors: I, Microstructure and mechanical properties.—73-08072; Fabrication and characterization of $YBa_2Cu_3O_{7-x}$/Sn composite superconductors: II, Electrical properties.—73-11755
**Chaim, R.; Marom, H.**
Particle size effect on the apparent brittle-ductile transition in $YBa_2Cu_3O_{7-x}$-Sn composite superconductor.—73-15576
**Chaim, Rachman; Heuer, Arthur H.**
Crystallization in a barium-containing magnesium aluminosilicate glass-ceramic—correction.—73-07113
**Chaissac, Martine; Claus, Juergen; Borchardt, Gunter; Slowik, Jacek; Frischat, G. H.; Scherrer, Stanislas**
Behavior of rf sputter-deposited $SiO_2$ and $Al_2O_3$ diffusion barriers on float glass at 300°C in air.—73-10499
**Chakatyan, K. O.** See Petrosyan, A. M.
**Chaker, M.** See El Khakani, M. A.; Jean, A.
**Chaker, M.; Bolly, S.; Diawara, Y.; El-Khakani, M. A.; Gat, E.; Jean, A.**
X-ray mask development based on SiC membrane and W absorber.—73-17071
**Chaki, T. K.** See Wang, Pauchiu E.
**Chakoumakos, B. C.** See Mook, H. A.
**Chakrabarti, N. B.** See Ray, S. K.
**Chakrabarti, S.**
Microstructure of puffed silica xerogel.—73-09490
**Chakrabarti, U. K.** See Lothian, J. R.; Pearton, S. J.
**Chakrabarti, U. K.; Pearton, S. J.; Katz, A.; Hobson, W. S.; Abernathy, C. R.**
Dry eching of III-IV semiconductors in $CH_3I$, $C_2H_5I$, and $C_3H_7I$ discharges.—73-07455
**Chakrabarty, J. S.** See Bhargava, S. C.
**Chakrabarty, J. S.; Bhargava, S. C.; Jhans, H.; Malik, S. K.**
Structural and magnetic properties of $Bi_2Sr_2Ca$- $Cu_{2(1-x)}$
**Chakraborthy, K. P.** See Balakrishna, P.
**Chakraborty, D.** See Mukhopadhyay, A. K.
**Chakraborty, P.** See Rajasekar, P.
**Chakravorty, A. K.**
Intermediate Si-Al spinel phase formation in phase transformation of diphasic mullite gel.—73-08643
**Chakravorty, D.** See Roy, B.; Roy, S.
**Chaldyshev, V. V.** See Akchurin, R. Kh.; Pyshnaya, N. B.
**Chalek, Carl L.** See Hatfield, William T.
**Chalup, Alan** See Gutmann, Benjamin
**Chalupka, A.** See Loschner, H.
**Chamarro, M. A.** See Cases, R.
**Chamberlain, A.** See Lewis, M. H.
**Chamberland, B. L.** See Lindsay, R.
**Chambers, Ben; Mahalingam, Mali; Hause, Vern; Latiolais, Paul**
Evaluation of a multichip module (MCM) thermal design tool—a three-chip MCM thermal mock-up as a case study.—73-04097
**Chambers, Brian**
Reducing $NO_x$ emissions.—73-03882
**Chambers, D. L.; Taylor, K. A.; Wan, C. T.; Susi, G. T.**
Stresses in multilayer combinations of sputter-deposited coatings of Ni, Ti, TiC+Ni, and $TiB_2$+Ni on coated carbon steel substrates.—73-00269
**Chambers, S. A** See Pearsall, T. P.; Tran, T. T.
**Chambers, S. A.; Loebs, V. A.; Li, Hua; Tong, S. Y.**
Momentum-space images of surface dimers on GaAs(100)-(2×4) by high-energy Auger and X-ray photoelectron diffraction.—73-07681
**Chambers, S. A.**
Schottky barrier height [SBH] control at epitaxial NiAl/GaAs(001) interfaces by means of variable band gap interlayers.—73-04473
**Chaminade, J. P.** See Gaewdang, T.; Zhang, H. J.
**Chamis, C. C.** See Murthy, P. L. N.
**Chamonal, J. P.** See Destefanis, G.
**Champagne, Blaise** See Lambert, Paul
**Champagnie, A. M.; Douglas, P. L.; Mallik, S. K.**
Effects of caustic concentration and bauxite composition on economics of Bayer alumina plants.—73-15722
**Champagnon, B.** See Othmani, A.
**Champion, H. G.** See Ye, F.
**Chan, A. R.** See Chao, Benjamin S.
**Chan, A.** See Aydinli, A.
**Chan, C.** See McGruer, N. E.
**Chan, C.-C.** See Tzeng, J.-M.
**Chan, D. Y. C.** See Scales, Peter J.
**Chan, E. Y.** See Derry, P. L.
**Chan, Helen M.** See French, Jonathan D.
**Chan, I. N.** See Tang, Y. Q.
**Chan, K. S.; He, Ming-Yuan; Hutchinson, J. W.**
Cracking and stress redistribution in ceramic layered composites.—73-09558
**Chan, Kevin K.** See D'Emic, Christopher P.
**Chan, L. Y.** See Yu, Kin-Man
**Chan, S. W..** See Ma, Q. Y.
**Chan, S.-K.** See Foster, C. M.
**Chan, Sammy Lap-Ip** See Lee, Huei-Long
**Chan, Sammy Lap-Ip; Lu, Wun-Hwa; Lee, Huei-Long**
Tensile properties of 6061 Al/SiC composite manufactured by powder metallurgy.—73-03649
**Chan, Siu-Wai** See Hampshire, D. P.
**Chan, Siu-Wai; Sampere, S. M.; Farrow, L. A.; Barner, J. B.; Rogers, C. T.; Wilkens, B. J.**
Reactive coevaporation system for in situ, epitaxial $YBa_2Cu_3O_{7-x}$ thin film deposition.—73-01646
**Chan, W. K.** See Ramesh, Ramamoorthy
**Chan, W.** See Busta, H. H.
**Chan, W.-C.; Chung, C.-J.**
Magnetic flux-drag forces for high-$T_c$ superconductors.—73-01594
**Chan, Y.-J.** See Kuo, J. M.
**Chanat, Stephanie**
FRCMC's: a sample preparation challenge.—73-08401; Preparation techniques for analysis of fiber-reinforced ceramic matrix composites.—73-08435
**Chand, Naresh**
Growth of high-quality AlGaAs/GaAs heterostructures by molecular beam epitaxy for photonic and electronic device applications.—73-14951
**Chand, Prem** See Rao, G. Srinivasa; Singh, Sandeep
**Chander, M.** See Patrin, J. C.
**Chandler, Clive D.; Powell, Quint; Hampden-Smith, Mark J.; Kodas, Toivo T.**
Generation of metal titanate powders by spray pyrolysis using single-source precursors.—73-09148
**Chandler, P. J.** See Hanna, D. C.
**Chandorkar, A. N.** See Choksi, A. J.; Kolluri, S. V.; Mallik, A.
**Chandra Satish; Xu, A.**
Influence of presaturation and freeze-thaw test conditions on length changes of portland cement mortar.—73-10011
**Chandra, D.; Goodwin, M. W.; Chen, M. C.; Dodge, J. A.**
Influence of Hg pressure on diffusion coefficient of As in HgCdTe [MCT].—73-13354
**Chandra, Grish; Haluska, Loren A.; Michael, Keith W.; Bilgrien, Carl J.**
Low-temperature process for converting silica precursor coatings to ceramic silica coatings by exposure to ammonium hydroxide or an environment to which water vapor and ammonia vapor have been added.—73-05221
**Chandra, L.; Clyne, T. W.**
Use of an ultrasonic resonance technique to measure the in-plane Young's modulus of thin diamond films deposited by a dc plasma jet.—73-01935
**Chandra, Subhas** See Kamalasanan, M. N.
**Chandramouli, M.** See Barba, M. F.
**Chandran, R. Gopi; Patil, Kashinath C.**
Combustion synthesis, characterization, sintering, and microstructure of cordierite.—73-12949
**Chandrasekahar, N.** See Achutharaman, V. S.
**Chandrasekar, S.** See Ahn, Y.; Chauhan, R.; Chen, Y. M.
**Chandrasekaran, H.** See Thoors, Hakan
**Chandrasekaran, H.; Johansson, J. O.**
Role of material and grinding parameters in grinding of alumina fiber-reinforced aluminum alloys.—73-06025
**Chandrasekaran, K. D.** See Ganesan, V.
**Chandrasekhar, B. K.**
Particle size distribution errors by sedimentation technique for mixtures of powders.—73-09233
**Chandrasekhar, N.; Achutharaman, V. S.; Goldman, A. M.**
Surface step density oscillation during the growth of $YBa_2Cu_3O_{7-x}$ and $DyBa_2Cu_3O_{7-x}$ superconducting thin films.—73-08235
**Chandrasekhar, N.; Agrawal, V.; Achutharaman, V. S.; Goldman, A. M.**
Growth of $DyBa_2Cu_3O_{7-x}$ thin films on vicinal (100)$SrTiO_3$ substrates.—73-06224
**Chandrasekhar, N.; Valls, Oriol T.; Goldman, A. M.**
Mechanism for electric field effects observed in $YBa_2Cu_3O_{7-x}$ films.—73-15552
**Chandrasekhar, S.** See Dodabalapur, A.
**Chandrasekhar, V. G.; Suthanthiraraj, S. Austin**
Fast ion transport in the new mixed system $(CuI)_x$-$[(Ag_2O)_2$-$(V_2O_5)]_{100-x}$ (40≤x≤80).—73-09406
**Chandrashekara, A.** See Ravindrachary, V.
**Chandross, Edwin A.; Fleming, Debra A.; Johnson, David W., Jr.; MacChesney, John B.; Walz, Frederick W., Jr.**
Manufacture of vitreous silica product via sol-gel process using a polymer additive.—73-00738
**Chaney, J. H.; Newman, M. J.; Pratko, M. J.**
Nonmetallic liners in batch handling equipment.—73-08353
**Chang, A. M.; Hallen, H. D.; Hess, H. F.; Kao, H. L.; Kwo, J.; Sudbo, A.**
Scanning Hall-probe microscopy of a vortex and field fluctuations in $La_{1.85}Sr_{0.15}CuO_4$ films.—73-08194
**Chang, B. P.** See Sonnenberg, N.
**Chang, C. L.** See Melloch, M. R.
**Chang, C. L.; Mahalingam, K.; Otsuka, N.; Melloch, M. R.; Woodall, J. M.**
Precipitation of arsenic in doped GaAs.—73-15109
**Chang, C. T.** See Liu, R. S.
**Chang, C. Y.; Vook, R. W.**
Effect of surface aluminum oxide films on thermally induced hillock formation.—73-05772
**Chang, C.** See Islam-Raja, M. M.; Pavelescu, C.
**Chang, C.-K.; Brachthauser, M.**
Operating experience with twin roll presses at the Asia Cement Corporation, Taiwan.—73-00154
**Chang, Chi-Ching** See Yau, Hon-Fai
**Chang, Chi-Ching; Yau, Hon-Fai; Tong, Yuh-Ping; Puh, N.-W.**
Rotational invariant pattern recognition with the method of circular harmonics using a $BaTiO_3$ crystal.—73-08965
**Chang, Chu-Nan; Chiou, Shin-Kuan; Luo, Ching-Rong**
Cu $K_\beta/K_\alpha$ intensity ratios of some Cu compounds and high-$T_c$ superconducting cuprates.—73-15407

**Chang, Chu-Yen** See Chang, Edward Y.; Haung, C.-J.; Hsieh, S.-W.
**Chang, D. R.** See Dunyak, Thomas J.
**Chang, De-An; Choh, Yi-Hung; Hsieh, Wen-Feng; Lin, Pang; Tseng, Tseung-Yuen**
Role of drying-control chemical additives on the preparation of sol-gel-derived PLZT thin films.—73-15286
**Chang, Edward Y.; Lai, Yeong-Lin; Lin, Kun-Chuan; Chang, Chu-Yen**
Schottky contacts on *n*-$Ga_{0.51}In_{0.49}P$ [studied] by low-pressure metallorganic chemical vapor deposition.—73-11437
**Chang, Fu-Chung; Chen, John-Sheng**
Preparation of metal-substituted hexagonal barium ferrite with organic precipitant method.—73-05975
**Chang, H. L. M.** See Foster, C. M.; Gao, Y.
**Chang, H. L. M.; Gao, Y.; Zhang, T. J.; Lam, D. J.**
Heteroepitaxy of $TiO_2$, $VO_2$ films, and $TiO_2/VO_2$ multilayers grown on sapphire(1$\bar{1}$02) by metallorganic chemical vapor deposition.—73-09160
**Chang, H.; Pitt, C. H.; Alexander, G. B.**
Electroless silver plating of oxide particles in aqueous solution.—73-10224
**Chang, Hyun-Ju** See Mahanti, S. D.
**Chang, In-Soon** See Kim, Eung-Ho
**Chang, J. C. P.** See Kavanagh, K. L.
**Chang, J. T.** See Hutchison, R. G.
**Chang, J.-H.** See Juang, C.
**Chang, J.-S.** See Hwang, I.-S.; Youm, H.-N.
**Chang, James S. C.; Patterson, George A.**
Effect of crystalline defects on electrical properties of heavily Si-doped strain-relaxed $In_{0.5}Ga_{0.5}As$ layers grown by molecular beam epitaxy on GaAs.—73-11151
**Chang, Jeanne C.; Lange, Fred F.; Pearson, Dale S.; Pollinger, John P.**
Pressure sensitivity for particle packing of aqueous $Al_2O_3$ slurries vs interparticle potential.—73-09274
**Chang, Jeanne C.; Lange, Fred F.; Pearson, Dale S.**
Viscosity and yield stress of alumina slurries containing large concentrations of electrolyte.—73-06132
**Chang, Jin-Yi** See Mao, Z.
**Chang, Jin-Yi; Mao, Z.**
Strengthening of glasses by sol-gel coating $TiO_2$-$SiO_2$ films.—73-14501
**Chang, K. T.; Goo, Edward**
Ordered phase in (Hg, Cd)Te grown by liquid phase epitaxy on CdTe(111)B substrate.—73-08681
**Chang, K.-J.** See Cheong, B.
**Chang, K.-J.; Cheong, B.; Park, C.-H.**
Atomic model for hydrogen passivation of DX centers in GaAs and $Al_xGa_{1-x}As$ alloys.—73-11076
**Chang, Kun-Zen**
Polycrystalline silicon thin-film transistor.—73-11538
**Chang, L. H.** See Jia, Q. X.
**Chang, L. L.** See Ohno, H.; Vina, L.
**Chang, Liang**
Effects of additives on properties of basic refractories.—73-10724
**Chang, M. W.** See Hu, L. J.
**Chang, Mau-Chung F.; Asbeck, Peter M.**
Self-aligned gallium arsenide/aluminum gallium arsenide collector-up heterojunction bipolar transistors capable of microwave applications and method.—73-04532
**Chang, P.** See Chen, K.
**Chang, Pok-Kie** See Lee, Jong-Ho; Lim, Yong-Moo
**Chang, R. P. H.** See Roberts, T. A.
**Chang, S.** See Vitomirov, I. M.
**Chang, S.-J.; Takahei, Kenichiro; Nakata, Jyoji; Su, Y.-K.**
Impact excitation of Er-doped GaAs and the rare-earth sites in III-V compound semiconductors.—73-04360
**Chang, S.-K.** See Jeong, B.-S.
**Chang, S.; Raisanen, A.; Brillson, L. J.; Shaw, J. L.; Kirchner, P. D.; Pettit, G. D.**
Inhomogeneous and wide range of barrier heights at metal/molecular beam epitaxy GaAs(100) interfaces observed with electrical measurements.—73-07608
**Chang, S.; Vitomirov, I. M.; Brillson, L. J.; Rioux, D. F.; Kirchner, P. D.; Pettit, G. D.**
Correlation of interface chemistry, barrier height, and step density for Al on vicinal GaAs(100) surfaces.—73-01112
**Chang, T. Y.** See Dodabalapur, A.; Williams, M. D.
**Chang, T. Y.; Sauer, N. J.; He, Y.**
Optimization of molecular beam epitaxy grown *p-i-n* multiple quantum well electroabsorption modulators for the 1.5-μm wavelength region.—73-11364
**Chang, Thomas; Zhu, Jian-Gang; Judy, Jack H.**
Method for investigating the reversal properties of isolated barium ferrite fine particles utilizing magnetic force microscopy (MFM).—73-05066
**Chang, W. F.** See Ghafoori, N.
**Chang, W. H.; Bello, I.; Lau, W. M.**
X-ray photoelectron spectroscopy study of low-energy $CF^+$ ion interactions with silicon.—73-08793
**Chang, W.-C.** See Lin, J.-N.
**Chang, W.; Hahn, Horst**
Electron microscopy studies of phase transformations in nanostructured yttrium oxide.—73-06213
**Chang, X.** See Zhou, Y.-C.
**Chang, Y. Austin** See DeKock, Joel A.; Lin, C. F.; Mohney, S. E.
**Chang, Y. H.** See Hu, L. J.
**Chang, Y. P.; Dornfeld, D. A.**
Chatter and surface pattern detection for cylindrical grinding using a fluid coupled acoustic emission [AE] sensor.—73-05026
**Chang, Y.-H.** See Chen, Y.-F.
**Chang, Y.-H.; Chen, T.-C.; Chen, C.-J.; Chen, Y.-F.**
Magnetophotoconductivity studies of $D^0$ and $D^-$ centers in GaAs quantum wells in metallic and insulating states.—73-07655
**Chang, Y.-M.** See Yeom, T.-H.
**Chang, Y.-S.** See Yang, F.-L.
**Chang, Yen-Hwei** See Yen, Tsung-Fu
**Chang, Ying-Lan; Krishnamurthy, Mohan; Tan, I.-H.; Hu, E. L.; Merz, J. L.; Petroff, P. M.**
Temperature-dependent hydrogenation on near-surface strained quantum wells.—73-11479
**Chang, Yoon-Ho** See Hahm, Yeong-Min
**Changchun, G. E.** See Limin, C.
**Changkakoti, Rupak** See Islam, D.
**Chani, V. I.** See Randoshkin, V. V.
**Channell, A. D.** See Whitaker, A.
**Chao, A.** See Lee, H. J.
**Chao, Benjamin S.** See Li, Yi
**Chao, Benjamin S.; Gonzalez-Hernandez, J.; Chan, A. R.; Gavulic, J. M.; Ovshinsky, S. R.; Wood, J. L.**
Thermal stability of encapsulated tungsten/carbon multilayer thin films.—73-08992
**Chao, J.** See Fernandez-Saez, J.
**Chao, K. A.** See Zou, Nan-Zhi
**Chao, K.-J.** See Gwo, S.
**Chao, Kei-Jung; Shy, Der-Shiuh**
$Xe^{129}$ NMR study of faujasite zeolites of varying Al content.—73-12733
**Chao, Kuei-Jung; Sheu, Shie-Ping; Sheu, Hwo-Shuenn**
Structure and chemistry of Co in CoAPO-5 molecular sieves.—73-08757; 73-16328
**Chao, Luen-Yuan; Shetty, Dinesh K.**
Time-dependent strength degradation and reliability of an alumina ceramic subjected to biaxial flexure.—73-17447
**Chao, P. C.** See Ballingall, J. M.
**Chao, Tsao-Fang; Walsh, Kenneth J.; Fedkiw, Peter S.**
Cyclic voltammetric study of the electrochemical formation of platinum oxide in a Pt/yttria-stabilized zirconia cell.—73-04070
**Chapelier, C.** See Mailly, D.
**Chaplanov, Victor A.** See Galkin, Igor M.
**Chaplanov, Victor A.; Galkin, Igor M.; Nefedov, A.; Shipov, I. A.; Yakimov, S.; Gerasimovich, Svetlana**
X-ray study of silicon distortion on deposition of diamondlike films.—73-05524
**Chaplot, S. L.** See Somayazulu, M. S.
**Chaplygin, I. L.** See Ayache, C.
**Chapman, A. R.** See Scott, V. D.
**Chapman, C. C.** See Elliott, M. L.
**Chapman, David M.**
Catalyst for cracking of paraffinic feedstocks.—73-02025
**Chapman, L. D.** See Ehrlich, S. N.
**Chapman, Lloyd R.; Holcombe, Cressie E.**
Boron nitride-containing bodies and method of making the same.—73-15978
**Chaput, F.** See Caboche, G.; Smaihi, M.
**Char, K.** See Verghese, S.
**Charbonneau, S.** See Allard, L. B.; Halliday, D. P.; Kakasaki, B. W.
**Chardon, J.** See Benabbas, A.
**Chardon, N.** See Guille, J. L.
**Chareire, Jean-Louis** See Bommier, Christophe
**Charest, B. A.** See Korhonen, C. J.
**Charette, A.** See Kiss, L. I.
**Charfi, F. F.** See Maaref, M.
**Chari, K. S.** See Kumar, Vipan
**Charlebois, A.** See Tinoco, T.
**Charles, C.** See Goullet, A.
**Charles, C.; Giroult-Matlakowski, G.; Boswell, R. W.; Goullet, A.; Turban, G.; Cardinaud, C.**
Characterization of silicon dioxide films deposited at low pressure and temperature in a helicon diffusion reactor.—73-16669
**Charles, Harry R.** See Cape, Thomas W.
**Charlesworth, J. P. A.; Godby, R. W.; Needs, R. J.**
First-principles calculations of many-bond band-gap narrowing at an Al/GaAs(110) interface.—73-14928
**Charlson, E. J.** See Stacy, T.
**Charlson, E. M.** See Stacy, T.
**Charnay, R.; Emriore, J. M.; Heberard, X.; Giuraldenq, P.**
Mechanical properties of the ceramic-metal bonding of a gold-platinum dental alloy and chemical characterization of the interface.—73-13869
**Charnaya, E. V.** See Asrarov, Sh. A.; Kasperovich, V. S.; Vorotilova, L. S.
**Charrier, Jean-Michel** See Bates, Philip J.
**Charron, Christophe** See Adam, J. L.; Matecki, Marc
**Charron, Christophe; Fonteneau, Gilles; Lucas, Jacques**
New glass compositions containing alkali metal derived from BIGaZYbT.—73-06942
**Chartier, I.** See Hanna, D. C.
**Chartier, T.** See Ferrato, M.
**Chartier, T.; Jorge, E.**
Pouring on band.—73-01813
**Charykov, N. A.** See Grebenyuk, A. M.
**Chase, L. L.** See DeLoach, Laura D.; Payne, Stephen A.
**Chassagneux, F.** See Tosan, Jean-Luc
**Chasse, T.; Theis, W.; Chen, T. P.; Evans, D. A.; Horn, K.; Pettenkofer, C.**
Interface chemistry and band bending induced by Pt deposition onto GaP(110).—73-01218
**Chastchin, S. V.** See Zhilin, A. A.
**Chatain, Dominique; Chabert, Francois; Ghetta, Veronique; Fouletier, Jacques**
New experimental setup for wettability characterization under monitored oxygen activity: II, Wettability of sapphire by silver-oxygen melts.—73-03628
**Chateigner, D.** See Rouco, A.
**Chatenoud, F.** See Dai, H.; Halliday, D. P.
**Chatterjee, A. K.**
Special and new cements.—73-10159
**Chatterjee, A.** See Chatterjee, M.
**Chatterjee, Amit** See Kerans, Ronald J.
**Chatterjee, Dilip K.** See Ghosh, Syamal K.; Majumdar, Debasis
**Chatterjee, Dilip K.; Majumdar, Debasis; Ghosh, Syamal K.; Mir, Jose M.**
Ceramic articles and methods for preparing ceramic articles and for sintering.—73-12345
**Chatterjee, M.** See Ray, J.
**Chatterjee, M.; Ray, J.; Chatterjee, A.; Ganguli, D.; Joshi, S. V.; Srivastava, M. P.**
Thermal barrier coatings from sol-gel-derived spray-grade $Y_2O_3$-$ZrO_2$ microspheres.—73-09375
**Chatterji, Susanta** See Kawamura, Mitsunori; Strunge, H.;e Taguchi, M.; Taguchi, T.
**Chatterji, Susanta; Kawamura, Mitsunori**
Critical reappraisal of ion diffusion through cement-based materials: I, Sample preparation, measurement technique, and interpretation of results.—73-09874
**Chattha, Mohinder S.** See Montreuil, Clifford; Narula, Chaitanya K.
**Chattopadhyay, A. K.; Hintermann, H. E.**
Brazing of cubic boron nitride abrasive crystals to steel substrate with alloys containing Cr or Ti.—73-13803; Performance of metal-bonded single-layer diamond abrasive tool.—73-03632
**Chattopadhyay, D.; Rakshit, P. C.**
Intersubband absorption in (Hg,Cd)Te quantum wells.—73-07619
**Chattopadhyay, S.** See Palkar, V. R.
**Chau, H. F.**
Correlated flux creep through columnar defects in $YBa_2Cu_3O_7$ crystals.—73-15406
**Chau, Hin-Fai; Pavlidis, Dimitris; Brock, Tim**
Reactive-ion-etching-induced damage studies and application to self-aligned InP/InGaAs heterojunction bipolar transistor [HBT] technology.—73-11414
**Chau, T. T.; Mejia, S. R.; Kao, K. C.**
New approach to low-temperature deposition of high-quality thin films by electron cyclotron resonance microwave plasmas.—73-09221
**Chaudhari, G. N.** See Manorama, S.
**Chaudhari, Praveen** See Kawasaki, M.
**Chaudhari, Praveen; Chi, Cheng-Chung J.; Dimos, Duane; Mannhart, Jochen D.; Tsuei, Chang-C.**
Method for forming grain-boundary junction devices using high-$T_c$ superconductors.—73-11963
**Chaudhari, A. K.** See Das, S.; Nandi, A. K.; Pal, U.
**Chaudhari, B. I.** See Mollah, S.
**Chaudhari, B. K.; Som, K. K.**
Oxide glass to high-temperature ceramic superconductors—a novel route.—73-11856
**Chaudhuri, S. P.; Sengupta, K.; Mitra, Nita**
Ceramic properties of hard porcelain in relation to mineralogical composition and microstructure: V, Electrical resistivity.—73-00937
**Chaudhuri, S.** See Gupta, P.
**Chaudhuri, S.; Stein, D.**
Application of new gas purging systems in ladle metallurgy.—73-10698
**Chaudhury, Ranjan**
High-temperature superconductivity—current status, our theoretical and experimental work.—73-11788
**Chaudouet, P.** See Hudner, J.
**Chauhan, R.; Ahn, Y.; Chandrasekar, S.; Farris, T. N.**
Role of indentation fracture in free abrasive machining of ceramics.—73-06514
**Chaumont, C.** See Henz, P.
**Chaumont, D.; Craievich, A. F.; Zarzycki, J.**
Effect of ultrasound on the formation of $ZrO_2$ sols and wet gels.—73-05774
**Chausskaya, I. D.; Komarov, G. N.; Kustova, L. V.; Mamyan, S. S.**
Corrosion resistance of boron carbide powders.—73-16434
**Chawla, K. K.** See Ha, Jung-Soo; Xu, Z. R.
**Chawla, K. K.; Ferber, Mattison K.; Xu, Z. R.; Venkatesh, R.**
Interface engineering in alumina/glass composites.—73-16846
**Chawla, K. K.; Xu, Z. R.; Hlinak, A.; Chung, Yip-Wah**
Surface roughness characterization of three alumina-type fibers by atomic force microscopy [AFM].—73-09515
**Chawla, K. K.**
Ceramic Matrix Composites.—73-06600
**Chawla, Nikhilesh** See Wagh, Arun S.
**Chayahara, Akiyoshi** See Fukumi, Kohei; Ikeyama, Masami; Miyake, S.
**Chazono, Hirokazu; Inomata, Yasuyuki; Shibuya, Kazuyuki; Horie, Katsuyuki**
Ceramic materials of improved dielectric constants, and capacitors fabricated therefrom.—73-11004
**Che, Guang-Can; Jia, Ahun-Lian; Zhao, Yu-Zhen**
Formation of 2223 phase in Bi-system superconductor containing Pb.—73-11767
**Cheang Wong, J. C.** See Cattan, E.
**Cheang, P.** See Khur, K. A.
**Cheatham, Linda K.** See Landry, Christopher C.
**Cheban, V. M.** See Zhur'yari, E. L.; Zhur'yari, Z. L.
**Cheban, V. N.** See Bresler, M. S.
**Chebotaev, N. M.** See Kostylev, V. A.
**Chebotar, V. N.** See Kovarskii, V. A.
**Chebotarev, A. N.; Markova, V. G.; Dyk, Nguyen-Dank**
Mechanism of interaction of amorphous silica with diluted solutions of hydrofluoric acids.—73-14033
**Chebotarev, A. P.** See Voronova, I. D.
**Chechersky, Vladimir; Kopelev, Nikolai S.; O, Beom-Hoan; Larkin, M. I.; Peng, J. L.; Markert, J. T.**
Supramagnetic behavior in $Nd_{2-x}Ce_xCu(^{57}Co)O_4$.—73-15370
**Chechulina, T. V.** See Dolgopolov, V. M.
**Cheetham, A. K.** See Speck, J. S.; Wilkinson, A. P.
**Cheetham, Anthony K.** See Gale, Julian D.; McManus, A. V. P.; Morris, R. E.
**Chen, Cui-Hong** See Wang, Yuan
**Chehab, S. F.** See Canaday, J. D.

**Chehab, S. F.; Canaday, J. D.; Kuriakose, A. K.; Wheat, T. A.; Ahmad, A.**
Hydrogen sensor based on bonded hydronium Nasicon.—73-00976
**Chehouani, H.; Benet, S.; Brunet, S.; Armas, B.; Combescure, C.**
Numerical simulation of hydrodynamics and heat transfer in a hot-wall CVD reactor.—73-13156
**Chekan, Paul N.; Gordon, Andrew**
Conversion of enameling steels from ingot cast to continuous cast.—73-13812
**Chekhov, O. S.** See Kalygin, V. G.
**Chekhovskii, V. D.** See Khalilev, V. D.; Ekzekov, M. Kh.; Khalilev, V. D.; Kreitsberga, V. Z.; Sizonenko, A. P.
**Chekhovskii, V. G.; Ivanova, G. S.; Muromtseva, M. E.**
Ir spectra of iron-containing borophosphate glasses.—73-00359
**Chekhovskii, V. G.; Kolobkova, E. V.; Keikhs, Yu. Ya.; Fokin, A. V.**
Structure of aluminoborate glasses according to Raman spectroscopy data and their properties.—73-14106
**Chekmarev, A. M.** See Mukhametshina, Z. B.
**Chekrygina, T. M.** See Karimov, Z. F.; Shershnev, A. A.
**Chelnokov, V. E.** See Anikin, M. M.; Ivanov, P. A.
**Cheinyi, A. A.** See Gorbylev, V. A.
**Chelokov, M. N.** See Radaev, S. F.
**Chemobai, V. A.** See Kirilova, S. I.
**Chemseddine, A.**
Sol-gel processing of an entirely new family of mixed valence glasses.—73-10604
**Chen, A-B.; Van Schilfgaarde, M.; Sher, A.**
Comparison of $In_{1-x}Tl_xSb$ [ITA] and $Hg_{1-x}Cd_xTe$ [MCT] as long-wavelength infrared materials.—73-11113
**Chen, A. C.** See Moy, A. M.
**Chen, A. C.; Moy, A. M.; Pearah, P. J.; Hsieh, K. C.; Cheng, K. Y.**
Growth of $Ga_xIn_{1-x}P/Ga_{0.5}In_{0.5}P$ multiple quantum wires by strain-induced lateral layer ordering process.—73-11233
**Chen, A.** See Podlesny, J.
**Chen, Ang** See Zhi, Yu
**Chen, Ang; Zhi, Yu; Lu, Zhuo**
Substitution effect of Sn and/or Ca elements in $YBa_2Cu_3O_{7-\delta}$ superconducting ceramics.—73-11911
**Chen, Bin-Jiang; Rodriguez, Mark A.; Snyder, R. L.**
Glass formation and crystallization of $Y_2O_3$-BaO-CuO-$B_2O_3$ glass-ceramics.—73-08089
**Chen, Bu-Su** See Kukhtarev, N.
**Chen, C. H.; Cheong, S. W.; Cooper, A. S.**
Charge modulations in $La_{2-x}Sr_xNiO_{4+y}$: ordering of polarons.—73-16050
**Chen, C. H.; Phillips, R. C.; Morrison, D. W.**
Monitoring of photodeposited superconductive films.—73-11841
**Chen, C. S.** See Mukhopadhyay, S. M.
**Chen, C. S.; Boutz, Michel R.; Boukamp, B. A.; Winnubst, A. J. A.; De Vries, K. J.; Burggraaf, Anthonie J.**
Electrical characterization of grain boundaries in ultrafine-grained Y-TZP.—73-13393
**Chen, C. T.** See Kuiper, Pieter
**Chen, C. T.; Tjeng, L. H.; Kwo, J.; Kao, H. L.; Rudolf, P.; Sette, F.**
Out-of-plane orbital characters of intrinsic and doped holes in $La_{2-x}Sr_xCuO_4$.—73-08156
**Chen, C.** See Dutta, P. K.; Pradhan, A. K.
**Chen, C.-C.; Yu, J.-L.; Lee, C.-Y.; Liu, C.-S.; Chiu, H.-T.**
Difluorosilylene as a precursor for the chemical vapor deposition of titanium silicide.—73-12988
**Chen, C.-D.**
Aspects of interface modes and LO eigenmodes in GaAs/AlAs quantum wells.—73-07384
**Chen, C.-J.** See Chang, Y.-H.; Lin, Y.-S.; Tsay, M.-J.
**Chen, Catherine S. H.; Schlenker, John L.; Wentzek, Steven E.**
Method for synthesizing microporous crystalline material.—73-05226
**Chen, Chang-Lee** See Lin, Ya-Yun
**Chen, Chao** See Zhuang, Wei-Hua
**Chen, Chen-Jia; Gao, Wei; Mi, Li-Zhi; Huang, D.-P.; Chen, Y.; Wan, Z.**
Photoreflectance and photoluminescence characterizations of $GaAs/Al_xGa_{1-x}As$ single quantum wells with interface structures.—73-15098
**Chen, Chen-Jia; Wang, Xue-Zhong; Gao, Wie; Qin, Zhi-Feng**
Magnetic and optical properties of $Cd_{1-x}Gd_xTe$ diluted magnetic semiconductor.—73-04395
**Chen, Chen-Jia; Wang, Xue-Zhong; Qin, Zhi-Feng; Wu, W.; Giriat, W.**
Optical properties of diluted magnetic semiconductor $Zn_{1-x}Co_xSe$.—73-15072
**Chen, Chi-Jen** See Hsu, Jen-Yan
**Chen, Chia-Fu; Chen, Sheng-Hsiung; Hong, Tsao-Ming; Ko, Hsien-Wen; Sheu, S.-E.**
Microwave diamond synthesis with high-oxygen hydrocarbons—(carbon dioxide, oxygen).—73-16868
**Chen, Chia-Fu; Hong, Tsao-Ming; Chen, Sheng-Hsiung**
Role of hydrogen and oxygen in diamond synthesis using carbon dioxide–methane gas mixtures.—73-13240
**Chen, Christina H.** See Kumar, Binod
**Chen, Christina H.; Kumar, Binod**
Superconductivity in the $(YBa_2Cu_3)_{1-x}Na_xO_{7-\delta}$ system.—73-08228
**Chen, Chuang-Tian** See Mei, Lin-Feng; Wu, Bai-Chang
**Chen, Chuang-Tien** See Lin, Shu-Jie
**Chen, Chun-Yao** See Klemer, David P.
**Chen, Chyuan-Wei** See Wu, Meng-Chyi
**Chen, D.-J.** See Mayo, M. J.
**Chen, D.-J.; Mayo, M. J.**
Densification and grain growth of ultrafine 3 mol% $Y_2O_3$-$ZrO_2$ ceramics.—73-16695
**Chen, Da-Qiang; Wang, Chang-Wen; Huang, Yong-Qian**
Effects of particle size of $Nd_2O_3$-$SiO_2$ system pigment on glaze coloring.—73-07250
**Chen, Du-Ren** See Song, Xiang-Yun
**Chen, Du-Wun; Lin, J. T.**
Temperature-tuned phase-matching properties of $LiB_3O_5$ for Ti:sapphire laser frequency doubling.—73-16614
**Chen, De-Ling** See Xiao, Ling-Zhu
**Chen, De-Rang**
Effects of coal gangue additives on quality of clay brick.—73-10678
**Chen, F.-H.** See Wang, Y.-H.
**Chen, Fan**
Development and prospects of China's ceramic machinery.—73-12130
**Chen, Funen E.** See Hodges, Robert L.
**Chen, G.-H.** See Sato, K.; Zhang, Fang-Qing
**Chen, G.-H.; Suryanarayana, C.; Froes, F. H.**
Effect of processing parameters on mechanical alloying of $Ti_3Al$-base alloys.—73-05769
**Chen, G.-S.** See Zhang, H.
**Chen, G.; Stump, N. A.; Haire, R. G.; Peterson, J. R.; Abraham, M. M.**
Pressure-induced phase transition by $YVO_4$:$Eu^{3+}$: an emission lifetime study at high pressure.—73-05621
**Chen, G.; Stump, N. A.; Haire, R. G.; Peterson, J. R.; Abraham, M. M.**
Pressure-induced phase transition in $YVO_4$:$Eu^{3+}$: a luminescence study at high pressure.—73-12660
**Chen, G.**
Improvements in glass composition control techniques by simultaneous measurement of density and softening point.—73-10552
**Chen, Guo-Liang** See Li, Yi-Jie
**Chen, Guo-Liang** See Ren, Cong-Xin
**Chen, H. C.** See Wang, W. C.
**Chen, H. S.** See Chou, H.
**Chen, H.-C.** See Wang, X.-L.; Yue, Xue-Feng
**Chen, H.-C.; Liu, Z.-Y.; Chuang, Y.-C.; Xu, L.-K.**
Structure of plasma-deposited $ZrO_2$-$Y_2O_3$ ceramic layers.—73-16337
**Chen, H.-C.; Liu, Z.-Y.; Chuang, Y.-C.**
Degradation of plasma-sprayed alumina and zirconia coatings on stainless steel during thermal cycling and hot corrosion.—73-00219
**Chen, H.; Feyereisen, M.; Long, X. P.; Fitzgerald, G.**
Stability, bonding, and geometric structure of $Ti_8C_{12}$, $Ti_8N_{12}$, $V_8C_{12}$, and $Zr_8C_{12}$.—73-16313
**Chen, Hai-Ying** See Dai, Yuan-Dong
**Chen, He-Min** See Shimoo, Toshio
**Chen, Hsi-Kuei; Lin, Chun-I; Lee, Chaipyng**
Kinetics of the reduction of carbon/alumina powder mixture in a flowing nitrogen stream.—73-13112
**Chen, Hsiung** See Wang, Ya-Xin
**Chen, Huan-Chu** See Zhang, Gui-Lan
**Chen, I-Wei** See Becher, Paul F.; Chen, Pei-Lin; Chen, San-Yuan; Hwang, Shyh-Lun; Jacobs, David S.; Li, Ping; Liu, Shih-Yu; Xue, Liang A.
**Chen, I-Wei; Hwang, Shyh-Lung**
Superplastic SiAlON—a bird's eye view of silicon nitride ceramics.—73-05278
**Chen, I-Wei**
Mobility control of ceramic grain boundaries and interfaces.—73-09212; Solute drag on grain boundary in ionic solids—the space charge effect.—73-03111
**Chen, In-Gann** See Liu, Jian-Xiong; Song, S. N.; Weinstein, Roy
**Chen, J. C.; Ladle Ristow, M.; Cubbage, J. I.; Werthen, J. G.**
GaAs/Ge heterojunction grown by metallorganic chemical vapor deposition and its application to high-efficiency photovoltaic devices.—73-14934
**Chen, J. S.; Kolawa, E.; Nicolet, M. A.; Pool, F. S.**
Thermal reaction of Ta thin films with polycrystalline diamond.—73-10285
**Chen, J.** See Kavanagh, K. L.; Lu, H. A.; Richard, J.
**Chen, J.-F.; Cho, A. Y.**
Molecular beam epitaxy growth of InAs-AlSb-GaSb interband tunneling diodes.—73-07680
**Chen, J.-H.; Wang, G.-Z.; Nogi, K.; Kamai, M.; Sato, N.; Iwamoto, N.**
Metallurgical behavior during brazing of Ni-base alloy Inconel 600 to $Si_3N_4$ with Ag71Cu27Ti2 filler metal.—73-06826; Segregation of chromium at the interface between Ni-Cr-Si-Ti brazing filler metal and $Si_3N_4$ ceramics.—73-00265
**Chen, J.; Li, G; Li, C.; Xiong, G.-C.; Lian, G.-J.; Yin, D.**
Flux-creep-flow crossover in laser ablation YBCO thin film.—73-04726
**Chen, J.; Lu, H. A.; DiMeo, F., Jr.**
Solid-phase epitaxy of $Bi_2Sr_2CaCu_2O_x$ superconducting thin films.—73-01660
**Chen, J.; Wills, L. A.; Wessels, B. W.; Schulz, D. L.; Marks, T. J.**
Structure of organometallic chemical vapor deposited $BaTiO_3$ thin films on $LaAlO_3$.—73-06291
**Chen, Ji-Ping; Ji, Hong; Wan, Yi**
Experimental study of $T_c$ measurement system for high-$T_c$ superconductor controlled automatically by microcomputer.—73-11754
**Chen, Jian** See Xu, Xian-Yu
**Chen, Jian-Hui** See Fernandez, J. M.
**Chen, Jian-Min** See Cai, Pei-Xin
**Chen, Jiann-Horng** See Liao, Jie-Hau
**Chen, Jiann-Ruey; Houng, Mau-Phon; Jenq, Fenq-Lin; Fang, C.-S.; Tse, W.-S.**
Substrate heating effect on the growth of a CdTe film on an InSb substrate by vacuum evaporation.—73-01330
**Chen, John-Sheng** See Chang, Fu-Chung
**Chen, Jun** See Mu, Xiao-Dong
**Chen, K. C.** See Morscher, Gregory N.
**Chen, K. Y.** See Tang, Y. Q.
**Chen, K.-J.** See Xia, Hua
**Chen, K.; Horng, L.; Koo, H.-S.; Chang, P.; Yang, T.-J.; Lee, W.-H.**
Mechanical and superconducting properties of an Ag-sheathed Bi-Pb-Sr-Ca-Cu-O tape.—73-04769
**Chen, Kai-Yuan; Zhou, Lu-Wei; Ma, Yi-Jun**
*I-V* characteristics of thin-film $YBa_2Cu_3O_{7-x}$ and *K-T* transition.—73-11793
**Chen, Kun-Ji; Xu, Jun; Huang, Xin-Fan; Zhuang, D.-K.; Li, Q.; Wang, W.-Y.**
RT optical bistability in hydrogenated a-$SiC_x$:H alloys.—73-16591
**Chen, Kuo-Tong; Liu, Hao-Chieh; Fang, Rei; Yu, T. C.; Brebrick, R. F.**
Occurrence of a miscibility gap in thin surface layers of $Hg_{1-x}Cd_xTe$.—73-07698
**Chen, L. M.; Barr, T. L.; Krauss, A. R.; Gruen, D. M.; Gady, B.**
Behavior of the 123 superconductor system during changes in atmospheric condition.—73-01495
**Chen, L.** See Ge, C.; Lamarche, A.-M.; Rich, D. H.; Wei, X.
**Chen, L.-H.** See Qian, Y.
**Chen, L.-J.** See Wu, S.-L.
**Chen, L.-N.** See Gao, Xian-Cheng
**Chen, Li** See Kaviani, Kian
**Chen, Li-Dong; Goto, Takashi; Hirai, Toshio**
Preparation of SiC-$W_2C$ nanocomposite powders by chemical vapor deposition of the $SiH_4$-$CH_4$-$WF_6$-$H_2$ system.—73-13201
**Chen, Li-Quan** See Cao, Shi-Xun; Inaguma, Yoshiyuki
**Chen, Liang-Yu; Hoffman, R. W.**
Angle-resolved X-ray photoelectron spectroscopy method for the thickness measurement of metal oxide/metal ultrathin films.—73-08374
**Chen, Liang-Yu; Hoffman, R. W.**
Angle-resolved X-ray photoelectron spectroscopy method for the thickness measurement of metal oxide/metal ultrathin films[—eratum].—73-15775
**Chen, Ling; Piazza, T. W.; Schmidt, B. E.; Kelsey, J. E.; Kaloyeros, A. E.; Hazelton, D. W.**
Effect of processing parameters in the chemical vapor deposition of $YBa_2Cu_3O_{7-\delta}$ thin films on polycrystalline silver.—73-08037
**Chen, Ling; Schmidt, B. E.; Kaboyeros, A. E.; Luo, Li**
High-quality $Y_1Ba_2Cu_3O_{7-\delta}$ ultrathin films produced in situ by high-growth-rate chemical vapor deposition.—73-04733
**Chen, Long-Qing** See Wang, Yun-Zhi
**Chen, Lu-Bin** See Liang, Zhi-Lin
**Chen, Lu-Bin; Li, Guang-Ping; Tian, Shou-Xin**
Effects of additives on magnesia alumina spinel bricks.—73-07208
**Chen, M. C.** See Chandra, D.
**Chen, M. F.** See Vezzoli, G. C.
**Chen, M.** See James, P. F.; Wu, J.
**Chen, M.; James, P. F.; Jones, F. R.**
Strengthening of soda-lime-silica glass by gel-derived coatings.—73-14502
**Chen, M.; Lee, W. C.; James, P. F.**
Synthesis of monoclinic celsian glass-ceramic from alkoxides.—73-10607
**Chen, Meng-Zhen** See Gao, Shi-Ping
**Chen, Min-Ru** See Lu, Hong-Yang
**Chen, Ming-Y.; Li, D.; Lin, X.; Dravid, Vinayak P.; Chung, Yip-Wah; Wong, Ming-Show**
Analytical electron microscopy and Raman spectroscopy studies of carbon nitride thin films.—73-06186
**Chen, Ming-Y.; Lin, X.; Dravid, Vinayak P.; Chung, Yip-Wah; Wong, Ming-Show; Sproul, W. D.**
Synthesis and tribological properties of carbon nitride as a novel superhard coating and solid lubricant.—73-09683
**Chen, Ming; Tsankov, Mincho A.; Nash, Jon M.; Patton, C. E.**
Microwave magnetic envelope dark solitons in YIG thin films.—73-15350
**Chen, Mu-Kuen; Lin, Hao-Hsiung**
Two-phase liquid phase epitaxy of $In_{0.53}Ga_{0.47}As$ on InP.—73-11492
**Chen, N. Y.** See Rietvield, G.
**Chen, Nai-Hong** See Li, Qin-Hai
**Chen, Ning-Wei** See Krutyholowa, M. W.
**Chen, Ning-Wei; Krutyholowa, M. W.; Haun, M. J.; Brog, T. K.; Wirth, D. G.; Sibold, J. D.**
Effect of thermal expansion mismatch between the intergranular glass and crystal phases on the fracture toughness of alumina ceramics.—73-09582
**Chen, Ning-Wei; Readey, D. W.; Moore, John J.**
Mechanisms of oxide whisker growth.—73-16862
**Chen, P. G.; Colaianni, M. L.; Yates, J. T., Jr.; Arbab, M.**
Thermal properties of the Sn/$SiO_2$ interface as studied by surface spectroscopies.—73-02711
**Chen, P. J.** See Colaianni, M. L.
**Chen, Pei-Lin; Chen, I-Wei**
Role of defect interaction in boundary mobility and cation diffusivity of $CeO_2$.—73-17098
**Chen, Peng-Xiong**
Relations between worm rotating speeds and relative parameters of extruders.—73-08361
**Chen, Pu-Woei; Chung, D. D. L.**
Concrete reinforced with up to 0.2 vol% of short carbon fibers.—73-06643
**Chen, Q.** See Falter, C.
**Chen, Q.; Dapkus, P. D.**
Growth and characterization of device-quality GaAs produced by laser-assisted atomic layer epitaxy using triethylgallium.—73-04348
**Chen, Qi-Tao** See Li, De-Yu
**Chen, Qiu-Ping** See Li, Liu-Sheng
**Chen, R. C.** See Borghesi, A.
**Chen, Rong-San** See Yang, Yu-Xiang
**Chen, Rong; Wang, Qing-Ji; Zheng, Le-Min**
Detection of overtone vibration spectrum of water vapor by AlGaAs diode laser.—73-11134

**Chen, Rong; Zhang, Guo-Ding**
Casting defects and properties of cast A356 aluminum alloy reinforced with SiC particles.—73-06742
**Chen, S. J.** See Schwartz, D. S.
**Chen, S. J.; Howitt, D. G.**
Mechanism to describe the basal twinning of sapphire.—73-16211
**Chen, S. T. J.; Yang, J.-M.**
Quantitative determination of the stability of SiC whisker in reaction-bonded/hot-pressed $Si_3N_4$ composites by X-ray diffraction.—73-13441
**Chen, S.** See Liu, H.-S.; Shen, P.
**Chen, S.-C.**
Commissioning and operation of Universal Cement's Ta-Fu gypsum board plant.—73-03445
**Chen, Samuel; Mason, M. G.; Gysling, H. J.; Pazpuyalt, G. R.; Blanton, T. N.; Castro, T.**
Ultrahigh vacuum metallorganic chemical vapor deposition growth and in situ characterization of epitaxial $TiO_2$ films.—73-17066
**Chen, San-Yuan; Chen, I-Wei**
Temperature-time texture transition of $Pb(Zr_{1-x}Ti_x)O_3$ [PZT] thin films: II, Heat treatment and compositional effects.—73-17055; Temperature-time texture transition of $Pb(Zr_{1-x}33Ti_x)O_3$ [PZT] thin films: I, Role of Pb-rich intermediate phases.—73-16362
**Chen, Sha-Ou; Shen, Hui-Min; Yu, Zheng**
Energy loss related to ferroelastic behavior in $Y_{1-x}Pr_xBa_2Cu_3O_y$.—73-15459
**Chen, Sheng-Hsiung** See Chen, Chia-Fu
**Chen, Shu-Chun; Qi, Chang-Hong; Wu, Tie-Qiang**
Photon-grated hole burning in $BaSO_4:Sm^{2+}$ crystals.—73-12658
**Chen, Shu-Fen** See Tartarini, Giovanni
**Chen, Shu-Sheng** See Boutz, Michel R.
**Chen, Shuei-Yuan; Shen, Pou-Yan; Gan, Der-Shin**
Growth kinetics of sintered $NiO/ZrO_2$ (5 mol% $Y_2O_3$) composites.—73-02281
**Chen, Shui-Yuan** See Lu, Hong-Yang
**Chen, T. M.** See Liu, R. S.
**Chen, T. P.** See Chasse, T.
**Chen, T.-C.** See Chang, Y.-H.
**Chen, Tie-Feng**
Developing glazed tiles from perlite tailings.—73-10812
**Chen, Ting-Guo** See Cai, Jie
**Chen, Tsung-Yu** See Numao, Tatsuya
**Chen, W. C.** See Davies, C. H. J.
**Chen, W. L.; Cowles, J. C.; Haddad, G. I.; Munns, G. O.; Eisenbeiser, K. W.; East, J. R.**
Ohmic contact study for quantum effect transistors and heterojunction bipolar transistors with InGaAs contact layers.—73-07699
**Chen, W. M.** See Dreszer, P.
**Chen, W. M.; Dreszer, P.; Weber, E. R.; Sorman, E.; Monemar, B.; Liang, B. W.**
Optically detected magnetic resonance studies of low-temperature InP.—73-15076
**Chen, W.** See Lin, J.
**Chen, W.-D.; Cui, Y.-D.**
Quantitative analysis of $In_xGa_{1-x}As$ by Auger electron spectroscopy.—73-07751
**Chen, W.; Dumas, M.; Mao, D.; Kahn, A.**
Work function, electron affinity, and band bending at decapped GaAs(100) surfaces.—73-07862
**Chen, W.; Kahn, A.; Mangat, P. S.; Soukiassian, P.; Florez, L. T.; Harbison, J. P.**
Pb/GaAs(100): band bending, adatom-induced gap states, and surface dipole.—73-11372
**Chen, W.; Mao, D.; Santos, M.; Shayegan, M.; Kahn, A.; Mangat, P. S.**
Schottky barrier formation at nonreactive interfaces: Ga/GaAs(100) and Pb/GaAs(100).—73-04472
**Chen, Wei-Qing** See Su, Da-Gen
**Chen, Wei-Shi** See Chronister, Sally A.; Monroe, Eugene A.
**Chen, Wei-Zhe** See Sun, Qing-Ping
**Chen, Wei; Pechenik, Alexander; Dapkunas, Stanley J.; Piermarini, Gasper J.; Maighan, Subhas G.**
Novel equipment for the study of the compaction of fine powders.—73-08426
**Chen, Wen-Ju** See Zhang, Gui-Lan
**Chen, Wie-Shi; Monroe, Eugene A.; Condrate, Robert A., Sr.; Guo, Y. M.**
Hardening process for several phosphate glass-containing cements.—73-03476
**Chen, Wu-Ming; Zhang, Yu-Tong; Yao, Xi-Xian**
Effects of substitution of tin for copper in Bi-based compound.—73-04711
**Chen, X. L.** See Ho, J. C.
**Chen, X.** See Tonner, B. P.
**Chen, X.-C.** See Zhang, Ming-Qian
**Chen, X.; Narayan, J.**
Deposition of diamond/TiN composite film on tool steel substrate.—73-03572; Effect of the chemical nature of transition metal substrates on chemical vapor deposition of diamond.—73-06777
**Chen, Xi-Kum; Qiu, Jing-He; Dai, Lai-Fu; Zhu, Qi-Biao**
Quadrangular bulk ZF-7 glass double layer optical path current sensor.—73-07066
**Chen, Xian-Hui; Chen, Zu-Yao; Qian, Yi-Tai**
Influence of Ca on superconductivity of $(Y_{1-x}Pr_x)Ba_2Cu_3O_{6.95}$ system.—73-11801
**Chen, Xian-Qiu** See Du, Xin-Min; Shen, Ding-Kun
**Chen, Xian-Tong; Yamane, Hisanori; Kaya, Kiyoshi**
Synthesis and properties of highly *c*-axis-oriented $PbTiO_3$ thin films prepared by an MOCVD method.—73-09350
**Chen, Xiang-Yuan**
Bricks fired from mixture of coal spoil and fly ash.—73-10673
**Chen, Xiao-Bo; Zhang, Guang-Yin**
Blue-green upconversion luminescence of nanocrystalline $HoP_5O_{14}$.—73-12747; Compound upconversion luminescence mechanism in crystalline $TmP_5O_{14}$.—73-16423
**Chen, Xiao-Lin** See Peng, Xi-Ling
**Chen, Xin-Hua** See Lee, Chui-Wee
**Chen, Xiu-Lan** See Gao, Bao-Qin
**Chen, Xu-Ming** See Jiang, Ying-Hong
**Chen, Y. L.** See Ma, Y.; Yasuda, T.
**Chen, Y. M.; Farris, T. N.; Chandrasekar, S.**
Precision crack-off of ceramics.—73-06500
**Chen, Y. P.** See Sporken, R.
**Chen, Y. P.; Sivananthan, S.; Faurie, J. P.**
Structure of CdTe(111)B grown by MBE on misoriented Si(001).—73-11461
**Chen, Y. W.** See Li, H. S.
**Chen, Y.** See Chen, Chen-Jia; Gao, Xing-Tao; Liliental-Weber, Z.
; Zakharov, N. D.
**Chen, Y.-C.** See Oda, Shunri
**Chen, Y.-F.** See Chang, Y.-H.
**Chen, Y.-F.; Shen, J.-L.; Chang, Y.-H.**
Cyclotron-resonance-induced negative photoconductivity in $GaAs/Al_xGa_{1-x}As$ quantum wells.—73-14822
**Chen, Y.-L.** See Kong, Lin-Shu
**Chen, Y.-X.** See Hua, Yi-Min
**Chen, Y.; Massies, J.; Neu, G.; Deparis, C.; Gil, B.**
Effects of the substrate misorientation on the excitonic transition properties in GaAs/AlGaAs superlattices.—73-07476
**Chen, Y.; Odler, Ivan**
Kinetics of portland cement hydration in the presence of selected chemical admixtures.—73-06681; Origin of portland cement setting.—73-10074
**Chen, Yi** See Zhang, Li-Feng
**Chen, Yi-Chia** See Lee, Chin C.
**Chen, Yi-Hong** See Gan, Fu-Xi
**Chen, Yi-Min** See Zhang, Pei-Xing
**Chen, Yi-Min; Shi, Li-Ping; Su, Mu-Zhen**
Kinetics of aluminoferrite formation at different conditions.—73-13746
**Chen, Yin** See Xu, Qin-Lun
**Chen, Ying-Chung** See Meen, Teen-Hang
**Chen, Ying-Li** See Hua, Yi-Min
**Chen, Yong-He** See Isozumi, Yasuhito
**Chen, You-Peng** See Tan, Chun-Yu
**Chen, Yu** See Wang, Wen-Cai
**Chen, Yu-Li** See Guo, Gong-Yi
**Chen, Yu-Ru** See Liu, Qian
**Chen, Yu-Wen** See Wang, Wei-Jye
**Chen, Yuan-Kui** See Wang, Shan-Ba
**Chen, Yue-Nan** See Qi, Zhao-Hui
**Chen, Yung-Fu** See Lin, Wen-Tai
**Chen, Yung-Fu; Lin, Wen-Tai; Pan, Fu-Min**
Effects of oxygen partial pressure and substrate temperature on the in situ growth of the $Ba_{1-x}Rb_xBiO_3$ films by laser ablation.—73-08046
**Chen, Yung-Jui** See Wu, Ming-Cho
**Chen, Z. J.; Herman, H.; Safai, S.**
Structures and properties of vacuum-plasma-sprayed [VPS] NiAl and NiAl-B.—73-09512
**Chen, Z. Y.** See Sheng, Zheng-Zhi; Tang, Y. Q.
**Chen, Z. Y.; Sheng, Zheng-Zhi; Tang, Y. Q.; Li, Y. F.; Pederson, D. O.**
Effects of F doping and Cl doping on formation and superconductivity of the 1212-type phase $TlSr_2CaCu_2O_7$.—73-04709
**Chen, Z.** See Li, L.
**Chen, Z.-Y.** See Li, Ru-Kang
**Chen, Z.; Mecholsky, J. J., Jr.**
Damage-tolerant laminated composites in thermal shock.—73-13817
**Chen, Z.; Pang, S. K.; Yasutake, K.; Rohatgi, A.**
Plasma-enhanced chemical vapor deposited oxide for low surface recombination velocity and high effective lifetime in silicon.—73-07738
**Chen, Zhao-Jia** See Xu, Qin-Lun
**Chen, Zhao-You** See Chai, Jun-Lan; Jiang, Ming-Xue; Li, Yong
**Chen, Zhao-You; Li, Yong**
Development and application of refractories for tuyere zone of nickel converters: II.—73-07204
**Chen, Zheng; Wan, Jing-Chun**
Thermal fixing technique of Ti-diffused $LiNbO_3$ waveguide characteristics.—73-01438
**Chen, Zhi-Qiang; Zheng, An-Zhong**
Thermal behavior of blended fiber products of $Al_2O_3$-$SiO_2$ system.—73-16618
**Chen, Zhi-Yuan; Liao, Xin**
Selection of stimulation agents for alkali-slag cement.—73-13774
**Chen, Zhien-Chi; Ring, Terry A.; Lemaitre, Jacques**
Stability and processing of aqueous $BaTiO_3$ suspension with polyacrylic acid [PAA]: effect of pH.—73-03026
**Chen, Zhong-Xin; Derking, Anke**
$TiO_2$ thin films by chemical vapor deposition: control of the deposition process and film characterization.—73-17063
**Chen, Zu-Xiong**
Synthesis and characterization of ß´-SiAlON whiskers prepared from the carbothermal reaction of silica fume and $\alpha$-$Al_2O_3$.—73-17018
**Chen, Zu-Yao** See Chen, Xian-Hui
**Chenavas, J.** See Rouco, A.
**Cheng, B.-P.** See Kong, J.
**Cheng, Bin-Ji** See Yuan, Feng-Chi
**Cheng, C. C.** See Erdemir, A.
**Cheng, C.-C.** See Sayer, M.
**Cheng, C.-Y.** See Lii, K.-H.
**Cheng, Guo-Sheng**
Application of new grinding media to manufacture of wall and floor tiles.—73-12108
**Cheng, H. J.** See Liliental-Weber, Z.
**Cheng, H. S.** See Liu, Hai-Yan
**Cheng, H.-M.** See Zhong, Wei-Lie
**Cheng, Hsiu-Fung** See Yeh, M.-H.
**Cheng, Hsiu-Fung**
Effect of sintering aids on microstructures and PTCR characteristics of $(Sr_{0.2}Ba_{0.8})TiO_3$ ceramics—reply.—73-09097
**Cheng, Hui-Ming** See Uchiyama, Yasuo
**Cheng, J. Joseph; Kolkowski, Brian M.**
Neutral gray glass composition.—73-10650
**Cheng, J.** See Carreau, P. J.; Fang, Yi
**Cheng, Jing-Xiang** See Xia, You-Ming
**Cheng, K. Y.** See Chen, A. C.; Moy, A. M.
**Cheng, P. C.** See Bullard, R. L.
**Cheng, Q.-H.** See Feng, Y.-J.
**Cheng, Sheng-Long** See Liao, Jie-Hau
**Cheng, T. T.** See Schafer, G. W.
**Cheng, Wood-Hi; Mar, Alan; Bowers, John E.; Huang, R. T.; Su, C. B.**
High-speed 1.3-µm InGaAsP Fabry-Perot laser for digital and analog applications.—73-14962
**Cheng, Wu-Cheng** See Laine, Norman R.
**Cheng, Xian-Chun**
Fabrication of gold tone glazed tile.—73-10840
**Cheng, Xiao-Jun** See Wang, Lei-Ming; Xu, You-Lin
**Cheng, Y.-C.** See Fleischer, S.
**Cheng, Y.; Thompson, D. P.**
Nitriding of zirconia.—73-02908
**Cheng, Yi-Bing; Thompson, D. P.**
Aluminum-containing nitrogen melilite phases.—73-05354
**Cheng, Yi-Bing; Thompson, D. P.**
Densification of zirconia-containing SiAlON composites by $Sm_2O_3$.—73-09060; Oxidation behavior of zirconia–SiAlON composites.—73-06314
**Cheng, Yuan-Fa; Kuang, An-Xiang**
Ultraviolet absorption edge of $LiNbO_3$ crystal from solid-liquid congruent point composition.—73-11628
**Cheng, Zhao-Kan** See Ren, De-He
**Cheng, Zhi-Qiang** See Wu, Ping-Yong
**Chengn, Vun-Shiug** See Yuan, Dah-Wei
**Chenys, A.** See Babenskas, E.
**Cheon, Chae-Il; Kim, Ho-Gi**
Effect of mechanical stress and electric field on the morphotropic tetragonal and rhombohedral phase boundary in PZT system: thermodynamic consideration.—73-16118; Ferroelectric domain structure and array of tetragonal and rhombohedral phase in PZT ceramics at MPB [morphotropic grain boundary] composition.—73-15263
**Cheong, B.** See Chang, K.-J.
**Cheong, B.; Chang, K.-J.**
Metastability and chemical bonding of S-induced defects in GaAs and InP.—73-11314
**Cheong, Deock-Soo** See Kim, Min-Soo
**Cheong, Dong-Ik** See Baek, Yong-Kee
**Cheong, Dong-Ik; Kang, Eul-Son; Choi, Won-Bong**
Effect of starting crystallographic phase on the mechanical properties of hot-pressed SiC ceramics.—73-06390
**Cheong, H.-M.; Choi, S.-H.; Han, Ki-Sung**
Effect of sulfate on the reaction of $C_3S$ [tricalcium silicate] formation.—73-09919
**Cheong, H.-M.; Choi, S.-H.**
Interaction of alkali oxide and $SO_3$ on $3CaO{\cdot}SiO_2$ formation and microstructure.—73-13743
**Cheong, H.-M.; Han, Ki-Sung; Choi, S.-H.**
Effect of sulfate on the reaction of $3CaO{\cdot}SiO_2$ formation in presence of clinker melt and its appearance in clinker.—73-06650
**Cheong, H.-M.; Han, Ki-Sung; Choi, S.-H.**
Effects of $K_2SO_4$ and $NaSO_4$ on $3CaO{\cdot}SiO_2$ formation and its microstructure.—73-13712
**Cheong, H.-M.; Han, Ki-Sung; Choi, S.-H.**
Mechanism of $3CaO{\cdot}SiO_2$ prevention in presence of excess $SO_3$.—73-10037
**Cheong, S. W.** See Chen, C. H.; Hammel, P. C.; Kwei, G. H.; Liu, Ran
**Chepik, D. I.** See Gurevich, S. A
**Chepilko, A. G.** See Pereverzeva, L. P.
**Chepin, James** See Shi, Jian-Hui
**Cheremnykh, G. S.** See Chusovitina, T. V.
**Cherenkov, A. E.** See Anikin, M. M.
**Cherenkov, V. A.** See Karuna, N. B.
**Cherenkov, V. A.; Grishin, V. E.**
Stimulation of superconductivity in metal oxide layered superconductors.—73-01663
**Chereshkevich, A. V.** See Andrianova, T. N.
**Cherian, I. K.; Kriven, Waltraud M.**
Processing and mechanical properties of alumina platelet-reinforced zirconia.—73-09278
**Cherico, Stephen D.** See Mottet, Leon-Philippe
**Cherkasov, A. N.** See Tsymbal, L. T.
**Cherkezyan, S. A.** See Perekalina, T. M.
**Chermant, Jean-Louis** See Gomina, Moussa; Kervadec, Dominique
**Chermenko, I. M.** See Mekekechko, A. V.
**Chermyshov, V. N.** See Grinyaev, S. N.
**Chern, E. James**
Automated surface profilometer.—73-12111
**Chern, J.-H.** See Wang, L.-M.
**Chern, M. Y.; Gupta, A.; Hussey, B. W.; Shaw, T. M.**
Reflection high-energy electron diffraction intensity monitored homoepitaxial growth of $SrTiO_3$ buffer layer by pulsed laser deposition.—73-06017
**Chernavin, S. B.** See Grinberg, V. Ya.
**Chernega, A. N.** See Nagornyi, P. G.
**Chernenkov, Yu.** See Plakhty, V.
**Cherng, Chian-Lii** See Lin, Jane-Chyi
**Chernik, I. A.** See Berezin, A. V.; Ravich, Yu. I.
**Chernik, I. A.; Berezin, A. V.; Zhitinskaya, M. K.; Lykov, S. N.**
Electronic and lattice characteristics of lead selenide studied by low-temperature (1–4 K) calorimetric spectroscopy.—73-16131

**Chernomorskaya, E. M.** See Dzhurzha, V. V.
**Chernov, I. P.** See Ul'yanov, V. L.
**Chernov, S. A.** See Aluker, E. D.
**Chernov, S. V.; Moskvin, A. L.; Murin, I. V.**
Structure of lead(II) tetrafluorostannate(II) prepared by hydrothermal synthesis.—73-05502
**Chernova, V. A.** See Dymnikov, A. A.; Il'khamov, R. A.
**Chernovaya, N. F.** See Min'ko, N. I.
**Cherny, V. V.** See Strashnikova, M. I.
**Chernyaev, S. V.** See Mozhaev, A. P.
**Chernyaeva, N. B.** See Petrukhnovskaya, N. B.
**Chernyakhovskii, V. A.; Konstantinov, V. F.; Grigor'ev, I. V.; Karaseva, M. D.; Krigman, L. I.**
Refractories for lining mobile mixtures.—73-00853
**Chernyshev, A. F.** See Buinov, N. S.
**Chernyshov, E. M.; Voronin, A. I.**
New developments at laboratory for silicate materials and structures.—73-16878
**Chernyshova, L. M.** See Kutvitskii, V. A.
**Cheron, J. P.; Tcheliebou, F.; Boyer, A.**
Structural properties of $Y_2O_3$-stabilized $ZrO_2$ films deposited by reactive thermal coevaporation.—73-08754
**Chertkov, I. L.** See Volnyanskii, M. D.
**Chertov, V. M.; Tsyrina, V. V.; Kaganovskii, V. A.**
$Al_2O_3$ porous structure and strength.—73-16653
**Cherukuri, Stayam C.; Onyshkevych, Lubomyr S.; Prabhu, Ashok N.; Thaler, Barry J.**
Multilayered, cofired, ceramic-on-metal circuit board for microelectronic packaging.—73-04225
**Chesna, A.** See Kundrotas, V.
**Chesnokov, S. N.** See Khokhlov, D. R.
**Chesnokov, V. M.** See Sviridov, N. V.
**Chester, M. J.; Jach, Terrence; Dagata, J. A.**
X-ray photoelectron and Auger electron spectroscopy study of ultraviolet/ozone oxidized, $P_2S_5/(NH_4)_2S$-treated GaAs(100) surfaces.—73-06184
**Chester, M. J.; Jach, Terrence; Thurgate, S.**
Grazing-incidence X-ray photoemission spectroscopy investigation of oxidized GaAs(100): a novel approach to nondestructive depth profiling.—73-11223
**Chetkin, M. V.; Lykov, V. V.; Makovozova, A. A.; Belonogov, A. G.**
Domain wall [DW] interaction with elastic waves in $FeBO_3$.—73-01453
**Chetwynd, D. G.; Cockerton, S. C.; Smith, S. T.**
Design and operation of monolithic X-ray inteferometers for super-precision metrology.—73-05035
**Cheung, J. T.** See Bubulac, L. O.; Neurgaonkar, R. R.
**Cheung, J. T.; Shin, S. H.; Pasko, J. G.; DeWames, R. E.**
In situ studies of the effect of various gaseous species and ultraviolet illumination on the dark currents of HgMnCdTe and HgCdTe short-wavelength infrared diodes.—73-07585
**Cheung, Ping-Sun**
Use of polymeric additives as admixtures in oil well cements.—73-03552
**Chevallier, J.** See Djemel, A.
**Chevrier, J.; Stocker, P.; Vinh, L.; Gay, J. M.; Derrien, J.**
Epitaxial growth of α-$FeSi_2$ on Si(111) at low temperature.—73-16137
**Chevy, A.** See Martinez-Pastor, J.
**Chevychelov, Alexander A.** See Movchan, Boris A.
**Chew, M.**
Effect of heat exposure on the thermoluminescence [TL] of concrete.—73-13709
**Chew, Wilbert; Bajuk, Louis J.; Corley, Thomas W.**
Superconductive coplanar-waveguide filters.—73-11917
**Chezhina, N. V.** See Bobrysheva, N. P.
**Chezhina, N. V.; Bobrysheva, N. P.**
Character of interatomic exchange interactions in solid solutions of $Mg(Mn_xAl_{1-x})_2O_4$.—73-12547
**Chezhina, N. V.; Zvereva, I. A.; Bobrysheva, N. P.**
State of iron atoms and exchange interactions in solid solutions of $LaSrFe_xAl_{1-x}O_4$ and $YCaFe_xAl_{1-x}O_4$.—73-12691
**Chhabra, R. P.** See Carreau, P. J.
**Chhor, K.** See Pommier, C.
**Chi, C. C.** See Tsuei, Chang-C.
**Chi, Cheng-Chung J.** See Chaudhari, Praveen
**Chi, P. H.** See Martin, Jaime M.; Thompson, Philip E.; Vellanki, Jayadev
**Chi, Xiu-Ming** See Ma, Y.-Z.
**Chia, Kai Y.; Boecker, Wolfgang D. G.; Storm, Roger S.**
Silicon carbide bodies having high toughness and fracture resistance and method of making [the] same.—73-12519
**Chia, Kai Y.**
Electrically conductive high-strength dense ceramic.—73-14747
**Chia, W.-T.; Chowdari, B. V. R.; Tan, K.-L.**
Structural and physical characterization of the $Li_2O$:$P_2O_5$:$CrO_{1.5}$ ion-conducting glasses.—73-07360
**Chiang, C. K.** See Smilgys, Russell V.
**Chiang, Cyril; Huang, Yao-T.; Shei, C.-Y.**
Summary on the modified Pechini method to prepare high-purity ceramic superconducting powders.—73-04810
**Chiang, J. C. H.** See Botha, P. J.
**Chiang, Yet-Ming** See Terwilliger, Chrysanthe D.
**Chiang, Yet-Ming; Ikeda, Jeri Ann S.**
Grain-boundary segregation in semiconducting oxides.—73-11221
**Chiang, Yet-Ming; Silverman, Lee A.; French, Roger H.; Cannon, Rowland M., Jr.**
Thin glass film between ultrafine conductor particles in thick-film resistors.—73-07368
**Chiang, Yih-Cheng; Wang, A. S.; Chou, Tsu-Wei**
Matrix cracking in fiber-reinforced ceramics.—73-09628
**Chiao, Y.-S.; Pan, Fu-Min; Lin, C.-A.; Horng, J.-L.; Lin, S.-J.**
$Al_2O_3$(p)-6061Al composites under dry sliding conditions [studied] using scanning electron microscopy, energy-dispersive spectrometry, and X-ray diffractometry.—73-06737
**Chiara, R.; Rabezzana, F.**
Evolution of hard coatings and base materials on cutting tool applications.—73-08531
**Chiaradia, P.** See Goletti, C.
**Chiaramonte, Francis P.; Sudsina, Michael W.**
Joining ceramics by brazing.—73-13108
**Chiarello, R. P.** See Foster, C. M.
**Chiarotti, G.** See Goletti, C.
**Chiba, Akira** See Morizono, Yasuhiro; Tomoshige, Ryuichi
**Chiba, Jiro** See Manabe, Tsuneo
**Chiba, Jiro; Manabe, Tsuneo**
Process for producing a curved glass plate partially coated with a ceramic.—73-00757
**Chibowski, Emil** See Holysz, Lucyna
**Chichagov, A. V.; Shilova, Z. V.; Lopatin, A. L.**
Qualitative X-ray phase analysis based on calculated standards.—73-15834
**Chida, Hiroaki** See Ishikawa, Shin
**Chida, Nakaya; Fujinuma, Haruko; Matsuura, Masamichi; Tsukahara, S.**
Copper or molybdenum metallization of ceramics by ion beam dynamic mixing.—73-10210
**Chida, Nakaya; Fujinuma, Haruko; Matsuura, Masamichi**
Copper or molybdenum metallization of ceramics by ion beam dynamic mixing.—73-03569
**Chidester, Kenneth M.** See Matthews, R. Bruce
**Chien, C. L.** See Gavrin, A.
**Chien, F. R.; Nutt, Steven R.; Cummings, D.**
Defect structures in single-crystal TiC.—73-09396
**Chieux, P.** See Rousselot, C.
**Chigira, Shiroshi** See Watanabe, Koichi
**Chigusa, Yoshiki** See Onishi, Masashi
**Chigvintsev, A. G.** See Podoinikov, A. G.
**Chih, B.-C.; Wei, W.-J.; Koo, C.-H.**
Flexural strength and surface grinding properties of alumina.—73-09599
**Chikamatsu, Ryuichi** See Kanazawa, Katsuyoshi
**Chikarmane, V.** See Sudhama, C.
**Chikhrii, S. I.** See Babizhetskii, V. S.
**Chikumoto, N.; Konczykowski, M.; Motohira, N.; Malozemoff, A. P.**
Flux-creep crossover and relaxation over surface barriers in $Bi_2Sr_2CaCu_2O_8$ crystals.—73-08871
**Chikutei, Satoru** See Nakajima, Shigeharu
**Childs, T. H. C.; Mimgroglu, A.**
Sliding friction and wear up to 600°C of high-speed steels and silicon nitrides for gas turbine bearings.—73-06854
**Chilton, N. B.** See Fujinami, M.
**Chimisov, Y.** See Gorshunova, N.
**Chimitov, A. Zh.** See Merkin, A. P.
**Chin, Albert** See Wang, H. H.
**Chin, Albert; Martin, Paul A.; Das, Utpal; Mazurowski, J.; Ballingall, J. M.**
Chemical beam epitaxial growth of InP, InGaP, and InAs heterojunctions using triethylindium and bisphosphinoethane.—73-11107
**Chin, Albert; Yang, Li-Wu; Martin, Paul A.; Nordheden, K. J.; Ballingall, J. M.; Yu, T. H.**
High-performance heterojunction bipolar transistor [HBT] grown by molecular beam epitaxy using novel growth method.—73-11245
**Chin, V. W. L.; Osotchan, T.; Vaughan, M. R.; Tansley, T. L.; Griffiths, G. J.; Kachwalla, Z.**
Hall and drift mobilities in molecular beam epitaxial grown GaAs.—73-14954
**Chindaudom, P.** See Trolier-McKinstry, S.; Witham, H. S.
**Chindaudom, P.; Vedam, K.**
Inhomogeneous transparent optical coatings on transparent substrates [studied] by spectroscopic ellipsometry [SE].—73-12148
**Ching, W. Y.; Xu, Yong-Nian**
First-principles calculation of electronic, optical, and structural properties of α-$Al_2O_3$.—73-05400
**Chinn, Richard**
Grain sizes of ceramics by automatic image analysis.—73-05051
**Chino, Atsushi** See Torizuka, Shiro
**Chinyama, Godfrey** See Roos, Arne
**Chiou, Bi-Shiou; Chung, Ming-Chih**
Electrical behavior of the $MnO_2$-doped ZnO-$Bi_2O_3$ system.—73-16473
**Chiou, Bi-Shiou; Hsieh, Shu-Ta; Wu, Wen-Fa**
Deposition of indium tin oxide films on acrylic substrates by radio-frequency magnetron sputtering.—73-10929
**Chiou, Bi-Shiou; Hsieh, Shu-Ta**
Rf magnetron sputtered indium tin oxide film on a reactively ion-etched acrylic substrate.—73-09305
**Chiou, Bi-Shiou; Sheu, Jer-Yuan; Wu, Wen-Fa**
Size effect on the electrical conduction and noise of $RuO_2$-based thick-film resistors.—73-10990
**Chiou, Bi-Shiou; Sheu, Jer-Yuan**
Temperature dependence of the electrical conduction in $RuO_2$-based thick-film resistors.—73-14739
**Chiou, Shin-Kuan** See Chang, Chu-Nan
**Chiou, Song; Hahn, H. Thomas**
Ultrasonic sol/gel processing of aluminoborosilicate glass and its composite with carbon fiber reinforcement.—73-03899
**Chippindale, A. M.** See Patat, S.
**Chippindale, A. M.; Dickens, P. G.; Powell, A. V.**
Synthesis, characterization, and inelastic neutron scattering study of hydrogen insertation compounds of $VO_2$ (rutile).—73-02502
**Chiragov, M. I.; Pushcharovskii, D. Yu.**
Polysomatism and structural models of Ca silicates.—73-02397
**Chirovsky, L. M. F.** See D'Asaro, L. D.
**Chischko, K. A.**
Dislocation mechanism of acoustic emission during crack growth in a crystal.—73-17277
**Chistov, Yu. D.** See Volzhenskii, A. V.
**Chistyakov, V. V.; Myasnikova, E. A.**
Gypsum-free high early-strength cement.—73-06665
**Chistyakov, Yu. N.** See Rudnykh, T. G.
**Chitica, N.** See Dinescu, Maria; Mihailescu, I. N.
**Chitnis, Girish K.; Kowalski, Jocelyn A.**
Yttrium-containing zeolite Y cracking catalyst.—73-05251
**Chiu, Chien-C.; Desu, Seshu B.**
Microstructure and properties of lead ferroniobate [PFN] ceramics ($Pb(Fe_{0.5}Nb_{0.5})O_3$).—73-13426
**Chiu, Chin-Chen; Case, Eldon D.**
Statistical study of the effect of subcritical crack growth on thermal shock resistance.—73-05643
**Chiu, Chin-Chen; Ma, Yuan-Ron; Liou, Yung**
Residual stresses in TiN-coated graphite.—73-17421
**Chiu, Chin-Chen**
Method for measuring temperature-dependent stress and thermal expansion of coatings.—73-15818
**Chiu, H.-T.** See Chen, C.-C.
**Chiu, Hung-Liang** See Huang, Jow-Lay
**Chiu, Raymond C.; Cima, Michael J.**
Drying of granular ceramic films: II, Drying stress and saturation uniformity.—73-02776
**Chiu, Yi-Da** See Kao, Chin-Hai
**Chizhevskii, E. G.** See Bryanov, D. I.
**Chkunina, V. N.** See Vovk, O. V.
**Chlopek, Jan; Blazewicz, Stanislaw; Powroznik, Augustyn**
Mechanical properties of carbon-carbon composites.—73-09635
**Chmel, A. E.; Baptizmanski, V. V.; Kharshak, A. A.**
Influence of structural defects on the strength of glass optical fibers.—73-10448
**Chmel, A. E.; Eranosyan, G. M.; Kharshak, A. A.**
Titanium silica glass [investigated] by vibration spectroscopy.—73-14121
**Chmel, A. E.; Eronko, S. B.; Kondyrev, A. M.; Nazarova, V. Ya.**
Optical resistance of sapphire.—73-08937
**Chmelar, Josef** See Nemec, Lubomir
**Chmelar, Josef; Franek, A.; Schill, Petr**
Computer-aided tracing of bubbles—glass quality control.—73-14341
**Chmelar, Josef; Schill, Petr; Nemec, Lubomir**
Verification of 3-D mathematical simulation of glass-melting tank.—73-14527
**Cho, A. Y.** See Chen, J.-F.; Lee, H. G.; Li, X.
**Cho, Byung-Doo** See Ahn, Chung-Sun
**Cho, C.-C.; Duncan, Walter M.; Liu, H.-Y.**
Optical and structural properties of $CaF_2$:Nd films on Si-based substrates.—73-04426
**Cho, Chang-Hyun** See Kim, Sang-Ho; No, Kwang-Soo
**Cho, Chang-Hyun; Hwang, Doo-Sup; No, Kwang-Soo; Chun, J.-S.; Kim, Sang-Ho**
Effects of deposition temperature on the microstructure of MOCVD $YBa_2Cu_3O_{7-\delta}$ thin films.—73-08042
**Cho, Chong-Du; Holmes, John W.**
Effect of fiber fractures on the frictional heating in a uniaxially fiber-reinforced ceramic matrix composite.—73-09575
**Cho, Chull-Koo** See Bae, Won-Tae
**Cho, Chull-Koo; Jung, Won-Do; Bae, Won-Tae**
Preparation of alumina powders from bauxite by wet acid process and their utilization: III, Effects of the dispersion of aluminum hydrate gel on the sintering behavior of alumina powder.—73-09255
**Cho, Duk-Ho** See Lee, Eun-Bok; Lee, Hyung-Bock
**Cho, Duk-Ho; Lee, Hyung-Bock**
High-temperature strength of the hot-pressed partially stabilized α-SiAlON ceramics having the composition of $Y_{0.1}(Si, Al)_{12}(N, O)_{16}$.—73-03309; Hot-pressing of silicon nitride containing low amounts of $Y_2O_3$ and AlN.—73-05848
**Cho, Eu-Seong** See Choi, Kyoon
**Cho, Gyu-Seog; Hahm, Sung-Ho; Kwon, Young-Se**
Meltback etching and regrowth of GaAs/AlGaAs in liquid phase epitaxy for fabrication of microlens.—73-04401
**Cho, H.-M.** See Kumazawa, H.
**Cho, H.-S.; Yang, J.-S.; Kweon, C.-O.; Lee, H.-H.**
Preparation of glass-ceramics in $Li_2O$-$Al_2O_3$-$TiO_2$-$SiO_2$ system by sol-gel technique: I, Preparation of porous monolithic gel in $Li_2O$-$Al_2O_3$-$TiO_2$-$SiO_2$ system by sol-gel method.—73-10580
**Cho, H.; Orr, K.-K.; Choi, J.-K.**
$SiO_2$-doped sapphire single-crystal growth by Verneuil method.—73-13271
**Cho, Hae-Seok** See Kong, Sun-Sik
**Cho, Hae-Suk; Kim, Sang-Duck; Cho, Ho-Jin**
Fabrication and characterization of carbon-fiber-reinforced glass composites.—73-03842
**Cho, Ho-Jin** See Cho, Hae-Suk
**Cho, J. H.** See Chou, F. C.
**Cho, J. H.; Chou, F. C.; Johnston, D. C.**
Phase separation and finite size scaling in $La_{2-x}Sr_xCuO_{4+\delta}$ ($0 \leq x, \delta \leq 0.03$).—73-15578
**Cho, Jae-Woo; Kim, Young-Ho; Lee, Kyung-Hee; Lee, Byung-Ha**
Effect of MgO addition on mullite.—73-09080
**Cho, Jaephil** See Bloyer, Donald R.
**Cho, Jeong-Sik; Kim, Cheol-Young**
Bioactivity of CaO-$P_2O_5$-$SiO_2$ glasses.—73-10357
**Cho, Jeong-Sik; Kim, Cheol-Young**
Properties of CaO-$P_2O_5$-$SiO_2$ glasses.—73-07065
**Cho, Kyu** See Katz, R. N.
**Cho, Kyu** See Quinn, George D.
**Cho, N.-H.; Kang, Hee-Bog; Lee, Jeon-Kook; Kim, Y.-H.**
Formation of $Nb_2O_5$ thin films by sol-gel technique and analysis of their crystalline phases and dielectric characteristics.—73-08872
**Cho, S.-B.** See Choi, Kyung-Ku
**Cho, S.-B.; Kwon, Kyoung-Il; Choi, Kyung-Ku**
Influence of heat-treatment temperature on microwave absorbing properties of Ni-Zn ferrite.—73-04616

**Cho, S.-H** See Tai, W.-P.
**Cho, S.-J.** See Lee, J.-R.; Yoon, K.-J.
**Cho, Sang-Hee** See Chung, Su-Tae; Huh, Kang-Il; Jung, W.-H.; Lee, Joon-Hyung; Park, Seh-Jin
**Cho, Seong-Jai; Huh, Yong-Hak; Yoon, Kyung-Jin; Ogawa, Tomeyoshi**
Aspects in grinding of ceramics.—73-16658
**Cho, Sung-Gurl** See Ahn, Chung-Sun
**Cho, Sung-R.; Lee, Kyu-Mann; Jang, Hyun-M.**
Effects of the columbite precursors on phase formation characteristics, microchemistry, and dielectric properties of $Pb(Zn, Mg)_{1/3}Nb_{2/3}O_3$ ceramics.—73-10941
**Cho, Tae-Hwan; Song, Ki-Se; Lee, Yong-Min; Song, Jong-Taek**
Synthesis of high-purity $TiO_2$ powder from elemental titanium particles.—73-09356
**Cho, Won-Seung; Hayashi, Koji**
Anisotropies of room temperature mechanical properties of hot-pressed SiC whisker/$Si_3N_4$ composite ceramics.—73-13493; Dependence of mechanical properties of SiC whisker/$Si_3N_4$ composite ceramics on crystal type of $Si_3N_4$ powders.—73-17274; Effects of kinds of sintering aids of rare-earth oxides on $Si_3N_4$ grain size and fracture toughness of SiC whisker/$Si_3N_4$ composite ceramics.—73-02806; Effects of kinds of sintering aids of rare-earth oxides on $Si_3N_4$ grain size and fracture toughness of SiC whisker/$Si_3N_4$ composite ceramics.—73-13032
**Cho, Woo-Seok; Kakihana, Masato; Yashima, Masatomo; Kumagai, Masao; Yoshimura, Masahiro**
Effects of mineralizers on $PbTiO_3$ films prepared by hydrothermal method.—73-09104
**Cho, Woo-Seok; Kakihana, Masato; Yashima, Masatomo; Kumagai, Masao; Yoshimura, Masahiro**
Effects of mineralizers on $PbTiO_3$ films prepared by hydrothermal method.—73-13829
**Cho, Yong-Soo** See Yoon, Ki-Hyun
**Choc, Zdenek** See Vichr, Roman
**Chodorowicz-Bak, A.** See Hodorowicz, S. A.
**Choe, Byung-Doo** See Jeong, Chang-Oh; Kim, C.-H.
**Choe, J. W.** See Coon, D. D.
**Choh, S.-H.** See Lim, A.-R; Yeom, T.-H.
**Choh, Yi-Hung** See Chang, De-An
**Choi, B. I.** See Westerheim, A. C.
**Choi, B. I.; Anderson, Alfredo C.; Westerheim, A. C.; Flik, Markus I.**
In situ substrate temperature measurement in high-$T_c$ superconducting film deposition.—73-15509
**Choi, B.-C.** See Kim, Jae-Hyung
**Choi, B.-C.; Kim, J.-B.; Kim, J.-N.**
Ionic conduction associated with polaronic hopping in $KTiOPO_4$ single crystals.—73-13358
**Choi, Byung-Hyun; Kim, Soon-Hwan; An, Yong-Kwan**
Hydrothermal reaction characteristics on the ALC [autoclaved lightweight concrete] of pitchstone-lime system—effect of the various pitchstone/CaO ratios.—73-03479
**Choi, Byung-Jin; Jeun, Sun-Ho; Kim, Dai-Ryong**
Effects of $C_3H_8$ on the chemical vapor deposition of silicon carbide in the $CH_3SiCl_3$+$H_2$ system.—73-13028
**Choi, Byung-Jin; Park, Byung-Ok; Kim, Dai-Ryong**
Chemical vapor deposition of β-SiC by pyrolysis of MTS and effect of excess C sources.—73-09041
**Choi, C.-H.; Ai, R.; Barnett, S. A.**
Ion-assisted molecular beam epitaxy of GaAs on Si(100).—73-11286
**Choi, C.-H.; Hultman, L.; Barnett, S. A.**
Elimination of planar faults in lattice-matched heteroepitaxial films using ion-assisted [IA] molecular beam epitaxy.—73-11191
**Choi, Calvin** See Kuo, Chau-Hong
**Choi, Cheong-Song** See Kim, Eung-Ho
**Choi, Chi-Kyu** See Kim, Kun-Ho
**Choi, D.-J.** See Yom, S.-S.
**Choi, D.-M.; You, Jae-Keun; Lee, Eung-Sang**
Thermal, mechanical properties of LAS with the addition of mullite.—73-13604
**Choi, Dong-Jin** See Ahn, Sang-Wook
**Choi, Doo-Jin** See Han, Kyoung-Ran; Hyun, Sang-Hoon; Kim, Dae-Joon
**Choi, Duck-Kyun** See Ahn, Jae-Min; Seo, Do-Won
**Choi, Eui-Suck** See Lee, Jeong-Hyung
**Choi, Guen; Horibe, Susumu**
Influence of variable-amplitude loading on cyclic fatigue crack growth in silicon nitride.—73-17362; Static fatigue in ceramic materials: influences of an intergranular glassy phase and fracture toughness.—73-17433
**Choi, Gyeong-Man** See Jun, Seok-Taek; Park, Young-Min
**Choi, Hyung** See Baek, Kyung-Seon
**Choi, J.-K.** See Cho, H.
**Choi, J.-S.** See Jeong, B.-S.
**Choi, J.-W.** See Min, K.-S.
**Choi, Jae-Hoon** See Kim, Je-Young
**Choi, Joon-Hoo; Kim, Ho-Gi**
Deposition behavior of $Pt(Zr,Ti_{1-x})O_3$ thin films by metallorganic vapor deposition.—73-12974
**Choi, Kyoon; Cho, Eu-Seong; Kang, Suk-Joong L.**
Chemically induced grain-boundary migration of $MgAl_2O_4$ by ZnO.—73-13381
**Choi, Kyung-Ku** See Cho, S.-B.
**Choi, Kyung-Ku; Cho, S.-B.; Kwon, Kyoung-Il**
Permittivity adjustment and impedance matching of ferrite composite microwave absorber.—73-04634
**Choi, Kyung-Ku; Oh, Jae-Hee; Kim, Sung-Soo**
Preparation and microwave absorbing characteristics of Ni-Zn ferrite composite.—73-01479
**Choi, S. W.; Bachmann, K. J.; Lucovsky, G.**
Epitaxial growth of GaP by remote plasma-enhanced chemical vapor deposition.—73-05790; Remote plasma-enhanced chemical vapor deposition of GaP with in situ generation of phosphine precursors.—73-07769
**Choi, S.-C.** See Kim, J.-W.; See Oh, C.-S.
**Choi, S.-C.; Park, H.-C.**
Isolated pore generation mechanism and mechanical properties in MAS system with 3Y-TZP.—73-17366
**Choi, S.-H.** See Cheong, H.-M.; Kim, Tae-Hyun; Min, K.-S.; Song, J.-T.
**Choi, S.-J.** See Hwang, K.-S.
**Choi, S.-S.** See Park, J.-H.
**Choi, Sang-Heul** See Kim, In-Ki; Yin, Gyong-Phi; Kim, Byung-Ick; Kim, Tae-Hyun
**Choi, Sang-Wook** See Rhee, Jhun
**Choi, Se-Young** See Lee, Jong-Ho; Yoon, Tae-Ill
**Choi, Seung-Chul** See Ko, Il-Young
**Choi, Seung-H.** See Lee, Sung-Ho
**Choi, Si-Don** See Kim, Ki-Nam
**Choi, Sung R.; Salem, Jonathan A.**
Indentation flaw formation and strength response of silicon nitride ceramics at low indentation loads.—73-03313
**Choi, Sung-Churl** See Kim, Hyun-Ha; Lee, Moon-Hwan
**Choi, Sung-Il** See Seo, Jeong-Min
**Choi, Sung-Il; Shin, Dae-Yong; Han, Sang-Mok; Lee, Seung-Hun**
Effects of organic substances in the preparation of porous silica glass by the sol-gel process.—73-14369
**Choi, Sung-Jun; Ko, Young-Shin; Kim, In-Ki; Oh, Won-Chun**
Intercalation complex of montmorillonite as model system: II.—73-08642
**Choi, Sung-R.** See Salem, Jonathan A.
**Choi, Sung-R.; Chulya, Abhisak; Salem, Jonathan A.**
Precracking parameters for ceramic single-edge-precracked-beam [SEPB] specimens.—73-06501
**Choi, Sung-R.; Salem, Jonathan A.; Nemeth, Noel N.; Gyekenyesi, John P.**
Elevated-temperature slow crack growth of silicon nitride under dynamic, static, and cyclic flexural loading.—73-17306
**Choi, Sung-R.; Salem, Jonathan A.; Palko, Joseph L.**
Comparison of tensions and flexure to determine fatigue life prediction parameters at elevated temperatures.—73-17252
**Choi, Sung-R.; Salem, Jonathan A.**
Crack-growth resistance of in-situ-toughened silicon nitride.—73-09556; Thermal shock behavior of silicon nitride flexure beam specimens with indentation cracks.—73-05666
**Choi, Sung-R.; Tikare, Veena**
Crack healing of alumina with a residual glassy phase: strength, fracture toughness, and fatigue.—73-17259
**Choi, Sung-R.**
Comparison of flexure creep behavior of silicon nitride between static and cyclic loading at elevated temperature.—73-17251
**Choi, W.-K.** See Sundaram, K.
**Choi, Whan** See Yoon, Sang-Ok
**Choi, Won-Bong** See Cheong, Dong-Ik
**Choi, Y.-K.; Sanagi, M.; Nakajima, M.**
Measurement of low-frequency electric field using Ti:$LiNbO_3$ optical modulator.—73-15271
**Choi, Yoon; Rhee, Shi-Woo**
Effect of aluminum addition on the combustion reaction of titanium and carbon to form TiC.—73-16723
**Choi, Young-Min** See Hyun, Sang-Hoon
**Choisnet, J.** See Archaimbault, F.
**Chokshi, Atul H.** See Owen, D. M.
**Chokshi, Atul H.; Mukherjee, Amiya K.; Langdon, Terence G.**
Superplasticity in advanced materials.—73-16606
**Chokshi, Atul H.**
Superplasticity in fine-grained ceramics and ceramic composites: current understanding and future prospects.—73-09681
**Choksi, A. J.; Lal, R.; Chandorkar, A. N.**
Improved electrical properties of silicon dioxide films for MOS gate dielectrics grown in an inductively coupled rf plasma.—73-10960
**Cholet, Vincent; Vandenbulcke, Lionel**
Chemical vapor infiltration of boron nitride interphase in ceramic fiber preforms: discussion of some aspects of the fundamentals of the isothermal chemical vapor infiltration process.—73-02746
**Chollon, G.** See Mocaer, D.
**Chong, Chin-Kung** See Watanabe, Kazuo
**Chong, K. P.** See Basham, K. D.
**Chong, Paul J.** See Lee, Sun-S.
**Chopin, Thierry** See Blanchard, Gilbert
**Chopin, Thierry; Dovergne, Georges; Le Loarer, Jean-Luc**
Silica-stabilized alumina.—73-05244
**Chopinet, M.-H.; Lehuede, P.**
Comparison of the behavior of container glasses in concentrated aqueous solutions of LiCl, NaCl, KCl, and CsCl.—73-13946
**Chopra, D. R.** See Kumar, Sunil
**Chopra, K. L.** See Mishra, S. K.; Rao, M. V.
**Chorkendorff, Ib** See Clausen, Thomas
**Chosokabe, Tohru** See Horiguchi, Koji
**Chou, F. C.** See Cho, J. H.
**Chou, F. C.; Borsa, F.; Cho, J. H.; Johnston, D. C.; Lascialfari, A.; Torgeson, D. R.**
Magnetic phase diagram of lightly doped $La_{2-x}Sr_xCuO_4$ from $^{139}La$ NQR.—73-15336
**Chou, H.** See Matsuda, Masaaki
**Chou, H.; Chen, H. S.; Fang, W. C.**
Activity and diffusivity of oxygen in liquid Ag-$Yb_1Ba_2Cu_3$ and $Tl_1Ba_2Ca_2Cu_3$ alloys.—73-11683
**Chou, P.** See Singh, R.
**Chou, Stephen Y.** See Wang, Yun
**Chou, T. C.; Nieh, T. G.**
Interface-controlled phase transformation and abnormal grain growth of alpha-$Al_2O_3$ in thin gamma-alumina films.—73-12610
**Chou, Tsu-Wei** See Chiang, Yih-Cheng; Karandikar, Prashant
**Chou, Tsu-Wei** See Tai, Nyan-Hwa
**Chou, W. C.** See Jonker, B. T.
**Chou, W.-B.; Tuan, W.-H.**
Toughening alumina ceramic with silver inclusions.—73-03658
**Chou, Ye-T.; Harmer, Martin P.; Yun, Jon-Do**
Superplastic forming of $YBa_2Cu_3O_{7-x}$ ceramic superconductors with or without silver addition.—73-12005
**Chou, Yeong-Shyung; Ramberg, C. Eric; Hellmann, John R.**
Fabrication of continuous-fiber-reinforced polycrystalline oxide composites via molten salt infiltration.—73-09129
**Choudary, Venkateswartu N.; Jasra, Raksh V.; Bhat, Thirumaleswara S. G.**
Influence of presorbed molecules on the sorption of *n*-alkanes in zeolite NaCaA.—73-16174
**Choudhary, R. N. P.** See Prasad, K.; Yadav, K. L.
**Choudhary, S. N.** See Prasad, K.
**Choudhury, Ratan** See Kuo, Arthur T.
**Chovancova, Marta** See Fellner, Pavel; Kostenska, Irena
**Chow, D. H.** See Collins, D. A.
**Chow, Julie L.; Pentlow, D. A.; Ma, Q. Y.; Yang, E. S.**
Processing and characterization of high-temperature superconductor films formed by spin-on coating and rapid thermal annealing.—73-11876
**Chow, Laurence C.**
Development of self-setting calcium phosphate cements.—73-00062
**Chow, Lee**
Method for growing a diamond thin film on a substrate by plasma-enhanced chemical vapor deposition.—73-02109
**Chow, Peter** See Anders, Andre
**Chowdari, B. V. R.** See Chia, W.-T.
**Chowdari, B. V. R.; Radhakrishnan, K.**
Preparation and characterization of rf-sputtered thin films of $Li_2O$-$P_2O_5$-$Nb_2O_5$ glasses.—73-01013
**Chowdhury, A. J. S.** See Pradhan, A. K.
**Choy, Jin-Ho; Han, Yang-Su; Song, Seung-Won**
Slow-cooling calcination process of potassium tetratitanate and potassium hexatitanate fibers.—73-13275
**Choyke, J.** See Gotz, W.
**Choyke, W. J.** See Suttrop, W.
**Chraska, P.** See Brozek, V.; Dubsky, J.; Ilarsky, J.; Kolman, B.
**Chrisey, D. B.** See Blackstead, H. A.; Leuchtner, R. E.
**Christen, David K.** See Kunchur, Milind N.
**Christen, J.** See Hoffmann, A.
**Christensen, A. N.** See Norby, P.
**Christensen, Bruce J.** See Cooper, E. A.
**Christensen, Bruce J.; Coverdale, R. Tate; Olson, Rudolf A.; Ford, Steven J.; Garboczi, Edward J.; Jennings, Hamlin M.**
Impedance spectroscopy of hydrating cement-based materials: measurement, interpretation, and application.—73-13734
**Christensen, P.** See Jacquier, B.
**Christensen, Thomas M.** See Wolf, Paul J.
**Christian, B.** See Lucuta, P. G.
**Christianen, P. C. M.** See Rossin, V. V.
**Christie, W. H.** See Riciputi, Lee R.
**Christin, Francois; Mocaer, D.; Pailler, Rene**
Method for fabricating a ceramic fiber-reinforced composite material.—73-12377
**Christo, S.** See Moukwa, M.
**Christoffersen, Roy; Davies, Peter K.; Wei, Xiao-Han; Negas, Taki**
Effect of Sn substitution on cation ordering in $(Zr_{1-x})Sn_xTiO_4$ microwave dielectric ceramics.—73-10939
**Christofides, Constantinos**
Thermal wave photopyroelectric characterization of advanced materials: state of the art.—73-08450
**Christol, P.; Lefebvre, P.; Mathieu, H.**
Low dimensionality semiconductors: modeling of excitons via a fractional-dimensional space.—73-07641
**Christoph, B. M.**
Hydraulic excavators and wheeled front-end loaders in rock quarries.—73-15729
**Christoph, Geert** See Nyssen, Peter R.
**Christoph, R.** See Binggeli, M.
**Christy, R. K.; Chadwick, Alan V.; Mole, R.; Greaves, G. N.**
Ionic conductivity of alkali silicate glasses.—73-03795
**Christyakova, L. A.** See Drozhzhina, T. V.
**Chroboczek, J. A.** See D'Avitaya, F. Arnaud; Kaatz, F. W.
**Chromy, Silva**
Quality control of portland cement clinker during operation by microscopy.—73-10117
**Chronister, Sally A.; Chen, Wei-Shi**
Using lead-free glaze with chrome-tin color underglaze.—73-14674
**Chrostowski, J.** See Simkin, D. J.
**Chryssikos, G. D.** See Duffy, J. A.; Kamitsos, E. I.
**Chryssikos, G. D.; Kapoutsis, J. A.; Bitsis, M. S.; Kamitsos, E. I.; Patsis, A. P.; Pappin, A. J.**
Chemical aspects of the glass transition in mixed alkali and mixed network glasses.—73-13939
**Chryssikos, G. D.**
Bond length–Raman frequency correlations in borate crystals.—73-02152
**Chu, C. W.** See Lin, J. G.; Tao, Y. K.
**Chu, C.-W.** See Bud'ko, S. L.
**Chu, Chun-Hsun; Hon, Min-Hsiung**
Morphology and ir transmission of β-SiC synthesized by chemical vapor deposition.—73-06262
**Chu, F.; Setter, Nava; Tagantsev, A. K.**
Spontaneous relaxor–ferroelectric transition of $Pb(Sc_{0.5}Ta_{0.5})O_3$.—73-11618
**Chu, J. H.; Mi, Z. Y.; Sizmann, R.; Koch, F.; Wollrab, R.; Ziegler, J.**
Influence of resonant defect states on subband structures in $Hg_{1-x}Cd_xTe$.—73-07600
**Chu, J. W.** See Crisp, R. S.
**Chu, John** See Moinpour, Mansour
**Chu, Judy; Ishibashi, Hirotaka; Hayashi, Koichi; Takebe, Hiromichi; Morinaga, Kenji**
Slip casting of continuous functionally gradient material.—73-09332

**Chu, Judy; Ishibashi, Hirotaka; Hayashi, Koichi; Takebe, Hiromichi; Morinaga, Kenji**
Slip casting of continuous functionally gradient material.—73-16999
**Chu, Li-Xin** See Sheng, Guang-Yao
**Chu, P.** See Shin, J.
**Chu, Paul K.** See Goldstein, Michael
**Chu, Pohrong R.; Cochran, Joe K.**
Kinetics optimization of uv-curable aqueous slurries for applications in ceramic processing.—73-16848
**Chu, S. N. G.** See Berger, Paul R.; Hou, H. Q.
**Chu, W. K.** See Hsieh, Peter Y.; Wu, J. Z.
**Chu, W.; Eugster, C. C.; Moel, A.; Moon, E. E.; De la Lamo, J. A.; Schattenburg, M. L.**
Conductance quantization in a GaAs electron waveguide device fabricated by X-ray lithography.—73-14816
**Chu, X.; Wong, Ming-Show; Sproul, W. D.; Barnett, S. A.**
Superhard nanocomposite of nitride superlattices by opposed-cathode unbalanced magnetron sputtering.—73-06071
**Chu, Y. C.** See Rokhlin, S. I.
**Chu, Y. T.** See Yun, J.
**Chu, Y. T.**
Determination of the optical dielectric functions of thin absorbing films from ir reflectivity measurements.—73-08833
**Chuang, I-S.** See Kinney, David R.
**Chuang, I-S.; Kinney, David R.; Maciel, Gary E.**
Interior hydroxyls of the silica gel system as studied by $^{29}Si$ CP-MAS NMR spectroscopy.—73-14016
**Chuang, Mei-Chem; Smith, Gary A.**
Deposition of transparent $ZrO_2$ on polyetherimide using a KrF excimer laser.—73-02769
**Chuang, S. L.** See Planken, Paul C. M.
**Chuang, Shih-Cheng; Kuo, Cheng-Tzu; Ho, Chi-Ting**
In situ reacted $TiB_2$-reinforced alumina.—73-03312
**Chuang, Shih-Cheng; Kuo, Cheng-Tzu; Lee, Chun-Shoo**
Alumina–chromium carbide composite through an internal synthesis method.—73-02725
**Chuang, Tze-Jer; Duffy, Stephen F.**
Methodology to predict creep life for advanced ceramics using continuum damage mechanics.—73-17396
**Chuang, Tze-Jer**
Generic model for creep rupture lifetime estimation on fibrous ceramic composites.—73-06445
**Chuang, Y.-C.** See Chen, H.-C.; Kong, J.
**Chuang, Y.-C.; Zhou, G.-F.; Liu, J.-P.; Qiao, G.-W.; Li, J.-N.; Li, X.**
High-field magnetization of MSTG [melt spun texture growth] processed $YBa_2Cu_3O_7$.—73-08095
**Chuang, Zuon-Min; Coldren, Larry A.**
Design of widely tunable semiconductor lasers using grating-assisted codirectional-coupler filters.—73-14832
**Chubukov, Andrey V.; Sachdev, Subir**
Universal magnetic properties of $La_{2-x}Sr_xCuO_4$ at intermediate temperatures.—73-15374
**Chudakov, O. P.** See Silich, L. M.
**Chudakov, V. A.** See Malchenko, S. N.
**Chudinov, S. M.** See Vardapetyan, R. P.
**Chudinov, S. M.; Kulbachinskii, V. A.; Svistunov, I. V.; Mancini, G.; Davoli, I.**
Magnetic properties of diluted $(Zn_{1-x}Mn_x)_3As_2$ solutions.—73-02638
**Chudnova, R. S.** See Smirnov, B. I.
**Chudnovskii, F. A.** See Belousov, M. V.; Egorov, V. M.
**Chudnovsky, A.** See Issa, M. A.
**Chueh, B.-R.** See Lii, K.-H.
**Chui, S. T.**
Dislocations in the Monte Carlo simulation of flux lattice melting in high-$T_c$ superconductors.—73-08022
**Chuiko, A. A.** See Borisenko, N. V.
**Chukalkin, Yu. G.; Shtirts, V. R.; Bich, V. G.; Petrov, Yu. A.**
Structure and magnetic properties of $Ge_xFe_{3-x}O_4$ oxides [x=0, 0.2, 0.4, 0.6, 0.8, 1].—73-15367
**Chukanov, N. V.** See Rozenberg, A. S.
**Chukhal, P. A.** See Antipin, V. G.
**Chuklai, A. M.** See Romanovskii, L. B.
**Chuklanova, E. B.** See Kuznetsov, V. Ya.
**Chulya, Abhisak** See Choi, Sung-R.
**Chumadurova, I. I.** See Volchek, I. Z.
**Chumaevskii, O. V.** See Smirnov, A. S.
**Chumak, V. A.** See Pyshnaya, N. B.
**Chumakova, S. P.** See Tikhomirova, N. A.
**Chumanov, G.** See Knox, R. D.
**Chumash, V.** See Michelotti, F.
**Chumash, Y.** See Bertolotti, M.
**Chumbley, L. S.** See Han, Y.; Miller, D. J.
**Chun, J.-S.** See Cho, Chang-Hyun; Kim, Sang-Ho
**Chun, Seong-Yong** See Lee, Byung-Ha
**Chun, Seong-Yong; Kim, Hong-Ki; Lee, Kyung-Hee; Lee, Byung-Ha**
Hydroxyapatite synthesis by wet-direct and hydrothermal synthesis.—73-09167
**Chung, C.-H.** See Chung, I.-H.; Hwang, J.-S.; Jeong, B.-S.
**Chung, C.-J.** See Chan, W.-C.
**Chung, Cheng-Sheng** See Jou, Jwo-Huei
**Chung, Chong-In** See Bail:, Yong-Hyuck
**Chung, Chun-Ki** See Oh, Won-Ung
**Chung, D. D. L.** See Chen, Pu-Woei; Yang, Xiao-Ming; Zhu, Ming-Guang
**Chung, D.-S.; Orr, K.-K.**
Crystal growth and color centers of yttria-stabilized cubic zirconia (YSCZ) single crystals.—73-12421
**Chung, Dong-Jin** See Park, Jin-Seong
**Chung, G. Y.; McCoy, B. J.; Smith, J. M.; Cagliostro, D. E.**
Chemical vapor infiltration: dispersed and graded depositions for ceramic composite.—73-16675
**Chung, Gil-Yong; Kim, Hye-Dong; Ahn, Byung-Tae; Im, H.-B.**
Properties of CdS films prepared by the chemical mist deposition process.—73-15123
**Chung, H. Young; Dema, Keh B.; Barris, Marty A.**
Ceramic filter construction and method.—73-05198
**Chung, Harvey H.** See Liu, Sung-Tsuen
**Chung, Hun-Taeg; Kim, Ho-Gi**
Equilibrium size of domains in ferroelectric ceramics.—73-01409; Permittivity in tetragonal and rhombohedral phase PZT ceramics after poling.—73-05445
**Chung, I** See Nam, H. G.
**Chung, I.-H.** See Kim, T.-W.; Lee, J.-H.
**Chung, I.-H.; Hwang, J.-S.; Chung, C.-H.; Park, H.-L.; Kim, T.-W.**
Intersubband-transition studies of $Cd_{0.936}Zn_{0.064}Te$/CdTe superlattices grown by double-well temperature gradient vapor transport deposition.—73-14999
**Chung, I.-J.** See Oh, C.-H.
**Chung, I.-J.; Oh, C.-H.; Kim, W.-Y.; Hwang, J.-R.; Kim, Y.-S.; Park, J.-S.**
Accelerated degradation mechanisms in amorphous silicon thin-film transistors.—73-04054
**Chung, Jae-Woo; Orr, Keun-Ho**
Manganese zinc ferrite single crystal growth by continuous crystal growing method.—73-01472
**Chung, Jin-K.** See Lee, Sung-Ho
**Chung, K.-H.** See Tzeng, J.-M.
**Chung, Ki-Sup** See Yoon, Ki-Hyun
**Chung, Kyung-Won** See Park, Jeong-Hyun
**Chung, M.-S.; Kim, H.-R.; Lee, J.-E.; Kang, B.-K.; Kim, B.-M.**
Via hole process for GaAs monolithic microwave-integrated circuit using two-step dry etching.—73-11506
**Chung, Ming-Chih** See Chiou, Bi-Shiou
**Chung, P.-S.** See Pun, E. Y. B.
**Chung, S. W.** See Li, S. H.
**Chung, S.-J.** See Jung, S.-T.
**Chung, Sang-Koo** See Kim, Youn-Tae
**Chung, Soo-Jin** See Jang, Jin-Wook
**Chung, Su-Jin** See Kim, Byoung-Ouk; Park, Seung-Eek
**Chung, Su-Tae** See Park, Soon-Tae
**Chung, Su-Tae; Cho, Sang-Hee; Lee, Wu-Il**
Physical properties of PZT-PNN-PZN ceramics.—73-04564
**Chung, Wan-Young; Lee, Duk-Dong; Sohn, Byung-Ki**
Effects of added $TiO_2$ on the characteristics of $SnO_2$-based thick-film gas sensors.—73-11169
**Chung, William S. C.** See Wooten, L.
**Chung, Y.-J.** See Youm, H.-N.
**Chung, Yau-Don; Schlesinger, Mark E.**
Interaction of CaO-FeO-$SiO_2$ slags with partially stabilized zirconia.—73-04009
**Chung, Yip-Wah** See Chawla, K. K.; Chen, Ming-Y.; Dugger, M. T.; Li, Dong; Vetrone, Jim
**Chung-Yau, F.** See Haus, J. W.
**Chupikov, A. A.** See Lazarev, B. G.
**Chupin, A. I.** See Dabizha, A. A.
**Chupis, I. E.**
Temperature dependence of the linear magnetoelectric effect in orthorhombic boracites.—73-08977
**Chuprakov, V. F.; Sakharov, V. V.; Kononova, N. M.**
Infrared chalcogenide optical fibers.—73-00505
**Churchill, D.** See Bird, D. A.
**Churchward, Rex A.** See Kourtides, Demetrius A.
**Churlyaeva, L. S.** See Popov, V. A.
**Chusovitina, T. V.; Komolikov, Yu. I.; Cheremnykh, G. S.**
Physicochemical characteristics of partially stabilized zirconia powders produced at Chepetsk mechanical plant.—73-17182
**Chusovitina, T. V.; Komolikov, Yu. I.; Stepanov, S. I.**
Stability of the properties of ceramics based on partially stabilized zirconia.—73-09672
**Chusovitina, T. V.; Toropov, Yu. S.; Tretnikova, M. G.**
Physical and chemical properties of the solid electrolytes consisting of $ZrO_2$ stabilized partially with a mixture of $Y_2O_3$-$Yb_2O_3$-$Sc_2O_3$.—73-01009; Properties of ceramics based on zirconia partly stabilized with yttrium concentrate.—73-01016
**Chuu, D.-S.** See Dai, C.-M.
**Chuvaeva, T. I.** See Dymshits, O. S.; Zhilin, A. A.
**Chwastiak, Stephen** See McMurtry, Carl H.
**Chyung, K.** See Larsen, D. C.
**Chyung, K.; Dawes, S. B.**
Fluormica-coated Nicalon fiber-reinforced glass-ceramic composites.—73-14381; 73-14383
**Cibert, J.** See Hamoudi, A.
**Cibulka, Jan** See Bernat, Dan
**Cicala, G.; Bruno, G.; Capezzuto, P.; Losurdo, M.**
$SiF_4$-$N_2$-$H_2$ plasmas for the deposition of fluorinated silicon nitride films.—73-06041
**Cicero, Connie A.** See Andrews, Mary K.; Marra, Sharon L.
**Cid, R.** See Agudo, Antonio Lopez
**Ciecinska, M.** See Laczka, M.
**Cignini, Pier Luigi** See Cellucci, Fabio
**Ciliberto, Enrico; Fragala, I. L.; Malandrino, G.; Allen, Geoffrey C.; Younes, C. M.; Marks, T. J.**
Surface and bulk analysis of metallorganic chemical-vapor-deposition-derived superconducting $Tl_2Ba_2Ca_2Cu_3O_x$ thin films by Auger electron spectroscopy.—73-11920
**Cillessen, Johannes F. M.** See Beckers, Lucas J. A. M.
**Cillessen, Johannes F. M.; Wolf, R. M.; De Leeuw, D. M.**
Pulsed laser deposition of heteroepitaxial thin Pt films on MgO(100).—73-03637
**Cima, Michael J.** See Chiu, Raymond C.; Higgins, Richard J; Lewis, Jennifer A.; Sakai, Hiroshi; Sonnenberg, N.; Westerheim, A. C.
**Cimberle, M. R.** See Calzona, V.
**Cimino, R.** See Alonso, M.; Evans, D. A.; McGovern, I. T.
**Cinbis, C.** See Azevedo, Antonio
**Cingolani, R.** See Dabbicco, M.; Lomascolo, M.
**Cingolani, R.; Lepore, M.; Tommasi, R.; Catalano, I. M.; Lage, H.; Heitmann, D.**
Two-phonon absorption in GaAs quantum wires.—73-07847
**Cingolani, R.; Lomascolo, M.; Rinaldi, R.; Spagnolo, V.; Scamarcio, G.; Ferraro, M.**
Excitons and electron-phonon interaction in $In_{0.52}Ga_{0.18}Al_{0.3}As$.—73-01162
**Cinibulk, Michael K.** See Kleebe, Hans-Joachim; Tanaka, Isao
**Cinibulk, Michael K.; Kleebe, Hans-Joachim; Schneider, Gerold A.; Ruhle, Manfred**
Amorphous intergranular films in silicon nitride ceramics quenched from high temperatures.—73-03119
**Cinibulk, Michael K.; Kleebe, Hans-Joachim**
Effects of oxidation on intergranular phases in silicon nitride ceramics.—73-17220
**Cinibulk, Michael K.**
Magnetoplumbite compounds as a fiber coating in oxide/oxide composites.—73-16858
**Cinti, R.** See Veuillen, J. Y.
**Cioffi, Raffaelle** See Sersale, Riccardo
**Cioffi, Raffaelle; Pernice, P.; Aronne, A.; Marotta, A.; Quattroni, G.**
Nucleation and crystal growth in a fly-ash-derived glass.—73-14057
**Cirino, Phil** See Golz, John W.
**Ciszek, Theodore F.**
Method and apparatus for forming high-critical-temperature superconducting layers on flat and/or elongated substrates.—73-11962
**Citrin, D. S.**
Long intrinsic radiative lifetimes of excitons in quantum wires.—73-08901
**Citrin, P. H.** See Benton, J. L.
**Civale, L.** See Krusin-Elbaum, L.
**Cizmek, Ankica** See Antonic, Tatjana
**Cizmek, Ankica; Komunjer, Ljepsa; Subotic, Boris; Siroki, M.; Roncevic, S.**
Kinetics of zeolite dissolution: III, Dissolution of synthetic mordenite in hot sodium hydroxide solutions.—73-12620
**Claar, Terry D.** See Aghajanian, Michael K.; White, Danny R.
**Claar, Terry D.; Johnson, William B.; Rapp, Robert A.**
Method of modifying ceramic composite bodies by a posttreatment process and articles produced thereby.—73-12497
**Claar, Terry D.; Mason, Steven M.; Pochopien, Kevin P.; White, Danny R.; Johnson, William B.; Aghajanian, Michael K.**
Self-supporting bodies.—73-10347
**Claar, Terry D.; Schiroky, Gerhard H.; Johnson, William B.**
Method of modifying ceramic composite bodies by a post-treatment process and articles produced thereby.—73-10330
**Claar, Terry D.; Schiroky, Gerhard H.; Ripa, Donald P.; Johnson, William B.**
Method of producing ceramic composite bodies.—73-10332
**Claar, Terry D.**
Method for forming a surface coating using powdered solid oxidants and parent metals.—73-03689
**Claassen, George R.; Schwartz, James H.; Waterloo, Thomas L.; Posney, Richard V.**
Lightweight vacuum shuttle.—73-03938
**Claes, P.; Tilquin, J.-Y.; Duveiller, P.; Glibert, J.**
Electrochemical investigation of multivalent elements in molten silicates at 1273 K.—73-13973
**Claessen, R.** See Anderson, R. O.
**Claflin, B.** See Pashmakov, B.
**Claiborne, Lewis T.** See Tyan, Y. L.
**Claisse, P. R.** See Docter, D. P.
**Clapham, S. L.** See Jeffrey, P. M.
**Clare, Alexis G.** See Wright, Adrian C.
**Clarebout, G.; Ruwet, M.; Matralis, H.; Grange, P.**
Selective catalytic reduction of nitric oxide with ammonia on vanadium oxide catalysts supported on titania–alumina.—73-02685
**Claridge, J. F.; Kivits, C.**
Laser inspection for liquid crystal display (LCD) screens.—73-12157
**Clark, Anthony R.**
Electronic timing system for glassware-forming machines.—73-01853
**Clark, B. A.; Schwoeble, A. J.; Lee, R. J.; Skalny, Jan**
Detection of ASR [alkali silica reaction] in opened fractures of damaged concrete.—73-09882
**Clark, David E.** See Ahmad, Iftikhar; Boonyapiwat, A.; Cozzi, A. D.; Einerson, C. J.; Fathi, Zak; Komarenko, P.; Moore, Edmund H.; Schulz, R. L.; Schulz, Rebecca L.; Singh, Rajiv K.; Wicks, George G.; Zhong, Ji-Pin
**Clark, David E.; Schulz, Rebecca L.; Lodding, A. R.; Friesel, M.; Wicks, George G.**
Overview of surface analysis on U.S. and international waste glasses.—73-08303
**Clark, David E.; Tinga, Wayne R.; Laia, Joseph R., Jr.**
Ceramic Transactions, Volume 36: Microwaves: Theory and Application in Materials Processing II.—73-17519
**Clark, Douglas T.; Galica, Leo M.; Losey, Robert W.**
Thinner, more efficient oxygen separation cells.—73-07369
**Clark, G. W.; Kesmodel, L. L.**
Ultrahigh vacuum scanning tunneling microscopy studies of platinum on graphite.—73-13463
**Clark, Hector M.**
Specimen diameter, impact velocity, erosion rate, and particle density in a slurry pot erosion tester.—73-08445
**Clark, J. A.** See Hoyer, J. L.
**Clark, James H.; Williamson, Colin J.**
Formation of Si–C bonds at the surface of silica and glass fibers.—73-03844; Mild surface fluorination of glass fibers.—73-03858
**Clark, S. A.** See Luo, J. K.
**Clark, S. M.** See Oversluizen, M.
**Clark, Terence D.** See Spiller, Timothy P.
**Clark, Thomas J.**
Coating for improved retention of cBN in vitreous bond matrices.—73-09770
**Clarke, A. R.** See Hine, P. J.
**Clarke, David R.** See Drennan, John; Ducker, William A.; Golden, Steve J.; Kleebe, Hans-Joachim; Ma, Qing; Speck, J. S.; Tanaka, Isao; Wen, Qing-Zhe

**Clarke, G. A.; Parsons, R. R.**
Characterization of magnetron-sputtered diamondlike thin films for optical coatings in ir.—73-13375
**Clarke, John** See Wellstood, Frederick C.
**Clasen, Rolf; Hermann, W.**
Differences in properties of natural and synthetic silica glass on the basis of impurity levels.—73-14157
**Clasen, Rolf**
Preparation of colored silica glasses made by sintering of particulate gels.—73-10578
**Clatty, Jan L. R.** See Madan, Sanjeev
**Claude, S.** See Macklin, W. J.
**Claudius, J.** See Himmel, B.
**Claus, Juergen** See Chaissac, Martine;7 Kiessling, Uta
**Claus, Michel**
Enamels for glass and toxicity problems caused by heavy metals.—73-10525
**Clausen, Thomas; Leistiko, Otto; Chorkendorff, Ib; Larsen, J.**
Transport properties of low-resistance ohmic contacts to InP.—73-17104
**Clauss, Ulrich; Seifert, E.; Hasslich, D.; Bartusch, R.; Schulle, Wolfgang**
Isostatic pressing of flat porcelain tableware: II.—73-00915
**Clauss, Ulrich; Seifert, E.; Hasslich, D.**
Isostatic pressing of flat porcelain tableware: I.—73-00916
**Clauss, Ulrich**
New technologies for porcelain tableware production and their environmental effects.—73-00918
**Claussen, Nils** See Garcia, D. E.; Holz, Dietmar; Janssen, Rolf; Schon, Stefan; Wendorff, J; Wu, Su-Xing
**Claussen, Nils**
Process of preparing zirconium oxide-containing ceramic formed bodies.—73-15956
**Clavaguera, N.** See Baro, M. D.
**Clavaguera, N.**
Nonequilibrium crystallization, critical cooling rate, and transformation diagrams.—73-07156
**Clavaguera-Mora, M. T.** See Baro, M. D.
**Claverie, A.** See Namavar, Fereydoon
**Clawson, S. R.; Jiang, X.; Yu, P. K. L.; Hanson, C. M.; Vu, T. T.**
Interface strain in organometallic vapor phase epitaxy grown InGaAs/InP superlattices.—73-04373
**Clayton, C. R.** See Halada, G. P.
**Clearfield, Abraham** See Mohan Ram, R. A.; Peascoe, R.; Shea, Wei-Lu
**Cleaveland, Peter**
Changing user demands drive T&I (test and inspection) technology improvements.—73-12115
**Cleaver, J. R. A.** See Woodham, R. G.; Young, R. J.
**Cleaver, William M.** See MacInnes, Andrew N.
**Clegg, Robert L.** See The, Kwat I.
**Clegg, W. J.** See Phillips, A. J.
**Clegg, William J.; Kendall, Kevin; Alford, Neil McN.; Button, T. W.; Birchall, James D.**
Inexpensive method for making ceramic composites.—73-02864
**Clegg, William J.; Kendall, Kevin**
Interfaces in silicon carbide/graphite laminates.—73-03319
**Clemens, H. J.** See Linz, R.
**Clemens, Larry C.** See Livingston, Jeffrey A.
**Clement, Marc; Geiler, Volker; Grabowski, Danuta**
Highly refractive ophthalmic and optical glass.—73-03934
**Clements, Jack**
Operating characteristics of a cartridge collector utilizing medium-pressure purge air.—73-01806
**Clerjaud, B.; Cote, D.; Svob, L.; Marfaing, Y.; Druilhe, R.**
Hydrogen-acceptor pairing in CdTe epitaxial layers grown by OMVPE.—73-04358
**Clifford, John F.** See Hood, Christopher
**Clifford, John F.**
Glaze composition.—73-10913
**Clifft, Greg; Seidensticker, David G.; Wilson, Tim**
Testing and analysis of an advanced hypersonic structure.—73-10284
**Cline, B.; Howard, W.; Wang, H.**
Cyclic deposition of diamond: experimental testing of model predictions.—73-12967
**Clinton, T. W.; Lynn, J. W.; Lee, B. W.; Buchgeister, M.; Maple, M. B.**
Oxygen dependence of the magnetic order of Nd in $NdBa_2Cu_3O_{6+z}$.—73-04782
**Cloitre, T.** See Briot, N.
**Cloots, R.** See Hannay, C.
**Clyne, T. W.** See Chandra, L.; Howard, S. J.; Phillips, A. J.; Turner, S. P.; Watson, M. C.; Whitehouse, A. F.
**Coath, J. A.** See Lane, D. W.
**Cobden, D. H.; Uren, M. J.; Pepper, M.**
Dissipative tunneling in two-state systems at the $Si/SiO_2$ interface.—73-11144
**Cobianu, Cornel**
Silane oxidation in a low pressure chemical vapor deposition system in the temperature range 100–450°C.—73-06042
**Coble, Harold D.** See Taylor, Timothy E.
**Cobzarenco, V.** See Rusu, E.
**Cocciantelli, J. M.; Gravereau, P.; Doumerc, J. P.; Pouchard, M.; Hagenmuller, P.**
Preparation and characterization of a new polymorph of $V_2O_5$.—73-02398
**Cocco, A.** See Lee, S. B.
**Cochran, G. W.** See Lux, G. E.
**Cochran, Gene A.** See Weimer, Alan W.
**Cochran, Joe K.** See Chu, Pohrong R.; Hill, D. N.; Meyer, Richard, Jr.
**Cochrane, R. W.** See Bensaada, A.
**Cocito, G.** See Baricco, M.; Braglia, Marco; Terranova, M. L.
**Cocivera, Michael** See Weng, Shi-Xing; Wynands, Henry
**Cockayne, B.** See Moze, O.
**Cockcroft, Steven L.; Brimacombe, J. Keith; Walrod, Dennis G.; Myles, Thomas A.**
Thermal stress analysis of fused-cast AZS refractories during production: I, Industrial study.—73-10774; Thermal stress analysis of fused-cast AZS refractories during production: II, Development of thermoelastic stress model.—73-10775
**Cocke, D. L.** See Yousuf, A.
**Cockerton, S. C.** See Chetwynd, D. G.
**Cockrum, C. A.** See Johnson, S. M.; Tennant, William E.
**Cocks, A. C. F.** See Pan, J.
**Cocks, A. C. F.; Du, Z.-Z.**
Pressureless sintering and HIPing of inhomogeneous ceramic compacts.—73-05991
**Cocks, A. C. F.; Pan, J.**
Void growth ahead of a dominant crack in a material which deforms by Coble creep.—73-06549
**Codazzi, V.; Loupias, G.; Rabii, S.; Elansari, L.; Guerard, D.; Ascone, I.**
Symmetry of the unoccupied states in Cs graphite intercalation compounds by X-ray absorption.—73-02474
**Coene, W.; Hakkens, F.; Jacobs, T. H.; Buschow, K. H. J.**
Structure defects in rare-earth-iron carbides with the hexagonal $Th_2Ni_{17}$ structure type: a study by means of high-resolution electron microscopy.—73-03113
**Coey, J. M. D.** See Masterson, H. J.
**Coffa, S.; Priolo, F.; Franzo, G.; Bellani, V.; Carnera, A.; Spinella, C.**
Er luminescence in Si—a critical balance between optical activity and pumping efficiency.—73-04325
**Coffer, C. G.; Economy, J.; Ferber, Mattison K.; Lara-Curzio, Edgar**
Evaluation of the interfacial mechanical properties of fiber-reinforced boron nitride matrix composites.—73-17311
**Coffey, D. W.** See Allard, L. F.
**Coffey, D.; Coffey, L.**
Quasi-particle decay effects in the superconducting density of states: evidence for *d*-wave pairing in the cuprates.—73-15607
**Coffey, K. R.** See Hylton, T. L.
**Coffey, L.** See Coffey, D.
**Cogan, Stuart F.** See Rauh, R. David
**Cogan, Stuart F.; Rauh, R. David; Nguyen, Nguyet M.; Plante, Timothy D.; Westwood, John D.**
Electrochromism in Nb-V and Cr-V mixed oxides.—73-04092
**Cohen, D. D.** See Hoffman, A.
**Cohen, E.** See Zahler, M.
**Cohen, M. L.** See Crespi, Vincent H.
**Cohen, M. L.** See Xiang, X.-D.
**Cohen, Menashi D.** See Bentur, Arnon; Bonen, David; Lobo, Colin
**Cohen, Menashi D.; Mobasher, Barzin**
Effects of sulfate and expansive clinker contents on expansion time of expansive cement paste.—73-00081
**Cohen, P. I.** See Dabiran, A. M.
**Coit, Nathan G.** See Wolf, Paul J.
**Cojeau, D.; Monthioux, M.**
Unexpected behavior of interfacial carbon in SiC/SiC composites during oxidation.—73-13491
**Coker, D.** See Boyle, M.
**Colaianni, M. L.** See Chen, P. G.
**Colaianni, M. L.; Chen, P. J.; Nagashima, N.**
Silicon nitride thin film production on Si(111).—73-03004
**Colavito, D.; Dody, J.; Damiano, J.**
New technologies widen usage of monolithic refractories for tundishes.—73-10748
**Colbourne, Paul D.; Cassidy, Daniel T.**
Dislocation detection using polarization-resolved photoluminescence.—73-07448
**Colbow, K. M.; Gao, Y.; Tiedje, T.; Dahn, J. R.; Eberhardt, W.**
Photoemission study of the ZnSe/GaAs(100) interface: composition and band offset.—73-01276
**Colchero, J.** See Binggeli, M.
**Coldren, Larry A.** See Chuang, Zuon-Min
**Cole, Barrett E.; Nguyen, Khanh Q.; Bonne, Ulrich**
Rugged $O_2$ microsensor.—73-11541
**Cole, Brady F.** See Newman, Nathan
**Cole, David R.** See Riciputi, Lee R.
**Cole, Gerald S.** See Allison, John E.
**Cole, M. W.** See McLane, G. F.
**Cole, M.** See Bush, Timothy S.; O'Reilly, K. P. J.
**Coleman, James J.; Beemink, Kevin J.; Givens, Michael E.**
Threshold current density in strained layer $In_xGa_{1-x}As$-GaAs quantum-well heterostructure lasers.—73-01356
**Coleman, Nancy A.; Landon, Thomas E.**
Kaolin.—73-12281
**Colin, S.; Dupre, B.; Gleitzer, C.; Le Coq, X.; Kaerle, M. C.; Guenard, C.**
Oxidation of calcia-stabilized zirconia–graphite refractories containing silicon and/or silicon carbide additives.—73-10750
**Colin, S.; Dupre, B.; Gleitzer, C.**
Decalcification of stabilized zirconia by silica and some other oxides.—73-12571
**Colin, T.** See Bouchut, P.
**Colla, E. L.; Reaney, Ian M.; Setter, Nava**
Effect of structural changes in complex perovskites on the temperature coefficient of the relative permittivity.—73-07307
**Collet, J. H.** See Gouaichault-Brugel, N.
**Collett, George J.**
Dartington's experience with saving energy.—73-14347
**Collias, George J.; Moeggenborg, K. J.; Cosper, David R.**
New binder program for spray-dried and pressed technical ceramics.—73-04931
**Colliex, C.** See Gu, H.
**Collin, Marianne** See Mattsson, Bertil
**Collins, D. A.** See Wang, M. W.
**Collins, D. A.; Fu, T. C.; McGill, T. C.; Chow, D. H.**
Reflection high-energy electron diffraction studies of the growth of InAs/$Ga_{1-x}In_xSb$ strained-layer superlattices.—73-07767
**Collins, David R.; Fitch, Andrew N.; Catlow, C. Richard A.**
Dehydration of vermiculites and montmorillonites: a time-resolved neutron diffraction study.—73-16103
**Collins, F. M.** See Jia, Q. X.
**Collins, G. J.** See Pihlstrom, B. G.; Yamada, Masao
**Collins, J. F.; Ganetsos, G.**
Using borax in the production of flat and container glass.—73-10615
**Collins, J. F.; Simon, J. M.; Stevenson, J. P.**
Effect of $B_2O_3$ on viscosity and durability of glass wool.—73-14357
**Collins, John P.; Way, J. Douglas**
Preparation and characterization of a composite palladium ceramic membrane.—73-13883
**Collins, L.** See Garneau, J.-F.
**Collins, Michael A.** See Talanina, Irina B.
**Collins, R. W.** See An, Il-Sin; Cong, Yue; Heyd, A. R.; Nguyen, Hien-V.; Witham, H. S.
**Collins, R. W.; An, Il-Sin; Nguyen, Hien-V.; Lu, Yi-Wei**
Real-time spectroscopic ellipsometry for characterization of nucleation, growth, and optical functions of thin films.—73-15840
**Collins, S. M.; O'Hanlon, J. F.; Beck, S. E.; Hong, L.**
Electrode material and geometry effects on the formation and electrical properties of particle traps in a plasma etch system.—73-07317
**Collins, Scott D.** See Smith, Rosemary L.
**Collins, W. E.** See Azoulay, M.; Li, Ying-Sing
**Collinson, Maryanne; Bowden, Edmond F.**
Chronoabsorptometric determination of adsorption isotherms for cytochrome *c* on tin oxide electrodes.—73-10923
**Collomb, A.** See Grey, I. E.
**Collomb, A.; Muller, J.; Fournier, T.**
Magnesium location in the barium-magnesium-iron Y-type hexagonal ferrite.—73-07947
**Collot, L.; Lefevre-Seguin, V.; Brune, M.; Raimond, J. M.; Haroche, S.**
Very high-*Q* whispering-gallery mode resonances observed on fused silica microspheres.—73-07100
**Colomban, P.** See Badot, Jean-Claude; Mhiri, T.; Mioc, U.; Vendange, V.
**Colomban, P.; Bruneton, E.**
Influence of hydrolysis conditions on crystallization, phase transitions, and sintering of zirconia gels prepared by alkoxide hydrolysis.—73-10554
**Colomban, P.; Jones, Deborah J.; Grandjean, Didier**
EXAFS and XANES study of (Si, Ge) mullite gels and glasses prepared by slow hydrolysis of alkoxides.—73-10374
**Colomban, P.; Vendange, V.**
Sintering of alumina and mullites prepared by slow hydrolysis of alkoxides: the role of the protonic species and pore topology.—73-13265
**Colombier, Christian** See Riedel, R.
**Colombin, L.** See Gonzalez Oliver, C. J. R.
**Colombo, Paolo** See Della Mea, Gianantonio
**Colon, Jose E.** See Elsaesser, David W.
**Colon, Jose E.; Elsaesser, David W.; Yeo, Yung-Kee; Hengehold, Robert L.; Pomrenke, Gernot S.**
Luminescence study of the intra-4*f* emissions from GaAs:(Er+O) and $Al_xGa_{1-x}As$:(Er+O).—73-04394
**Colon, Jose L.; Horchos, Leonard A.; Suback, Gary P.**
Thermally assisted shorts removal process for glass-ceramic product using a rf field.—73-11055
**Colpitts, T. S.** See Venkatasubramanian, R.
**Colson, S.; Szu, S.-P.; Klein, L. C.; Tarascon, Jean-Marie**
Ac complex impedance, dc resistivity, $^7Li$ and $^{23}Na$ NMR studies of the layered $Li(Na)_xMo_2O_4$ system.—73-05350
**Colter, P. C.** See Dip, A.
**Colton, R. J.** See Burnham, N. A.
**Coltrin, Michael E.; Dandy, David S.**
Diamond growth in subatmospheric dc plasma-gun reactors.—73-12983
**Coluccia, Salvatore** See Marchese, Leonardo
**Coluccia, Salvatore** See Scarano, D.
**Coluzza, C.** See McKinley, J. T.; Sanjines, R.; Sobiesierski, Z.
**Colvard, C.** See Hamilton, Doug; Kopf, R. F.
**Comas, J.** See Pellegrino, J. G.; Steiner, Bruce
**Combes, J. M.; Brown, G. E., Jr.; Waychunas, G. A.**
Local environment of Ca in some silicate glasses.—73-14028
**Combescure, C.** See Aspar, B.; Chehouani, H.
**Comedi, D.** See Qiu, C.
**Comedi, D.; Balcaitis, G.; Robinson, B. J.; Thompson, D. A.**
Thermal desorption of uv/ozone oxide onto InP.—73-07837
**Comello, Vic**
Semiconductor researchers probe for new SPM [scanning probe microscopy] uses.—73-08442
**Comin, F.** See Ferrer, A.
**Comins, J. D.** See Botha, P. J.; Stoddart, P. R.
**Commercon, Pascal; Wightman, James P.**
Effect of annealing the polymer on the adhesion between carbon fibers and a thermoplastic matrix.—73-03577
**Compaan, A.** See Aydinli, A.
**Compton, K. L.; Bennert, D. M.; Bickford, Dennis F.**
Regulatory issues in vitrification research: a case study of circuit board reclamation.—73-09744
**Compton, Richard C.** See Hur, Katerina Y.
**Conde, A.** See Conde, C. F.
**Conde, C. F.; Millan, M.; Conde, A.**
Thermal stability of $Fe_{79-x}M_xB_{18}Si_3$ (M=Co, Cr) glasses.—73-14297
**Conder, R. J.; Ponton, C. B.; Marquis, P. M.**
Sol and powder routes to alumina–silicon carbide nanocomposites.—73-17004
**Condrate, Robert A., Sr.** See Chen, Wie-Shi; Kohli, J. T.; Kudesia, R.; Wang, X. W.
**Conedera, V.** See Jean-Jean, P.
**Coneski, Anthony F.; Waian, Mitchel**
Magnetic plate punch actuator.—73-01861

**Conflant, P.** See Khatir, S.
**Conflant, Pierre** See Drache, Michel
**Cong, Q.-Z; Yu, D.-Y.; Weng, L.-J.; Zhang, F.-Q.**
X-ray phase analysis with depth profiling for thin films.—73-08461
**Cong, Xian-Dong; Kirkpatrick, R. James; Diamond, Sidney**
$^{29}$Si MAS [magic angle spinning] NMR spectroscopic investigation of alkali-silica [AS] reaction product gels.—73-06967
**Cong, Xian-Dong; Kirkpatrick, R. James**
$^{17}$O and $^{29}$Si MAS NMR study of $\beta$-$C_2S$ [dicalcium silicate] hydration and the structure of calcium-silicate hydrates.—73-13758
**Cong, Y. S.** See Eyink, K. G.
**Cong, Yue** See Heyd, A. R.
**Cong, Yue; Collins, R. W.; Messier, R.; Vedam, K.; Epps, Glenn F.; Windischmann, Henry**
Characterization of ion-beam-induced surface modification of diamond films by real-time spectroscopic ellipsometry.—73-02743
**Congiu, F.** See Anedda, Alberto
**Conlon, K. T.; Wilkinson, David S.; Corbin, S. F.**
Effect of inhomogeneous particle distributions on the mechanical properties of metal matrix composites.—73-09578
**Connally, Patricia; Cooper, Jonathan; Moores, Geoffrey M.**
Development of molecular patterning and immobilization techniques for scanning tunneling microscopy and atomic force microscopy.—73-05038
**Conner, W. C.** See Mazzarese, D.
**Connors, Edward J.** See Carius, Alan C; McEachron, Roger
**Connors, Timothy L.; Ismail, Mohammed; Soofi, Madjid**
System for spraying ceramic slurries onto surfaces in contact with molten metals.—73-12097
**Conover, Joseph J.** See Knapp, Vincent A.
**Conrad, Hans** See Lu, Jyh-Woei
**Conrad, J. R.** See Sandstrom, P. W.
**Conrad, J.** See Nicolas, M.
**Conrad, K.** See Hu, Y. Z.; Li, M.
**Conradi, M. S.** See Jeong, Eun-Kee
**Conradson, S. D.** See Mustre de Leon, J.
**Conradt, R.** See Sebastian, K.
**Constantine, C.** See Buckle, K. A.
**Constantinian, K. Y.** See Lee, Kei-Jin
**Constien, Imke**
Development of a ceramic exterior for thermos coffeepots.—73-10814
**Conte, A.** See Benz, R. G.; Rajavel, D.
**Contour, J. P.; Sant, C.; Ravelosona, D.; Fisher, B.; Patlagan, L.**
Growth of $[YBa_2Cu_3O_{7-\delta}]_M$- $[PrBa_2Cu_{3-x}Ga_xO_{7-\delta}]_N$ superlattices by pulsed laser deposition.—73-15493
**Contractor, Dinshaw B.** See Meshri, Dayal T.
**Contreras-Puente, G.** See Mendez, Juan Manual
**Conveney, D. V.** See Billingham, J.
**Conway, B. E.** See Tremiliosi-Filko, G.
**Cook, J. W.** See Hoffman, C. A.; Vaudo, R. P.; Lansari, Y.; Ren, J.
**Cook, James R.; Bickford, Dennis F.**
Preliminary assessment of disposal limits for vitrified low-level mixed wastes in RCRA (Resource Conservation and Recovery Act) landfills.—73-08305
**Cook, John** See Knights, Clive F.
**Cook, Lawrence P.** See Brody, P. S.; Wong-Ng, Winnie
**Cook, P. W.** See Umlor, M. T.
**Cook, R. E.** See Ajayi, O. O.
**Cook, Raymond A.; Hover, Kenneth C.**
Experiments on the contact angle between mercury and hardened cement paste.—73-00088
**Cook, Robert F.** See Tandon, R.
**Cook, Robert F.; Liniger, Eric G.; Steinbrech, Rolf W.; Deuerler, Friederike**
Sigmoidal indentation–strength characteristics of polycrystalline alumina.—73-06517
**Cook, Robert F.**
Deformation and fracture by sharp rolling contacts.—73-09568
**Cook, Ronald L.; Sammells, Anthony F.**
Systematic selection of perovskite solid electrolytes for intermediate temperature fuel cells.—73-01034
**Cook, S. D.** See Hulbert, S. F.
**Cooke, C.** See Hay, Randall S.
**Cooke, P.** See McLane, G. F.; Tousley, B. C.
**Cooke, R. G.** See Davies, C. M. A; Habib, F. A.; Pearson, G. P.; Russell-Floyd, R. S.
**Cooke, R. G.; Habib, F. A.; Harris, B.**
Mechanical properties of fiber-reinforced glass and glass-ceramics.—73-07047
**Cooley, Kevin M.** See Besmann, Theodore M.
**Coombs, A. W.** See King, Wayne E.
**Coon, D. D.; Bandara, K. M. S. V.; Byungsung, O.; Choe, J. W.; Francombe, M. H.; Lin, Y. F.**
Modeling and performance characteristics of GaAs quantum well infrared detector structures.—73-01248
**Coon, Dennis N.** See Huang, Chao-M.
**Coon, Victoria** See Langer, Dietrich W.
**Cooper, A. S.** See Chen, C. H.
**Cooper, Alfred R.** See Gupta, Prabhat K.; Sakoske, G. E.
**Cooper, Alfred R.; Wu, Yong-Guo**
Modifications on the thermal performance of combustion-heated continuous glass-melting furnaces.—73-15886
**Cooper, David A.; Denkewicz, Raymond P.; Hertzenberg, Elliot P.**
Stable zeolite of low unit cell constant and method of making [the] same.—73-02069
**Cooper, E. A.; Kirkpatrick, Kelly S.; Christensen, Bruce J.; Hong, B.-S.; Mason, Thomas O.**
Processing kinetics and grain-boundary electrical properties of electroceramics via impedance spectroscopyy [IS].—73-03186
**Cooper, Elizabeth A.; Nastasi, Michael**
Ion-beam mixing of iron oxide marker layers in doped and undoped alumina thin films.—73-05173
**Cooper, Emanuel I.** See Aoude, Farid Y.
**Cooper, George A.** See Lin, Tze-Pin
**Cooper, J. J.; Tilley, R. J. D.**
Structural transformations in some oxyborates observed by high-resolution transmission electron microscopy.—73-03201
**Cooper, J. J.**
Role of infrared spectroscopy in the ceramic industry.—73-12190
**Cooper, J. R.** See Carrington, A.; Loram, J. W.
**Cooper, Joel P.** See Tour, James M.
**Cooper, John; Bratt, J. Stephen**
New developments in hydroxyapatite ceramics.—73-05176
**Cooper, Jonathan** See Connally, Patricia
**Cooper, M. F.** See Freeman, C. J.
**Cooper, Reid F.** See Freeman, S. A; King, Todd T.; Reardon, Brian J.
**Cooper, S. L.** See Liu, Ran
**Cooper, S. L.; Nyhus, P.; Reznik, D.; Klein, M. V.; Lee, W. C.; Ginsberg, D. M.**
Interbilayer charge dynamics in $YBa_2Cu_3O_{6+x}$.—73-15520
**Copes, Jane S.**
Ceramic composite of aluminoborosilicate fibers coated with several layers.—73-05290
**Copetti, C. A.; Schubert, J.; Zander, W.; Soltner, H.; Poppe, U.; Buchal, C.**
Aging of superconducting $Y_1Ba_2Cu_3O_{7-\delta}$ structures on silicon.—73-01492
**Copp, A. N.**
Magnesia/magnesite.—73-12287
**Coppin, William P.** See Brown, John T.
**Corat, E. J.; Goodwin, D. G.**
Temperature dependence of species concentration near the substrate during diamond chemical vapor deposition.—73-09371
**Corbel, C.** See Makinen, J.; Saarinen, K.
**Corbett, J. M.** See Robertson, M. D.
**Corbett, J. W.** See Liu, J.
**Corbin, David R.** See Parise, John B.
**Corbin, N. D.; Miller, Brad J.; Sawicki, Kazimierz; Lucek, John W.; Hannoosh, James G.**
High-temperature ceramic composite.—73-12370
**Corbin, N. D.; Sundberg, G. J.; Siebein, K. N.; Wilkens, C. A.; Pujari, V. K.; Rossi, G. A.**
Material development in the $Si_3N_4$ system using glass-encapsulating HIPing: I.—73-02889
**Corbin, N. D.; Sundberg, G. J.; Siebein, K. N.**
Material development in the $Si_3N_4$ system using glass-encapsulating HIPing: II.—73-09197
**Corbin, S. F.** See Conlon, K. T.
**Corcoran, E. W.** See Huan, G. H.
**Cordaro, J. F.** See Rafla-Yuan, H.; Tomozawa, Minoru
**Cordero, F.** See Cannelli, G.
**Cordfunke, E. H. P.; Van Vlaanderen, P.; Onink, M.; Ijdo, D. J. W.**
$Sr_3U_{11}O_{36}$: crystal structure and thermal stability.—73-02440
**Cordoncillo, E.; Rodriguez, S.; Rincon, J. M.; Mouros, G.; Tena, M. A.; Escribano, P.**
Recent advances in the sol-gel mechanisms of silica and $SiO_2$-$M_xO_y$ (M=Ca and Al) glassy systems in nontraditional solvents.—73-14077
**Corkill, J. L.** See Xiang, X.-D.
**Corley, Thomas W.** See Chew, Wilbert
**Cormack, A. N.** See Weber, W. J.
**Cormack, Ray**
From workhouse to workhorse.—73-15727
**Corman, Gregory S.** See Luthra, Krishan L.
**Corman, Gregory S.**
Creep of MgO-rich spinel single crystals.—73-06359; Creep of yttrium aluminum garnet single crystals.—73-09565
**Cormier, G.; Capobianco, J. A.; Monteil, A.**
Molecular dynamics simulation of the trivalent europium ion doped in silica and sodium disilicate glasses.—73-00374
**Cornelis, J.** See Weyten, H
**Cornelissen, Bastiaan E.**
Cyclic fatigue and fracture toughness of silicon nitride ceramics sintered with rare-earth oxides.—73-06363
**Cornet, A.** See Peiro, F.
**Cornie, J. A.** See Guth, J. R.
**Coronado, C. A.** See Ho, E.
**Coronado, J. M.** See Saez-Puche, R.; Verwey, J. W. M.
**Corradi, Anna Bonamartini; Leonelli, C.; Manfredini, T.; Siligardi, C.**
Effect of forming pressure on the reactivity and microstructure of zircon powder compacts.—73-13005
**Corradi, Anna Bonamartini; Manfredini, T.; Pellacani, Gian Carlo; Pozzi, Paolo**
Deflocculation of concentrated aqueous clay suspensions with sodium polymethacrylates.—73-05729
**Correra, L.** See Bianconi, M.
**Corrigan, D.** See Holt, R. T.
**Corrigan, Francis R.**
Process for preparing polycrystalline cBN ceramic masses and resulting product.—73-16011
**Corriu, R.** See Belot, V.
**Cortes, R.** See Loudjani, M. K.
**Cortes, R.; Martinez, M. A.; Navarro, C.; Sanchez-Galvez, V.**
Measurements of internal friction coefficient of SiC and $Al_2O_3$ powders.—73-16538
**Cortez, E. R.** See Korhonen, C. J.
**Corti, M.** See Borsa, F.; Carretta, P.
**Corzo Carreno, Carlos** See Ruiz Navarro, Antonio M.
**Cosentino, I. C.; Muccillo, R.**
Effect of bismuth oxide addition on the electrical properties of zirconia magnesia solid electrolytes.—73-07304
**Cosper, David R.** See Collias, George J.; Kneller, James F.
**Cosper, David R.**
Ethylene oxide/propylene oxide block copolymers as green binders for ceramics.—73-15942
**Costa, J.** See Campmany, J.
**Costa, J.; Sardin, G.; Campmany, J.; Andujar, J. L.; Canillas, A.; Bertran, E.**
Production of silicon powder by square-wave modulated rf silane plasma.—73-06002
**Costantini, A.** See Branda, F.; Tomasi, A.
**Costantini, Michael**
Thin-cake filtration offers improved washing capability for ceramic powders.—73-08366
**Costello, Lora M.** See Rezac, Mary E.
**Costentin, G.; Borel, M. M.; Grandin, A.; Leclaire, A.; Raveau, B.**
Molybdenophosphate with a mixed valence of molybdenum, Mo(VI)-Mo(V): $NaMo_3P_3O_{16}$.—73-02332; Niobium phosphate with a tunnel structure: $Ca_{0.5+x}Cs_2Nb_6P_3O_{24}$.—73-02360
**Cota-Araiza, L.** See Galvan, D. H.
**Cote, Bertrand** See Poe, Brent T.; Vaills, Yahn
**Cote, Bertrand; Massiot, D.; McMillan, Paul F.; Poe, Brent T.; Coutures, Jean-Pierre**
Al $^{27}$Al NMR spectroscopy of $CaO$-$Al_2O_3$-$SiO_2$ melts and glasses.—73-13923
**Cote, D.** See Clerjaud, B.
**Cotell, Catherine M.** See Pellegrino, J. G.
**Cotell, Catherine M.**
Pulsed laser deposition: a method for in situ deposition of crystalline hydroxyapatite thin-film coatings.—73-16962
**Cotterell, Brian** See Duan, Kai; Mai, Yiu-Wing
**Cotterill, P. J.; Bowen, P.**
Fatigue crack growth in a fiber-reinforced titanium MMC at ambient and elevated temperatures.—73-03289
**Cottringer, Thomas E.** See Rue, Charles V.
**Coubrough, Lawrence E.** See Roy, Donald W.
**Couch, Kevin** See Franklin, Thomas C.
**Coudert, J. F.** See Planche, M. P.
**Coudert, J. F.; Planche, M. P.; Betoule, O.; Vardelle, M.; Fauchais, P.**
Measurement of flow velocity and correlation to particle velocity under plasma-spraying conditions.—73-09199
**Coudreuse, A.** See Bulou, A.
**Coudurier, L.** See Danes, F.; Kritsalis, P.
**Coufal, H. J.** See Winters, Harold F.
**Coufalova, Olga** See Solc, Zdenek
**Couillard, J. G.; Craighead, H. G.**
High-resolution reactive ion etching of SiGe alloys.—73-11246
**Coulas, D.** See Maigne, P.
**Coulomb, J. P.** See Llewellyn, P. L.
**Coulon, C.; Livage, C.; Gonzalvez, L.; Boubekeur, K.; Batail, P.**
Electron magnetic resonance in a series of antiferromagnetic molecular perovskites.—73-05557
**Coulter, Kent** See Wu, Ming-Cheng
**Coults, T. J.** See Qu, Y.
**Coundamy, G.**
Once or twice firing for porcelain tableware.—73-04045
**Coupelle, Philippe; Destermes, J.; Miglioretti, F.**
Deformation of atomization granules under uniaxial compression.—73-02764; Deformation of spray-dried granules under uniaxial loading.—73-05034; 73-12969
**Coupelle, Philippe; Trouillard, S.; Destermes, J.**
Influence of the residual humidity on the pressing of atomized powders: example of porcelain.—73-05877
**Couper, Malcolm J.** See Smith, Thomas K.
**Courtemanche, R.** See Nagamori, M.
**Courths, Ralf** See Heise, Rainer
**Courtial, P.** See Guyot, F.
**Cousseins, J. C.** See Aamili, A.
**Coutures, Jean-Pierre** See Cote, Bertrand; Douy, Andre; Poe, Brent T.
**Couturier, J. C.** See Tillement, O.
**Couzi, M.** See Ducel, J. F.
**Cova, P.** See Singh, A.
**Cova, P.; Masut, R. A.; Curie, J. F.**
Growth mechanisms in the metallorganic vapor phase epitaxy of InP.—73-11230
**Covas, M.; Gay, H. C.**
Rapid thermal annealing of semiconductors by microwave energy.—73-09291
**Coverdale, R. Tate** See Christensen, Bruce J.; Skamser, Daniel J.
**Covian, Ignacio** See De Lucas, Antonio
**Covington, W.** See Dura, J. A.
**Covino-Hrbacek, Josephine**
Coatings for $SiO_2$ optical fibers.—73-03914
**Cowan, P. L.** See Kendelewicz, T.; Wolcik, J. C.
**Cowdin, Eric** See Singh, Dileep
**Cowher, Melvyn E.** See Shuskus, Alexander J.
**Cowie, J.; Glasser, Fredrick P.**
Reaction between cement and natural waters containing dissolved carbon dioxide.—73-10129
**Cowles, J. C.** See Chen, W. L.
**Cowman, Stephen P.; Puyane, Ramon**
Varistor having interleaved electrodes.—73-01389
**Cox, Brian N.** See Morris, Winfred L.
**Cox, Brian N.; Lo, C. S.**
Simple approximations for bridged cracks in fibrous composites.—73-17429
**Cox, D. E.** See Sullivan, J. D.
**Cox, G. A.; Ford, B. A.**
Long-term corrosion of glass by groundwater.—73-10388
**Coyle, Thomas W.** See Liao, H. M.; Zheng, Zhi-Do
**Cozar, O.** See Ardelean, I.
**Cozar, O.; Ardelean, I.; Bratu, I.; Ilonca, G.; Simon, S.**
EPR, ir, and magnetic susceptibility studies of $xCr_2O_3(1-x)(2B_2O_3{\cdot}Li_2O)$ glasses.—73-06913
**Cozar, O.; Ardelean, I.; Simon, S.; David, L.**
ESR studies of $Mo^{5+}$ ions in potassium borate and soda phosphate glasses.—73-03729

**Cozzi, A. D.; Clark, David E.; Porter, Wallace D.; Cavin, O. Burl**
Potential interlayer materials for the microwave joining of alumina.—73-16902
**Cozzi, A. D.; Fathi, Zak; Clark, David E.**
Crystallization of sol-gel-derived barium aluminosilicate in a 2.45-GHz microwave field.—73-05725
**Crabtree, G. W.** See Kwok, W. K; Seidler, G. T.; Welp, U.; Wiesinger, H. P.
**Craciun, D.** See Craciun, V.
**Craciun, V.; Craciun, D.; Boyd, I. W.**
Reactive pulsed laser deposition of thin TiN films.—73-02992
**Craievich, A. F.** See Chaumont, D.; Ramirez-del-Solar, M.,
**Craig, B. I.; Smith, P. V.**
MINDO molecular orbit description of three phases of BN.—73-08668
**Craig, Philip**
Thin-film diamond derby.—73-03657
**Craig-Ryan, Susan P.** See Ainslie, Benjamin J.
**Craighead, H. G.** See Couillard, J. G.
**Craigie, C. J.** See Snail, K. A.
**Crain, J.; Ackland, G. J.; Piltz, R. O.; Hatton, P. D.**
Phase-transition-induced defect formation in III-V semiconductors.—73-15087
**Cramer, J. Kalpathy; Muraka, S. P.; Srikrishnan, K. V.; Patrick, W.**
Sodium passivation dependence on phosphorus concentration in tetraorthosilicate plasma-enhanced chemical vapor deposited phosphosilicate glasses.—73-00399
**Cramm, M.** See Buchner, B.
**Crampon, J.** See Baddi, R.; Peni, F.
**Cranton, W. M.; Spink, D. M.; Stevens, R.; Thomas, C. B.**
Growth and dielectric characterization of yttrium oxide thin films deposited on Si by rf magnetron sputtering.—73-05573
**Crasto, A. S.** See Kim, R. Y.
**Craven, Christopher A.** See Joshi, Chandrashekhar H.
**Crawford, Charles L.** See Jantzen, Carol M.
**Crawford, Charles L.; Bibler, Ned E.**
Effects of temperature and radiation on the results of the nuclear waste glass product consistency leach test.—73-08296
**Crawford, G. M.** See Pingitore, Nicholase E., Jr.
**Crawford, M. K.** See Morris, P. A.
**Crawley, J. D.; Eckel, A. J.; Parthasarathy, Triplicane A.**
Oxidation of carbon in fiber-reinforced ceramic matrix composites.—73-17233
**Crayston, Joe A.** See Campbell, S. A.
**Crea, Fortunato** See Tavolaro, Adalgisa
**Crean, G. M.** See Greef, R.; Lynch, S.
**Credali, Lino** See Giunchi, Giovanni
**Cregut, O.** See Pelant, I.
**Creighton, J. Randall; Bansenauer, Barbara A.; Huett, T.; White, J. M.**
Mechanism of carbon incorporation during GaAs epitaxy.—73-04400
**Creighton, J. Randall; Bansenauer, Barbara A.**
Surface chemistry and kinetics of GaAs atomic layer epitaxy [ALE].—73-01333
**Cremades, A.; Dominguez-Adame, F.; Piqueras, J.**
Defects in chemical-vapor-deposited diamond films [studied] by cross-sectional cathodoluminescence.—73-13386
**Cremer, C.; Emeis, N.; Schier, M.; Heise, G.; Ebbinghaus, G.**
Monolithically integrated DWDM receiver.—73-15048
**Crespi, Vincent H.; Cohen, M. L.**
Anharmonic phonons and site-selective isotope effects in $YBa_{2-x}M_xCu_3O_7$ (M=La, Sr).—73-04670
**Crespin, M.** See Seron, A.
**Crespo, P.** See Caneiro, A.
**Creuzet, F.; Abriou, Daniel; Arribart, H.**
Glass surfaces at the nanometer scale [observed] using atomic force microscopy.—73-00348
**Creuzet, F.; Ryschenkow, G.; Abriou, Daniel; Didier, F.; Arribart, H.**
Glass surfaces and glass-polymer interfaces [investigated] by atomic force microscopy.—73-15802
**Criado, C.** See Ramos-Barrado, J. R.
**Criado, C.; Ramos-Barrado, J. R.; Maireles-Torres, P.; Olivera-Pastor, P.; Jimenez-Lopez, A.; Rodriguez-Castellon, E.**
Ion transport in alumina-pillared zirconium phosphate.—73-06166
**Cricenti, A.; Selci, S.; Felici, A. C.; Ferrari, L.; Gavrilovich, A.; Goletti, C.**
Clean and oxygen-covered InP(110) surface differential reflectivity.—73-01103
**Crick, D.** See Taheri, F.
**Crisan, Dorel** See Frunza, Ligia
**Crisan, I. A.**
Synthesis of Tl-Ba-Ca-Cu-O high-temperature superconductors from Ba-Ca-Cu-O precursors.—73-15646
**Crisan, Maria** See Zaharescu, Maria
**Crisp, R. S.; Haneman, D.; Chu, J. W.**
Valence band structure of $CuInS_2$ by soft X-ray spectroscopy.—73-04507
**Cristol, B.** See Benier, G.
**Croft, Alan P.; Sheffield, Byford D.**
Process to increase the drying rate of a glaze for ceramics.—73-10915
**Croitoru, N.** See Laor, A.
**Croix, Odette** See Cauchetier, Michel
**Croker, M.**
Furnace technology for the manufacture of rare-earth permanent magnets.—73-01954
**Cronemeyer, D. C.** See Maletta, H.
**Cronin, J. P.** See Agrawal, Anoop; Denesuk, M.
**Crooker, David H.; Echeverria, Lina M.**
Method of making a glass-ceramic article having an adherent colored glaze with controlled texture.—73-03949
**Cros, B.; Berjoan, R.; Monteil, C.; Gat, E.; Azema, N.; Perarnau, D.**
Limitations on AES quantitative analyses of plasma-deposited ceramics.—73-08408
**Cros, B.; Gat, E.; Berjoan, R.; Viguier, M.; Durand, J.**
Tensiometry and Auger electron spectroscopy studies of the surface of plasma-deposited silicon carbide coatings.—73-13460
**Cros, Y.** See Viscaino, S.
**Cros, Y.; Viscaino, S.; Bik, W. M. Arnold; Habraken, F. H. P. M.**
Thermodynamic model for the hydrogen incorporation in PECVD silicon oxynitride thin layers.—73-04178
**Cross, L. Eric** See Cao, Wen-Wu; Jiang, Qi-Yue; Kushida, Keiko; Liu, D.-H.; Oh, Ki-Young; Zhang, Q.-M.
**Cross, Leslie E.** See Flynn, Anita M.
**Cross, T. E.** See Arai, M.
**Crouch-Baker, S.**
Equilibrium defect behavior in α- and ß-CuI.—73-06159
**Crousier, J. P.** See Massiani, Y.
**Crouwell, J. H.** See Demakopoulos, K.
**Crowder, M. S.** See Hoinkis, M.
**Crowe, General D.**
Ceramic container.—73-12012
**Crowe, John T.** See Ault, Neil N.
**Crowell, John E.** See Tedder, Laura L.
**Crownover, Joseph W.; Meckel, Ben B.; Burer, Aubrey M.**
Method for manufacturing electrodes for multilayer ceramic capacitors.—73-11029; Process for producing ceramic capacitors with thinner electrodes.—73-04229
**Crucenau, E.; Deutz, J.; Klein, H.; Schmitz, W.; Ullmaier, H.**
Mechanical anisotropy of $YBa_2Cu_3O_x$ single crystals.—73-01599
**Cruise, Wilma; Hemp, Doreen**
Contemporary ceramics in South Africa: an overview.—73-09778
**Crum, Gerald W.**
Electrostatic spraying: the three-zone model.—73-13833
**Crum, James R.** See Burkett, Cecil G., Jr.
**Cruse, T.** See Al-Assafi, S.
**Cruz, Carlos H. Brito** See Andrade, Leandro H. F.
**Cruz, J.** See Galvan, D. H.
**Csizi, Bela**
Evaluation of strength testing results of wall bricks.—73-10679
**Cubbage, J. I.** See Chen, J. C.
**Cuberes, M. T.** See Bauer, A.; Jimenez, I.; Mendez, M. A.; Palomares, F. J.
**Cubitt, R.** See Mook, H. A.; Yethiraj, M.
**Cuccio, John; Peralta, Alonso; Song, Jeff; Brehm, Peggy; Johnson, Curtis A.; Tucker, William T.**
Probabilistic methods for ceramic component design and implications for standards.—73-17417
**Cuchiaro, J. M.** See Allman, D. D. J.
**Cuddy, JoAnn** See Dang, Tuan A.
**Cui, C.-G.; Lam, C.-C.; Yang, B.-C.; Wang, X.-P.; Fung, P. C. W.; Tang, S.-T.**
Characterization of critical current for high-$J_c$ single-crystal $YBa_2Cu_3O_x$ thin films on $LaAlO_3$ deposited by dc magnetron sputtering.—73-01502
**Cui, Chang-Geng** See Wan, Xian-Qin
**Cui, En-Shu** See Fu, Zi-Cheng
**Cui, Gui-Bing; We, Wan-Liang**
Development of phosphorus-titaniferrous glaze.—73-10822
**Cui, Si-Cong; Hao, Wei; Li Zhan-Cheng**
Development of AB series of burners on horizontal ampoule production line.—73-05109
**Cui, Xue-Hua** See Liu, Zheng; Zheng, Liu
**Cui, Y.-D.** See Chen, W.-D.
**Cui, Yi-Ping** See He, Guang-S.
**Cui, Ying-Qing; Budiansky, Bernard**
Steady-state matrix cracking of ceramics reinforced by aligned fibers and transforming particles.—73-03356
**Cui, Zuo-Lin; Hahn, Horst**
Tensile deformation of nanostructured $TiO_2$ at low temperatures.—73-13601
**Cukan, Vladimir; Morgan, David L.**
Making carbides and nitrides.—73-12477
**Cukauskas, E. J.; Allen, L. H.; Sherrill, G. K.; Holm, R. T.; Vold, C.**
Morphology and transport of $YBa_2Cu_3O_{7-x}$ sputtered in argon, oxygen, and hydrogen: dependence on deposition temperature.—73-11842
**Culbertson, James C.; Newman, Harvey S.; Pond, Jeffrey M.; Wolf, S. A.; Strom, Ulrich**
Microwave detection of a superconducting infrared sensor.—73-11981
**Cull, A. D.** See Rellick, G. S.
**Culler, Scott R.** See Mitra, Sumita B.
**Cummings, D.** See Chien, F. R.
**Cummings, Robert H.** See Peters, Michael G.
**Cundiff, S. T.** See Koch, M.
**Cundill, R. T.** See Hadfield, M.
**Cunnane, J. C.** See Feng, X.
**Cunningham, J.** See Rouviere, J.-L.
**Cuomo, Jerome J.; Pappas, David L.; Lossy, Richard; Doyle, J. P.; Bruley, J.; Dibello, G. W.**
Energetic carbon deposition at oblique angles.—73-13047
**Cupini, N. L.; Ferreira, J. R.**
Turning of carbon and glass fiber hybrid cloth composite material.—73-04951
**Curcio, F.** See Alunno Rossetti, V.
**Curet, Antonio**
Regional studies and ceramic production areas: an example from La Mixtequilla, Veracruz, Mexico.—73-09794
**Curie, J. F.** See Cova, P.
**Curlin, D.** See Matusinovic, T.
**Curran, Sean** See Van Weeren, Remco
**Currie, David B.** See Dann, Sandra E.
**Currie, David B.; Weller, Mark T.**
Structure of the mixed-valence lithium cuprate $Li_3Cu_2O_4$ by powder neutron diffraction.—73-05504
**Currie, John F.** See Bouchard, H.; Gagnon, G.; Sundararaman, Chetlur S.
**Currier, Robert P.** See Devlin, David J.
**Currier, Robert P.; Devlin, David J.**
Ceramic matrix composites by microwave-assisted CVI.—73-05700
**Curry, Donald M.** See Schwab, Stuart T.
**Curtil, L.; Gielly, J.; Murat, M.**
Polarizing microscope—a tool of interest for investigation on concrete; application to carbonation.—73-01924
**Curtin, William A.** See He, Ming-Yuan; Srinivasan, Gajawalli V.
**Curtin, William A.**
In situ fiber strengths in ceramic matrix composites from fracture mirrors.—73-09617; Multiple matrix cracking in brittle matrix composites.—73-06494; Strength versus gauge length in ceramic matrix composites.—73-09677; Ultimate strengths of fiber-reinforced ceramics and metals.—73-03374
**Curtis, A. P.** See Jackson, S. L.
**Curtis, C. L.; Gawne, D. T.; Priestnall, M.**
Electrical conductivity of plasma-sprayed yttria-stabilized zirconia.—73-08854
**Curzon, A. E.** See Templeton, T. L.
**Cushine, Kirt K.** See Bell, James A. E.
**Cussino, L.** See Alunno Rossetti, V.
**Cusso, F.** See Duchowicz, R.
**Custer, J. S.; Polman, A.; Snoeks, E.; Van den Hoven, G. N.**
High concentrations of erbium in crystal silicon by thermal or ion-beam-induced epitaxy of erbium-implanted amorphous silicon.—73-04354
**Cutler, R. A.** See Log, T.
**Cuypers, J. P.** See Blom, P. W. M.
**Cvjeticanin, N.; Mentus, S.; Petranovic, N.**
Electric conductivity of Na and Ag forms of A and X zeolites: effect of cluster formation on the conductivity.—73-04083
**Cyrkiewicz, Marceli; Zielinski, Marek**
Effect of the action of make-up water subjected to the treatment of magnetic field on cement mortars and their chemistry of binding processes.—73-00079
**Czaja, W.** See Bosio, C.
**Czajewski, Henryk** See Ostrowski, Czeslaw
**Czako-Nagy, I.** See Music, S.
**Czapla, A.** See Bah, K.
**Czaplewski, R.** See Kratochvil, W.
**Czaran, E.** See Zsadon, B., Jr.
**Czekaj, D.** See Surowiak, Z.
**Czekaj, J.** See Wu, K. F.
**Czerwonka, J.** See Hodorowicz, S. A.
**Czerwonka, J.; Eick, H. A.**
Phase relationships in the Sm-Ba-Cu-O system at ≈950°C.—73-02388
**Czjzek, G.** See Brugger, T.; Winterer, M.
**Czornyj, George** See Tummala, Rao R.
**D'Anna, F.; Leggieri, G.; Luches, A.**
Synthesis of thin films of semiconductor and refractory metal nitrides by laser irradiation of solid samples in ambient gases.—73-13311
**D'Anna, G.; Benoit, W.; Sadowski, W.; Walker, E.**
Experimental evidence of a crossover in the pinning of vortices in untwinned single crystals of $YBa_2Cu_3O_{7-\delta}$.—73-11753
**D'Asaro, L. D.; Chirovsky, L. M. F.; Laskowski, E. J.; Pei, S. S.; Woodward, T. K.; Lentine, A. L.**
Batch fabrication and operation of GaAs-$Al_xGa_{1-x}As$ FET self-electrooptic effect device (FET-SEED) smart Pixel arrays.—73-14783
**D'Avitaya, F. Arnaud; Campidelli, Y.; Chroboczek, J. A.; Favennec, P. N.; L'Haridon, H.; Moutonnet, D.**
Oxygen-enhanced 1.54-μm photoluminescence of $Er^{3+}$ in silicon.—73-04433
**D'Emic, Christopher P.; Chan, Kevin K.; Blum, Joseph**
Deep trench plasma etching of single-crystal silicon using $SF_6/O_2$ gas mixtures.—73-07435
**D'Evelyn, Mark P.** See Struck, Lisa M.
**D'Intino, A.** See Agullo-Rueda, F.
**D'Iorio, M.** See Campbell, J. W. M.
**D'yachenko, A. I.** See Svistunov, V. M.
**D'yachenko, A. I.; Chabanenko, V. V.**
Irreversible phenomena in the absorption of electromagnetic field in HTSC plates.—73-08117
**D'yachenko, S. S.; Uvarova, S. Kh.; Yakovleva, O. L.**
Complex additive-retarder of cement setting mortars.—73-00047
**D'yachkova, T. V.; Kadyrova, N. I.; Talashmanova, N. V.**
Synthesis of the cuprates of lanthanum and yttrium under the conditions of high pressures and temperatures.—73-01685
**D'yakonov, V. P.** See Fita, I. M.; Levchenko, G. G.
**D'yakonov, V. P.; Zubov, E. E.; Kozeeva, L. P.; Levchenko, G. G.; Markovich, V. I.; Pavlyuk, A. A.**
Magnetic oderng of $Dy^{3+}$ sublattice in tetragonal single crystal $DyBa_2Cu_3O_{6.2}$.—73-16206
**D'yakonova, N. V.** See Gusinskii, G. M.
**D'yakonova, N. V.; Levinshtein, M. E.; Rumyantsev, S. L.**
Temperature dependence of the low-frequency noise in structurally perfect GaAs and after destructive compression.—73-01345
**D'yakonova, N. V.**
Nonmonotonic dependence of 1/*f* noise on the intensity of additional illumination of GaAs.—73-01260
**D'Yvoire, F.** See Masquelier, C.
**Da Costa, F. M. A.** See Thomas, H. M.
**Da Jornada, J. A. H.** See Balzaretti, N. M.
**Da Silva Pereira, M. I.** See Thomas, H. M.
**Da Silva, E. C.** See Nakamura, O.
**Da Silva, M. E.** See Alves, E.

**Da Silva, M. G. Ferreira; Waerenborgh, J. C.; Navarro, J. M.**
$^{57}$Fe Mossbauer effect in sol-gel silicate glasses.—73-10375
**Da Silveira, A. C. F.** See Morosini, M. B. Z.
**Da, Yuan-Dong** See Yang, Dan-Sheng
**Dabbicco, M.; Cingolani, R.; Ferrara, M.**
Room-temperature stimulated emission in optically pumped narrow $ZnSe/ZnS_xSe_{1-x}$ multiple-quantum-well structures.—73-11427
**Dabiran, A. M.; Cohen, P. I.; Angelo, J. E.; Gerberich, William W.**
Reflection high-energy electron diffraction measurements of molecular beam epitaxially grown GaAs and InGaAs on GaAs(111).—73-15143
**Dabizha, A. A.** See Peichev, V. G.
**Dabizha, A. A.; Prokof'ev, A. V.; Akimov, G. Ya.**
Role of mechanochemical activation in the evolution of the structure and properties of reaction-bonded mullite-zirconia refractories.—73-14623
**Dabizha, A. A.; Prokof'ev, A. V.; Chupin, A. I.; Fridrikh, A. D.**
Aspects of the chemical technology of $ZrO_2$-$Y_2O_3$-$Al_2O_3$ powders and testing them in ceramics technology.—73-02729
**Dabizha, N. A.; Storozh, V. V.; Akimov, G. Ya.**
Effect of hydrostatic treatment of greenware and sintering profiles on the properties of ceramics in the tialite-mullite-corundum system.—73-16731
**Dabranov, M. D.** See Nabakhtiani, G. N.
**Dabrowski, B.** See Pei, S.
**Dabrowski, B.**
Synthesis of new copper oxide superconductors at high oxygen pressure.—73-11926
**Dadashov, M. S.** See Malinovskii, Yu. A.; Yakubovich, O. V.
**Dadras, Parviz; Mehrotra, Gopal M.**
Joining of carbon-carbon composites by graphite formation.—73-12433
**Daehn, Glenn S.** See Breslin, Michael C.
**Dafinei, I.; Szalewski, M.; Mitroaica, G.**
Velocity measurements for surface acoustic waves on $Bi_{12}SiO_{20}$ substrates.—73-04577
**Dafne, Y.** See Edelman, F.
**Dagata, J. A.** See Bennett, J.; Chester, M. J.
**Dagata, J. A.; Tseng, W.; Silver, R. M.**
Scanning tunneling microscopy of passivated gallium arsenide under ambient conditions.—73-07783
**Daghish, S.** See Barboux, Philippe
**Dagys, R.** See Babonas, G.-J.
**Dagys, R.; Babonas, G.-J.; Grebinskii, S. I.; Pukinskas, G.**
Optical and magnetooptical properties of $HgCr_2X_4$ (X=S, Se) single crystals.—73-16552
**Dagys, R.; Babonas, G.-J.; Leonyuk, L.**
Optical properties of superconducting copper oxides and related compounds.—73-05606
**Dahiya, H. S.** See Maan, A. S.
**Dahlberg, E. Dan** See Moloni, Katerina
**Dahmen, Ulrich**
Split reflections from broken mirrors: symmetry breaking in the making of material microstructures.—73-06283
**Dahn, J. R.** See Colbow, K. M.; Davidson, I.; Reimers, J. N.
**Dai, An-Bang** See Yang, Yu-Xiang
**Dai, C.-M.; Chuu, D.-S.**
Vibrational mode softening in thin-film CdS.—73-01362
**Dai, Fu-Loon** See Sun, Qing-Ping
**Dai, H.; Janz, S.; Normandin, R.; Chatenoud, F.**
InGaAs/GaAs single quantum-well lasers with monolithically integrated multilayer waveguides for surface-emitted sum-frequency generation.—73-07606
**Dai, H.**
Nonexponential fluorescence decay and multiphonon relaxation of the $^4F_{3/2}$ level of $Nd^{3+}$ in sodium β″-alumina.—73-02648
**Dai, H; Stafsudd, O. M.; Dunn, Bruce S.; Momoda, Leslie A.**
Polarized absorption spectra and intensities of $Er^{3+}$ in sodium beta-double-prime alumina crystals.—73-12861
**Dai, Jian-Guo; Li, Yuan; Kang, Lin**
Patterning method for high-$T_c$ superconducting YBaCuO thin films.—73-08161
**Dai, Lai-Fa** See Chen, Xi-Kum
**Dai, N.** See Luo, H.
**Dai, Xun-Hu; DiGiovanni, A.; Viehland, Dwight**
Dielectric properties of tetragonal lanthanum-modified lead zirconate titanate ceramics.—73-07879
**Dai, Y.; Takahashi, K.; Yamaguchi, I.**
Thermal oxidation of fluorozirconate glass and fibers.—73-14518
**Dai, Yi-Sheng**
Surface modification of heavy metal fluoride glass by ion implantation.—73-03768
**Dai, Ying** See Li, Ning-Fang
**Dai, Yuan-Dong** See Liu, Rang-Jiao; Wang, Shi-Guang
**Dai, Yuan-Dong; Liu, Zhun-Xiao; Chen, Hai-Ying**
Irreversibility lines of 1223-phase superconductor of Tl system.—73-11811
**Dai, Yuan-Dong**
Influence of silver base on $J_c$ measurement of oxide superconductors.—73-04744
**Dai, Z. G.** See Su, Chao-Chin
**Daily, M. R.** See Napolitano, L. M., Jr.
**Daimon, Hiroshi** See Kimura, Akio
**Daimon, Masaki** See Asaga, Kiyoshi; Goto, Seishi; Ishida, Hideaki; Kim, Sang-Kyu; Tsurumi, Takaaki; Yoshida, Kozaburo
**Daimon, Masaki; Hirano, Yoshinubu; Tsurumi, Takaaki**
Crystal structure analysis of major constituent phases in ordinary portland cement.—73-09875
**Daimon, Masaki; Kishi, Kazuhiro**
Recent advancement in cement industry—manufacturing system and special cements.—73-03526
**Daimon, Masaki; Okada, Kiyoshi**
Manufacturing and properties of inorganic porous materials.—73-12044
**Dainty, J. C.** See Narayanamurthy, C. S.
**Daitoh, Yoshihiro,** See Ikeda, Yasunori
**Daitoh, Yoshihiro; Shimura, Kenichi; Terashima, Takahito; Yano, Yoshihiko**
TEM study of microstructures of growth interface in ultrathin $YBa_2Cu_3O_7$ films.—73-01689
**Dakshinamurthy, S.** See Johs, Blaine
**Dal Maschio, Roberto** See Della Mea, Gianantonio; Sglavo, V. M.
**Dal Maschio, Roberto; Geotti-Bianchini, F.; Sglavo, V. M.; Angelini, P.**
Influence of alumina content on homogeneous nucleation in $57.5SiO_2$-$21.25Na_2O$-21.25CaO (mol%) glass.—73-14006
**Dalal, V.** See Knox, R. D.
**Dalas, Evagelos; Kordulis, Christos; Koutsoukos, Petros O.; Lycourghiotis, A.**
Unsupported molybdena catalysts: precipitation, characterization, and catalytic activity.—73-13332
**Dalba, G.** See Kisiel, A.
**Dalby, R. J.** See Yellen, S. L.
**Dalgleish, Brian J.** See Dauskardt, R. H.; Evans, Anthony G.; Reimanis, Ivar E.; Ritchie, R. O.; Rogers, Kirk A.; Shalz, M. L.
**Dalichaouch, Y.** See Almasan, C. C.
**Dalla, Salman** See Gerchikov, L. G.
**Dallaire, S.** See Legoux, J. G.
**Dallaire, S.; Dufour, M.; Gauthier, B.**
Characterization of wear damages in coatings by optical profilometry.—73-08379
**Dalick, Steven** See Talmy, Inna G.
**Dallibor, W.** See Weisweiler, Werner
**Dallies-Labourdette, E.** See Ehrburger, P.
**Dalmai, G.** See Poellmann, H.
**Dalmilr, W. L.** See Maltha, J. C.
**Dalpi, Maria; Karayianni, Eleni; Koutsoukos, Petros O.**
Inhibition of HAp formation in aqueous solutions of zinc and 1,2-dihydroxy-1,2-bis(dihydroxyphosphonyl)ethane.—73-12604
**Dalton, D. A.**
Future of crystal.—73-10538
**Dalvi, P. Y.** See Upadhyaya, D. D.
**Dalzell, William J., Jr.** See Wright, Robert J.
**Dalzell, William J., Jr.; Wright, Robert J.**
High rate electrophoresis process for ceramic-coated fibers.—73-12081
**Dam, Chuong Q.** See Livingston, Jeffrey A.
**Dam, Chuong Q.; Kelley, Kurtis C.**
Method for making a piezoelectric stack.—73-04582
**Dam, H.; Jensen, S.; Quist, P.**
Surface characterization of ultrasonic machined ceramics with diamond-impregnated sonotrode.—73-06075
**Damaskinskaya, E. E.; Tomilin, N. G.**
Computer simulation of fracture sequences in heterogeneous materials.—73-03247
**Dambrine, E.**
Waste burning and thermal destruction of organic compounds in a cement kiln.—73-13649; Waste burning and thermal destruction of organic compounds in kilns.—73-03557
**Damen, T. C.** See Kim, Dai-Sik; Vinattieri, A.
**Damewood, Peggy L.; Schott, Marvin**
Laboratory testing of porcelain coatings for home laundry.—73-13859
**Damianiuk, M.** See Vu, T. Q.
**Damiano, J.** See Colavito, D.
**Damiano, J.; Dody, Julie A.; Martinez, Wilfred A.**
Dry refractory composition.—73-10780
**Damidot, Denis; Glasser, Fredrick P.**
Thermodynamic investigation of the CaO-$Al_2O_3$-$CaSO_4$-$H_2O$ system at 25°C and the influence of $Na_2O$.—73-03546; Thermodynamic investigation of the CaO-$Al_2O_3$-$CaSO_4$-$H_2O$ system at 50°C and 85°C.—73-10181; Thermodynamic investigation of the CaO-$Al_2O_3$-$CaSO_4$-$K_2O$-$H_2O$ system at 25°C.—73-16376
**Damjanovic, Dragan** See Troilo, Louis M.
**Damodaran, Alathoor D.** See Koshy, J.; Mani, T. V.; Mukherjee, P. S.; Paulose, K. V.; Perumal, P.; Varma, Hari Krishna
**Dan'ko, V. A.; Indutnyi, I. Z.; Kulikovskii, V. Yu.**
Effect of annealing on the properties of conductivity and diffusional mass transport in $As_2S_3$ films photodoped with silver.—73-00451
**Dan'ko, V. A.; Indutnyi, I. Z.; Min'ko, V. I.**
Features of electroconductivity of films of $As_2S_3$ photoalloyed with silver.—73-14918
**Dan'kov, I. A.; Zvereva, O. V.; Ivannikov, V. I.**
Electromechanical properties of gallium phosphate at temperatures from –196 to 723°C.—73-02606
**Dan'shin, N. K.** See Arutyunyan, V. E.
**Dan, Koji** See Paisley, M. J.
**Dan, Koji; Kunishige, Hiroshi; Tamura, Hideki; Sawaoka, Akira B.; Akashi, Tamotsu; Kudo, Haruhiko**
New technique for material synthesis by utilizing shock wave interaction and its application to the synthesis of B-C-N system.—73-16879; 73-16880
**Dan, T.** See Hanafusa, H.
**Danailov, M.** See Koetke, J.
**Danchevskaya, M. N.** See Kreisberg, V. A.
**Danchevskaya, M. N.; Ovchinnikova, O. G.**
Features of formation of radiation-induced $E'$ centers in silica glasses melted of one-type raw materials by different methods.—73-14185
**Danchevskaya, M. N.; Tsekebrovskii, A. N.**
Microhardness of fused silicas.—73-14225
**Dancygier, M.; Benitah, L.; Frigerio, J.-M.**
Ferrite surface treatments [investigated] by spectroscopic ellipsometry.—73-13397
**Dandrea, R. G.; Duke, C. B.; Zunger, Alex**
Interfacial atomic structure and band offsets at semiconductor heterojunctions.—73-07617
**Dandrea, R. G.; Duke, C. B.**
Calculation of the Schottky barrier height at the Al/GaAs(001) heterojunction: effect of interfacial atomic relaxations.—73-04256; Interfacial atomic composition and Schottky barrier heights at the Al/GaAs(001) interface.—73-11282
**Dandy, David S.** See Coltrin, Michael E.
**Dane, D.** See Gadgil, P.
**Danek, Vladimir** See Lubyova, Zelmira
**Daneo, Antonio; Castellini, Carlo; Macrelli, Guglielmo; Polato, P.; Tiribilli, B.**
Advanced glazings: practical problems relevant to their optical characterization.—73-06994
**Danco, Antonio; Polato, P.; Scandellari, M. L.; Verita, M.**
Spectrophotometric determination of ferrous iron and sulfides in industrial hollow soda-lime glass.—73-14086
**Danes, F.; Saint-Aman, E.; Coudurier, L.**
Si-C-O system: II, Isobaric evolution of the system.—73-16302
**Daneshvar, Majid** See Madan, Sanjeev
**Danforth, Stephen C.** See Lu, Ping; Pechenik, Alexander; Sheldon, Brian W.; Tsao, In-Lin; Van Weeren, Remco; Yu, S. H.
**Dang, Le-Si** See Hamoudi, A.
**Dang, Tuan A.; Meyers, Gail; Cuddy, JoAnn**
Depth profiling of nonconductive powders using low-pressure radio-frequency plasma.—73-09066
**Daniel, A. M.** See Lewis, M. H.; Pharaoh, M. W.
**Daniel, I. M.; Anastassopoulos, G.; Lee, J.-W.**
Behavior of ceramic matrix fiber composites under longitudinal loading.—73-03240
**Danielius, R.; Piskarskas, A.; Podenas, D.; Ditrapani, P.; Varanavicius, A.; Banfi, GianPiero**
High-power, subpicosecond, 750–1770-nm tunable pulses from travelling wave parametric generator.—73-00499
**Danielson, Paul S.; Hulman, Sheryl L.**
Forehearth colorant.—73-03920
**Danilenko, N. V.; Oleinik, G. S.; Dobrovol'skii, V. D.**
Microstructural features of the α→β transformation in silicon nitride at high pressures and temperatures.—73-13420
**Danilenko, N. V.; Oleinik, G. S.; Semenenko, N. P.**
Structural transformations in polycrystalline β-$Si_3N_4$ at high temperatures and pressures.—73-12701
**Danilov, E. B.; Ermolenko, A. I.; Kuzuh, S. G.**
Production of preforms for single-mode optical fibers.—73-00687
**Danilova, T. N.** See Baranov, A. N.
**Daniska, V.** See Luby, S.
**Dann, Sandra E.; Weller, Mark T.; Currie, David B.; Thomas, M. F.; Alrawwas, A. D.**
Structure and magnetic properties of $Sr_2FeO_4$ and $Sr_3Fe_2O_7$ studied by powder neutron diffraction and Mossbauer spectroscopy.—73-15368
**Dann, Sandra E.; Weller, Mark T.; Currie, David B.**
Synthesis and structure of $Sr_2FeO_4$.—73-02493
**Dannefaer, S.** See Bretagnon, T.
**Dannefaer, S.; Bretagnon, T.; Kerr, D.**
Vacancy-type defects in crystalline and amorphous $SiO_2$.—73-09428
**Dannheim, Henning** See Schels, Thomas
**Dannheim, Henning; Oel, Heribert J.; Rivera, P.**
Effect of production parameters on the variation of strength values for commercial porcelain.—73-00905
**Dannheim, Henning**
Thermal stresses by joining different glasses depending on cooling rate.—73-00564
**Danova, D.** See Kozhukharov, V.
**Danshin, N. K.** See Barilo, S. N.
**Danyluk, J.** See Wu, W.
**Danyluk, Steven** See Fang, Yue; Zanoria, Elmer
**Danzuka, Toshio** See Ohga, Yuichi; Saitoh, Tatsuhiko
**Danzuka, Toshio; Ito, Masumi; Saito, Tatsuhiko; Tsuchiya, Ichiro**
Method for producing glass preform for optical fiber.—73-00287
**Danzuka, Toshio; Ito, Masumi; Tsuchiya, Ichiro**
Method for producing glass preform for optical fiber.—73-14549
**Daoud, A.** See Mhiri, T.
**Daous, M. A.** See Khawaja, E. E.
**Dapkunas, Stanley J.** See Chen, Wei
**Dapkus, P. D.** See Chen, Q.; Maa, B. Y; Osinski, Julian S.; Zou, Yao
**Darchuk, S. D.; Korovina, L. A.; Sizov, F. F.**
Resonant states in doped and undoped PbTe crystals.—73-01306
**Darejeh, Hedi; Thomas, Henry; Delcher, Ray**
Machine tests optical fibers in flexure.—73-08410
**Dargys, A.** See Kundrotas, V.
**Darinskii, B. M.** See Gorbunov, V. V.
**Darinskii, B. M.; Fedorov, Yu. A.**
Classification of intercrystalline boundaries.—73-16056
**Darlington, C. N. W.; Cernik, R. J.**
Effects of isovalent and nonisovalent impurities on the ferroelectric phase transition in barium titanate.—73-07883
**Darracq, S.** See Demazeau, Gerard
**Darracq, S.; Matar, S.; Demazeau, Gerard**
Correlations between the structural distortion of LaCuO lattice and the resulting physical properties.—73-05376
**Darriet, J.; Regnault, L. P.**
Compound $Y_2BaNiO_5$: a new example of a Haldane gap in an $S=1$ magnetic chain.—73-07929
**Darriet, J.; Weill, F.; Darriett, B.; Zhang, X. F.; Etourneau, J.**
Crystal structure of $Bi_2Sr_2CuO_6$: a structure based on periodic crystallographic shear planes in the "2201" structure.—73-08587
**Darriett, B.** See Darriet, J.
**Darshane, Vishnu S.** See Bhattacharya, Utpal; Dube, Gulanshankar R.
**Dartnell, N. J.** See Greef, R.
**Dartyge, E.** See Studer, F.

**Darula, M.** See Plecenik, A.

**Darwin, David** See Zhao, Hong

**Das Chowdhury, K.** See Liu, J.

**Das Gupta, S.** See Payzant, E. A.

**Das Sarma, S.**
Molecular beam epitaxial growth as a self-organized critical phenomenon.—73-09216

**Das, A. C.; Mukherjee, S.; Niyogi, S. K.**
Monitoring thermal-shock damage development in refractories by stress-wave-factor technique.—73-12169

**Das, B. K.** See Dhara, Sandip; Jain, Kiran; Padam, G. K.

**Das, D.** See Roy, S.

**Das, Jagannath; Bhat Yajnavalkya, S.; Halgeri, Anand B.**
Ethylbenzene dealkylation and realkylation over pore-size-regulated MFI zeolite.—73-16764

**Das, Kalyankjumar; Dreifus, David L.; Tessmer, Alison J.; Venkatesan, Vasudev**
Diamond field effect transistor with a particular boron distribution profile.—73-04512

**Das, Kalyankumar** See Venkatesan, Vasudev; Von Windheim, J. A.

**Das, Kalyankumar**
Diamond and silicon carbide heterojunction bipolar transistor.—73-11517; Diamond rectifying contact with undoped diamond layer.—73-11519; Vertical diamond field effect transistor.—73-11550

**Das, Kamal K.** See Kumar, Binod

**Das, P. S.** See Mahfuz, Hassan

**Das, P.** See Han, K. J.

**Das, S. K.; Morris, G. C.**
Influence of growth and microstructure of electrodeposited cadmium telluride films on the properties of *n*-CdS/*p*-CdTe thin-film solar cells.—73-11272

**Das, S. K.; Nathan, R. C.**
Relationship between thermal expansion and X-ray intensity of quartz and cristobalite in electroporcelain bodies.—73-12877

**Das, S. R.** See Mishra, S. K.

**Das, S.; Lahiri, S. K.; Chaudhuri, A. K.**
Microstructural and electrical characterization of ion-beam-sputtered polysilicon films for microelectronic applications.—73-11315

**Das, T.; Sanyal, A. S.; Mukerji, J.**
Effect of nitrogen on the diffusion coefficients of sodium and iron in yttrium oxynitride glasses.—73-13967

**Das, Utpal** See Chin, Albert

**Das-Gupta, D. K.** See Dias, C. J.

**Dasgupta, A.** See Sarkar, Shondeep L.

**Dasgupta, Sankar** See Bhola, Rakesh

**Dasgupta, Sankar; Jacobs, James K.; Radmacher, Stephen; Sobczyk, Marek**
Glow plug with improved composite sintered silicon nitride ceramic heater.—73-11020

**Dashevskii, Z. M.** See Lidorenko, N. S.

**Dashevskii, Z. M.; Rulenko, M. P.**
Increase in the diffusion length of carriers in polycrystalline PbTe films.—73-14978

**Dat, R.** See Lichtenwalner, D. J.

**Datars, W. R.** See Gong, W. H.

**Date, Muneyuki; Kindo, Koichi**
Antiferromagnetic resonance in the heavy fermion state of $URu_2Si_2$.—73-08282

**Date, S. K.** See Kharat, D. K.

**Date, Shigeyuki** See Saitou, Yoshiaki

**Date, Takayuki** See Funayama, Osamu

**Date, Yumiko** See Yoshimura, Kazuyoshi

**Datka, Jerzy; Boczar, M.; Gil, B.**
Heterogeneity of hydroxyl groups of zeolites.—73-16165

**Datka, Jerzy; Kawalek, Marek**
Strength of Bronsted acid sites in boralites.—73-12692

**Datta, Anusuya; Srivastava, C. M.; Datta, Sambhu N.**
Relativistically parametrized extended Huecckel calculation of net charges on atoms in $YBa_2Cu_3O_7$.—73-08187

**Datta, S. K.** See Mukhopadhyay, A. K.

**Datta, Sambhu N.** See Datta, Anusuya

**Datta, T.** See Bist, H. D.

**Dattagupta, S.; Ghoshal, S. K.**
Spring-defect model of structural phase transition in $YBa_2Cu_3O_{7-\delta}$.—73-15629

**Dattilo, M.; Bemelmans, C.**
Electrodeposition of lead dioxide from nitrate and other media.—73-05787

**Daufenbach, Jo Dee** See Griffin, Curtis

**Dauger, A.** See Fabre, A.; Guinebretiere, R.; Vesteghem, H.

**Dauger, Alain** See Leture, Phillipe J. A. M.

**Daugherty, Kenneth E.** See Hill, Russell; Ingram, Kevin D.

**Daulasim, K.** See Orsal, B.

**Dauletmuratov, B. K.** See Baidullaeva, A.

**Daum, W.; Krause, H.-J.; Reichel, U.; Ibach, H.**
Identification of strained Si layers at Si-$SiO_2$ interfaces and clean Si surfaces by nonlinear optical spectroscopy.—73-16171

**Daum, Wolfgang** See Hatfield, William T.

**Daumling, M.** See Tsuei, Chang-C.

**Daunois, A.** See Bigot, J.-Y.; Oberle, J.

**Dauplaise, H. M.** See Davis, A.

**Dauskardt, R. H.** See Card, J. C.; Ritchie, R. O.

**Dauskardt, R. H.; Dalgleish, Brian J.; Yao, D.; Ritchie, R. O.; Becher, Paul F.**
Cyclic fatigue–crack propagation in a silicon carbide whisker-reinforced alumina composite: role of load ratio.—73-09567

**Davanzo, Celso U.** See Benvenutti, Edison V.

**Davarashvili, O. I.; Karavaev, G. F.; Kataev, S. G.; Tyuterev, V. G.**
Radiative and nonradiative recombination in quaternary $Pb_{1-x}Sn_xSe_{1-y}Te_y$ solid solutions.—73-01295

**Davarashvili, O. I.; Kuznetsov, V. V.; Selin, A. A.; Shotov, A. P.**
Computation of equilibrium composition of liquid and solid phases in the system Pb-Sn-Se-Te.—73-16065

**Davey, S. T.** See Lauder, R. D.; Szebesta, D.

**Davey, S. T.; Szebesta, D.; Williams, J. R.; Whitley, T.; Wyatt, R.**
Rare-earth-doped high NA fluoride fiber amplifiers.—73-07067

**Davey, S. T.**
Optical gain in glass fiber doped with rare-earth ions.—73-03806

**David, L.** See Cozar, O.

**David, W. I.** See Thackeray, M. M.

**Davidovic, M.** See Mioc, U.

**Davidovich, N. M.** See Baikova, L. G.

**Davidovich, R. L.** See Udovenko, A. A.

**Davidovits, Joseph; Schmitt, Rolf-Erhard; Friehmelt, Volker**
Microwave processing of geopolymer–cement-based waste forms.—73-03501

**Davidovits, Joseph**
Geopolymer cements to minimize carbon dioxide greenhouse warming.—73-03475

**Davidson, A.** See Machal, C.

**Davidson, David L.** See Schwab, Stuart T.

**Davidson, David L.**
Fatigue and fracture toughness of aluminum alloys reinforced with SiC and alumina particles.—73-03286

**Davidson, I.; Greedan, J. E.; Von Sacken, U.; Michal, C. A.; Dahn, J. R.**
Structure of 1T-$Li_2NiO_2$ from powder neutron diffraction.—73-02462

**Davidson, J. A.** See Mishra, A. K.

**Davidson, J. Ian; Fahlenbock, Terry D.**
Bulk bag: filling and discharging—latest developments.—73-08323

**Davidson, J. L.** See Kral, M. V.

**Davidson, James A.**
Zirconium oxide and nitride coated cardiovascular implants.—73-03705

**Davidson, N.** See Hine, P. J.

**Davies, C. H. J.; Chen, W. C.; Geltser, I. S.; Hawbolt, E. B.; Samarasekera, I. V.; Brimacombe, J. Keith**
Hot deformation of 6061 alumina composite materials.—73-06801

**Davies, C. H. J.; Raghunathan, N.; Sheppard, T.**
Heat treatment and mechanical properties of aluminum alloy CW67/SiC composites.—73-09609

**Davies, C. M. A.; Harris, B.; Cooke, R. G.**
Characterization of damage onset in glass-ceramic matrix composites angle-ply laminates.—73-03244

**Davies, F. J.**
European container glass industry.—73-09714

**Davies, Gordon**
Properties and Growth of Diamond.—73-17536

**Davies, J. J.** See Halsall, H. P.; Halsall, M. P.

**Davies, J. R. R.** See Lawrence, C. W.

**Davies, M.** See Taylor, R. P.

**Davies, P.** See Kaisersberger, K.

**Davies, Peter K.** See Brosha, Eric L.; Christoffersen, Roy; Worrell, Wayne; Zhang, Yan

**Davies, Peter K.**
Rare-earth cuprates with structures radiated to $NaCuO_2$.—73-02418

**Davies, T. J.** See Emblem, H. G.

**Davies, Thomas W.** See Meinhold, Richard H.

**Davis, A.** See Burrows, S.

**Davis, A.; Dauplaise, H. M.; Lorenzo, J. P.; Ramseyer, G.; Horrigan, J. A.**
Effects of ytterbium addition on liquid phase epitaxial growth of InGaAs/InP heterostructures.—73-04296

**Davis, Burtron H.** See Milburn, Diane R.

**Davis, C. A.**
Simple model for the formation of compressive stress in thin films by ion bombardment.—73-06046

**Davis, J.** See Gogotsi, G. A.

**Davis, Jack R.** See Livingston, Jeffrey A.

**Davis, James L.** See Papageorge, Marc V.

**Davis, John L.** See Thompson, Philip E.

**Davis, John L.; Wagner, R. J.; Waterman, James R.; Shanabrook, B. V.; Omaggio, J. P.**
Optimum growth temperature determination for GaInSb/InAs strained-layer superlattices.—73-11366

**Davis, Lawrence L.**
Gypsum.—73-12279; Mica.—73-12288

**Davis, Lynn**
Properties of transparent-conducting oxides deposited at room temperature.—73-12873

**Davis, Mark E.** See De Man, A. J. M.; Li, Hong-Xin; Lobo, Raul F.

**Davis, Michael W.; Shott, A. Robert**
Recessed label panels—another view.—73-10591

**Davis, Michael W.**
Effect of lightweighting on the impact performance of glass containers: further discussions.—73-10522

**Davis, P. R.** See Tessner, T. C.

**Davis, R. Alan** See Gaa, Peter C.

**Davis, R.** See Hill, P. G.

**Davis, Robert F.** See Glass, Robert C.; Paisley, M. J.; Sumakeris, J.

**Davis, Robert F.**
Deposition, characterization, and device development in diamond, silicon carbide, and gallium nitride thin films.—73-05740

**Davison, Marie T.**
Electricity potential in the ceramics industry.—73-13616

**Davison, Terry S.** See Eldridge, Jeffrey I.

**Davoli, I.** See Chudinov, S. M.; Gazda, M.

**Davydov, I. A.; Strakhov, L. P.; Tselishchev, S. L.**
Role of bulk deep centers in the generation of the surface photo-emf in low-resistivity ZnSe single crystals.—73-07775

**Davydov, I. V.; Nesterov, A. V.**
Design of an apparatus for aluminum hydroxide hydraulic separation.—73-15785

**Davydov, V. Yu.** See Belousov, M. V.

**Davydova, N. G.** See Mashir, Yu. I.

**Daweritz, L.; Hagenstein, K.; Schutzendube, P.**
Si incorporation during molecular beam epitaxy growth of GaAs and preferential attachment of Si atoms at misorientation steps.—73-07796

**Dawes, A. C.** See Atkins, M.

**Dawes, M. L.** See Dickinson, J. T.

**Daw, S. S.** See Chyung, K.

**Dawson, Brian**
Emerging technologies for utilizing wastes in cement production.—73-03464

**Dawson, Jeff** See Saasen, Arild

**Dawson, P. R.**
Recent developments in iron ore sintering: II, Research studies on sintering and sinter quality.—73-06847

**Dawson, P. R.; Recent developments in iron ore sintering: III, Granulation and strand feeding.—73-06848; Recent developments in iron ore sintering: IV, The sintering process.—73-06849**

**Dawson, P.** See Feldman, J.

**Day, A.** See Jansen, F.

**Day, Delbert E.** See Huang, Wen-Hai; Mogus-Milankovic, A.

**Day, John P.; Johnson, Timothy V.**
Material, structure, filter, and catalytic converter.—73-12375

**Day, M. J.** See Bi, Y. J.

**Day, Paul S.** See Skamser, Daniel J.

**Day, Paul S.; Skamser, Daniel J.; Jennings, Hamlin M.; Johnson, D. Lynn; Spotz, Mark S.**
Fabrication of SiC matrix surface composites by chemical vapor infiltration with microwave heating: temperature effects.—73-16776

**Day, Robert L.** See Shi, Cai-Jun

**Day, Robert L.**
Canadian database of mortar cube strength: the move toward a Canadian performance standard for portland cement.—73-09836

**Dayal, R.** See Dewaele, P. J.

**Dayalan, E.; Tomar, M. S.**
Low-temperature preparation of $SrTiO_3$ thin films.—73-13122

**Daza, Loreta** See Anderson, James A.

**De Andrade, M. C.** See Almasan, C. C.

**De Andres, A.; Martinez, J. L.; Saez-Puche, R.; Salinas-Sanchez, A.**
Vibrational study of $R_2BaNiO_5$ (R=Y, Ho, Er, or Tm), $NiO_6$ 1-D chains, and $Tm_2BaNiO_5$ pyramids.—73-08790

**De Angelis, Lucio** See Passerini, Stefano

**De Angelis, R. J.** See Rohde, S. L.

**De Araujo, Cid B.** See Ma, H.

**De Aza, Salvador** See Barba, M. F.; Liu, Kuo-Chung; Nieto, M. Isabel; Torrecillas, Ramon

**De Barbadillo, John J.** See Bell, James A. E.

**De Blieck-Hogervorst, J. M. A.** See Wolke, J. C. G.

**De Boeij, P. L.** See Wijers, C. M. J.

**De Bruyn, K.; Celis, J. P.; Roos, J. R.; Stals, L. M.; Van Stappen, M.**
Coating thickness and surface roughness of TiN-coated high-speed steel in relation to coating functionality.—73-06752

**De Castro, A. J.; Fernandez, M.; Sacedon, J. L.**
Effects of thermal nitridation on the radiation hardness of the $SiO_2$/Si interface.—73-08841

**De Castro, Luiz D.**
Sol-gel method of making silicon carbide and of protecting a substrate.—73-05343

**De Castro, S. C.** See Estrada, W.

**De Cayeux, M. D.** See Seveque, J. L.

**De Ceukelaire, L.; Van Nieuwenburg, D.**
Accelerated carbonation of a blast-furnace cement concrete.—73-03431

**De Ceukelaire, L.**
Concrete surface deterioration due to the expansion by the formation of jarosite.—73-00048

**De Damborenea, J.; Vazquez, A. J.**
Laser cladding of high-temperature coatings.—73-06814

**De Diana, Giancarlo C.** See Guadagnino, Emanuel

**De Franceschi, Roberto** See Braglia, Marco

**De Francisco, C.** See Torres, L.

**De Fresart, Edouard D.; Liaw, Hang M.**
Method for making a bipolar transistor having a silicon carbide layer.—73-04521

**De Frutos, J.** See Calzada, M. L.

**De Graef, Marc** See Cao, Heng-Chu; Speck, J. S.

**De Grave, F.** See Van Alboom, A.

**De Gregori, Italo**
New applications for glass in the modern building industry.—73-09731

**De Groot, Klaas** See Li, Pan-Jian; Wolke, J. C. G.

**De Groot, Klaas**
Applications of porous bioceramics in surgery.—73-15918; Clinical applications of calcium phosphate biomaterials: a review.—73-08507; Medical applications of calcium phosphate bioceramics.—73-02015

**De Guire, M. R.** See Nemati, Z. Ali

**De Hosson, J. T. M.** See Van den Burg, M.

**De Jong, M. S.** See Hutcheon, Ronald M.

**De Jong, Remco** See McCauley, Ronald A.

**De Jongh, Petrus F.** See Rutjes, Peter C. S.

**De Jonghe, Lutgard C.** See Lu, Chung-Hsin; Ohji, Tatsuki

**De Julian, C.** See Andres-Verges, M.

**De Kempeneer, E. H. A.; Jacobs, R.; Smeets, J.; Meneve, J.; Eersels, L.; Blanpain, B.**
Rf plasma-assisted chemical vapor deposition of diamondlike carbon: physical and mechanical properties.—73-17422

**De Kever, Ebba; Frischat, G. H.**
Influence of batch moisture and atmosphere on the melting behavior of $As_2O_3$- and $Sb_2O_3$-containing glasses.—73-10553

**De Kock, A.** See Thackeray, M. M.
**De L'Eprevier, Alain G.**
Process for the manufacture of a rigid insulating refractory material and material thus obtained.—73-04038
**De La Bathie, R. P.** See Givord, D.
**De la Cruz, F.** See Decca, R.
**De La Cruz, F.-Y.** See Rodriguez, E.
**De la Cruz, G. G.** See Ramirez-Bon, R.
**De la Houssaye, P. R.; Offord, B. W.; Minter, J. P.; Imthurn, G. P.; Garcia, G. A.**
Fabrication of *n*-channel metal-oxide-semiconductor field effect transistors with 0.2-μm gate lengths in 500-Å thin-film silicon on sapphire.—73-14905
**De la Lamo, J. A.** See Chu, W.
**De la Olvera, M.; Maldonado, A.; Asomoza, R.; Konagai, M.; Asomoza, M.**
Growth of textured ZnO:In thin films by chemical spray deposition.—73-09158
**De Laet, J.; Van Hellemont, J.; Terryn, H.; Vereecken, J.**
Characterization of different conversion coatings on aluminum with spectroscopic ellipsometry.—73-13806
**De las Pozas-Del Río, C.; Reguera-Ruiz, E.; Díaz-Aguila, C.**
Mossbauer study of hydrothermal transformation of natural clinoptilolite into Y and $P_1$ zeolites.—73-02333
**De Leeuw, D. M.** See Cillessen, Johannes F. M.
**De Lozanne, A. L.** See Edwards, H. L.
**De Lucas, Antonio; Uguina, M. Angeles; Covian, Ignacia; Rodriguez, L.**
Use of Spanish natural clays as additional silica sources to synthesize 13X zeolite from kaolin.—73-17068
**De Lucas, Antonio; Uguina, M. Angeles; Covian, Ignacio**
Synthesis of 13X zeolite from calcined kaolins and sodium silicate for use in detergents.—73-17028
**De Maat-Gersdorf, I.** See Gregorkiewicz, T.
**De Man, A. J. M.; Jacobs, W. P. J. H.; Gilson, J. P.; Van Santen, R. A.**
Modeling of structure and vibrational spectra of $AlPO_4$-5 and its silica analog SSZ-24.—73-12631
**De Man, A. J. M.; Ueda, S.; Annen, Michael J.; Davis, Mark E.; Van Santen, R. A.**
Stability and vibrational spectra of three-ring-containing zeolitic silica polymorphs.—73-12690
**De Man, A. J. M.; Van Santen, R. A.**
Relation between zeolite framework structure and vibrational spectra.—73-06278
**De Marchi, G.** See Battaglin, G.
**De Marco, M.; Wang, X. W.; Snyder, R. L.; Simmins, J.; Bayya, S.; White, M.**
Mossbauer and magnetization studies of nickel ferrites.—73-04628
**De Miranda-Neto, J. A.; Moraes, Fernando**
Vitreous $B_2O_3$: a geometrical study.—73-06304
**De Morais, M. M.** See Albertini, G.
**De Nivelle, M. J. M. E.; Gerritsma, G. J.; Rogalla, H.**
Thermally activated coherent vortex motion in $YBa_2Cu_3O_{7-\delta}$ thin-film microbridges.—73-15654
**De Oliveira, C. J.; De Paiva, J. A.; Barbosa, P. C.; Mendes, J.; De Oliveira, J. C. P.; Bezerra Sombra, A. Sergio**
Thermally stimulated depolarization current and Mossbauer spectroscopy of iron-doped niobophosphate glasses.—73-06979
**De Oliveira, J. C. P.** See De Oliveira, C. J.
**De Oliveira, J.** See Dos Santos, C. A.
**De Pablo, A.** See Balda, R.
**De Paiva, J. A.** See De Oliveira, C. J.
**De Riu, L.** See Geotti-Bianchini, F.
**De Rossi, Sergio** See Porta, P.
**De Roy, A.** See Moneyron, J. E.
**De Saint Romain, Pierre**
Inks for the marking or decoration of objects, such as ceramic objects.—73-03426
**De Schutter, F.** See Luyten, J.
**De Silva, P. S.; Glasser, Fredrick P.**
Phase relations in the system $CaO$-$Al_2O_3$-$SiO_2$-$H_2O$ relevant to metakaolin–calcium hydroxide hydration.—73-03516; Pozzolanic activation of metakaolin.—73-10089
**De Silvestri, Sandro** See Magni, Vittorio
**De Smet, D. J.** See Ord, J. L.
**De Vicente, I.; Callejas, P.; Rincon, J. M.**
Nucleation and crystallization mechanism of glasses obtained from Canarian basaltic rocks.—73-14444
**De Villiers, Patrick; Doyle, Richard A.; Gridin, Vladimir V.**
Superconducting fluctuations in the thermoelectric power and resistivity of Bi-based polycrystalline cuprates.—73-01674
**De Visser, A.** See Khokhlov, D. R.
**De Vita, Alessandro** See Kruse, Carsten
**De Vito, B.** See Beretka, Julius
**De Vos Burchart, Erik; Van Bekkum, Herman; Van der Graaf, Bastiaan; Vogt, E. T. C.**
Consistent molecular mechanics force field for aluminophosphates.—73-16426
**De Vos Burchart, Erik; Van Bekkum, Herman; Van der Graaf, Bastiaan**
Molecular mechanics study on the α-quartz/ß-quartz transition.—73-12632
**De Vries, K. J.** See Chen, C. S.
**De Vries, P.**
Concrete recycled.—73-13697
**De Waal, Henk** See Faber, Anne J.; Simons, D. R.; Wondergem-de Best, A.
**De Wames, R. E.** See Shin, S. H.; Williams, G. M.
**De Wijn, H. W.** See Van Wijk, R. J.; Woltgens, P. J. M.
**De With, G.** See Scholten, Huibert F.; Van Den Berg, P. H. J.; Willems, H. X.
**De With, G.**
How can we improve the (mechanical) reliability of ceramic components.—73-12326
**De Yoreo, J. J.; Woods, B. W.**
Residual stress and the stress-optic effect in mixed crystals of $K(D_xH_{1-x})_2PO_4$.—73-05627
**De, G.; Kundu, D.; Karmakar, B.; Ganguli, D.**
FTIR studies of gel to glass conversion in TEOS-fumed silica-derived gels.—73-03731
**De, G.; Kundu, D.; Karmakar, B.**
Transparent silica gel tubes by the sol-gel process.—73-03897
**De, S. S.; Ghosh, A. K.; Halder, J. C.; Bera, M.; Hazra, A. K.**
Temperature dependence of Auger lifetime in heavily doped $Hg_{1-x}Cd_xTe$.—73-11475
**De, U.** See Bandyopadhyay, S. K.
**Dean, B.** See Vydyanath, H. R.
**Dean, D. A.**
Consumer looks at the broader aspects of quality (from a packaging technologist's point of view).—73-06565
**Dearnaley, G.**
Bioapplications of diamondlike carbon [DLC] coatings.—73-13800
**Deb, Sugato** See Flaugher, Jeffrey R.
**DeBastiani, Duane L.** See Rancoule, Gilbert
**Debauche, C.; Devine, R. A. B.; Licoppe, C.; Flicstein, J.; Huet, F.**
Evidence for low-temperature uv annealing of uv CVD, PECVD, and [spin-on-glass] SOG-based $SiO_2$ films.—73-04098
**Debauche, C.; Licoppe, C.; Flicstein, J.; Devine, R. A. B.**
Paramagnetic defect analysis in uv-lamp-induced chemical vapor deposited a-$SiO_2$ films.—73-06170
**Debauche, C.; Licoppe, C.; Ossart, P.; Devine, R. A. B.; Rochet, F.**
Influence of pressure on nitrogen incorporation in ultraviolet chemical-vapor-deposited $SiO_2$ films.—73-13100
**DeBell, George C.; ABor, Richard L.; Stiles, Ernest D.**
Wrist pin having a ceramic composite core.—73-16024
**DeBellis, C. L.**
Evaluation of high-emittance coatings in a large industrial furnace.—73-07211
**Debenest, P.** See Mathiot, D.
**Debnam, W. J.** See Sorokach, S. E.
**Debnam, William J., Jr.** See Rosch, William R.
**Debray, P.** See Imbert, P.
**Debrie, R.** See Ketata, K.
**DebRoy, Tarasankar** See Banerjee, Aditi; Breval, E.; Venugopalan, Hari
**DebRoy, Tarasankar; Bandopadhyay, Amitava; Roy, Rustum**
Oxide matrix composite by directional oxidation of a commercial aluminum–magnesium alloy.—73-09535
**Dec, Steven F.** See Schwab, Stuart T.
**DeCarr, Sylvia M.** See Casey, Jon A.
**Decastro, S. C.** See Benvenutti, Edison V.
**Decca, R.; Isoardi, R.; De la Cruz, F.**
Linear field dependence of flux flow resistance in high-temperature superconductors.—73-04756
**Dechamps, M.** See Favrot, D.
**Decker, Raymond F.** See Movchan, Boris A.
**Deckman, Bruce W.**
Case for strategic partners in a high-tech industry.—73-09701; Worldwide advanced ceramics industry outlook for the '90s.—73-17514
**Dedov, N. V.** See Abzaev, Yu. A.
**Dedov, N. V.; Ivanov, Yu. F.; Dorda, F. A.**
Structural investigation of powders based on zirconium dioxide obtained by high-frequency plasmochemical denitration.—73-03199; Structural investigations of zirconia powders obtained by hf-plasmochemical denitration.—73-03200
**Dedyk, A. I.** See Borisovskii, K. E.
**Deen, M. J.** See Ma, C. L. F.
**Dees, Dennis W.** See Singh, Jitendra P.
**Defalque, Corinne** See Soria, Raymond
**Degiorgio, Vittorio** See Banfi, GianPiero
**Degiovanni, Alain** See Andre, Stephane
**Degnan, Thomas F.** See Apelian, Minas R.
**DeGroot, D. C.** See Neumayer, Deborah A.; Schulz, D. L.
**Deguchi, K.** See Itoh, K.; Ohno, Nobuhito; Sohn, S. H.
**Deguchi, M.** See Izumi, T.
**Deguchi, Masahiro** See Kitabatake, Makoto; Mori, Yusuki
**DeGuire, Mark R.; Philipp, Warren H.**
Guanidine oxalate: a new reagent for coprecipitation in the synthesis of multicomponent ceramics.—73-05837; Method for producing coprecipitated multicomponent oxide powder precursors using guanidine oxalate as precipitating agent.—73-05225; Method for producing coprecipitated multicomponent oxide powder precursors.—73-12380
**Dehaan, J. W.** See Van Hoek, J. A. M.
**Dehbi-Alaoui, A.** See Holiday, P.
**Dehoust, Jurgen** See Burckhardt, Hans-Georg
**Dehrlein, G. S.** See Haverlag, M.
**Deigraf, V. D.** See Bubelo, V. V.
**Deja, Jan** See Kurdowski, Wieslaw
**Dejneka, Matthew; Riman, Richard E.; Snitzer, Elias**
Sol-gel synthesis of high-quality heavy-metal fluoride glasses.—73-00703
**DeKay, Yvonne R.** See Holzl, Robert A.
**Dekempeneer, E.** See Smeets, J.
**Deki, Shigehito** See Goda, Takuji; Hashimoto, Noboru
**Deki, Shigehito; Nakamura, Shin-Ya; Kajinami, Akihiko; Kanaji, Y.; Mizuhata, M.**
Properties of $CaCl_2$ hydrate with an inorganic powder: I, Electrical conductivity of $CaCl_2{\cdot}nH_2O$ ($n$=6–7.35) with α-$Al_2O_3$ powder.—73-12867
**Dekker, C.** See Woltgens, P. J. M.
**Dekker, C.; Woltgens, P. J. M.; Koch, R. H.; Hussey, B. W.; Gupta, A.**
Absence of finite-temperature vortex-glass phase transition in 2-D $YBa_2Cu_3O_{7-\delta}$ films.—73-07983
**Dekker, J. P.** See Schoonman, J.
**Deklotz, Joe**
Machine vision can keep quality high and production lines moving.—73-12159; 73-15813
**DeKock, Joel A.; Chang, Y. Austin**
Stability of interfaces in high-temperature metal matrix composites.—73-06858
**Dekorsy, T.; Kutt, W.; Pfeifer, T.; Kurz, H.**
Coherent control of LO-phonon dynamics in opaque semiconductors by femtosecond laser pulses.—73-07416
**Dekoster, J.; Jedryka, E.; Meny, C.; Langouche, G.**
Epilayer-induced structural transition to bcc Co during epitaxial growth of Co/Fe superlattices.—73-16136
**Deksnys, A.** See Balchyunas, V.
**Del Arco, Margarita; Martin, Cristina; Rives, Vicente; Sanchez-Escribano, V.; Ramis, G.; Busca, Guido**
Surface structure and reactivity of molybdena-titania catalysts prepared by different methods.—73-12708
**Del Favero, N.** See Morterra, Claudio
**Del Pennino, U.** See Campano, R.
**Del Sole, R.** See Bechstedt, F.
**Delabouglise, G.** See Labeau, M.
**Delacarte, V.; Kahn-Harari, A.; Thery, J.**
Barium hexaaluminoferrites with new structural features.—73-01450
**Delafiguera, J.** See Alvarez, J.
**Delafond, J.** See Riviere, J. P.
**Delage, A.** See Fallahi, M.
**Delaney, Margaret L.** See Filippelli, Gabriel M.
**Delaye, J. M.; Limoge, Y.**
Molecular dynamics study of vacancy-like defects in a model glass: dynamical behavior and diffusion.—73-14043; Molecular dynamics study of vacancy-like defects in a model glass: static behavior.—73-14044; Simulation of vacancies in a glass by molecular dynamics.—73-06968
**Delaye, Philippe** See Sugg, B.
**Delaye, Philippe; Jarassiunas, Kestutis; Launay, Jean-Claude; Roosen, G.**
Picosecond investigation of photorefractive and free carrier gratings in GaAs:EL2 and CdTe:V.—73-07735
**Delaye, Phillipe** See Jarasiunas, Kestutis
**Delben, A.** See Messaddeq, Y.
**Delben, A.; Messaddeq, Y.; Caridade, M. D.; Aegerter, M. A.; Eiras, Jose Antonio**
Mechanical properties of ZBLAN glasses.—73-07048
**Delcher, Ray** See Darejeh, Hedi
**Delchev, N. A.** See Vulkov, V.
**Deleeuw, David C.; Lipowitz, Jonathan; Rabe, James A.**
Preparation of substantially polycrystalline silicon carbide fibers from methylpolydisilylazanes.—73-05326
**Delerue, C.** See Allan, G.; Lannoo, M.
**Delfino, M.** See Tsai, W.
**Delgado, J. C.** See Bertomeu, J.
**Della Corte, Christopher** See Farmer, S. C.
**Della Corte, Christopher; Pepper, S. V.; Honecy, Frank S.**
Solid lubricant for alumina.—73-13900
**Della Corte, Christopher**
Analysis of the wear behavior of SiC whisker-reinforced alumina from 25° to 1200°C.—73-09544
**Della Mea, Gianantonio; Rigato, V.; Dal Maschio, Roberto; Sighel, Corrado; Colombo, Paolo**
Electrically conducting $Pb_xO_y$-$SiO_2$ glass films deposited by reactive radio-frequency magnetron sputtering.—73-00959
**Della Ratta, Anthony D.** See Xu, Xin
**Della Valle, Francesco**
Innovative materials: an area of future competitiveness for Italy.—73-09722
**Dellalov, V. S.** See Grishin, A. M.
**Delmas, Jacques** See Autran, J. L.
**Delmastro, Alessandro; Gozzelino, Giuseppe; Mazza, Daniele; Vallino, M.; Busca, Guido; Lorenzelli, V.**
Characterization of microporous amorphous alumina–boria.—73-08570
**Delmon, B.** See Skaribas, Stellos P.
**Delmotte, L.** See Guth, J. L.; Hoffner, F. Marcucill; Merrouche, A.
**DeLoach, Laura D.; Payne, Stephen A.; Chase, L. L.; Smith, L. K.; Kway, W. L.; Krupke, W. F.**
Evaluation of absorption and emission properties of $Yb^{3+}$-doped crystals for laser applications.—73-16494
**Delort, M.** See Sprung, Siegbert
**DeLouise, L. A.**
Nitridation of GaAs(110) using energetic $N^+$ and $N_2^+$ ion beams.—73-04417
**Delsing, A.** See Tracholt, C.
**Deltour, R.** See Diko, Pave
**Deltour, Robert** See Diko, Pave
**Delvar, Gerard** See Iatrides, Jean-Yves
**Delvar, Gerard; Lalart, Denis; Piquet, Albert**
Combustion with pure oxygen at the Arques Glass and Crystal plants.—73-10510
**Delville, Alfred**
Structure and properties of confined liquids: a molecular model of the clay–water interface.—73-08974
**Delyi, Yu. V.; Koleda, V. V.; Malinin, V. G.**
Strengthening porous silicon nitride ceramics.—73-08543
**Dem'yanchenko, V. A.** See Kozakov, A. T.
**Dem'yanets, L. N.; Zvereva, O. V.; Mininzon, Yu. M.; Nikitenko, V. A.; Pruntsev, A. P.; Savikhina, T. I.**
Spectroscopy of gallium and aluminum orthophosphate single crystals.—73-16310
**Dema, Keh B.** See Chung, H. Young
**Demakopoulos, K.; Crouwell, J. H.**
Mycenaean pictorial pottery from the Argive Heraion.—73-09790
**Demazeau, Gerard** See Darracq, S.; Gonnet, V.
**Demazeau, Gerard; Fabritchnyi, F. B.; Fournes, L.; Presniakov, I. A.; Darracq, S.; Gorkov, V. P.**
Mossbauer spectrometry study of a compound of perovskite structure containing tetravalent iron by means of a dimagnetic $^{119}Sn^{4+}$ probe.—73-16222
**Demazeau, Gerard; Jung, Duk-Young; Sanchez, Jean-Pierre**
Ir(VI) stabilized in a perovskite-type lattice: $Ba_2CaIrO_6$.—73-08653
**Dembicki, Michael T.** See Poad, William J.

**Dembrovskii, S. A.** See Kozyukhin, S. A.
**Dembrovskii, S. A.; Koz'min, P. A.**
Gigantic lattices and gigantic noncrystalline clusters in glasses.—73-06921
**Dembrovskii, S. A.**
Clusters in the model of glass based on soft three-center bonds in a rigid covalent network.—73-13943
**Demcak, Peter** See Kostenska, Irena
**Demchuk, M. I.; Kaiosha, V. P.; Kuleshov, N. V.; Mikhailov, V. P.; Sandulenko, V. A.**
Radiative and nonradiative transitions from the $^1T_2$ upper excited state of the $Ni^{2+}$ ion in rare-earth garnet crystals.—73-02679
**Demczyk, Brian G.** See Narula, Chaitanya K.
**Demczyk, Brian G.**
Near-surface structure of molybdenum nitride catalysts as deduced by Fourier analysis of high-resolution transmission electron micrographs.—73-06263
**Demeester, P.** See Vermaerke, F.
**Demenet, J. L.** See Audurier, V.
**Demeshko, A. N.** See Balashov, Yu. S.
**Demetry, James D.** See Strock, Harold B.
**Demianiuk, M.** See Krevet, R.; Mac, W.; Twardowski, A.
**Demicheli, M. P.** See Tartarini, Giovanni
**Demidenko, A. A.** See Andrianova, L. K.
**Demidenko, L. M.; Demidova, Zh. N.; Ivanova, G. A.; Matsak, R. I.; Sokolov, M. I.; Suvorov, E. M.**
Taimyrsk graphites for producing periclase-carbon ladle refractories.—73-00875
**Demidov, A. I.** See Galitskii, I. N.
**Demidov, E. S.** See Galina, T. M.; Pavlov, P. V.
**Demidov, E. S.**
Polarization-induced transformation of ionization potentials of 3*d* ions into their impurity levels in diamond-type semiconductors.—73-15106
**Demidov, E. V.** See Aleshkin, V. Ya.
**Demidova, E. R.** See Aleshkin, V. Ya.
**Demidova, Zh. N.** See Demidenko, L. M.
**Demidovich, A. A.** See Bazylev, A. G.
**Demidovich, B. K.; Lebedkova, V. A.; Yakimovich, D. T.**
Rapid thermoprocessing methods used for fine-grained lime production.—73-13772
**Demina, N. V.** See Gostishchev, V. V.
**Demina, V. M.** See Khabibullaev, P. K.
**Demirci, M.** See Eroglu, S.
**Demishev, S. V.** See Brazhkin, V. V.
**Demishev, S. V.; Ishchenko, T. V.; Lyapin, A. G.; Pirogov, F. V.**
Nonequilibrium crystallization of noncrystalline solids: explosive crystallization modeling.—73-06945
**Demishev, S. V.; Kosichkin, Yu. V.; Lyapin, A. E.; Sluchanko, N. E.; Sharambeyan, M. S.**
Crystallization of metastable phases and superconductivity in amorphous GaSb.—73-14820
**Demishev, S. V.; Kosichkin, Yu. V.; Lyapin, A. G.; Melnik, N. N.; Nekhaev, D. V.; Sluchanko, N. E.**
Raman light scattering in a-GaSb.—73-15137
**Demiya, Mitsunori** See Yamashita, Hiroshi
**Demjaniuk, M.** See Bindilatti, V.
**Demkina, L. I.**
Contribution of sodium and potassium oxides to the optical constants and density of silicate glasses.—73-00443; 73-00444; Development of a system of computing refractive index, mean dispersion, and density of silicate optical glasses based on their composition.—73-00322; Improving the system of calculating the refractive index, the mean dispersion, and the density of silicate optical glasses on the basis of their composition.—73-00501; Optical constants and density of oxide elements of group II in the periodic system as components of silicate glasses.—73-14240; Refractive index, mean dispersion, and density of lead oxide in silicate glasses of ordinary systems.—73-00541
**Demouchy, G.** See Gomes, A. S. L.
**Demura, Katsunori** See Afridi, Musarrat Ullah Khan
**Den Exter, Marcel J.** See Geus, Edward R.
**Den Exter, Peter; Winnubst, Louis; Leuwerink, Theo H. P.; Burggraaf, Anthonie J.**
Effect of calcination on the sintering of gel-derived, zirconia-toughened alumina.—73-16724
**Denanot, M. F.** See Rabier, J.
**Denape, J.** See Guilmard, Y.
**Denape, J.; Marzinotto, A.; Petit, J. A.**
Roughness effect of silicon nitride sliding on steel under boundary lubrication.—73-17423
**DeNatale, Jeffrey D.; Flintoff, John F.; Harker, Alan B.; Hood, Patrick J.; Robinson, Gerald D.**
Nucleation control of diamond films by microlithographic patterning.—73-02119
**Denboer, M.** See Yang, X.-Q.
**Denecke, R.** See Zhang, X. D.
**Denes, G.** See Feldman, D.
**Denes, G.; Yu, Y. H.; Tyliszczak, T.; Hitchcock, A. P.**
Sn-*K*, Pb-$L_3$, and Ba-$L_3$ EXAFS, X-ray diffraction, and $^{119}Sn$ Mossbauer spectroscopic studies of ordered $PbSnF_4$ and $BaSnF_4$ fluoride ionic conductors with α-$PbSnF_4$ structure.—73-02434
**Denesuk, M.; Cronin, J. P.; Zelinski, B. J. J.; Kreidl, N. J.; Uhlmann, Donald R.**
Predictve modeling of liquids spreading on solid surfaces.—73-10470
**Deneuville, A.; Tanner, D. B.; Park, R. M.; Holloway, Paul H.**
Determination of the carrier concentration of doped ZnSe from infrared measurements.—73-01125
**Deng, D.-Q.** See Wu, Bai-Chang
**Deng, Hua** See Yang, Bei-Fang
**Deng, Ju** See Yang, Guan-Jun
**Deng, Ju-Nan** See Su, Mu-Zhen
**Deng, M.-X.** See Lin, Zu-Xiang
**Deng, Min; Han, S.-F.; Lu, Y.-M.; Lan, X.-H.; Hu, Y.-L.; Tang, Ming-Shu**
Deterioration of concrete structures due to alkali-dolomite reaction [ADR] in China.—73-13701
**Deng, Min; Tang, Ming-Shu**
Measures to inhibit alkali-dolomite reaction.—73-13750
**Deng, Pei-Zhen; Li, Rui-Hua; Gan, Fu-Xi**
Defects in nonoxide glasses.—73-13957
**Deng, Yong-Mei** See Xu, Zhong-Zi
**Deng, Yong-Qian** See Liu, Yu
**Deng, Zhong-Yan** See Liu, Ke-Zhong
**Deniard, P.** See Bestaoui, N.; Jobic, S.; Sourisseau, C.
**Denis, J. P.** See Balzaretti, N. M.; Wu, Xu
**Denisov, D. S.** See Abov, Yu. G.
**Denisov, I. P.** See Gritsenko, B. P.
**Denisova, T. A.** See Onorin, S. A.
**Denisyuk, I. A.** See Solov'ev, V. I.
**Denker, M.** See Hu, Y. Z.
**Denkewicz, Raymond P.** See Cooper, David A.
**Denning, D. J.** See Fitch, J. T.
**Dennis, B. S.** See Goni, A.; Pinczuk, A.
**Dennis, Mahlon D.** See Waldenstrom, Mats G.
**Dennis, P. F.; Freer, R.**
Oxygen self-diffusion in rutile under hydrothermal conditions.—73-09418
**Dennis, Roger D.; Killian, Michael L.; Larson, Jay M.; Narasimhan, Sundaram L.; Vukovich, Dennis T.; Wireman, Homer D.**
Hard surfacing material for engine components and method for depositing [the] same.—73-10314
**Dennis, T.** See Anderson, L. D.
**Denny, Patrick J.** See Baird, Thomas
**Dent, A. J.** See Houde-Walter, S. N.
**Dent, Andrew J.** See Turrillas, Xavier
**Denteneer, P. J. H.** See Kelires, P. C.
**Denton, D. D.** See Ghodssi, R.
**Denton, Dean A.**
Use of base-treated inorganic porous adsorbents for removal of contaminants.—73-05248
**Denton, G. J.** See Lovering, D. J.
**Denz, Cornelia** See Rauch, Torsten
**Deo, Goutam; Turek, Andrzej M.; Wachs, Israel E.; Huybrechts, D. R. C.; Jacobs, P. A.**
Characterization of titania silicalites.—73-08574
**Deol, R. S.** See Wang, J.
**Deol, R. S.; Hewak, D. W.; Jordery, Sophie; Jha, Animesh; Poulain, M.; Baro, M. D.**
Improved fluoride glasses for 1.3-μm optical amplifiers.—73-07037
**Deparis, C.** See Chen, Y.
**Depero, L. E.** See Zocchi, M.
**DePoorter, G. L.** See Mustoe, G. G. W.
**Deppe, D. G.** See Rogers, T. J.
**Deppe, W.**
New cement grinding plant at Dyckerhoff AG's Neubeckum plant.—73-03504
**Deptula, A.; Lada, W.; Olczak, T.**
Preparation of spherical powders of hydroxyapatite by sol-gel process.—73-13205
**Deraedt, W.** See Van Hove, M.
**Derbeeva, T. A.** See Boiko, R. M.
**Derbeneva, T. A.** See Boiko, R. M.
**Derby, Brian** See Ashcroft, I. A.; Ferro, Alberto C.; Qin, C. D.; Xiao, Ping
**Derderian, Garo J.; Barrie, James D.; Aitchison, Kenneth A.; Adams, Paul M.; Mecartney, Martha L.**
Microstructure/process relations in sol-gel-prepared $KNbO_3$ thin films on (100)MgO.—73-04560
**Derek, D. A.** See Markiewicz, D. J.
**Derep, J. L.; Beauprez, E.**
Transmission electron microscopy analysis of a $TiN_x$ substoichiometric CVD coating.—73-13461
**Derevianko, G. V.** See Koltun, P. S.
**Derevyanko, V. V.** See Anders, E. E.
**Derewinski, Miroslav; Peltre, Marie Jeanne; Briend, Marguerite; Barthomeuf, D.; Man, P. P.**
Solid-state transformation of SAPO-37 molecular sieve above 1100 K.—73-12686
**Dergunov, K. N.** See Kolomeitsev, V. V.
**Derkachenko, V. N.** See Troyanchuk, I. O.
**Derking, Anke** See Chen, Zhong-Xin
**Derleth, Helmut; Grosjean, Abel**
Process for the production of a microspheroidal powder of low dispersity.—73-05009
**Derlyukova, L. E.** See Ganin, V. V.
**Derlyukova, L. E.; Solov'eva, E. A.**
Interactions of a mixture of tin and antimony oxides with chlorine.—73-16183
**DeRose, J. A.; Lampner, D. B.; Lindsay, S. M.; Tao, N. J.**
Comparative scanning probe microscopy study of the surface morphology of Au films grown from the vapor onto glass, fused silica, and muscovite mica.—73-06201
**Deroy, G.** See Gillis-D'Hamers, Iwan
**Derrien, J.** See Chevrier, J.
**Derry, P. L.; Fu, R. J.; Hong, C. S.; Chan, E. Y.; Figueroa, L.**
Analysis of the high-temperature characteristics of InGaAs-AlGaAs strained quantum-well lasers.—73-07379
**Deryabin, V. A.**
Capillary stability of the particles of the primary gunite layer.—73-14576
**Deryabina, T. I.** See Zav'yalov, V. V.
**Deryagin, B. V.** See Lipson, A. G.
**Derzhavin, S. N.** See Glebov, L. B.
**Des Courieres, Thierry; Guth, Jean-Louis; Patarin, J.; Zivkov, Catherine**
Zeolite catalyst of hexagonal structure and its application.—73-05252
**Desalvo, R.** See Bolger, J. A.
**Desbrieres, J.**
Cement cake properties in static filtration—influence of polymeric additives on cement filter cake permeability.—73-00031
**Descamps, M.** See Thierry, B.
**Descemond, M.; Brodhag, C.; Thevenot, F.; Durand, Bernard; Jebrouni, M.; Roubin, Marc**
Characteristics and sintering behavior of 3 mol% $Y_2O_3$-$ZrO_2$ powders synthesized by reaction in molten salts.—73-02741
**Descemond, M.; Brodhag, C.; Thevenot, F.; Durand, Bernard; Roubin, Marc; Samdi, A.**
Influence of production conditions on the densification of zirconia powders obtained from acetates.—73-09175
**Deschanvres, J. L.** See Labeau, M.
**Deschka, S.; Nickel, Hubertus**
Thermal fatigue behavior of actively cooled divertor mockups with fiber composites as plasma interactive material.—73-05659
**Desgranges, Corinne** See Freund, Friedemann
**Desgranges, Lionel** See Freund, Friedemann
**Deshimaru, Yuichi; Otani, Tetsuya; Shimizu, Youichi; Miura, N.; Yamazoe, N.**
Oxygen sorption-desorption behavior and superconductivity of Bi-based oxide superconductor (2212 phase).—73-01626
**Deshkovets, A. V.** See Bobkova, N. M.
**Deshmukh, Shashank C.; Economou, Demetre J.**
Remote plasma-etching reactors: modeling and experiment.—73-12186
**Deshpande, Ravindra; Hua, Duen-Wu; Smith, Douglas M.**
Pore structure evolution in silica gel during aging/drying: III, Effects of surface tension.—73-10572
**Deshpandey, Chandra V.** See Yoon, Jong-S.
**Desikan, Anatha N.; Huang, Lily; Oyama, S. Ted**
Structure and dispersion of molybdenum oxide supported on alumina and titania.—73-08758
**Desmaison-Brut, M.** See Alexandre, N.
**Desnica, Dunja I.** See Desnica, U. V.
**Desnica, Dunja I.**
Characterization of deep traps in semiinsulating gallium arsenide.—73-14799
**Desnica, U. V.; Santic, B.; Desnica, Dunja I.; Pavlovic, M.**
Trapping and recombination processes via deep level $T_3$ in semiinsulating gallium arsenide.—73-04502
**Despetis, F.** See Pauthe, M.
**Desrousseaux, G.; Carlan, A.; Jiang, Z.**
Sticking coefficient variation during condensation of silver and gold on MgO film.—73-13901
**Desruisseaux, C.** See Maigne, P.
**Dessa, R. M.; Walyocsik, E. W.; Goeke, N. H.**
Aluminum zoning in ZSM-5 as revealed by selective silica removal.—73-12914
**Dessau, D. S.** See King, D. M.; Shen, Z.-X.
**Dessau, D. S.; Shen, Z.-X.; King, D. M.; Marshall, D. S.; Lombardo, L. W.; Dickinson, P. H.**
Key features in the measured band structure of $Bi_2Sr_2CaCu_2Cu_2O_{8+\delta}$: flat bands and Fermi surface nesting.—73-15527
**Dessau, D. S.; Shen, Z.-X.; Wells, B. O.; Spicer, W. E.; List, R. S.; Arko, A. J.**
Gold/high-temperature superconductor interface: metallicity of the near surface region and a search for the proximity effect.—73-01560
**Destefanis, G.** See Bouchut, P.
**Destefanis, G.; Chamonal, J. P.**
Large improvement in HgCdTe photovoltaic detector performances at LETI.—73-11290
**Destermes, J.** See Coupelle, Philippe
**Desu, Seshu B.** See Chiu, Chien-C.; Peng, Chien-H.; Si, Jie
**Desu, Seshu B.; Peng, Chien-H.; Shi, Tian**
Coating porous materials with metal oxides and other ceramics by MOCVD.—73-05208
**Detering, B. A.** See Einerson, C. J.
**Detinich, V. A.**
Dynamics of hydrogen-containing groups in structure of hydrosodalite.—73-02241
**Detkov, P. G.** See Gusev, A. N.
**Detwiler, Rachel J.** See Kjellsen, Knut O.
**Detwiler, Rachel J.; Fapohunda, Chris A.**
Comparison of two methods for measuring the chloride ion permeability of concrete.—73-09860
**Deubener, J.; Bruckner, Rolf; Hessenkemper, H.**
Surface crystallization kinetics of float glass.—73-14507
**Deubener, J.; Bruckner, Rolf; Sternitzke, Martin**
Induction time analysis of nucleation and crystal growth in di- and metasilicate glass.—73-06927
**Deuerler, Friederike** See Cook, Robert F.
**Deutscher, G.** See Barkay, Z.
**Deutz, J.** See Crucenau, E.
**Dev, A.**
Total quality management [TQM] at Saudi Ceramic Company.—73-08367
**DeValk, Jack**
Precontrol: implementation and effect on washer parameters.—73-13882
**DeVan, J. H.** See Lauf, R. J.
**Devaraj, N.** See Anavekar, R. V.
**Devaux, X.; Rousset, A.; Laurent, C.**
Chemical synthesis of metal nanoparticles dispersed in alumina.—73-13807
**Deve, Herve E.** See Wang, Hsin-Fu
**Deveau, M.** See Bryden, R. H.
**Develyn, M. P.** See Yang, Yuemei L.
**Devereux, O. F.** See Liang, S. X.
**Deverson, Robert**
Recharging ceramics.—73-10986
**Devi, G. Sarala; Roy, Sujit; Rao, V. J.**
Boron nitride thin films on Si(100) by MOCVD.—73-14786
**Devi, P. Sujatha; Rao, M. Subba**
Low-temperature preparation and characterization of pure-phase lanthanide chromates(V) by the citrate gels process.—73-05900
**Devi, P. Sujatha**
Citrate gel processing of the perovskite lanthanide chromites.—73-05707
**DeVier, B.** See Mallik, R. R.

**Devine, R. A. B.** See Debauche, C.; Herve, D.; Vallier, L.
**Devletian, J. H.** See Schwartz, D. S.
**Devlin, David J.** See Currier, Robert P.
**Devlin, David J.; Currier, Robert P.; Laia, Joseph R., Jr.; Barbero, Robert S.**
Chemical vapor infiltration using microwave energy.—73-04966
**Devon, A. K.; Lunt, Stephen G.**
Automated flatware production.—73-14325
**Devrajan, J.; Reddy, S. K.; Singh, R. N.**
Characterization of interfaces in nickel-matrix composites.—73-06745
**Devrajan, J.; Singh, R. N.**
Electrochemical processing of metal-matrix composites.—73-06779
**Devreese, J. T.** See Van Camp, P. E.
**Devries, K. J.** See Cao, Guo-Zhong
**Devyatykh, G. G.** See Bubnov, M. M.
**Dewaele, P. J.; Reardon, E. J.; Dayal, R.**
Permeability and porosity changes associated with cement grout carbonation.—73-00161
**DeWames, R. E.** See Bajaj, J.; Cheung, J. T.; Shin, S. H.
**Dewan, H. S.** See Mathis, M. D.; Roy, Rustum
**Dewey, C. F.** See Becla, P.; Scharpf, William J., Jr.
**Dewilde, L.** See Smeets, J.
**Dewing, John** See Ojo, Adeola F.
**Dexpert, H.** See Ouvrard, G.
**Dexpert-Ghys, J.** See Ribeiro, S. J. L.; Rossignol, S.; Santa-Cruz, P.
**Dey, G. K.** See Upadhyaya, D. D.
**Dey, N.; Socie, Darrell F.**
Tensile creep behavior of alumina under static and cyclic loading.—73-17441
**Dey, S. D.** See Rajasekar, P.
**Dey, S.K.; Barlingay, C. K.; Lee, J. J.; Gloerstad, T. K.; Suchicital, C. T. A.**
Advances in processing and properties of perovskite thin films for FRAM's, DRAM's, and decoupling capacitors.—73-11553
**Dey, Soumya; Shetty, Dinesh K.**
Processing and characterization of alumina (platelet)-reinforced Y-TZP (matrix) composites.—73-09500
**Dhalenne, Guy** See Dravid, Vinayak P.
**Dhami, G. S.** See Kharat, D. K.
**Dhanaraj, G.** See Sekar, M. M. A.
**Dhar, Ajay; Mansingh, Abhai**
Correlation between optical and electrical properties in reduced lithium niobate crystals.—73-01396
**Dhar, N. K.** See Benson, J. David
**Dhar, S. K.** See Mazumdar, Chandan
**Dhara, Sandip; Rastogi, A. C.; Das, B. K.**
Direct deposition of highly coercive gamma iron oxide thin films for magnetic recording.—73-12991
**Dharani, L. R.** See Hong, W.
**Dharani, L. R.; Carroll, D. R.; Haug, S. B.; Goethe, J. E.; Laws, A. D.; Raj, P.**
Microcracking stress and transverse properties of hybrid ceramic matrix composites.—73-17398
**Dharmadhikari, Vineet S.**
Statistical approach to parameter study of stress in multilayer films of phosphosilicate glass and silicon nitride.—73-03354
**Dhas, N. Arul; Patil, Kashinath C.**
Combustion synthesis and properties of fine-particle rare-earth-metal zirconates, $Ln_2Zr_2O_7$.—73-16677; Properties of magnesia-stabilized zirconia powders prepared by a combustion route.—73-17184
**Dhere, R. G.** See Abou-Elfotouh, Fouad A.; Qu, Y.
**Dhir, R. K.; Byars, E. A.**
PFA [pulverized fly ash] concrete: permeation properties of cover to steel reinforcement.—73-06694
**Dhir, R. K.; Jones, M. R.; Elghaly, A. E.**
PFA [pulverized fuel ash] concrete: exposure temperature effects on chloride diffusion.—73-13759
**Dhir, R. K.; Jones, M. R.; Seneviratne, A. M. G.**
Diffusion of chlorides into concrete—influence of PFA [pulverized fuel ash] quality.—73-00064
**Dhzumaev, B. R.** See Baidullaeva, A.
**Di Bartolo, B.** See Zhang, X. X.
**Di Caprio, Ninina Cuomo; Vaughan, Sarah**
Experimental study in distinguishing grog (chamotte) from argillaceous inclusions in ceramic thin sections.—73-09783
**Di Carlo, D. A.** See Maher, M. P.
**Di Carlo, J. A.** See Manghnani, M. H.; Morscher, Gregory N.
**Di Cecca, S.** See Goodhue, W. D.
**Di Chiara, A.** See Andreone, A.
**Di Chirico, Giuseppe; Rossi, Raffaele**
Holographic evaluation of elastic constants.—73-15803
**Di Giampaolo, Ana Rita** See Castell, Ricardo; Lira, Joaquin
**Di Giulio, Massimo; Manno, Daniela; Nicotra, Maria Concetta; Re, Marilena**
Structural and morphological analysis of reactively sputtered tellurium suboxide thin films.—73-03196
**Di Marco, M.; Swanson, J. G.**
Temperature effects in GaAs OEMS [optoelectronic modulation spectroscopy] spectra.—73-15201
**Di Nola, Patrizia** See Morazzoni, Franca
**Di Nola, Patrizia; Morazzoni, France; Scotti, Roberto; Narducci, D.**
Paramagnetic point defects in $SnO_2$ and their reactivity with the surrounding gases—interaction of oxygen lattice centers with vapor-phase $H_2O_2$, air, inert and combustile gases, as revealed by EPR spectroscopy.—73-13360
**Di Pietro, E.; Ferro, C.; Libera, S.; Orsini, A.; Sacchetti, M.**
Applications of advanced materials for the manufacturing of components of experimental devices for controlled nuclear fusion research.—73-08283
**Di, Y. D.** See Golz, John W.
**Diamandescue, L.; Tarina, D.; Aldica, G.**
High-$T_c$ superconducting phases in the system $^{57}Fe_{0.05}$:$Bi_{1.7-x}Pb_{0.4}Sr_{1.5}Ca_{2.5}Cu_{3.4}O_z$ studied by Mossbauer spectroscopy.—73-15500
**Diamon, Masaki** See Tsurumi, Takaaki
**Diamond, Sidney** See Bonen, David; Cong, Xian-Dong; Mindess, Sidney; Olek, Jan; Ong, Shaode
**Diamond, Sidney; Bonen, David**
Microstructure of hardened cement paste—a new interpretation.—73-00144
**Diamond, Sidney; Mindess, Sidney**
SEM investigations of fracture surfaces using stereo pairs: I, Fracture surfaces of rock and of cement paste.—73-03536
**Diamond, Sidney; Ong, Shaode**
Combined effects of alkali-silica reaction [ASR] and secondary ettringite deposition [SED] in steam-cured mortars.—73-09858
**Dianov, E. M.** See Biriukov, A. S.; Bubnov, M. M.
**Dianov, E. M.; Koryakovskii, A. S.; Lebedev, V. F.; Marchenko, V. M.; Prokhorov, A. M.**
Laser aerosol deposition of porous and transparent silica glasses.—73-14416
**DiAntonio, P.** See Toulouse, J.
**Diao, Xiao-Xue; Xing, Xiu-San**
Statistical theory of ceramic damage and fracture.—73-09674
**Dias, C. J.; Das-Gupta, D. K.**
Hysteresis measurements on ferroelectric composites.—73-11585
**Dias, W. P. S.**
Properties of hardened cement paste and reinforcing bars upon cooling from elevated temperatures.—73-13769
**Diawara, Y.** See Chaker, M.; Jean, A.
**Diaz Mora, Nora; Ziemath, Ervino Carlos; Dutra Zanotto, Edgar**
Heterogeneous crystallization in cordierite glasses.—73-14000
**Diaz, A.** See Cabeza, O.
**Diaz, C.** See Rincon, J. M.
**Diaz, C.; Torres-Martinez L. M.; Garza, L.; Avalos-Borja, M.; Rincon, J. M.**
Turning geothermal waste into glasses and glass-ceramics.—73-01999
**Diaz, R.; Leon, M.**
Band gap and band levels of Cu-In-Se-Te thin-film compounds.—73-04252
**Diaz-Aguila, C.** See De las Pozas-Del Rio, C.
**Diaz-Garcia, M. A.** See Olivares, J.
**Dibbits, Theo**
Air compressors for the process industries.—73-04899
**Dibello, G. W.** See Cuomo, Jerome J.
**DiCarlo, J. A.** See Hilmas, G. E.; Yun, H. M.
**DiCarlo, J.** See Bularzik, J.
**Dickens, P. G.** See Chippindale, A. M.; Patat, S.
**Dickens, P. G.; Powell, A. V.**
Structure of the insertion compound $Li_{0.88}U_3O_8$ by powder neutron diffraction.—73-02465
**Dickenson, Peter**
Industrial R&D on advanced materials in the CIS.—73-17488
**Dickenson, R. P.; Hill, M. R.**
Review of recent research [1982-1992] in the former Soviet Union on fibrous composites.—73-09748
**Dickerson, Robert M.; Laraia, Vincent J.; Heuer, Arthur H.**
Precipitate coarsening by liquid film migration in (Mg,Ca)-PSZ's.—73-17183
**Dickin, Peter**
CADCAM at Wedgwood.—73-03421
**Dickinson, Gordon**
Mexican success with regenerative ceramic burners.—73-12230; Regenerative burners and the glass industry.—73-08484
**Dickinson, J. T.** See Webb, R. L.
**Dickinson, J. T.; Jensen, L. C.; Webb, R. L.; Dawes, M. L.; Langford, S. C.**
Interactions of wide-band-gap single crystals with 248-nm excimer laser radiation: III, The role of cleavage-induced defects in MgO.—73-09412
**Dickinson, J. T.; Langford, S. C.; Jensen, L. C.**
Dissipative process accompanying fracture.—73-06374
**Dickinson, James E.** See Quinn, Candace J.
**Dickinson, James E.; Aitken, Bruce G.; Ponader, Carl W.; Boek, Heather**
Structure of alkali and alkaline-earth zinc tellurite glasses.—73-14105
**Dickinson, M. R.** See MacGill, R. A.
**Dickinson, P. H.** See Dessau, D. S.
**Dickson, J. A. D.**
Crystal growth diagrams as an aid to interpreting the fabrics of calcite aggregates.—73-12558
**Didenkulova, I. I.** See Perepletchikov, M. L.
**Didier, F.** See Creuzet, F.
**Didik, V. A.** See Mokhov, E. N.
**Didik, V. A.; Kozlovskii, V. V.; Malkovich, R. Sh.; Skoryatina, E. A.**
Profiles of isotopes in III-V semiconductor compounds formed as a result of bombardment with high-energy α particles.—73-15119; Profiles of the isotopes formed in GaAs by bombarding it with α particles of energies of 12, 16, and 20 MeV.—73-15120
**Dieckmann, Rudiger** See Solmon, Helene; Subramanian, Ramesh; Tinkler, S.; Ustundag, E.
**Dieckmann, Rudiger; Sass, S. L.**
In situ formation of metal-ceramic oxide microstructures.—73-00283
**Dieckmann, Rudiger**
Transition metal oxide–platinum alloy phase equilibria and their consequences for nonstoichiometry measurements.—73-02530
**Diego, J. A.** See Baro, M. D.
**Dieguez, E.** See Sochinskii, N. V.
**Dieker, C.** See Forster, A.
**Diekmann, R.** See Subramanian, Ramesh
**Dietl, Steffen**
Method of joining corrugated glass plates of borosilicate glass.—73-03947
**Dietrich, Eckhard** See Beister, Gunter
**Dietrich, H. B.** See Molnar, B.; Vellanki, Jayadev
**Dietrich, H.** See Gonczy, Stephen T.; Tadayon, Bijan
**Dietrich, Rainer** See Trigg, Mark B.
**Dietrichs, P.**
Ceramic linings for waste incinerators: I.—73-00784
**Dietsche, W.** See Wang, H. S.
**Dietz, E.** See Ratz, S.; Schroeder, N.
**Dietz, N. L.** See Ebert, W. L.
**Dietzel, Adolf**
Effect of PbO on some properties, especially light scattering, of glasses with mixed alkalis.—73-10432
**Difoitepoisson, M. A.** See Pinkse, P. W. H.
**DiGiovanni, A.** See Asaro, R. J; Dai, Xun-Hu
**DiGiovanni, David J.; Krol, Denise M.; Varma, Chandra M.**
Resonantly enhanced optical second harmonic generator.—73-00583
**Digiulio, M.** See Lomascolo, M.
**DiGregorio, J. F.; Furtak, T. E.**
Characterization of SiC whiskers through infrared absorption spectroscopy.—73-08818
**Diikov, A. L.** See Mashkov, V. A.
**Dikarev, E. V.** See Shevelkov, A. V.
**Diko, Pave; Duvigneaud, Paul-H.; Lanckbeen, Alain; Van Moer, Andre; Naessens, Georges; Deltour, Robert**
Influence of iron doping on the microstructure of $YBa_2(Cu_{1-x}Fe_x)_3O_{7-\delta}$ ceramics.—73-01576
**Diko, Pave; Ye, M.; Mehbod, M.; Deltour, Robert; Deltour, R.**
Microstructure and cracking in pure and substituted $YBa_2Cu_3O_{7-\delta}$.—73-03167
**Dikonimos-Makris, T.** See Borsella, E.
**Dillaman, Larry; Carle, Richard C.**
How to replace a complex control system with minimum production interruption.—73-07140
**Dillich, Sara**
U.S. Bureau of Mines—open industry briefing on engineered materials research.—73-17510
**Dillingham, T. R.** See Hong, Y.
**DiMaria, D. J.** See Marwick, A. D.
**DiMaria, D. J.; Cartier, E.; Arnold, D.**
Impact ionization, degradation, and breakdown in $SiO_2$.—73-06161
**Dimarzio, D.** See Fanning, T.
**DiMeo, F., Jr.** See Chen, J.
**Dimesso, Lucangelo** See Tampieri, Anna
**Dimingo, M. T.; Birkby, I.; Barnes, P.**
Fabrication of high-strength Y-TZP components by slip casting.—73-02825
**Dimitriev, Y.; Gattef, E.; Kashchieva, E. P.; Staneva, A.; Vlakhov, E.**
High-$T_c$ superconducting glass-ceramics prepared by melt-quenching methods in the bismuthate system with additives.—73-15499
**Dimitriev, Y.; Klissurski, D.; Iordanova, R.**
Glass formation in $V_2O_5$-$MoO_3$-$Fe_2O_3$.—73-10380
**Dimitriev, Y.; Mihailova, V.; Gattef, E.**
X-ray diffraction study of $TiO_2$-PbO glasses.—73-10415
**Dimitriev, Y.; Mihailova, V.**
Infrared spectral investigation of bismuthate glasses.—73-14011
**Dimitrijevic, R.; Dondur, V.; Petranovic, N.**
High-temperature synthesis of $CsAlSiO_4$-ANA, a new polymorph in the system $Cs_2O$-$Al_2O_3$-$SiO_2$: I, The end member of ANA type of zeolite framework.—73-02284
**Dimitrijevic, S. T.** See Vilotijevic, M.
**Dimitrov, D. B.; Paskaleva, A.; Dimitrova, T.**
Radiation effects on wet and dry oxide metal-oxide-semiconductor devices.—73-01294
**Dimitrov, D.** See Georgieva, I.
**Dimitrov, Vesselin V.; Kim, Sae-Hoon; Yoko, Toshinobu; Sakka, Sumio**
Third harmonic generation in $PbO$-$SiO_2$ and $PbO$-$B_2O_3$ glasses.—73-03816; 73-10490
**Dimitrova, O. V.** See Simonov, M. A.; Yakubovich, O. V.
**Dimitrova, T.** See Dimitrov, D. B.
**Dimitruk, N. L.** See Breza, Yu.
**Dimm, Ted**
Cost of ownership drives flow meter evolution.—73-05033
**Dimos, Duane** See Chaudhari, Praveen; Garg, Diwakar; Seager, C. H.; Warren, W. L.
**Dimos, Duane; Schwartz, Robert W.; Lockwood, Steven J.**
Control of leakage resistance in $Pb(Zr,Ti)O_3$ thin films by donor doping.—73-16430
**Din, Z.-Y.** See Wang, W.
**Dinan, J. H.** See Benson, J. David
**DiNardo, N. J.** See Heskett, D.
**Dinca, Viorica** See Frunza, Ligia
**Dinescu, Maria; Chitica, N.; Timus, Clementina; Mihailescu, I. N.; Andrei, A.; Maiello, Gabriella**
Evidence of refractive index change by Ti indiffusion into $LiNbO_3$ substrate as a result of multipulse free-running ruby laser irradiation.—73-08866
**Ding, B.-Z.** See Liu, X. D.
**Ding, Feng** See Yu, Yun-Lin
**Ding, J.; Jenq, J.-S.; Kim, G. H.; Maynard, H. L.; Hamers, J. S.; Hershkowitz, N.**
Etching rate characterization of $SiO_2$ and Si using ion energy flux and atomic fluorine density in a $CF_4/O_2/Ar$ electron cyclotron resonance plasma.—73-09121
**Ding, J.; Jeon, H.; Ishihara, T.; Hagerott, M.; Nurmikko, A. V.; Luo, H.**
Exciton gain and laser emission in ZnSe-based quantum wells.—73-07517
**Ding, Jow-Lian; Liu, Kenneth C.; Brinkman, Charles R.**
Comparative study of existing and newly proposed models for creep deformation and life prediction of $Si_3N_4$.—73-17250
**Ding, Jow-Lian; Liu, Kenneth C.; More, Karren L.; Brinkman, Charles R.**
Creep and creep rupture of an advanced silicon nitride ceramic.—73-09559

**Ding, Lan-Ying** See Ren, Quan
**Ding, M. L.** See Mazzullo, Jim
**Ding, M.-Q.; Zhang, T.; Huang, J.; Wang, X.-D.; Qian, F.**
Preparation and characterization of $YBa_2Cu_3O_{7-x}$ high-$T_c$ superconducting thin films deposited by S-gun sputtering.—73-08173
**Ding, Maynard** See McMahon, Arlene
**Ding, Shi-Ying** See Zeng, Zhao-Yang
**Ding, Song-Jun** See Cao, Xiao-An
**Ding, Wei** See Gong, Luo-Shu; Liu, Qi
**Ding, X.-Z.** See Gong, H.; Oh, K.-H.
**Ding, Xue-Zhou** See Zhang, Zhi-Guo
**Ding, Y.** See Eichler, H. J.
**Ding, Y.-F.** See Zhang, Xiao-Dong
**Ding, Y.; Roziere, J.; Jones, D.**
Polynuclear hydroxy metal cations pillared zirconium phosphates and their proton conductivity.—73-12863
**Ding, Yi; Liu, Wan-Yu; Yu, Wen-Hai**
Structural study on the composite: mordenite with inorganic salt.—73-02455
**Ding, Yong; Miura, Yoshinari; Osaka, Akiyoshi**
Polar-oriented crystallization of fresnoite ($Ba_2TiSi_2O_8$) on glass surface due to ultrasonic treatment with suspensions.—73-14072
**Ding, Yong; Osaka, Akiyoshi; Miura, Yoshinari**
Enhanced surface crystallization of ß-barium borate [BBO] on glass due to ultrasonic treatment.—73-03839
**Ding, Zhen-Ya; Huang, Yi-Bin; Fang, Chen-Ping**
Glass-ceramics of the system $BaO-B_2O_3-SiO_2$.—73-14398
**Ding, Zi-Shang** See Shen, Zhi-Jian; Xu, Yu-Qing
**Dinger, Dennis R.** See Funk, James E.
**Dinger, Dennis R.; Funk, James E.**
Particle packing: II[A], Review of packing of polydisperse particle systems.—73-10878; Particle packing: II[B]: Review of packing of polydisperse particle systems.—73-10877; Particle packing: III, Discrete versus continuous particle sizes.—73-10879; Particle packing: IV, Computer modeling of particle packing phenomena.—73-16896
**Dinges, H. W.; Burkhard, H.; Losch, R.; Nickel, Hubertus; Schlapp, W.**
Spectroscopic ellipsometry: a useful tool to determine the refractive indices and interfaces of $In_{0.52}Al_{0.48}As$ and $In_{0.53}Al_xGa_{0.47-x}As$ on InP in the wavelength range from 280 to 1900 nm.—73-15172
**Dinh, L.** See Voillot, F.
**Dinsmoor, Anastasia N.**
Red-figured pottery from Samothrace.—73-09793
**Dinulescu, M.** See Muntean, Marcela
**Dion, M.** See McGreer, K. A.
**Dionisio, P. H.** See Soares, M. R.
**Dionne, Gerald F.; Allen, Gary A.**
Spectral orgins of giant Faraday rotation and ellipticity in Bi-substituted magnetic garnets.—73-04653
**Dionne, S.; Popescu, M.; Lo, S. H. J.; Goodwin, F.**
Tensile properties of cold-chamber die-cast ceramic particulate-reinforced ZA-8 composites.—73-06863
**Dip, A.; Eldallal, G. M.; Colter, P. C.; Bedair, Salah M.**
Atomic layer epitaxy of AlAs and $Al_xGa_{1-x}As$ for device application.—73-04247
**Dire, S.** See Babonneau, Florence
**Dire, S.; Babonneau, Florence; Carturan, G.**
Synthesis and characterization of siloxane-titania materials.—73-13292
**Dirksen, G. J.; Blasse, G.**
Luminescence in the pentaborate $LiBa_2B_5O_{10}$.—73-02630
**Dirkx, Ryan** See Gitlitz, Mel H.
**Disam, J.; Lubbers, K.; Neudert, U.; Sickinger, A.**
Effect of spraying parameters of the LPPS [low-pressure plasma spraying] method on the structure of ceramic coatings.—73-09098
**Disdier, Laurent; Roosen, G.**
Nanosecond four-wave mixing in semiinsulating GaAs.—73-00998
**Dishman, Karla L.; Doolin, Patricia K.; Hoffman, James F.**
Comparison of particle size of cracking catalyst determined by laser light scattering and dry sieve methods.—73-08383
**Dislich, Helmut** See Hinz, Paul
**Dislich, Helmut; Hinz, Paul; Arfsten, N. J.; Hussmann, E.**
Sol-gel coating products.—73-14494
**Dismukes, John P.** See Spear, Karl E.
**Dispenziere, Nicholas C.** See Saleh, Ramzi Y.
**Dissanayake, A.** See Lin, J. Y.
**Dissanayake, M. A. K. L.** See Lunden, A.
**Dissanayake, M. A. K. L.; Careem, M. A.; Bandaranayake, P. W. S. K.; Wijayasekera, C. N.**
Ionic conductivity of solid solutions of $\alpha$-$Li_2SO_4$ with $Li_2WO_4$: strong evidence for the paddle wheel mechanism of ion transport.—73-00988
**Dissel, M.** See Keulen, N. M.
**Disson, J. P.; Bachelard, Roland**
AlN powders for electronic substrates: relations between properties and synthesis.—73-00934
**Ditali, Akram** See Mathews, Viju K.
**Ditizio, R. A.** See Awadelkarim, O. O.; Gu, Tieer
**Ditrapani, P.** See Banfi, GianPiero; Danielius, R.
**Ditrikh, I. V.; Nakhodnova, A. P.; Sukhorukova, N. E.; Gonchar, N. P.**
Indium vanadates of sodium and cesium, their physical-chemical properties.—73-16173
**Dittmar, G.; Offermann, V.; Pohlen, M.; Grosse, P.**
Extension of spectroscopic ellipsometry to the far infrared.—73-12138
**Ditz, Hermann** See Paschke, Hartmut
**Divecha, Amarnath P.; Kerr, James M.**
Superconducting fibers made with yttrium and yttrium oxide interlayers and barium cuprate cover layers.—73-04876
**Divis, M.** See Muzichka, Y. U.
**DiVito, M. P.** See Feder, M. S.
**Dixon, A. G.** See Morris, M.
**Dixon, D.**
Temperature measurement in the glass industry using radiation thermometers.—73-01832
**Dixon, J. B.** See White, G. Norman
**Dixon, James** See Griffith, Trevor R.
**Dizhur, E. M.; Voronovskii, A. N.; Itskevich, E. S.**
Oscillations of the tunnel conductance of an *n*-GaAs:Te/Au junction with a Schottky barrier.—73-07707
**Dizio, Steven F.** See Newkirk, Marc S.
**Djahazi, M.** See Akmoulin, I. A.
**Djahli, F.** See Autran, J. L.
**Djamin, M.** See Zegadi, A.
**Djega-Mariadassou, G.** See Shin, C. H.
**Djemel, A.; Castaing, Jacques; Chevallier, J.; Henoc, P.**
Hydrogenation of GaAs covered by GaAlAs and subgrain boundary passivation.—73-11255
**Djessas, K.** See Masse, G.
**Djessas, K.; Masse, G.**
Characterization of $Cu(Ga, In)Se_2$ thin films and heterojunctions grown by close-spaced vapor transport.—73-16668
**Djousdi, M. A.** See Sahli, S.
**Djuric, Mirjana; Ranogajec, Jonjaua; Neducin, Radmila M.**
Presentation of two-dimensional property function for ceramic floor tiles.—73-10885
**Djuric, Mirjana; Ranogajec, Jonjaua; Zavargo, Z.**
Mathematical model of one-dimensional heating and cooling of flat ceramic bodies inside the tunnel kiln.—73-02890
**Djuric, Mirjana; Tot, Ferenc**
Calculation of optimal mixtures for frit production.—73-15708
**Djuricic, B.; McGarry, D.; Pickering, S.**
Preparation of ultrafine ceria-stabilized zirconia particles coated with yttria.—73-09272
**Dlugon, E.** See Stoch, A.
**Dmitriev, A. G.** See Dzhumamukhambetov, N. G.
**Dmitriev, A. G.; Dorin, V. A.; Karful, R.; Pogarskii, M. A.; Shulga, M. I.**
Formation of deep centers in GaAs by laser irradiation.—73-07536
**Dmitriev, A. G.**
Solid-phase decomposition of GaAs as a result of laser bombardment at threshold density.—73-15165
**Dmitriev, A. V.; Zolotukhina, L. V.; Zyabnev, A. M.**
Nature of paramagnetic centers in cadmium borate glasses.—73-00378; Nature of paramagnetic centers in cadmium borate glasses.—73-00379
**Dmitriev, S. G.** See Borisov, V. I.
**Dmitriev, V. A.** See Ognev, A. N.; Vassilevski, K. V.
**Dmitrieva, M. T.** See Bolotina, N. B.
**Dmitrieva, T. V.** See Lyubutin, I. S.
**Dmitrikova, E. Yu.; Lobanov, A. V.; Mikhailov, M. D.; Turkina, E. Yu.**
Thermoplastic low-melting glasses in the system Se-Te-I and their properties.—73-14520
**Dmitruk, N. L.** See Basyuk, E. V.; Bobiitskii, Ya. V; Borkovskaya, O. Yu.; Venger, E. F.
**Dmitryuk, A. V.** See Syutkin, V. M.
**Dmowski, L. H.** See Baj, M.
**Dmytriv, G. S.** See Pavlyuk, V. V.
**Do Nascimento, George C.** See Engelsberg, M.
**Do, Duong D.** See Jordi, Robin G.
**Do, Duong D.; Jordi, Robin G.; Ruthven, Douglas**
Sorption kinetics in zeolite crystals with finite intracrystal mass exchange: isothermal systems.—73-12880
**Doan, Trung T.** See Kim, Sung C.; Sandhu, Gurtej S.
**Dobaczewski, L.; Kaczor, D.; Missous, M.; Peaker, A. R.; Zytkiewicz, Z. R.**
Evidence for substitutional-interstitial defect motion leading to DX behavior by donors in $Al_xGa_{1-x}As$.—73-07512
**Dobbyn, Ronald C.** See Steiner, Bruce
**Dobisz, E. A.** See Eddy, C. R., Jr.; McGuire, G. E.
**Dobisz, E. A.; Marrian, C. R. K.; Shirey, L. M.; Ancona, M.**
Thin silicon nitride films for reduction of linewidth and proximity effects in electron-beam lithography.—73-15207
**Dobkin, Daniel M.** See Hitchens, William R.
**Doble, J. B.** See Pitkethly, M. J.
**Dobler, U.** See Paloura, E. C.
**Dobreva, A.** See Gutzow, I.
**Dobreva, A.; Gutzow, I.**
Activity of substrates in the catalyzed nucleation of glass-forming melts: I, Theory.—73-07104; Activity of substrates in the catalyzed nucleation of glass-forming melts: II, Experimental evidence.—73-07105; Structural aspects of the rheology of glass-forming melts.—73-14088
**Dobreva, A.**
Nonisothermal differential scanning calorimetry technique for studying crystallization in glass-forming melts.—73-14054
**Dobromyslov, P. A.** See Gamants, E. M.
**Dobrovol'skii, V. D.** See Danilenko, N. V.
**Dobrovolskaya, A. M.** See Freik, D. M.
**Dobrowolska, M.** See Hu, B.; Luo, H.; Meyer, J. R.
**Dobry, A.; Greco, A.; Migoni, R.; Stachiotti, M.**
Cu charge fluctuations and anomalous behavior in the phonon spectrum of $La_2CuO_4$.—73-08594
**Dobson, Christopher M.** See Brough, Adrian R.
**Dobychin, D. P.** See Burkat, T. M.
**Docktor, Thomas; Weymouth, Paul; Barson, Todd**
Proper techniques for the ball milling of ceramic glazes.—73-04944
**Docter, D. P.; Claisse, P. R.; Taylor, G. W.**
Strained layer [SL] single quantum well [SQW] double heterostructure optoelectronic switching laser.—73-11456
**Dodabalapur, A.; Chang, T. Y.; Chandrasekhar, S.**
Growth and characterization of novel multilayer heterostructures for the monolithic integration of resonant cavity photodiodes and heterojunction bipolar transistors.—73-11225
**Dodabalapur, A.; Chang, T. Y.**
Comparison of *pnp* and *npn* InGaAlAs/InGaAs heterojunction bipolar transistors [HBT's].—73-11112
**Dodd, P.** See Asatsuma, T.
**Doddato, Carmine M.** See Koradia, Pramod B.
**Dodge, J. A.** See Chandra, D.
**Dodge, J. S.** See Spielman, S.
**Dodier, J.** See Jean, A.
**Dodokin, A. P.** See Bagdasarov, Kh. S.
**Dodson, James D.** See Rose, Malcolm F., Jr.
**Dodsworth, John**
Technical ceramics for refractory applications.—73-04021
**Dody, J.** See Colavito, D.
**Dody, Julie A.** See Damiano, J.; Rumpeltin, Charles R.
**Doele, B. A.** See Waite, M. M.
**Doering, D. L.** See Carroll, D. L.; Xiong-Skiba, P.
**Doerr, Dave** See Johs, Blaine
**Doerr, H. J.** See Cha, Y. H. C.
**Doesburg, E. B. M.** See Mercera, P. D. L.
**Dogo, S.; Germain, J.-P.; Maleysson, C.; Pauly, A.**
Interaction of $NO_2$ with copper phthalocyanine thin films: I, Characterization of the copper phthalocyanine films.—73-13405; Interaction of $NO_2$ with copper phthalocyanine thin films: II, Application to gas sensing.—73-12821
**Dohler, G. H.** See Agullo-Rueda, F.
**Dohnalek, J.** See Balek, V.
**Doi, A.; Fusayama, K.; Ishikawa, T.**
Ac field-induced silver injection into soda lime silicate glasses.—73-00931
**Doi, Akira** See Kobayashi, Naoya
**Doi, Kenji** See Yamana, Kazuo
**Doi, Minoru** See Nakabayashi, H.
**Doi, Minoru; Miyazaki, Toru**
Spinodal decomposition in zirconia–yttria ($ZrO_2$-$Y_2O_3$) alloys.—73-08739
**Doi, Toshiya; Suzuki, Takaaki; Yoshida, Yutaka; Soeta, Atsuko; Kamo, Tomoichi; Takeuchi, Seizi**
Oxide superconductors.—73-11987
**Doi, Yoshihiko** See Yamakawa, Akira
**Doi, Yoshinaru** See Ochiai, Shouichi
**Dokhner, R. D.; Eliguiashvili, L. E.**
Ionic conductivity of crystals subjected to radiation and mechanical processing.—73-04125
**Dokiya, Harumi** See Sakai, Natsuko
**Dokiya, Masayuki** See Kawada, Tatsuya; Yokokawa, Harumi
**Doktycz, Stephen J.; Howard, Kevin E.**
Rapid omnidirectional compaction process for producing metal nitride, carbide, or carbonitride coating on ceramic substrate.—73-01879
**Dokuchaev, V. G.** See Barinova, N. A.
**Dokuchaev, V. G.; Nastai, E. G.; Nikonorov, N. V.**
Formation mechanism of the refractive index profile of glass in low-temperature ion exchange $Li^+_{solid} \leftrightarrow K^+_{molten}$.—73-14190
**Dokuchaev, V. G.; Petrov, M. A.**
Color center absorption in binary alkali silicate glasses.—73-14145; Photostimulated reorientation of color centers in silicate glasses.—73-14249
**Dolan, P. J., Jr.** See Smith, C. W.
**Dolch, William L.** See Senbetta, Ephraim
**Dolet, N.** See Las, W. C.
**Dolgikh, T. N.** See Karklit, A. K.
**Dolgin, A. M.; Smirnov, S. N.; Natsik, V. D.**
Changes in diamagnetic susceptibility and critical current of $Bi_{1.6}Pb_{0.4}Sr_2Ca_2Cu_3O_x$ caused by mechanical stresses.—73-07995
**Dolginov, L. M.** See Gogoladze, D. T.
**Dolgopolov, V. M.; Kurbatskii, M. N.; Tarabrina, L. A.; Safronova, L. V.; Chechulina, T. V.**
Production of lime-slag cement based on wastes of a metallurgical plant.—73-13767
**Dolgopolov, V.** See Wendel, M.
**Dolgov, S. A.** See Kyarner, T.
**Dolgushev, N. V.; Gusarov, V. V.; Malkov, A. A.; Malygin, A. A.; Polyakova, E. V.; Petrova, L. I.**
Effects of disperse system history on heat compaction of materials containing $\alpha$-$AlO_{1.5}$ and $TiO_2$.—73-16749
**Dolhert, Leonard E.**
Clean burning green ceramic tape cast system using atactic polypropylene binder.—73-04192
**Dolino, Gerard** See Abe, Kohji; Vallade, M.
**Dolino, Gerard; Berge, B.; Vallade, M.; Moussa, F.**
Origin of the incommensurate phase of quartz: I, Inelastic neutron scattering study of the high-temperature ß-phase of quartz.—73-08684
**Dolinsek, J.; Zalar, B.; Blinc, R.**
2-D exchange NMR in deuteron glasses.—73-06984
**Doll, Gary L.** See Ballal, A. K.; Heremans, Joseph P.
**Doll, Gary L.; Baucom, Kevin C.**
Cubic boron nitride phosphide films.—73-15987
**Doll, Gary L.; Sell, Jeffrey A.; Peck, Charles A.**
Laser deposition of crystalline boron nitride films.—73-05306
**Doll, Gary L.**
Cubic boron nitride carbide films.—73-15986
**Dollein, G.** See Weber, A.
**Dollfus, P.; Galdin, S.; Brisset, C.; Hesto, P.**
High-frequency analysis of fast devices using small-signal Monte Carlo simulations: application to a 0.1-µm gate MODFET.—73-07562; 73-14959; Monte Carlo study of 50-nm-long single and cual-gate MODFET's: suppression of short-channel effects.—73-15049; 73-07683
**Dollhopf, V.** See Kun, Yu
**Domashevskaya, E. P.** See Terekhov, V. A.
**Domen, K.** See Anayama, C.
**Domenges, B.; Hervieu, M.; Raveau, B.; Karpinski, J.; Kaldis, E.; Rusiecki, S.**
High-resolution electron microscopy study of defects in high-oxygen-pressure $YBa_2Cu_4O_8$.—73-01568
**Domenici, Marcello**
Market trends in electronic materials.—73-09728
**Domergue, J.-M.** See Evans, Anthony G.
**Dominguez Rodriguez, Arturo** See Martinez Fernandez, Julian
**Dominguez, R.** See Puertas, F.
**Dominguez-Adame, F.** See Cremades, A.; Gomez, P.

**Dominguez-Adame, F.; Fernandez, P.; Piqueras, J.**
Scanning electron acoustic microscopy [SEAM] of $Bi_2Sr_2CaCu_2O_8$.—73-15616
**Dominguez-Rodriguez, Arturo** See Dransmann, Gerhard W.; Martinez Fernandez, Julian; Pajares, Antonia
**Dominiak-Dzik, G.** See Ryba-Romanowski, W.
**Domke, M.** See Lopez, M. F.
**Donadson, K. M.; Ham, F. E.; Francki, R. C.**
Design of refractories and bindings for modern high-productivity pyrometallurgical furnaces.—73-10712
**Donald, I. W.** See Metcalfe, B. L.
**Donald, I. W.; Hill, M. J. C.; Metcalfe, B. L.; Bradley, D. J.; Bye, A. D.**
Chemical strengthening of some silicate- and borate-based glasses.—73-13941; Mechanical properties and fracture behavior of some chemically strengthened silicate and borate glasses.—73-10452
**Donald, I. W.**
Preparation, properties, and chemistry of glass– and glass-ceramic–to–metal seals and coatings.—73-06842
**Donaldson, Kimberly Y.** See Bhatt, H.; Hasselman, D. P. H.; Thomas, J. R., Jr.
**Dondur, V.** See Dimitrijevic, R.
**Donegan, J. F.** See Asatsuma, T.; Doran, J. P.
**Donets, I. G.** See Tkachenko, V. D.
**Dong, Dun-Zhuo; Marakami, Kenji; Kaneko, Shoji; Xiong, Mao-Ren**
Piezoelectric properties of PZT ceramics sintered at low temperature with complex oxide additives.—73-15280; 73-15281
**Dong, Dun-Zhuo; Murakami, Kenji; Okada, Nagaya; Kaneko, Shoji**
Microstructural and compositional analyses on grain boundary of low-temperature-sintered $Pb(Zr,Ti)O_3$ ceramics.—73-13418
**Dong, F.; Graf, M. J.; Mankiewich, P. M.**
Experimental search for current-driven plasma instabilities in superconducting layers.—73-04720
**Dong, G.-S.** See Li, Z.-S.
**Dong, Jian** See Xiong, Guang-Ying
**Dong, Jin-Xiang** See Xu, Wen-Yang
**Dong, Liang-Jun; Yang, Hang-Rong**
Fabrication of thin deck based on cordierite-bonded fireclay.—73-07213
**Dong, Ming-Li; Li, Jian-Hua; Du, Shu-Bin**
Temperature dependence of electric quadrupole interaction in high-$T_c$ superconductor $Bi_{1.7}Pb_{0.7}Sr_2CaCu_2O_{8+\delta}$.—73-08245
**Dong, Q. Y.** See Lee, Sun-Woo
**Dong, X.; Jahanmir, Said**
Wear transition diagram for silicon nitride.—73-08544
**Dong, Xing-Xiu**
Application of air as thermal insulating material to kilns.—73-15865
**Dong, Y.-D.** See Liu, L.
**Donkai, N.; Miyamoto, T.; Kokubo, Tadashi**
Preparation of transparent mullite-silica film by heat treatment of imogolite.—73-02974
**Donley, M. S.** See McDevitt, N. T.; Walck, S. D.; Zabinski, J. S.
**Donnelly, D.** See Dura, J. A.
**Donnelly, Vincent M.** See Aydil, Eray S.; Yoon, Eui-Joos
**Donnelly, Vincent M.**
Real-time determination of the direction of wafer temperature change by spatially resolved infrared laser interferometric thermometry.—73-15838
**Dontsov, G. I.** See Slinkina, M. V.
**Dooghin, A. V.; Ilinykh, P. N.; Liberman, V. S.; Nestiorkin, O. P.; Zeldovich, B. Y.**
Recording of higher spatial harmonics of a photorefractive grating through the phase-locked detection mechanism.—73-08963
**Dooglav, A. V.** See Egorov, A. V.
**Dooley, Daniel J.; Elsea, Arthur R., Jr.**
Method of making laser-generated ic pattern for masking.—73-04523
**Doolin, Patricia K.** See Dishman, Karla L.
**Doorbar, Phillip J.; Sudds, Ian D. A.**
Method of making fiber-reinforced metal component.—73-10329
**Dooryhee, E.** See Steel, A. T.
**Doran, J. P.; Donegan, J. F.; Hegarty, J.; Feldman, R. D.; Austin, R. F.**
Quantum well width dependence of exciton-phonon interaction in $Cd_{0.33}Zn_{0.67}Te/ZnTe$ single quantum wells.—73-07756
**Dorbath, Bernd; Starz, Karl A.; Voelker, Werner; Jerke, Wilan; Dorer, Kai**
Purple pigments, a process for their production and use thereof.—73-03963
**Dorda, F. A.** See Dedov, N. V.
**Dordor, P.** See Las, W. C.; Santilli, C. V.
**Doremieux-Morin, Claudine; Martin, Claudine; Bregeault, Jean-Marie**
Multinuclear high-resolution solid-state nuclear magnetic resonance studies of amorphous silica aluminas.—73-02339
**Doremus, Robert H.**
Glass Science, Second Edition.—73-17529
**Dorenbos, P.** See Baryshevsky, V. G.
**Dorer, Kai** See Dorbath, Bernd
**Dorfman, Ya. A.** See Kurakbaeva, R. Kh.
**Dorfman, Ya. A.; Kurakbaeva, R. Kh.; Polimbetova, G. S.**
Catalytic decontamination of electrothermophosphorus slag.—73-15921
**Dori, L.** See Marwick, A. D.
**Dorin, V. A.** See Dmitriev, A. G.
**Dorin, V.** See Hascicek, Yusuh S.
**Dorn, G.** See Becker, E.
**Dorn, Harry C.** See Johnson, Robert D.
**Dornen, Achim** See Scholz, Ferdinand
**Dornen, Achim; Pressel, Klaus; Hiller, Christoph; Haase, Dieter; Weber, Jurgen; Scholz, Ferdinand**
Luminescence of $Tm^{3+}$ in gallium arsenide grown by metallorganic vapor phase epitaxy.—73-04390
**Dorner, G.** See Durakpasa, H.
**Dornfeld, D. A.** See Chang, Y. P.
**Dorokhova, G. I.** See Belokoneva, E. L.
**Doroshenko, N. A.** See Fita, I. M.
**Doroshenko, R. A.; Setchenkov, M. S.; Vladimirov, I. V.; Timofeeva, V. A.**
Photoinduced magnetic anisotropy in yttrium iron garnet single crystals.—73-15358
**Doroshev, V. D.; Krivoruchko, V. N.; Savosta, M. M.**
Experimental and theoretical invcstigation of the temperature dependence of $La_2CuO_4$ sublattice magnetization.—73-05563
**Doroshev, V. D.; Savosta, M. M.**
Hyperfine interactions in ordered lithium ferrite: NMR investigations with diamagnetic substitution and hydrostatic compression.—73-08639; NMR study of magnetic structure of $Tb_xY_{3-x}Fe_5O_{12}$ garnets [x=0.1, 0.26].—73-15351
**Dorsey, Alan T.; Fisher, Matthew P. A.**
Hall effect near the vortex glass transition in high-temperature superconductors.—73-11779
**Dorsey, P. C.; Bushnell, S. E.; Seed, R. G.; Vittoria, Carmine**
Epitaxial yttrium iron garnet films grown by pulsed laser deposition.—73-07934
**Dorsinville, R.** See Yang, Lina
**Dortmans, Leonardus J.** See Scholten, Huibert F.; Van Den Berg, P. H. J.
**Dos Reis, S. T.** See Martinelli, J. R.
**Dos Santos, A. V.** See Kuhnen, C. A.
**Dos Santos, C. A.; De Oliveira, J.**
Solubility limit in the tetragonal series of the $Fe(Ta_xNb_{1-x})_2O_6$ system.—73-08734
**Dos Santos, M. P.** See Meng, Li-Jian
**Dosanjh, P.** See Bonn, D. A.; Staub, U.
**Dose, Hans R.** See Hurtado, Antonio M.
**Dosinger, Klaus; Graf, Gerhard; Meier, Andreas**
Coating an oxide powder by spray drying.—73-05207
**Dosluoglu, T.; Solanki, R.**
Self-consistent calculations of carrier distribution and energy bands in InGaAs/InP *p-i-n* diodes.—73-04475
**Dotsch, H.** See Gerhardt, R.; Luhrmann, R.
**Dotsenko, A. V.** See Bershtein, V. A.; Kuchinskii, S. A.
**Dotsenko, A. V.; Nikonorov, N. V.; Kharchenko, M. V.**
Photoinduced processes in the volume of photochromic glass PhKhS-2 and waveguides based upon it.—73-14248
**Dotsenko, V. I.** See Pal-Val, L. N.
**Dotsenko, V. P.** See Malykh, A. G.; Zuev, M. G.
**Doty, F. P.; Butler, J. F.; Schetzina, J. F.; Bowers, K. A.**
Properties of CdZnTe crystals grown by a high-pressure Bridgman method.—73-07747
**Dou, S. X.** See Kusevic, I.; Shi, F.; Zhao, Y.
**Dou, T.** See Xu, Wen-Yang
**Douay, M.** See Xie, W. X.
**Dougal, S.** See Hatch, S. R.
**Doughty, C.** See Venkatesan, T.; Walkerhorst, A.; Xi, X.-X.
**Douglas, E.; Bilodeau, A.; Brandstetr, J.; Malhotra, V. M.**
Alkali-activated ground-granulated blast-furnace slag concrete: preliminary investigation.—73-00018
**Douglas, E.; Pouskouleli, G.**
Prediction of compressive strengths of mortars made with portland cement–blast-furnace slag–fly ash blends.—73-00168
**Douglas, Monte A.; Beratan, Howard R.; Summerfelt, Scott R.**
Anisotropic titanate etch.—73-01840
**Douglas, Monte A.**
Anisotropic metal oxide etch.—73-01839
**Douglas, P. L.** See Champagnie, A. M.
**Douglas, Weiss J.** See Taylor, William J.
**Doumerc, J. P.** See Cocciantelli, J. M.
**Doura, Koji** See Nagahata, Tsutomu
**Douse, Victor E.** See Wagh, Arun S.
**Doushita, Kazuhiro** See Mizuno, Toshiaki; Yokoi, Koji
**Doussineau, F.; Farssi, Y.; Frenoi, C.; Levelut, A.; McEnaney, K.; Toulouse, J.**
Strophoidal Argand diagram and distribution of relaxation times in $K_{1-x}Li_xTaO_3$.—73-16601
**Douy, Andre; Canale, P.; Coutures, Jean-Pierre**
Spray-dried homogeneous cordierite and MLAS [Mg-Li aluminosilicate] glass-ceramic powders.—73-10606
**Douy, Andre**
Organic gels in the preparation of ceramic oxide powders.—73-13158; Synthesis of cordierite powder by spray drying.—73-13302
**Dove, Martin T.** See Swainsom, Ian P.
**Dovergne, Georges** See Chopin, Thierry
**Dovesi, R.** See Nada, R.
**Dovgii, Ya. O.; Kityk, I. V.; Lutsiv, R. V.**
Laser annealing of high-$T_c$ superconductors.—73-15532
**Dovgii, Ya. O.; Kityk, I. V.; Pashchuk, I. P.**
Polarized vuv spectra of $KTiOPO_4$ crystals.—73-02672
**Dovgii, Ya. O.; Kityk, I. V.**
Calculation of nonlinear optical constants of single crystals of ferroelectrics and ferroelastics.—73-01392
**Dovidenko, K.; Oktyabrsky, S. R.; Tokarchuk, D.**
Influence of the native $BaAl_2O_4$ boundary layer on microstructure and properties of $YBa_2Cu_3O_{7-x}$ thin films grown on sapphire.—73-01579
**Dow, John D.** See Ren, Shang-Yuan
**Doweidar, H.** See El-Damrawi, G.
**Doweidar, H.; Gohar, I. A.; Megahed, A. A.; El-Damrawi, G.**
Structure-transport relationships in lead borate glasses containing $V_2O_5$.—73-03813
**Dowling, Norman E.**
Mechanical Behavior of Materials: Engineering Methods for Deformation, Fracture, and Fatigue.—73-13655
**Downes, T. J.; King, J. E.**
Effect of microstructure on the fracture toughness of a metal-matrix composite.—73-03269
**Downey, J.** See Kwok, W. K.; Welp, U.
**Doyama, M.** See Nakabayashi, H.
**Doychak, Joseph** See Miller, Robert A.
**Doyle, J. P.** See Cuomo, Jerome J.
**Doyle, N. J.** See Sinharoy, S.
**Doyle, R. A.; Campbell, A. M.; Somekh, R. E.**
Direct observation of intrinsic pinning in YBCO thin films.—73-11726
**Doyle, Richard A.** See De Villiers, Patrick
**Doyle, William D.** See Bao, Xiao-Hua
**Drache, M.** See Khatir, S.
**Drache, Michel; Schrotter, Jean-Christophe; Conflant, Pierre**
Evidence for oxygen nonstoichiometry in a stabilized Bi-Ca-Pb-O fluorite-type phase.—73-08621
**Dradi, E.** See Lan, Luo
**Dragan, I. I.** See Laleko, V. A.
**Drahokoupil, J.; Drbohlav, I.; Polcik, M.; Menken, M. J. V.; Menovsky, A. A.**
Anisotropy of the electronic states around Cu in $Bi_2Sr_2CaCu_2O_{8+x}$.—73-05356
**Drahorad, Radovan**
Chemical polishing of small glass products.—73-14337
**Drake, J. T.** See Williamson, R. L.
**Drake, J. T.; Williamson, R. L.; Rabin, B. H.**
Finite element analysis of thermal residual stresses at graded ceramic-metal interfaces: II, Interface optimization for residual stress reduction.—73-06792
**Dransfield, Graham P.** See Egerton, Terence A.
**Dransfield, Graham P.**
Plasma production and novel processing of ultrafine ceramic powders.—73-05950
**Dransmann, Gerhard W.** See Kaliszewski, Mary S.
**Dransmann, Gerhard W.; Steinbrech, Rolf W.; Pajares, Antonia; Guiberteau, Fernando; Dominguez-Rodriguez, Arturo; Heuer, Arthur H.**
Indentation studies on $Y_2O_3$-stabilized $ZrO_2$: II, Toughness determination from stable growth of indentation-induced cracks.—73-09618
**Draper, E. A.; Skalny, Jan; Rosenthal, M. S.**
Use of computed axial tomography for evaluation of concrete porosity.—73-10184
**Draper, Eric A.** See Wagner, Keith E.
**Draper, R. C. J.** See Senin, H. B.
**Dravid, Vinayak P.** See Chen, Ming-Y.; Duray, S. J.; Hwang, Jin-Ha
**Dravid, Vinayak P.; Ravikumar V.; Notis, Michael R.; Lyman, Charles E.; Dhalenne, Guy; Revcolevschi, Alexandre**
Stabilization of cubic zirconia with manganese oxide.—73-16314
**Drazic, G.; Forthmann, R.; Naoumidis, Aristides**
Basic studies of the corrosion of SiC by silicate melts.—73-03212
**Drazic, G.; Trontelj, Marija; Kolar, D.**
TEM investigations in the PFN-PFW-PZN perovskite system.—73-09516
**Drbohlav, I.** See Drahokoupil, J.
**Drees, D.** See Celis, J. P.
**Drehman,** See Jiang, H.
**Dreifus, David L.** See Das, Kalyankjuma; Miyata, K.
**Dremin, A. A.; Malyavkin, A. V.**
Energy spectrum of 2-D electrons and doublet structure of cyclotron line in GaAs-GaAlAs heterojunctions in tilted magnetic field.—73-01158
**Drennan, John** See Trigg, Mark B.
**Drennan, John; Clarke, David R.; Hannink, Richard H. J.; Shaw, T. M.**
Effect of oxygen partial pressure during sintering on the microstructure of Mg-PSZ with strontia and silica additions.—73-17125
**Drenten, R. R.** See Leo, G.
**Dresselhaus, P. D.; Sacks, R. N.; Wheeler, R. G.; Papavassiliou, C. M. A.**
Spin precession in GaAs inversion layers using antilocalization.—73-07805
**Dreszer, P.** See Chen, W. M.; Jager, N. D.
**Dreszer, P.; Chen, W. M.; Wasik, D.; Leon, R.; Walukiewicz, W.; Liang, B. W.**
Electronic properties of low-temperature [LT] InP.—73-14881
**Drevet, B.** See Eustathopoulos, N.
**Drevillon, B.** See Canillas, A.; Layadi, N.; Ossikovski, R.; Segaud, J. P.; Shrai, H.; Yakovlev, V.
**Drew, Michael G. B.; Hobson, Richard J.; Padayatchy, Viveganandа T.**
Synthesis, single-crystal structure, and magnetic properties of orthorhombic $CuNb_2O_6$.—73-07980
**Drew, Robin A. L.** See Baik, Young-Min; Muscat, D.; Shanker, K.
**Drexler, F.** See Bohmer, R.
**Drexler, K. Eric**
Molecular directions in nanotechnology.—73-05068
**Dreyhsig, J.; Klein, K.; Gumlich, H.-E.; Allen, J. W.**
Influence of stacking faults on $d^n$ internal transitions in ZnS:Co.—73-05421
**Drichko, I. L.** See Aronzon, B. A.
**Drickamer, H. G.** See Baer, B. J.
**Driessens, F. C.** See Bermudez, O.
**Driessens, F. C.; Boltong, M. G.; Bermudez, O.; Plannel, J. A.**
Formulation and setting times of some calcium orthophosphate cements: a pilot study.—73-15925
**Drijaca, J. D.** See Plecas, I. B.
**Drillon, M.** See Tighezza, A.
**Driscoll, John N.**
Portable instrumentation for on-site monitoring of toxic gases.—73-05079
**Driss-Khodja, M.** See Senemaud, C.
**Drijaca, J. D.** See Plecas, I. B.
**Drobeck, David L.** See Fung, Kuan-Zong

**Drobot, N. F.** See Otdel'nov, V. V.
**Drofenik, M.**
Sintering of MnZn ferrites of large cross section.—73-11672
**Droge, E.** See Bottcher, E. Holger
**Drogue, Sophie; Breininger, Shannon; Ruiz, Roberto**
Minimization of $NO_x$ emissions with improved fuel combustion: controlled pulsated combustion.—73-08480
**Drokin, N. A.; Ganiev, Sh. M.**
Static and dynamic characteristics of bulk and contact electrical resistivity in $CdCr_2Se_4$ under stochastic current instability.—73-15176
**Dron, Roger; Brivot, Francoise**
Thermodynamic and kinetic approach to the alkali-silica reaction: II, Experiment.—73-08777
**Drory, Michael D.** See Perry, Scott S.
**Drotos, Mark A.** See Alterovitz, Samuel A.
**Drougge, Lars**
Tool of cemented carbide for cutting, punching, or nibbling.—73-00301
**Drouot, V.** See Gendry, M.
**Drozd, I. A.** See Gorshkova, O. V.
**Drozd, V. I.** See Khonchik, I. V.
**Drozd, V. L.** See Frolova, L. S.
**Drozdova, I. A.** See Panova, T. I.
**Drozdova, I. A.; Embergenov, B.; Korsunskaya, N. E.; Markevich, I. V.**
Influence of mobile defects on the characteristics of a metal-semiconductor contact in the case of CdS crystals.—73-14983
**Drozhzhina, T. V.; Ganyushkina, L. V.; Christyakova, L. A.; Potekhina, L. V.**
Use of different flames for the photometric determination of traces of sodium, potassium, and lithium in glasses.—73-00422
**Druilhe, R.** See Clerjaud, B.
**Drulis, H.; Klamut, J.; Zygmunt, A.; Suleimanov, N. M.; Kukovitskii, E. F.**
Improvement of the critical magnetization currents in $La_{1.85}Sr_{0.15}CuO_4$ by hydrogen treatment.—73-12811
**Drumm, Robert** See Frisch, Bertram
**Drummond, Charles H., III** See Walters, Christopher
**Drummond, Charles H., III; Bansal, Narottam P.**
Phase transformations in $SrAl_2Si_2O_8$ glass.—73-14069
**Drummond, Warren W.**
Method of winding glass fibers.—73-10648
**Druz, B. L.** See Kovalenko, A. S.
**Druzhinin, A.** See Medvedev, E.
**Druzhinin, V. V.; Pavlovskii, A. I.; Tatsenko, O. M.; Lagutin, A. S.; Platonov, V. V.**
Faraday effect and magnetic moment dynamics in holmium ferrite garnet in superstrong magnetic field.—73-15325
**Dryuchko, A. G.** See Vigdorchik, A. G.
**Dsouza, C. P.** See Pinto, R.
**Du Mao-Lu,** See Rudowicz, C.
**Du, Bo**
Methods of reducing overburnt specks in internal-fired bricks.—73-10684
**Du, Hai-Qin** See He, Guo-Xin
**Du, Hai-Yan** See Liu, Fang-Xing
**Du, Hong** See Tong, Yu-Ye
**Du, Shu-Bin** See Dong, Ming-Li
**Du, Wei-Fang** See Li, Yu-Shu
**Du, Xiao-Qun** See Jiang, Lian-Hua
**Du, Xin-Min; Fang, Xian-Gyu; Shen, Ding-Kun**
$Sr_{1-x}Ca_xCuO_2$ [SCCO] solid solution in Bi(Pb)-Sr-Ca-Cu-O superconductors.—73-08204
**Du, Xin-Min; Shen, Ding-Kun; Chen, Xian-Qiu**
Nucleation in a $K_2O$-CaO-$Al_2O_3$-$SiO_2$ glass.—73-14445
**Du, Y.-J.** See Holland, D.
**Du, Y.-J.; Holland, D.; Pittson, R.**
Sintering and crystallization behavior of BaO-$Al_2O_3$-$SiO_2$ and BaO-ZnO-$Al_2O_3$-$SiO_2$ xerogel powders.—73-13257
**Du, Yan-Hai** See Feng, Jia-Rong
**Du, Ying-Lei** See Tian, Ming-Liang
**Du, Yong; Yoashima, Masatomo; Kakihana, Masato; Koura, Toshiaki; Yoshimura, Masahiro**
Thermodynamic properties of cerium oxalate and cerium oxide—comment.—73-16377
**Du, Z.-Z.** See Cocks, A. C. F.
**Duan, Ji-Min**
Indirect coulomb effect: a new coupling mechanism between vortex pancakes in neighboring superconducting layers.—73-15512
**Duan, Kai** See Mai, Yiu-Wing
**Duan, Kai; Cotterell, Brian; Mai, Yiu-Wing**
Crack growth in zirconia-bearing ceramics under cyclic loading.—73-06348
**Duan, Li-Yuan** See Zhang, Wei-Da
**Duan, Li-Zhu** See Zhang, Wei-Da
**Duan, Ming-Qian** See Xu, You
**Duan, Su-Qing; Wu, Ying-Kai**
Percolation model of high-$T_c$ superconductors.—73-15577
**Duarte, J.** See Auciello, O.
**Dub, S. N.; Maistrenko, A. L.; Isakov, A. A.**
Features of measurement of the crack resistance of ceramics by the indentation method.—73-13531
**Dub, S. N.; Maistrenko, A. L.**
Reliability of ceramic fracture toughness measurements by indentation.—73-06511
**Dubanska, Vera**
Hydrothermal preparation of vanadium zeolites.—73-13091
**Dubcek, P.; Etlinger, B.; Pivac, B.; Kranjcec, M.**
Ir investigation of phonon modes in $(Ga_xIn_{1-x})_2Se_3$ solid solution in the $0.1 \le x \le 0.4$ concentration range.—73-09414
**Dube, D. C.** See Mathur, S. C.
**Dube, Gulanshankar R.; Darshane, Vishnu S.**
X-ray, transport, magnetic, Mossbauer, and catalytic studies of the system $Zn_{1-x}Cu_xMnFeO_4$.—73-08796
**Dubietis, A.; Jonusaukas, G.; Piskarskas, A.**
Powerful femtosecond pulse generation by chirped and stretched pulse parametric amplification in BBO crystals.—73-08956
**Dubinskaya, O. F.; Kudzin, A. Yu.; Sadovskaya, L. Ya.; Sokolyanskii, G. Kh.**
Photoconductivity of bismuth tellurite.—73-15278
**Dubinskii, A. A.** See Gal'tseva, E. V.
**Dubkov, A. A.** See Shor, A. M.
**Dubois, C.; Canet, R.; Carmona, F.; Flandrois, S.**
Weak-links effect in 123/Ccu and 123/CuO composites.—73-15667
**Dubois, J.** See Jorand, Y.
**Dubon, A.** See Nicolas, M.; Van Huong, C. Nguyen
**Dubon-Chevallier, C.** See Campo, A.
**Duboudin, F.** See Pierre, A. C.
**Dubov, I. R.** See Makarov, R. I.
**Dubovey, Val S.** See Tresouthick, Stewart W.
**Dubovik, T. V.** See Shchipalov, Yu. K.
**Dubovik, T. V.; Sushcheva, V. Ya.; Shmat'ko, G. N.**
Electrical conductivities of low-alkali and alkali-free glasses and glass-ceramics.—73-00955
**Dubovik, V. N.** See Gomon, V. M.; Samkova, L. G.
**Dubovik, V. N.; Raikhel, A. M.; Nepomnyashchii, O. A.**
Increase in hardness and specific shock viscosity of glass-ceramics by the method of combined hardening.—73-00643; Increasing the strength and specific impact strength of glass-ceramics by combined strengthening methods.—73-00644
**Dubovik, Ya.; Kudryavtsev, Yu. V.; Mishchenko, I. N.**
Application of magnetooptical and optical spectroscopy to investigation of spin fluctuation in weakly ferromagnetic alloy $Fe_2P$ in paramagnetic region.—73-15305
**Dubovoy, Val S.; Ribar, Jacob W.**
Masonry properties as influenced by mortars.—73-06684
**Dubowski, J. J.** See Labrie, D.
**Dubray, J. J.; Pantano, Carlo G.; Meloncelli, M.; Bertran, E.**
Nucleation of diamond on silicon, SiAlON, and graphite substrates coated with an a-C:H layer.—73-02912
**Dubray, J. J.; Pantano, Carlo G.; Yarbrough, W. A.**
Graphite as a substrate for diamond growth.—73-13076
**Dubreuil, Alain** See Larose, Sylvain
**Dubreuil, Alain; Skeaff, Jim**
Long-lasting thermocouple for high-temperature measurements of liquid metals, mattes, and slags.—73-00285
**Dubrov, I. N.** See Kirilova, S. I.
**Dubrovskii, Yu. V.** See Morozov, S. V.
**Dubsky, J.** See Ilarsky, J; Kolman, B.
**Dubsky, J.; Kolman, B.; Chraska, P.**
Comparison of alumina titanate powders prepared by various technologies.—73-09045
**Dubson, M. A.** See Calabrese, J. J.
**Ducarroir, M.** See Ignat, M.
**Ducel, J. F.; Videau, J. J.; Couzi, M.**
Structural study of borophosphate glasses by Raman and infrared spectroscopy.—73-10405
**Ducharme, Roland**
Filter-based power conditions boost productivity at glass plant.—73-10531
**Duchateau, J. P. W. B.** See La Via, F.
**Duchowicz, R.; Nunez, L.; Tocho, J. O.; Cusso, F.**
MgO-induced effects on the optical properties of Er-doped $LiNbO_3$.—73-16542
**Ducker, William A.** See Senden, Tim J.
**Ducker, William A.; Xu, Z.; Clarke, David R.; Israelachvili, Jacob N.**
Forces between alumina surfaces in salt solutions: non-DLVO forces and the implications for colloidal processing.—73-05809
**Duckett, R. A.** See Hine, P. J.
**Duclos, R.** See Baddi, R.; Peni, F.
**Ducos, M.; Gauthier, E.**
Plasma-sprayed $B_4C$ coatings in controlled fusion reactors.—73-09246; 73-13879
**Duda, V. M.; Linnik, V. G.**
Stabilized single-domain state and dielectric hysteresis loop [DHL] in $Pb_5Ge_3O_{11}$ crystals.—73-01433
**Duderstadt, Edward C.; Nagaraj, Bangalore A.**
Thermal barrier coating system with intermetallic overlay bond coat.—73-00299
**Dudin, V. V.** See Vlasov, A. S.
**Dudkevich, V. P.** See Surowiak, Z.
**Dudley, J. J.** See Babic, D. I.
**Dudley, M.** See Fanning, T.
**Dudney, N. J.** See Wachs, A. L.
**Dudney, N. J.; Bates, J. B.; Robertson, J. D.**
Radio-frequency magnetron sputtering of pure and mixed targets of $Li_4SiO_4$, $Li_3PO_4$, and $Li_2O$.—73-06005
**Dudnik, E. F.; Kolomoets, A. G.; Gaidar, I. V.**
Real structure and phase transitions [PT's] in nitrates of divalent elements.—73-02420
**Dudnikova, V. B.; Urusov, V. S.**
Cooperative effect of microimpurities during crystallization of forsterite from melt.—73-17075; Increase of distribution coefficient of microimpurities in microconcentration regions during melt crystallization (trapping effect). Heterovalent systems[—review].—73-12602
**Dudoff, G. K.** See Myers, T. H.
**Duerden, S. L.** See Quillin, K. C.
**Duffer, Paul**
Effects of glass reactivity, surface corrosion.—73-14166
**Duffy, J. A.** See Baucke, F. G. K.; Blair, J. A.
**Duffy, J. A.; Kamitsos, E. I.; Chryssikos, G. D.; Patsis, A. P.**
Trends in local optical basicity in sodium borate glasses and relation to ionic mobility.—73-10492
**Duffy, J. A.**
Optical basicity and glass chemistry.—73-00380
**Duffy, Stephen F.** See Brinkman, Charles R.; Chuang, Tze-Jer; Sandifer, Jerry B.
**Dufour, G.** See Senemaud, C.
**Dufour, M.** See Dallaire, S.; Ermolieff, E.; Martin, P.
**Dugautier, C.** See Foussigne, Y.
**Dugger, M. T.** See Panitz, Janda K. G.
**Dugger, M. T.; Chung, Yip-Wah; Bhushan, B.; Rothschild, W.**
Wear mechanisms of amorphous carbon and zirconia coatings on rigid disk magnetic recording media.—73-09694
**Duginov, V. N.** See Grebnik, V. G.
**Duglav, A. V.** See Bakharev, O. N.
**Dugne, O.; Prouhet, Stephane; Guette, Alain; Naslain, R.; Fourmeaux, R.; Khin, Y.**
Interface characterization by TEM, AES, and SIMS in tough SiC (ex-PCS) fiber–SiC (CVI) matrix composites with a BN interphase.—73-09470
**Dugrand, L.** See Azoulay, R.
**Duh, J.-G.** See Tzeng, J.-M.
**Duh, J.-G.; Wan, J.-U.**
Liquid infiltration in $ZrO_2$ ceramics.—73-09192; Developments in highly toughened $CeO_2$-$Y_2O_3$-$ZrO_2$ ceramic system.—73-02772
**Duke, C. B.** See Bowler, Ann M.; Dandrea, R. G.; Lessor, D. L.
**Duke, C. B.**
Twenty years of semiconductor surface and interface structure determination and prediction: the role of the annual conferences on the physics and chemistry of semiconductor interfaces.—73-11491
**Dul'kin, E. A.; Gavriliyachenko, V. G.; Semenchev, A. F.**
Acoustic emission in $BaTiO_3$-type ferroelectric crystals in phase transition region.—73-15247
**Dul'neva, E. G.** See Al'tshuler, G. B.
**Dulak, J.; Howard, B. J.; Steinbruchel, C.**
Etch mechanism in the reactive ion etching of silicon nitride.—73-02816
**Dullea, John F.; Philips, James R.; Tootoonchi, Ali A.**
Method of manufacturing dielectric block filters.—73-04221
**Duloisy, E.** See Boutinaud, P.
**Dumas, J.** See Othmani, A.
**Dumas, M.** See Chen, W.
**Dumas, P.; Bouffakhreddine, B.; Amra, C.; Votel, O.; Andre, E.; Galindo, R.**
Quantitative microroughness analyses down to the nanometer scale.—73-17188
**Dumas, P.; Gu, M.; Syrykh, C.; Gimzewski, J. K.; Makarenko, I.; Halimaoui, A.**
Direct observation of individual nanometer-sized light-emitting structures on porous silicon surfaces.—73-09443
**Dumbaugh, William H., Jr.; Lapp, Josef C.**
Barium aluminosilicate glasses.—73-14534
**Dumesnil, Maurice E.; Finkelstein, Leo**
Low-temperature sealing glass composition.—73-10638
**Dumin, D. J.** See Richardson, J. T.; Scott, Ronald S.; Wong, D. P.
**Dumin, D. J.; Maddux, J. R.; Wong, D. P.**
Stress-induced increased low-level leakage in thin oxides.—73-05644
**Dumin, D. J.; Maddux, J. R.**
Measurement of high-voltage stress-induced traps inside thin silicon oxide films.—73-04132
**Dumont, H.; Los, P.; Brossard, L.; Lasia, A.; Menard, H.**
Lanthanum phosphate-bonded composite nickel-rhodium electrodes for alkaline water electrolysis.—73-00990
**Duncan, Elaine**
Implant tracking, surveillance, and retrieval.—73-03396
**Duncan, G. K.** See Van Zyl, A.
**Duncan, Walter M.** See Celii, F. G.; Cho, C.-C.; Henck, Steven A.
**Duncombe, Peter R.** See Aoude, Farid Y.
**Dunken, Helga** See Hucke, Hans-Dieter
**Dunki, M.**
Static plate corrosion test, a novel method for the reproducible determination of the corrosion rate of refractories by glass melt.—73-14625
**Dunn, Bruce S.** See Dai, H; Momoda, Leslie A.; Zink, Jeffrey I.
**Dunn, Stanley A.** See Mitchell, Brian S.
**Dunn-Rankin, D.** See Zhang, Y. F.
**Dunne, Lawrence J.** See Spiller, Timothy P.
**Dunogues, J.** See Mocaer, D.; Pillot, J. P.
**Dunstan, D. J.** See Hassen, A.
**Dunster, A. M.; Parsonage, J. R.; Thomas, M. J. K.**
Pozzolanic reaction of metakaolinite and its effect on portland cement hydration.—73-00167
**Dunster, A. M.**
Comparison between the carbonation of OPC and PFA concrete in a mass concrete structure.—73-09859
**Dunyak, Thomas J.** See Elahi, Mehran
**Dunyak, Thomas J.; Chang, D. R.; Millard, M. L.**
Thermal aging effects in oxide/oxide ceramic matrix composites.—73-13602
**Duong, H.; Wolfenstine, J.**
Creep behavior of fine-grained two-phase $Al_2O_3$-$Y_3Al_5O_{12}$ materials.—73-17264
**Dupeux, M.** See Scafidi, P.; Wan, C.
**Dupin, Thierry; Lavina, Jean; Poisson, Regis**
Process for the preparation of alumina agglomerates.—73-02064
**DuPlessis, John**
Permanent magnets attract more power.—73-07970
**Dupre, B.** See Colin, S.
**Dupree, R.** See Gibbons, G.; Han, Z. P.; Holland, D.
**Dupuis, J.** See Granier, W.
**Duquette, D. J.** See Iacocca, R. G.
**Dura, J. A.** See Wang, W. C.
**Dura, J. A.; Zborowski, J. T.; Golding, T. D.; Donnelly, D.; Covington, W.**
Properties of InAs/(Ga,In)Sb strained-layer superlattices grown on the (111) orientations.—73-11407
**Durakpasa, H.; Dorner, G.; Faflilek, G.; Breiter, M. W.**
Impedance studies of the cell Pt/(Na, Sr)β″-alumina/Pt.—73-04111
**Duran, A.** See Pascual, Luis
**Duran, A.; Jurado, J. R.**
Electrical behavior of the interface in lithium phosphate glasses.—73-14701

**Duran, C. A.** See Gammel, P. L.
**Duran, J.** See Fernandez-Saez, J.
**Duran, P.** See Gonzalez, M.; Villegas, Maria Angeles
**Durand, Bernard** See Descemond, M.; Tosan, Jean-Luc
**Durand, J.** See Cros, B.
**Duray, S. J.; Buchholz, D. B.; Zhang, H.; Song, S. N.; Schulz, D. L.; Dravid, Vinayak P.**
Superlattices of $YBa_2Cu_3O_{7-\delta}/PrBa_2Cu_3O_{7-\delta}$ grown by the pulsed organometallic beam epitaxy [POMBE] method.—73-08 '33
**Durbin, C** See Badakhshan, Ali
**Durbin, Thomas J.**
Behavior-based safety at PPG Industries, Inc.—73-17462
**Durcanska, Edita** See Mrnikova, Miroslava
**Durcok, S.** See Garg, K. B.; Hybler, J.
**Durdyev, A. S.; Ovezov, N. Sh.; Saiyiov, N. S.**
Algorithm for calculating glass charge compositions.—73-00587
**Durekovic, A.; Tkalcic-Ciboci, B.**
Cement pastes of low water-to-solid ratio: an investigation of the polymerization of silicate anions in the presence of a superplasticizer and silica fume.—73-00032
**Durnev, Yu. I.** See Kul'buzhev, B. S.
**Durolf, H.** See Kiefer, W.
**Durr, J.** See Hannoyer, B.
**Durrani, S. K.; Dyer, Alan; Blackburn, R.**
Self-diffusion of barium and cesium cations in neutron- and gamma-irradiated high-silica zeolites and boron zeotypes.—73-09421
**Dusatko, Petr** See Kucera, J.
**Dusatko, Petr**
Modeling of the combustion chamber in glass-melting furnaces.—73-05123
**Dusdorf, Wolfgang; Schnabel, Hans-Dieter**
Manufacture and properties of glasses containing nitrogen.—73-00656
**Dussardier, B.** See Saissy, A.
**Dussaulx, Michel** See Schoennahl, Jacques P. R.
**Dusza, J.** See Krylov, A. V.
**Duszak, R.; Palmstrom, C. J.; Florez, L. T.; Yang, Y.-N.; Weaver, J. H.**
Dramatic work function variations of molecular beam epitaxially grown GaAs(100) surfaces.—73-07454
**Dutartre, D.** See Souifi, A.
**Dutkiewicz, R. K.** See Scieszka, S. F.
**Dutov, A. G.; Komar, V. A.; Shiryaev, S. V.**
Aluminum impurity in $SiO_2$-Si semiconductor structures.—73-14768
**Dutra Zanotto, Edgar** See Diaz Mora, Nora
**Dutron, Pierre**
European (EN) and World (ISO) standards—comparison with ASTM standards.—73-13618
**Dutta, N. C.** See Bhattacharyya, D. K.
**Dutta, P. K.** See Mhaisalkar, S. G.
**Dutta, P. K.; Samanta, S. B.; Navlikar, A. V.; Chen, C.; Hodby, J. W.; Wanklyn, B. M.**
Scanning tunneling microscopy of defect structures and growth spirals in bulk single crystals of the high-$T_c$ superconductor $Pb_2Sr_2(Y, Ca)Cu_3O_{8+\delta}$.—73-01654
**Dutton, R. E.; Rahaman, M. N.**
Creep viscosity of glass-matrix composites near the percolation threshold.—73-10426
**Duveiller, P.** See Claes, P.
**Duvierre, Gerard** See Zanoli, A.
**Duvierre, Gerard; Sertain, E.; Reber, A.**
Advantages of using high-zirconia refractories in lead crystal glass electric furnaces.—73-10694
**Duvigneaud, Paul-H.** See Diko, Pave
**Duy, T. N.** See Triboulet, R.
**Dvorak, G. J.** See Beall, M. W.
**Dvorkin, A. A.; Verin, I. A.; Zakhvalinskii, V. S.; Nateprov, A. N.**
Synthesis and structure of $ZnMn_2As_2$.—73-02495
**Dvorsky, George R.; Love, David W.**
Method for encapsulating a ceramic device for embedding in composite structures.—73-11634
**Dvurechenskii, A. V.; Remesnik, V. G.; Ryazantsev, I. A.; Talipov, N. Kh.**
Inversion of the conduction of $Cd_xHg_{1-x}Te$ films subjected to a plasma treatment.—73-15000
**Dwight, K.** See Albert, M.; Bai, C.-S.; Gao, Y.-M.; Niu, C.-M.; Qian, Y.-T.
**Dwir, Benjamin** See Frangi, Francesca
**Dwir, Benjamin; Pavuna, Davor**
Sensitive YBaCuO thin-film bolometer with ultrawide wavelength response.—73-11897
**Dwivedi, B. P.; Rahman, M. H.; Kumar, Y.; Khanna, B. N.**
Raman scattering study of lithium borate glasses.—73-03755
**Dwivedi, Ratnesh K.** See Lesher, H. D.; Newkirk, Marc S.
**Dwivedi, Ratnesh K.**
Method of making ceramic composite articles.—73-03696;Porous ceramic composite with dense surface.—73-10336
**Dwyer, John** See Ojo, Adeola F.; Rawlence, David J.
**Dwyer, John; Karim, Khalid**
Synthesis of ZSM-20 using crown ethers.—73-06103
**Dy, K. S.** See Yang, Chih-Kai
**Dyatlova, E. M.; Bobkova, N. M.; Yurkevich, T. N.**
Determination of the quantitative phase composition of a ceramic by X-ray phase analysis.—73-08599; Effect of the processes of thermal cycling on the structure and properties of heat-resistant ceramics.—73-00808; Effect of thermal cycling processes on the structure and properties of heat-resistant ceramics.—73-02590
**Dyatlova, E. M.; Levitskii, I. A.; Tizhovka, V. V.**
Complex evaluation of waste from the electroplating industry as a secondary source of raw materials for silicate production.—73-08494
**Dye, R. C.** See Wu, X.-D.
**Dyer, Alan** See Durrani, S. K.; Fichtner-Schmittler, H; Harjula, Risto
**Dyer, Alan; Amin, S.; Enamy, H.; Elnaggar, H. A.; Anderson, M. W.**
Cation-exchange in synthetic zeolite L: the exchange of hydronium and ammonium ions by alkali metal and alkaline earth cations.—73-08563
**Dyer, Paul N.** See Benander, Robert E.; Garg, Diwakar; Holzl, Robert A.; Kelly, C. Michael
**Dyer, Paul N.; Magnotta, Vincent L.; Stevens, Robert E.**
Coated carbonaceous articles and method for making [the] same.—73-15983
**Dygas, J.** See Krok, F.
**Dyhouse, V. J.** See Zabinski, J. S.
**Dyk, Nguyen-Dank** See Chebotarev, A. N.
**Dykes, Norman L.** See Kimrey, Harold D., Jr.; Tiegs, Terry N.
**Dykhuizen, R. C.** See Neiser, R. A.
**Dymnikov, A. A.; Przhevuskii, A. K.; Fedorov, Yu. K.; Chernova, V. A.**
Sensitivity of spectroscopic parameters of neodymium in phosphate glasses to change in their structures on transition from ultra- to pyrophosphates.—73-00398
**Dymshits, O. S.; Zhilin, A. A.; Chuvaeva, T. I.**
Optical spectra and structural states of Ni(II) in glass-ceramic-forming glasses of the lithium aluminosilicate system.—73-00381
**Dymshits, O. S.; Zhilin, A. A.; Tsenter, M. Ya.**
Raman spectroscopy study of the kinetics of transformations of titanium-containing phases in glass-ceramic-forming lithium aluminosilicate glasses activated by nickel oxide.—73-00392
**Dyshlova, T. A.; Markonrenkov, Yu. A.; Sheludyakov, L. N.**
Predicting the crystallization capability of aluminosilicate glasses.—73-06954
**Dytrych, Karel** See Enninga, Gerhard
**Dyumin, A. N.; Kudryavtsev, I. V.; Lebedev, V. M.**
Features of the formation of the near-surface layer of fluorine-containing glasses.—73-00481
**Dzenis, Ya. Ya.** See Arbuzov, V. I.
**Dzerzhinskii, R. V.; Timokhova, M. I.; Rachkov, V. S.**
Features of molds for quasi-isostatic pressing.—73-07128
**Dzhafarov, K. M.** See Asadov, Yu. G.
**Dzhafarov, T. D.** See Gafarov, S. F.
**Dzhafarova, S. Z.** See Abutalybov, G. I.
**Dzhafarova, S. Z.; Ragimova, N. A.; Abutalybov, G. I.; Natig, B. A.**
Spectroscopy of intracenter transitions and excitons in $TlGaS_2$-$Nd_2S_3$ crystals.—73-01318
**Dzhuadi, D.** See Blazhku, A. I.
**Dzhuadi, D.; Kasiyan, V. A.; Nedeoglo, D. D.**
Thermal quenching of the residual conductivity of Cu-doped ZnSe crystals.—73-01352
**Dzhumaev, B. R.** See Garyagdyev, G.; Kryukova, I. V.
**Dzhumamukhambetov, N. G.; Dmitriev, A. G.**
Problem of the nature of the luminescence band at 1.23–1.25 eV in the spectrum of GaAs:Te crystals.—73-01290; Temperature dependence of the photoluminescence of modified InP:Sn crystals.—73-15199
**Dzhurinskii, B. F.** See Tselebrovskaya, E. G.
**Dzhurinskii, G. M.** See Punagin, V. N.
**Dzhurtanov, B. E.** See Andaspaeva, A. A.
**Dzhurzha, V. V.; Gorovits, E. V.; Barsukova, V. A.; Chernomorskaya, E. M.**
Electrochemical reduction and oxidation of 2H-$MoS_2$ and 3R-$MoS_2$ in propylene carbonate.—73-14703
**Dziedzic, Pietron Jozef** See Gustaw, Krystyna
**Dziembaj, R.; Lachman, O.; Piwowarska, Z.; Stoch, L.; Laczka, M.**
Surface characterization of lead- and bismuth-lead-silicate glasses by X-ray photoelectron spectroscopy (XPS).—73-14116
**Dzjubenko, N.; Martynenko, L.; Zharkova, N.**
Zirconium acetylacetonate as a precursor for the chemical vapor deposition of $ZrO_2$.—73-06137
**Dzwonkowski, P.** See Eddrief, M; Jin, Y.
**Eaglesham, D. J.** See Benton, J. L.
**Eamsiri, J.; Elyamani, Abdessamad; Riman, Richard E.**
Sol-gel synthesis of amorphous five-component oxide systems using crown ether complexation: ZBLAN gels.—73-14495
**Early, K.** See Jeon, D. Y.
**Easler, T. E.** See Bradt, Richard C.
**Eason, D. B.** See Ren, J.; Vaudo, R. P.
**Eason, R. W.** See Fish, D. A.; Jeffrey, P. M.; Ross, Graeme W.
**East, J. R.** See Chen, W. L.
**Eastman, J. A.; Thompson, L. J.; Marshall, D. J.**
Synthesis of nanophase materials by electron beam evaporation.—73-17043
**Eastwood, B.; Harmer, S.; Smith, J.**
Characteristics of chromium carbide layers produced on martensitic stainless steel using different chemical vapor deposition (CVD) techniques.—73-10201
**Eatou, Harry E., Jr.** See Scharman, Alan J.
**Eaton, Harvill C.** See Roy, Amitava; Schilling, Paul J.
**Eaton, W. C.** See Korwin, D. M.; Simpson, J. C.
**Eaton, W. C.; Joseph, I.; Pye, L. D.**
Surface tension of glass melts measured by the capillary rise method.—73-14288
**Eaves, L.** See Harrison, P. A.; Henini, M.; Kamata, Norihiko; Osada, T.; Taylor, R. P.
**Ebaid, A. R.** See Arafat, A.
**Ebato, Ichiro** See Ito, Shigeru
**Ebato, Koichi** See Saito, Tadashi
**Ebberink, J.** See Blanpain, B.
**Ebbesen, Thomas** See Tanigaki, Katsumi
**Ebbinghaus, G.** See Bauer, J. C.; Cremer, C.
**Ebeling, J. K.** See Schuller, C.
**Ebendorff-Heidepriem, Heike; Seeber, Wolfgang; Ehrt, Doris**
Spectroscopic investigations of the $Er^{3+}$ fluorescence transitions at 540 nm and 1.5 μm in fluoride phosphate and phosphate glasses.—73-10482
**Eberhard, Emil** See Schneider, H.
**Eberhardt, W.** See Colbow, K. M.
**Eberl, K.** See Powell, A. R.
**Ebert, P.; Lagally, M. G.; Urban, K.**
Scanning tunneling microscope tip-induced migration of vacancies on GaP(110).—73-15154
**Ebert, W. L.; Bates, J. K.; Bradley, C. R.; Buck, E. C.; Dietz, N. L.; Brown, N. R.**
Long-term alteration of borosilicate waste glasses.—73-06936
**Ebert, W. L.**
Effects of the leachate pH and the ratio of glass surface area to leachant volume [SA/V] on glass reactions.—73-10368
**Ebisawa, Fumihiro** See Yokoyama, Kenji
**Ebisawa, Y.; Kokubo, Tadashi; Ohura, K.; Yamamuro, T.**
Bioactivity of $Fe_2O_3$-containing CaO-$SiO_2$ glasses: in vitro evaluation.—73-14136
**Ecelberger, S. A.** See Kistenmacher, T. J.
**Echegoin, P.; Kircher, J.; Cardona, M.**
Piezooptical response of semiconductors.—73-15103
**Echeverria, Lina M.** See Crooker, David H.
**Echeverria, Lina M.**
Enstatite ceramics: a multicomponent system via sol-gel.—73-13048;New lithium disilicate glass-ceramics.—73-14438
**Echigoya, J.** See Mumtaz, K.
**Echols, Sherman** See Hill, W. F.
**Echon, E. A.** See Halder, N. C.
**Eckart, D. W.** See McLane, G. F.
**Eckart, D.** See Meyyappan, M.
**Eckel, A. J.** See Cawley, James D.
**Eckel, A. J.; Herbell, T. P.**
Ceramic composites survive severe thermal shocks.—73-15961
**Eckert, H.** See Hardcastle, Franklin D.; Moran, Kelly L.
**Eckert, Hellmut** See Kennedy, John H.; Maxwell, Robert
**Eckert, J.; Holzer, J. C.; Li, M.**
Effects of chemistry on the grain size refinement in nanocrystalline Ru and Ru-C powders prepared by mechanical attrition.—73-16747
**Eckstein, J. N.** See Rogers, C. T.
**Eckstein, J. N.; Bozovic, I.; Klausmeier-Brown, M. E.; Virshup, G.; Ralls, K. S.**
Atomically layered growth and properties of high-temperature superconducting single-crystal films and superlattices.—73-07992
**Eckstein, J. N.; Bozovic, I.; Schlom, D. G.; Harris, James S., Jr.**
Growth of superconducting $Bi_2Sr_2Ca_{n-1}Cu_nO_x$ thin films by atomically layered epitaxy.—73-01564
**Eckstein, W.** See Winters, Harold F.
**Ecolivet, C.** See Cailleau, H.
**Economou, Demetre J.** See Deshmukh, Shashank C.
**Economy, J.** See Coffer, C. G.; Kim, Dong-Pyo
**Eda, K.**
Longitudinal-transverse splitting effects in ir absorption spectra of $MoO_3$.—73-02322
**Eda, Kazuo; Kanaboshi, Akihiro; Ogura, Tetsuyoshi; Taguchi, Yutaka**
Direct bonding of quartz crystal onto silicon.—73-12990
**Edagawa, Noboru; Yoshida, Yoshihiro; Taya, Minoru; Shimada, Tadakatsi; Koya, Kazuo**
Method for preparing a fused silica glass body codoped with a rare-earth element and aluminum.—73-00741
**Edamura, Tadataka; Muto, Junichiro**
Preparation and properties of electrodeposited ternary $CdS_xSe_{1-x}$ and $Zn_xCd_{1-x}S$ films.—73-05618
**Eddrief, M.** See Jin, Y.
**Eddrief, M.; Dzwonkowski, P.; Julien, C.; Balkanski, M.**
Ac conductivity in $B_2O_3$-$Li_2O$ films.—73-00930
**Eddy, C. R., Jr.** See Youchison, D. L.; Youchison, W. L.
**Eddy, C. R., Jr.; Dobisz, E. A.; Meyer, J. R.; Hoffman, C. A.**
Electron cyclotron resonance reactive ion etching of fine features in $Hg_xCd_{1-x}Te$ using $CH_4/H_2$ plasmas.—73-07492; Nanometer fabrication in mercury cadmium telluride [MCT] by electron cyclotron resonance microwave plasma reactive ion etching.—73-11342
**Eddy, Michael M.**
Reactor vessel for manufacture of superconducting films.—73-11998
**Edelman, F.; Brener, R.; Eizenberg, M.; Sader, E.; Dafne, Y.**
Stress and anisotropy effects in the interfacial reactions of Al and $TiN_x$.—73-03645
**Edelman, H. S.; Larbalestier, D. C.**
Resistive transitions and the origin of the *n* value in superconductors with a Gaussian critical current distribution.—73-08189
**Edelman, I. S.; Zarubina, T. V.; Stepanov, S. A.; Kim, T. A.**
Magnetic properties of ferrite microparticles in borate glasses.—73-15339
**Edelstein, V. M.**
Novel anomalous contribution to the Hall effect in some high-$T_c$ compounds.—73-01619
**Eden, J. G.** See John, P. C.
**Eden, Richard C.** See Moravec, Thomas J.
**Eden, Richard C.**
Laminated diamond substrate.—73-02100
**Ederova, Jana** See Endrys, Jiri
**Edgar, A.** See Quilty, J.
**Edgar, J. H.** See Yu, Z. J.
**Edgell, M. J.** See Loboda, M. J.
**Edgington, J.**
Following numbers to productivity benefits.—73-15726; Proposal for an international quality standard for cullet.—73-01993
**Edie, D. D.** See McHugh, J. J.
**Edirisinghe, M. J.** See Fawcett-Jones, A. J. W.; Nogueira, R. E.; Shaw, H. M.; Yu, Ga-Er
**Edstrom, Kristina; Carrillo-Cabrera, Wilder; Thomas, John O.; Farrington, G. C.**
Structural evidence of water-induced relaxation of the Frenkel defect in $Na^+$ ß-alumina.—73-06176

**Edwall, D. D.** See Baars, J.; Bubulac, L. O.; Irvine, S. J. C.; Shin, S. H.

**Edwall, D. D.; Bubulac, L. O.; Gertner, E. R.**
Para-type doping of metallorganic chemical vapor deposition grown HgCdTe by arsenic and antimony.—73-07708

**Edwall, D. D.**
Comparison of spatial compositional uniformity and dislocation density for organometallic vapor phase epitaxial $Hg_{1-x}Cd_xTe$ grown by the direct alloy and interdiffused growth processes.—73-11115

**Edward, John P.; MacKinnon, Robin J.**
Coated optical fibers and method.—73-03912

**Edwards, Arthur H.**
Theory of the self-trapped hole in a-$SiO_2$.—73-12718

**Edwards, G. J.** See Scripsick, M. P.

**Edwards, George H.**
How glassmaking wastes can be used as raw materials.—73-14406

**Edwards, H. L.; Markert, J. T.; De Lozanne, A. L.**
Energy gap and surface structure of $YBa_2Cu_3O_{7-x}$ probed by STM.—73-08058

**Edwards, Leslie C.** See Smith, Thomas K.

**Edwards, Michael J.** See Sandifer, Jerry B.

**Edwards, N. V.** See Zhang, Tong

**Edwards, P. P.** See Han, Z. P.; Liu, R. S.; Zhou, W.

**Edwards, V. N.** See Zhang, Tong

**Edwards, William H., III**
Gas turbine elements bearing coke inhibiting coatings of alumina.—73-03682; :Inhibiting coke formation by coating gas turbine elements with alumina.—73-03686

**Eersels, L.** See De Kempeneer, E. H. A.; Smeets, J.

**Eesley, G. L.** See Meng, W. J.

**Efe, Turhan**
Early Bronze Age III pottery from Bahcehisar: the significance of the Pre-Hittite sequence in the Eskisehir Plain, northwestern Australia.—73-09781

**Efeoglu, H.** See Peaker, A. R.

**Efferson, Kenneth** See Grumblatt, Gerard

**Efimov, A. G.** See Govorkov, A. V.

**Efimov, A. N.** See Bogomolov, V. N.

**Efimov, A. V.** See Evstrop'ev, S. K.; Ivanov, I. A.

**Efimov, O. Yu.** See Zaripov, N. G.

**Efimov, V. M.** See Belousov, I. I.; Esaev, D. G.

**Efimov, Yu. V.** See Babareko, A. A.

**Efremenko, G. N.** See Shershnev, A. A.

**Efremov, V. A.; Gasanov, Yu. M.; Trunov, V. K.**
Crystal structure of $Cs_3Nd(MoO_4)_3$.—73-02193

**Efros, A. L.** See Kokhanovskii, S. I.

**Efryushina, N. P.** See Zuev, M. G.

**Efstathiadis, H.** See Smith, F. W.

**Eftekhari, G.**
Electron trapping in thin oxide on *n*-InP.—73-11187

**Egashira, Makoto** See Abe, Hisao; Shimizu, Yasuhiro

**Egashira, Makoto; Shimizu, Yasuhiro; Takao, Yuji; Yamaguchi, Ryoji; Ishikawa, Yasuhiro**
Effect of carboxylic acid adsorption on the hydrolysis and sintered properties of aluminum nitride powder.—73-13000

**Egashira, Yasuyuki; Kim, Hee-Joon; Komiyama, Hiroshi**
Cluster size determination in the chemical vapor deposition of aluminum nitride.—73-17118

**Egawa, Kunihiko** See Umemura, Toshio

**Eger, D.; Oron, M.; Katz, M.**
Optical characterization of $KTiOPO_4$ periodically segmented waveguides for second-harmonic generation of blue light.—73-12845

**Egerton, Terence A.; Dransfield, Graham P.; Bromley, Anthony P.; Riley, Frank L.**
Ceramic green bodies.—73-05200

**Eggenkamp, M. E. W.; Khabl, H.; Laheurte, J. P.; Noiray, J. C.; Romagnan, J. P.**
Heat diffusion through a glass substrate coated by a thin $^4He$ film.—73-00497

**Eggerstedt, Paul** See Zievers, James F.

**Eggert, A.; Teutenberg, J.**
Quality assurance and control using flexible modular system technology—POLAB.—73-10116

**Egi, Toshio** See Takada, Jun

**Egi, Toshio; Hase, Takashi; Shibutani, Kazuyuki; Hayashi, Seiji; Ogawa, Rikuo; Kawate, Yoshio**
Influence of Ag doping, composition, and structure in $J_c$ of Ag-sheathed Bi-2212 tapes.—73-15513

**Egi, Toshio; Hosotani, Katsunori; Nanba, Tokuro; Takada, Jun**
Formation of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O in samples enclosed in silver pipe.—73-01557

**Egi, Toshio; Shibutani, Kazuyuki; Hayashi, Seiji; Ogawa, Rikuo; Kawate, Yoshio; Hosotani, Katsunori**
Superconducting properties of Ba-doped (Bi,Pb) 2223 tapes.—73-01675

**Eglash, S. J.** See Turner, G. W.

**Egorov, A. V.; Lutgemeier, H.; Wagener, D.; Dooglav, A. V.; Teplov, M. A.**
Decrease of the homogeneous width of the $Tm^{3+}$ electron energy levels in $TmBa_2Cu_3O_{6+x}$ at the superconducting transition.—73-08014

**Egorov, A. Yu.** See Alferov, Zh. I.

**Egorov, G. B.; Alexandrov, I. E.; Turecki, A. M.**
Optimal parameters of clinker formation in a rotary kiln.—73-10073

**Egorov, G. B.; Kanimov, B. K.; Shkatova, G. V.**
Kinetics of the radiation-thermal $C_2S$ [dicalcium silicate] synthesis.—73-10024

**Egorov, G. V.** See Ivanov, S. N.; Sirota, N. N.

**Egorov, V. M.** See Bershtein, V. A.

**Egorov, V. M.; Baikov, Yu. M.; Bershtein, V. A.; Ryzhov, V. A.; Stepanov, Yu. P.; Chudnovskii, F. A.**
Energy characteristics of hydrogen-treated Y-Ba-Cu-O high-$T_c$ superconductors.—73-15456

**Egorov, V. M.; Orlova, T. S.; Smirnov, B. I.; Smirnov, I. A.; Golubkov, A. V.**
Differential scanning calorimetry study of $Sm_{1-x}Gd_xS$ single crystals.—73-16110

**Egorova, A. V.** See Bel'tyukova, S. V.

**Egorova, L. M.** See Bershtein, V. A.

**Eguchi, K.** See Chai, Mao-Rong; Inoue, Takanori; Machida, M.; Yazawa, Tetsuo; Yazawa, Tetsuya

**Eguchi, K.; Yoshida, T.**
Size distribution of SiC powders synthesized in hybrid plasma.—73-09330

**Eguchi, T.** See Ikesue, Akio

**Eguchi, Tadataka; Ichiyama, Hiroshige; Yoshimura, Tadashi; Kuroda, Kotaro; Koga, Masanori**
Properties of CaO-rich gunning material for converter.—73-00843

**Eguchi, Tamiyuki** See Yokoyama, Masao

**Ehara, T.; Kumagai, H.; Sanada, Y.**
Interaction between carbon fiber and pitch as measured by high-temperature electron paramagnetic resonance.—73-13404

**Eherburger, P.; Dallies-Labourdette, E.**
Inhibition of the oxidation of carbon fibers and composites.—73-13476

**Eholie, R.** See Akinocho, G.

**Ehrenreich, H.** See Grein, C. H.

**Ehrhardt, H.** See Fuchs, A.

**Ehrlich, A. C.** See Tritt, T. M.

**Ehrlich, J. E.; Neilson, D. T.; Walker, A. C.; Hopkinson, M.**
Guided-wave measurements of real-excitation optical nonlinearities in a tensile-strained InGaAs on InP quantum well at 1.5 μm.—73-14953

**Ehrlich, Mel**
Computer-aided design and manufacture (CAD/CAM) in plunger manufacture.—73-12019

**Ehrlich, S. N.; Chapman, L. D.; Lazarz, N. M.**
Time-resolved X-ray diffraction study of hot phonons in quartz.—73-02528

**Ehrlich, Shelton** See Snyder, Gordon E. D.

**Ehrnsten, U.** See Ronkainen, H.

**Ehrt, Doris** See Ebendorff-Heidepriem, Heike

**Ehrt, Doris; Seeber, Wolfgang**
Optical properties of fluoride phosphate glasses.—73-14244

**Ehsani, H.** See Karam, N. H.; Koestner, R.

**Ehsani, Hassan** See Bhat, Ishwara B.; Wang, Wen-Sheng

**Eiberman, M. F.** See Udovenko, A. A.

**Eiberman, M. F.; Udovenko, A. A.**
X-ray structural study of consecutive phase transitions in potassium pentafluorooantimonate(III) in the 323–98 K range: III. Structural modulation.—73-16399

**Eibl, O.** See Gerhauser, W.

**Eiche, C.; Maier, D.; Sinerius, D.; Benz, K. W.; Honerkamp, J.**
Compensation defects in CdTe:Cl samples grown by different techniques.—73-11116

**Eichele, K.** See Moran, Kelly L.

**Eichhorn, Klaus** See Zeiske, Thomas

**Eichler, D. W.** See Sacks, R. N.

**Eichler, H. J.; Ding, Y.; Smandek, B.**
Two-wave mixing in InP:Fe at 1064 nm by linear and quadratic photorefractive effect.—73-09004

**Eichler, M.** See Weidner, M.

**Eick, H. A.** See Czerwonka, J.; Hodorowicz, S. A.

**Eidolloth, Walter; Busch, James T.; Gambino, R. J.; Ruoff, Rodney; Tesche, Claudia D.**
Superconducting thin films with fullerenes and method of making.—73-15696

**Eidukyavichyus, K. K.** See Kerene, Ya. K.

**Eikyu, Katsumi** See Matsubara, Gensoh

**Eilers, H.; Hommerich, U.; Jaffe, S.; Yen, W. M.**
Refractive index changes in $Ti^{3+}$-doped glass.—73-14268

**Eiling, Aloys** See Wannagat, Ulrich

**Eimori, Nobuhiro** See Mori, Yusuki

**Einerson, C. J.; Clark, David E.; Detering, B. A.; Taylor, P. L.**
Intelligent control strategies for the plasma spray process.—73-09185

**Eingorin, M. Ya.** See Maksimov, I. L.

**Einishi, Toshihiko** See Tarumi, Takashi

**Einullaev, A. V.** See Aliev, O. M.

**Eiras, Jose Antonio** See Delben, A.; Menegazzo, Bruno Acacio

**Eisen, Gunther; Skoczny, Michael**
Hot end coating [analysis].—73-07137

**Eisenbeiser, K. W.** See Chen, W. L.

**Eisenberg, S.** See Lampe, T.

**Eisman, Glenn A.** See Weimer, Alan W.

**Eissa, N. A.; El-Meliegy, W. M.; El Minyawi, S. M.; Sheta, N. H.; Sallam, H. A.**
Mossbauer effect, electron spin resonance, and electrical conductivity studies of the effect of iron on the magnetic and electrical properties of sodium silicate glass.—73-07054

**Eissler, D.** See Wang, H. S.

**Eizenberg, M.** See Edelman, F.; Golan, A.

**Ek, B. A.** See Powell, A. R.

**Ekbom, Ragnar**
Method for manufacturing rings or disks having a blade or vane rim.—73-01865

**Ekelund, Magnus; Forslund, Bertil**
Kinetics of silicon nitride formation by gas-phase routes in the Si-C-O-N system.—73-13111

**Ekerdt, J. G.** See Sun, Y.-M.

**Ekimov, A. I.** See Gurevich, S. A; Jursenas, S.

**Ekinaga, Naotaka**
Crack opening behavior of artificial graphite electrodes in thermal shock test.—73-02565; 73-10928; Influences of length of nipple on effective strength of socket at the joint of artificial graphite electrodes.—73-17363; Judgments of macroscopic crack initiations of artificial graphite electrodes in fracture toughness test.—73-17367; Stress analysis of nipple in the joint of artificial graphite electrodes.—73-13596 & 73-03357

**Ekino, Toshikazu**
Tunneling observation of phonon structures in $La_{1.85}Sr_{0.15}CuO_4$.—73-08268

**Eklund, E. A.; Kirchner, P. D.; Shuh, D. K.; McFeely, F. R.; Cartier, E.**
Direct determination of impact ionization rates near threshold in $Al_{0.9}Ga_{0.1}As$ and GaAs using molecular beam epitaxially grown $GaAs/Al_{0.9}Ga_{0.1}As$ structures and soft X-ray photoemission.—73-07447

**Eklund, E. A.; McFeely, F. R.; Cartier, E.**
Breakdown of the semiclassical description of hot-electron dynamics in $SiO_2$.—73-09390

**Eklund, Peter C.** See Bi, Xiang-Xin

**Ekpenuma, Sylvester N.** See Myles, Charles W.

**Ekpenuma, Sylvester N.; Myles, Charles W.**
Critical stress of $Hg_{1-x}Cd_xTe$ solid solutions.—73-07427

**Ekstrom, Thommy** See Mandal, H.

**Ekstrom, Thommy**
SiAlON ceramics sintered with yttria and rare-earth oxides.—73-06039

**Ekzekov, M. Kh.; Chekhovskii, V. G.; Bogdanov, V. L.**
Crystallization in lead-bearing glasses and melts based on $BaSrCaMgAl_2F_{14}$.—73-07007

**El Ghitani, H.; Pasquinelli, M.; Martinuzzi, S.**
Influence of dislocations on photovoltaic properties of multicrystalline silicon solar cells.—73-16517

**El Ghitani, H.; Pasquinelli, M.**
Influence of dislocations on dark current of multicrystalline silicon $n^+$-$p$ junction.—73-16516

**El Horr, N.; Hammou, A.; Bagieu, M.**
Electrical conductivity of polyphosphates—$Li_3Ba_2(PO_3)_7$, $LiPb_2(PO_3)_5$, $LiCs(PO_3)_2$, and α-$LiK(PO_3)_2$.—73-02599

**El Horr, N.**
Preparation and crystallographic characterization of the polyphosphate $TlPO_3$.—73-02401

**El Khakani, M. A.** See Jean, A.

**El Khakani, M. A.; Chaker, M.; Jean, A.; Boily, S.; Pepin, H.; Kieffer, J. C.**
Effects of rapid thermal annealing on both the stress and the bonding states of a-SiC:H films.—73-09108

**El Masry, N. A.** See He, Y.

**El Minyawi, S. M.** See Eissa, N. A.

**El Nimr, M. K.** See Shaaban, M. H.

**El Omari, M.; Reau, J. M.; Senegas, J.; Laval, J. P.; Frit, B.**
Ion conductivity of solid solutions $Ca_{1-x}Th_xF_{2+2x}$ and $Ca_{1-x}U_xF_{2+2x}$.—73-00982

**El Rhaleb, H.** See Jin, G.

**El'chaninova, S. D.; Prasolov, B. N.**
High-temperature phase transitions in $CsDy(MoO_4)_2$.—73-02283

**El'kin, G. B.**
Devices for inspecting glassmaking furnaces.—73-08394; Hydraulic tests on devices for examining glass-melting furnaces.—73-01905

**El-Abbar, A. A.; Maxwell, K. J.; Owers-Bradley, J. R.; King, P. J.; Lees, J.; Balakrishnan, G.**
Irreversibility line [IL] in $Bi_2Sr_2CaCu_2O_8$ single crystals.—73-15523

**El-Absy, M. A.** See El-Naggar, I.

**El-Batal, H. A.** See Ezz-Eldin, F. M.

**El-Bayoumi, O. H.; Said, A. A.; Andrews, R. J.; Suscavage, M. J.; Swiller, T. P.; Simmons, J. H.**
High refractive index glasses.—73-14202

**El-Damrawi, G.** See Doweidar, H.

**El-Damrawi, G.; Muller-Warmuth, Werner; Doweidar, H.; Gohar, I. A.**
$^{11}B$, $^{29}Si$, and $^{27}Al$ nuclear magnetic resonance studies of $Na_2O$-$Al_2O_3$-$B_2O_3$-$SiO_2$ glasses.—73-10356

**El-Defrawi, S. A.; Abdel-Fattah, Wafa I.**
Pinholes and introduction of albite in double-firing zircon-glazed tiles.—73-10881

**El-Didamony, H.** See Helmy, I. M.

**El-Fallal, I.; Pilkington, R. D.; Hill, A. E.**
Formulation of a statistical thermodynamic model for the electron concentration in heavily doped metal oxide semiconductors applied to the tin-doped indium oxide system.—73-01169

**El-Ghazzawi, M. E.; Saitoh, T.; Hori, N.; Sakai, A.; Oka, T.**
Spectroellipsometry characterization of directly bonded silicon-on-insulator structures.—73-15170

**El-Hemaly, S. A. S.** See Ismail, M. R.

**El-Khakani, M. A.** See Chaker, M.

**El-Khatib, J. M.** See Mangat, P. S.

**El-Khatieb, A.** See Ibrahim, A. K.

**El-Korchi, T.** See Toutanji, H. A.

**El-Mallawany, Raouf**
Electrical transport properties in semiconducting tellurite glasses.—73-14873; Longitudinal elastic constants of tellurite glasses.—73-01231; Ultrasonic detection of microphase separation in binary zinc tellurite glasses.—73-14303

**El-Meliegy, W. M.** See Eissa, N. A.

**El-Naggar, I.; Shabana, El-Said I.; El-Absy, M. A.**
Mechanism of diffusion and ion transport of chloride ions on hydrous ceric oxide.—73-06167

**El-Samanoudy, M. M. A. G.** See Beynon, J.

**El-Shennawi, A. W.; Mandour, M. A.; Shoaib, M. M.**
Controlled crystallization of some rectified slag-based glasses.—73-14345

**El-Shennawi, A. W.**
Crystallization characteristics of certain lithum manganese aluminosilicate glasses and the effect of adding $TiO_2$ or $ZrO_2$.—73-03719

**El-Shereafy, E.** See Abou, Sekkına M. M.

**El-Sherif, M. A.; Shih, Wan-Y.; Cai, Z.; Radhakrishnan, J.; Hu, S.; Ko, F. K.**
Development of a fiber optic sensor for ceramic materials characterization.—73-16701

**El-Sherik, A. M.; Erb, U.; Krstic, V. D.; Szpunar, B.; Aus, M. J.; Palumbo, G.**
Effect of porosity on properties of nanocrystalline materials.—73-06211

**Elahi, Mehran** See Liao, Kin

**Elahi, Mehran; Liao, Kin; Lesko, John; Reifsnider, Kenneth L.; Stinchcomb, Wayne W.; Dunyak, Thomas J.**
Elevated-temperature cyclic fatigue of silicon carbide fiber-reinforced silicon carbide matrix composites.—73-17304
**Elaloui, Elimame** See Ponthieu, Eric
**Elangovan, A.; Navaneethakrishnan, K.**
Polarizability of a donor in a quantum box.—73-04444
**Elangovan, A.; Navaneethakrishnan, K.**
Polaronic effects and donor polarizability in a quantum well.—73-01287
**Elansari, L.** See Codazzi, V.
**Eldallal, G. M.** See Dip, A.
**Eldhose, N. V.** See Menon, C. S.
**Eldin, Neil N.; Senouci, A. B.**
Engineering properties of rubberized concrete.—73-03465; Rubberized concrete behavior.—73-10144
**Eldridge, J. E.** See Zeng, A.
**Eldridge, Jeffery I.** See Harding, David R.; Sathish, Shamachary
**Eldridge, Jeffrey I.; Wiening, Jonathan P.; Davison, Terry S.; Pindera, Marek-Jerzy**
Transverse strength of SCS-6 silicon carbide fibers—correction.—73-06544; Transverse strength of SCS-6 silicon carbide fibers.—73-03373
**Eleazer, Prince B.** See Bazarian, E. Robert
**Eleazer, Prince B.; Slavejkov, Aleksandar G.**
Clean firing of glass furnaces through the use of oxygen.—73-08465
**Elejalde, M. J.** See Macho, E.
**Elena, M.** See Laidani, N.
**Elena, M.; Bonelli, M.; Bottani, C. E.; Ghislotti, G.; Miotello, A.; Mutti, P.**
Elastic behavior of TiN thin films.—73-12781
**Elert, M.** See Seveque, J. L.
**Elerts, M. A.** See Arbuzov, V. I.
**Elesin, V. F.** See Menushenko, A. P.
**Elesin, V. F.; Kashurnikov, V. A.; Openov, L. A.**
Effect of Anderson disorder on the correlation functions and binding energy of excess carriers in a $Cu_4O_8$ cluster.—73-05544
**Elesin, V. F.; Kashurnikov, V. A.; Podlivaev, A. I.**
Effect of magnetic and nonmagnetic impurities of the carrier binding energy in Cu-O clusters.—73-11652
**Elesin, V. F.; Sinchenko, A. A.**
Influence of radiation defects on the energy gap in $YBa_2Cu_3O_{7-\delta}$ as measured with the help of Andreev reflection effect.—73-11803
**Elghaly, A. E.** See Dhir, R. K.
**Eliasova, Maria; Kosecky, Milan; Rekenova, Maria**
Chemical, phase, and enthalpy balance of changes in the preheated batch for Eutal glass: I, Determination of the mass balance of the escape of gas reaction products.—73-00595; Chemical, phase, and enthalpy balance of changes in the preheated batch for Eutal glass: II, Determination of phase and enthalpy changes.—73-00596
**Elices, Manuel** See Llorca, J.; Pastor, Jose Ygnacio
**Eligulashvili, L. E.** See Dokhner, R. D.
**Eliseev, J.; Kayushkin, V.; Tomyn, V.**
Glass formation and some properties of the Ge-As-Se-Te glasses and amorphous films in a region with Te contents [of] 45–70 at.%.—73-14195
**Eliseev, S. Yu.** See Pronkin, A. A.
**Eliseeva, G. G.** See Alapin, B. G.
**Elissalde, C.; Ravez, J.; Gaucher, Philippe**
Low- and high-frequency dielectric relaxations in lead magnesium niobate ceramics.—73-07333
**Elistratova, N. Yu.** See Sham, P. I.
**Elkin, B. S.** See Belousov, M. V.
**Elkind, Alexander; Koczak, Michael J.; Schadler, Linda S.**
Characterization of carbon-carbon composites by laser Raman spectroscopy.—73-17114
**Elkind, J. L.** See Littler, C. L.
**Elkind, J. L.**
Ion mill damage in *n*-HgCdTe.—73-07623
**Elkjaer, H. P.; Enkegaard, T.**
Operation of grate coolers and a method of evaluating their efficiency.—73-10072
**Ellacott, Stephen D.**
Insulation material.—73-10782
**Ellefson, Robert E.** See Basford, James A.
**Ellerbrock, H.-G.** See Scheuer, A.; Schiller, B.
**Elliatioglu, R.** See Aydinli, A.
**Elliatioglu, S.** See Allakhverdiev, K; Aydinli, A.
**Ellin, H. C.** See Takacs, J.
**Ellingboe, S.; Ridgway, M. C.; Schultz, P. J.**
Buried $SiO_2$ layer formation in Si with an MeV O ion beam.—73-03122
**Ellingson, William A.** See Steckenrider, J. Scott; Stinson, Michael C.
**Ellingson, William A.; Ayaz, D. M.; Brada, M. P.; O'Connell, W.**
Detection of subsurface defects in machined silicon nitride ceramics by optical scattering methods.—73-06205
**Elliot, M.** See Hooper, S. E.
**Elliott, J. C.** See Breunig, T. M.
**Elliott, J. F.** See Krishna Murthy, G. G.
**Elliott, J.; Kreismanis, V.**
Orientation dependence of arsenic incorporation in metallorganic chemical vapor deposition grown HgCdTe.—73-07706
**Elliott, M. L.** See Anderson, L. D.
**Elliott, M. L.; Chapman, C. C.; Freeman, C. J.**
Characterization and vitrification of various waste streams.—73-09703
**Elliott, M.** See Shen, T.-H.
**Elliott, S. R.** See Bershtein, V. A.
**Elliott, S. R.**
Calculation of the activation energy for ionic conduction in glasses.—73-06999
**Ellis, B.** See Bonanos, Nicholas
**Ellis, Donald E.; Guo, Jun; Lam, D. J.**
Cluster models of bulk, surface, and impurity structure in $\alpha$-$Al_2O_3$.—73-05370
**Ellis, M.** See Booth, Andrew S.
**Ellis, T. W.** See Sordelet, D. J.
**Ellmer, K.** See Hopfner, C.
**Ellrich, Klaus** See Guggenberger, Rainer
**Ellsworth, J. A.** See Vydyanath, H. R.
**Ellsworth, Timothy E.**
New container coating technology is developed.—73-10569
**Ellul, Joseph P.** See Kalnitsky, A.; Tay, Sing P.
**Elmasry, N. A.** See Gong, J. R.
**Elmer, Thomas H.; Hultman, Sheryl L.**
Yellow high silica glass.—73-00722 & 73-10672
**Elmi, Giuliano**
Fast firing technology in the brick and tile industry—a technical evaluation.—73-05115; Roller kilns with postcombustion for brick firing.—73-12242
**Elnaggar, H. A.** See Dyer, Alan
**Elowitz, M. B.** See Sudijono, J.
**Elsaesser, David W.** See Colon, Jose E.
**Elsaesser, David W.; Colon, Jose E.; Yeo, Yung-Kee; Hangebold, R. L.; Pomrenke, Gernot S.**
Annealing studies of Er-implanted GaAs and the excitation mechanism of Er in GaAs.—73-04240
**Elsaesser, T.** See Lohner, A.
**Elsea, Arthur R., Jr.** See Dooley, Daniel J.
**Elshanskii, V. A.** See Novitskaya, G. N.
**Elshereafy, E. E.**
Physicochemical studies on $LaYO_3$ perovskite prepared at low temperature.—73-02922
**Elsner, Frederick H.** See Stephens, Richard B.
**Elssner, Gerhard** See Kiessler, Gonde
**Elwell, Dennis F.** See Smith, Hal D.
**Elyamani, A.** See Kahnt, H.
**Elyamani, Abdessamad** See Eamsiri, J.
**Elyamani, Abdessamad; Pafchek, Robert**
Fluoride glasses and methods for making optical fibers from the glasses.—73-10627
**Emanuel, Cristina** See Morterra, Claudio
**Embergenov, B.** See Drozdova, I. A.
**Embergenov, B.; Korsunskaya, N. E.; Ryzhikov, V. D.; Galchinetskii, L. P.; Lisetskaya, E. K.**
Structure of luminescence centers in ZnSe crystals.—73-11462
**Emblem, H. G.; Davies, T. J.; Harabi, A.; Sargeant, G. K.**
Mullite grain mixes for steel plant refractories.—73-10745
**Emeis, N.** See Bauer, J. C.; Cremer, C.
**Emery, J.-Y.** See Jin, Y.
**Emiliani, G.** See Caneve, L.
**Emiliani, M. L.**
Characterization and oxidation resistance of hot-pressed chromium diboride.—73-17245; ebond coating requirements for brittle matrix composites.—73-13501
**Eminov, Aschrap M.; Atakuziev, T. A.; Muslimov, B. A.**
Active silica in porcelain production.—73-00892
**Eminow, Aschrap M.**
Effects of microcrystalline cellulose on the properties of whiteware bodies.—73-10834
**Emlemdi, Hasan B.** See Ruderer, Clifford G.
**Emmerichs, U.** See Bjorkman, C. H.
**Emond, M. H. J.; Wiegel, M.; Blasse, G.; Feigelson, R.**
Luminescence of stoichiometric lithium niobate crystals.—73-07897
**Emoto, Hideyuki** See Hojo, Junichi
**Emoto, Hideyuki; Hojo, Junichi**
Sintering and dielectric properties of $BaTiO_3$-Ni composite ceramics.—73-04168 & 73-10988
**Emriore, J. M.** See Charnay, R.
**Emura, Masaki** See Takizawa, Kazutaka
**Enami, Hiroyoshi** See Hoshizaki, Hiroki
**Enami, Hiroyoshi; Shinohara, Toshiyuki; Kawahara, Nobuaki; Suzuki, Masanobu; Hoshizaki, Hiroki; Imura, Toru**
Fabrication of dc superconducting quantum interference devices with hybrid structure of polycrystalline $Y_1Ba_2Cu_3O_x$ films and epitaxial $Y_1Ba_2Cu_3O_x$ films.—73-15468
**Enamy, H.** See Dyer, Alan
**Enard, J. P.** See Jimenez, C.; Rano, L.
**Endo, Akihiko** See Yoshida, Masashi
**Endo, Hidehiro** See Ono, Toru
**Endo, K.** See Ishikawa, Shin; Yamasaki, H.
**Endo, Kazuyo; Kusano, Yoshihiro; Nanba, Tokuro; Takada, Jun**
Effect of Li addition to the low-$T_c$ phase in the Bi-Sr-Ca-Cu-O system: II.—73-01531
**Endo, Koetsu; Tokuyama, Akio; Sobata, Tamotsu**
Phosphate coatings for metal surfaces.—73-00291
**Endo, M.** See Noguchi, M.
**Endo, Nobuhiro** See Kikkawa, Takamoro
**Endo, S.** See Agui, Akane; Maruyama, Kazunori
**Endo, Tadashi** See Kobayashi, T.; Takizawa, Hirotsugu
**Endo, Tadashi; Takizawa, Hirotsugu; Shimada, Masahiko**
High-pressure synthesis of "periodic compound" and its optical and electrical properties.—73-16816
**Endoh, Shigehisa; Kuga, Yoshikazu; Arakida, Tomohiro; Takeuchi, K.**
Infrared laser-assisted zone refining of inorganic materials.—73-02878
**Endoh, Yasuo** See Matsuda, Masaaki
**Endres, Gerhard; Gauthier, Jean-Claude**
Reduction of emissions and energy consumption in rotary kilns by means of a technology for peak combustion.—73-12238
**Endres, Gerhard**
Utilization of advanced combustion technology in kilns.—73-05137
**Endrys, Jiri; Blazek, Antonin; Ederova, Jana**
Experimental determination of the effective thermal conductivity of glass by steady-state method.—73-07025
**Engalychev, A. E.** See Vinokurova, L. I.
**Engblom, John H.** See Aikens, Quinn
**Engdahl, Richard E.** See Ha, Jung-Soo
**Engel, Angela** See Partenfelder, Uwe
**Engel, G.** See Pyka, N.
**Engelhard, Tina** See Moons, Ellen
**Engelke, F.** See Schwerk, U.
**Engell, J.** See Hoj, J. W.
**Engelmann, Reinhard** See Raghuraman, R.
**Engelsberg, M.; Do Nascimento, George C.; Pacobahyba, L. H.**
$^1H$ atomic motion in proton-exchanged $LiNbO_3$.—73-11582
**Engemann, J.**
Technology and application of filamentless rf ion sources in ion beam sputter deposition.—73-04950
**Engert, J.** See Orlova, T. S.
**English, J. H.** See Bolognesi, C. R.; Merlin, R.; Nguyen, Chanh
**Engstrom, E. U.** See Falk, L. K. L.
**Engstrom, O.** See Farmer, K. R.
**Enjalbert, R.** See Martinez, S.; Millet, P.; Mosset, A.; Schnuriger, B.
**Enkegaard, T.** See Elkjaer, H. P.
**Ennaoui, A.** See Hopfner, C.
**Enninga, Gerhard; Dytrych, Karel; Barklage-Hilgefort, H.**
Practical experience with raw material preheating on glass-melting furnaces.—73-03864
**Ennouri, A.; Tapiero, M.; Vola, J. P.; Zielinger, J. P.; Moisan, J. Y.; Launay, J. C.**
Determination of the mobility and transport properties of photocarriers in $Bi_{12}GeO_{20}$ by the time-of-flight technique.—73-09399
**Enoki, Manabu** See Tsuda, Hiroshi
**Enoki, Toshiaki; Shindo, Kazuhiko; Sakamoto, Noriaki; Suzuki, K.**
Electronic properties of sodium hydride and potassium mercury ternary graphite intercalation compounds.—73-16489
**Enokihara, Akira** See Kohiki, Shigemi
**Enomoto, Goro** See Yamaguchi, Katsuhiko
**Enomoto, Goro**
Low refractive optical glass of a flint glass type.—73-14547
**Enomoto, N.** See Yoshida, Hideto
**Enomoto, Naoya** See Nagatome, Tomoo
**Enomoto, Naoya; Katsumoto, Masumi; Nakagawa, Zenbee**
Effect of ultrasonic irradiation on hydration of MgO powder.—73-09100
**Enomoto, Noritsugu** See Hihara, Hiroshi; Shiga, Shoji
**Enomoto, Ryo; Matsuno, Yoshimi; Tamaki, Masanori**
Superconductive ceramic wire and method for producing the same.—73-04882
**Enomoto, Ryo; Matsuno, Yoshimi; Yokoi, Masato**
Fiber-reinforced silicon carbide ceramics and method of producing the same.—73-05300
**Enomoto, Sae** See Miyoshi, Shunzou
**Enomoto, Sumie** See Sasamoto, Tadashi
**Enomoto, Youichi** See Neumann, Christian;Tanabe, Keiichi
**Enomoto, Yuji; Mizuhara, Kazuyuki**
Characterization of wear behavior of steel and ceramics in the VAMAS round robin tests.—73-06341
**Enpuku, K.; Shimomura, Y.; Kisu, T.**
Effect of thermal noise on the characteristics of a high-$T_c$ superconducting quantum interference device.—73-04546
**Enright, James M.**
Troubleshooting defects in porcelain enamel powder systems.—73-13905
**Ensinger, W.** See Huber, R.
**Ensinger, W.**
Ceramic film synthesis with highly energetic ions: II, Chromium nitride.—73-12935
**Entelis, F. S.; Nazarova, V. N.; Bogdanova, G. A.**
Abrasive grain size and glass surface finish.—73-00584
**Eom, C. B.** See Spielman, S.
**Eom, Tae-Hyoung; Ko, Soung-Man; Suhr, Dong-Soo; Yang, Joon-Hwan; Park, Keun-Ha**
MnZn ferrite preparation by coprecipitation method.—73-11666
**Epanchintsev, O. G.** See Bushueva, S. K.
**Epel'baum, M. B.; Salova, T. P.**
Forms of water in perlites and genesis of volcanic glasses.—73-13989
**Epicier, Thierry**
Interest of limiting voluntarily the resolution in HREM studies of materials.—73-06236
**Epifani, M.** See Bottiglione, A.
**Eppel, V. I.** See Gorev, N. B.
**Eppler, Douglas R.; Eppler, Richard A.**
Determining the crystal phases in ceramic pigments by X-ray diffraction analysis.—73-08391; Which colors can and cannot be produced in ceramic glazes.—73-07279
**Eppler, Richard A.** See Eppler, Douglas R.
**Eppler, Richard A.**
Fundamentals of leadless glaze development.—73-07255
**Epps, Glenn F.** See Cong, Yue
**Epstein, J. S.** See Okada, H.; Perry, K. E.
**Epting, Michael J.**
Process for producing furnace atmospheres using noncryogenically generated nitrogen.—73-15894
**Er, Gang** See Kikkawa, Shinichi
**Eranosyan, G. M.** See Chmel, A. E.
**Erb, Roger L.** See Smith, Richard L.
**Erb, U.** See El-Sherik, A. M.
**Erben, J.** See Ullmann, J.
**Erck, R. A.** See Ajayi, O. O.
**Erdem, Emin; Olmez, H.**
Mechanical properties of supersulfated cement containing phosphogypsum.—73-03497
**Erdemir, A.** See Ajayi, O. O.
**Erdemir, A.; Cheng, C. C.**
Effect of postdeposition annealing on structure and chemistry of the TiN film/steel substrate interfaces.—73-00222
**Erdmann, A.**
Influence of shallow traps on the properties of $LiNbO_3$ waveguides.—73-07894

**Erdmann, K.** See Rozwadowski, M.
**Eremenko, A. V.** See Shapiro, V. V.
**Eremenko, V. V.** See Blinkin, V. A.; Gnezdilov, V. P.
**Eremenko, V. V.; Makarov, V. I.; Zhukov, V. V.**
Influence of fluorine on the superconducting properties of $YBa_2Cu_3O_{7-\delta}$.—73-08106
**Eremenko, V. V.; Zvyagin, S. A.; Pishko, V. V.**
Experimental investigation of magnetic resonance in $Nd_2CuO_4$.—73-08624
**Eremin, M. V.; Markendorf, R.; Variamov, S. V.**
Energy dispersion in the singlet correlated impurity band in layered cuprates.—73-16492
**Eremina, L. I.**
Features of hydroabrasive treatment of glass-ceramic components.—73-01899
**Eremkin, V. V.** See Topolov, V. Yu.
**Erentork, A.; Esen, E.**
Quantitative analysis of $B_2O_3$ in E-glass by using X-ray fluorescence spectrometer.—73-14075
**Erezhepov, M. T.** See Abdikamalov, B. A.
**Erickson, A. W.** See Rabin, B. H.
**Erickson, L. C.; Blomberg, A.; Hogmark, S.; Bratthall, J.**
Tribological characterization of alumina and silicon carbide under lubricated sliding.—73-17454
**Ericsson, T.** See Sjoberg, Jorgen
**Eriksson, L.; Werner, P.-E.; Berger, R.; Meerschaat, A.**
Structure refinement of $TlCu_7Se_4$ from X-ray powder profile data.—73-02467
**Eriksson, Ronny; LeBay, Thomas A.**
Controlling and optimizing an oxy-fuel-fired furnace.—73-15869
**Erin, O. N.** See Britun, V. F.
**Erkmen, Z. Engin; Anghaie, Samim**
Interaction of yttria with uranium fluoride gases ($UF_n$, $n$=4, 6) at high temperatures.—73-12010
**Ermakov, G. A.** See Akkerman, V. A.
**Erman, M.** See Vinchant, J.-F.
**Ermer, Elzbieta** See Stobierski, Ludoslaw
**Ermer, J.; Gay, R.; Pier, D.; Tarrant, D.**
Challenges and progress in the scale-up of $CuInSe_2$ thin-film photovoltaic technology.—73-07402
**Ermisch, R.; Schulze, D.; Schwedes, J.**
New type of silo extractor for bulk materials with poor flow properties.—73-15739
**Ermolenko, A. I.,** See Danilov, E. B.
**Ermolenko, V. I.,** See Malchenko, S. N.
**Ermolenko, Yu. E.,** See Khutsishvili, A. N.
**Ermolieff, A.,** See Martin, P.; Sindzingre, T.
**Ermolieff, E.; Marthon, S.; Martin, P.; Pierre, F.; Dufour, M.**
Implantation of quartz with high-dose Ti ions as studied by XPS.—73-13401
**Ernas, T.,** See Muller-Simon, H.
**Ernazarov, U. K.,** See Abdikamalov, B. A.
**Ernst, Josef; Semmler, Hans J.; Wirtz, Peter**
Single-component alkali metal silicate cement composition.—73-12403
**Ernst, N.,** See Melmed, A. J.
**Ernst, N.; Schmidt, W. A.; Bozdech, G.; Naschitzki, M.; Melmed, A. J.**
Electronic properties of high-$T_c$ superconductors below and above the Fermi energy.—73-01540
**Erntroy, H. C.**
Effect on compressive strength of the glass content of blast-furnace slag when used as a cementitious constituent.—73-09928
**Erofeeva, N. T.,** See Rumyantsev, P. F.
**Eroglu, S.; Birla, N. C.; Demirci, M.; Baykara, T.**
Synthesis of functionally gradient NiCr-Al/MgO-$ZrO_2$ coatings by plasma spray technique.—73-06861
**Eron'yan, M. A.; Kondrat'ev, Yu. N.; Romashova, E. I.**
Heat treatment of strengthened epoxy acrylate-coated silica light guides.—73-00639
**Eronen, Raimo,** See Andersson, Kjell
**Eronko, S. B.,** See Chmel, A. E.
**Ershov, O. G.,** See Baranov, A. N.
**Ershov, V. A.,** See Fedotov, A. O.
**Ershova, L. M.,** See Voronko, Yu. K.
**Ershova, N. Yu.,** See Laleko, V. A.
**Ertek (Haciu), Durata,** See Inel, Yuksei
**Ertl, Daniel; McMahon, Arlene**
Conversion of a fiberglass furnace from 100% electric firing to oxy-fuel combustion.—73-08468
**Ertl, W.,** See Wunsch, D.
**Erts, D. P.,** See Aluker, E. D.
**Ertug, S.; Altenhofer, F.**
Conversion of a four-stage cyclone preheater to a VA-PASEC precalciner system.—73-00050
**Erturk, Turgay**
Temperature dependence of dynamic shear modulus of a chemically vapor deposited SiC fiber: an application of inverted torsion pendulum.—73-17439; See also Manley, M. E.
**Erwin, R. W.,** See Borchers, J. A.; Lind, D. M.
**Esaev, D. G.; Efimov, V. M.; Shklyaev, A. A.**
Effect of hydrogen on hot electron energy relaxation in $SiO_2$ and $Si_3N_4$ films.—73-10937
**Esagui, R.,** See Ren, F.
**Esaka, Takao,** See Iwahara, Hiroyasu
**Esayan, S. Kh.,** See Boikov, Yu. A.
**Escadafals, L.,** See Zahorski, D.
**Escardino, A.,** See Barba, A.; Negre, F.
**Escardino, A.; Gallego, M. A.; Feliu, C.; Barba, A.; Sanchez, E.**
Drying of ceramic materials shaped by unidirectional pressing: I, Kinetic model.—73-12992
**Escardino, A.; Sanchez, E.; Moreno, S.; Gimenez, S.**
Used catalyst as an additive in ceramic glazes.—73-07278
**Eschnauer, H.; Lugscheider, E.; Muller, U.; Weber, T.**
Quo vadis, thermal spray technology.—73-01825
**Eschner, J.,** See Sierks, J.
**Escribano, P.,** See Cantavella, V.; Carda, J.; Cordoncillo, E.; Monros, G.; Sales, M.
**Escribe-Filippini, C.,** See Affronte, M.
**Escudero, M. L.,** See Lopez, V.
**Escure, P.,** See Bossler, F.
**Esen, E.,** See Erentork, A.
**Esenbaeva, K.,** See Alybakov, A. A.
**Esener, Sadik C.; Lee, Sing-H.; Krishnakumar, Subramania; Ozguz, Volkan H.; Fan, Chi**
System and method for producing electrooptic components integratable with silicon-on-sapphire circuits.—73-01447
**Esengaliev, A. B.; Salaev, F. M.; Novik, V. K.**
Pyroelectric properties of $TlInS_2$ single crystal in temperature range of 1.5–100 K.—73-16580
**Esfahani, Rasoul N.; Maclay, G. Jordan; Zajac, Gerry W.**
Effects of substrate temperature, deposition pressure, and thickness on the morphology of ultrathin platinum film on $SiO_2$/Si substrate.—73-13035
**Eshbekov, A. A.,** See Evstrop'ev, S. K.
**Esimov, B. O.,** See Abduvaliev, T. A.; Apollonov, V. N.
**Eskov, N. A.,** See Voronko, Yu. K.
**Esnouf, C.,** See Werckmann, J.
**Espinat, D.,** See Guth, J. L.
**Espinosa, R. J.,** See Johnson, A. C.; Lauf, R. J.
**Espinoza-Beltran, F. J.,** See Ramirez-Bon, R.
**Espinoza-Beltran, F. J.; Sanchez-Sinencio, F.; Zelaya-Angel, O.**
Temperature dependence of the absorptive edge in CdTe:O amorphous thin films.—73-02701
**Espinoza-Beltran, F. J.; Zelaya, O.; Sanchez-Sinencio, F.; Mendoza-Alvarez, J. G.; Farias, M. H.; Banos, L.**
Structural and optical studies of oxygenated amorphous CdTe films.—73-15183
**Esposito, Antonio,** See Bellussi, Giuseppe
**Esposito, Arthur N.,** See Wolter, Peter A.
**Esposito, Leonardo,** See Carani, G.; Nicoletto, G.
**Esposito, Leonardo; Carani, G.; Tucci, A.; Nuzziello, S.; Generali, P.**
Vickers indentation method applied to the characterization of ceramic glazes.—73-08459
**Esposito, Leonardo; Tucci, A.; Timelini, Giorgio; Fontana, Antonio**
Effects of glazing technologies on tile surface properties.—73-14654
**Esquinazi, P.,** See Kopelevich, Y.
**Esquivias, Ignacio,** See Ralston, John D.
**Esquivias, L.,** See Ramirez-del-Solar, M.
**Esrom, Hilmer; Kogelschatz, Ulrich**
Modification of surfaces with new excimer uv sources.—73-13141
**Esser, G.,** See Jager, R. G.
**Esser, N.,** See Resch, U.; Richter, W.
**Esser, N.; Kopp, M.; Haier, P.; Kelnberger, A.; Richter, W.**
Electronic properties of Sb monolayers on III-V(110) surfaces determined by resonance Raman scattering.—73-11189
**Esteve, D.,** See Rouhani, M. Djafari
**Estournes, C.,** See Menetrier, M.; Rao, K. J.
**Estrada, Leticia Y.,** See Pingitore, Nicholase E., Jr.
**Estrada, W.; Fantini, M. C. A.; De Castro, S. C.; Polo da Fonseca, C. N.; Gorenstein, A.**
Radio-frequency-sputtered cobalt oxide coating: structural, optical, and electrochemical characterization.—73-12874
**Estrada-Gasca, C. A.,** See Nair, M. T. S.
**Estrera, J. P.,** See Snail, K. A.
**Estropov, V. V.; Lin'kov, I. Yu.; Morozenko, Ya. V.; Pikus, F. G.**
Photoluminescence of compensated SiC-6H.—73-04439
**Estry, Hal W.,** See Laine, Richard M.
**Etchegoin, P.; Cardona, M.**
Circular birefringence in zinc-blende-type semiconductors.—73-14808; Stress-induced optical activity in the zinc blende type semiconductors.—73-11458
**Etchin, S.,** See Vignaud, D.
**Etemandi, G.; Palmier, J. F.**
Effect of interface roughness on nonlinear vertical transport in GaAs/AlAs superlattices.—73-07466
**Etienne, B.,** See Jusserand, B.
**Etienne, P.,** See Pernot, F.
**Etienne, S.; Perez, J.; Peytavin, S.; Ribes, M.**
Degrees of freedom and ionic mobility in silver chalcogenide glasses.—73-00318
**Etienne, S.; Sekkat, A.; Perez, J.**
Viscoelastic properties and molecular mobility near the glass transition range.—73-14308
**Etlinger, B.,** See Dubcek, P.
**Eto, Motokuni,** See Ishiyama, Shintarou
**Eto, Satoshi,** See Kobayashi, Tadayuki
**Etourneau, J.,** See Darriet, J.; Videau, J. J.
**Etrillard, J.,** See Campo, A.
**Ettinger, Robert H.,** See Anthony, Thomas R.
**Eugster, C. C.,** See Chu, W.
**Eustacchio, C.**
Development of fast dry-fast technology.—73-12214
**Eustathopoulos, N.,** See **Kritsalis, P.**
**Eustathopoulos, N.; Drevet, B.**
Mechanisms of wetting in reactive metal/oxide systems.—73-00249
**Evain, M.,** See Jobic, S.
**Evain, M.; Boucher, F.; Brec, R.; Mathey, Y.**
Question of silver pairing in the new structurally resolved two-dimensional phase $Ag_2MnP_2S_6$.—73-02412
**Evans, Anthony G.,** See Bartlett, A.; Brondsted, Paul; Cao, Heng-Chu; He, Ming-Yuan; Heredia, Fernando E.; Lam, David C. C.; Mackin, T. J.; Sergo, Valter; Spearing, S. Mark; Warren, P. D.; Weber, Christian H.
**Evans, Anthony G.; Dalgleish, Brian**
Fracture resistance of metal-ceramic interfaces.—73-13838
**Evans, Anthony G.; Domergue, J.-M.; Vagaggini, E.**
Methodology for relating the tensile constitutive behavior of ceramic matrix composites [CMC's] to constituent properties.—73-13571
**Evans, B. J.,** See Thompson, G. K.
**Evans, C. J.,** See Ives, L. K.
**Evans, D. A.,** See Chasse, T.
**Evans, D. A.; Alonso, M.; Cimino, R.; Horn, K.**
Quantum size effects in photoemission from Ag islands on GaAs(110).—73-15131
**Evans, D. A.; Lapeyre, G. J.; Horn, K.**
Overlayer-induced valence states, and evidence for charge transfer in Na/GaP(110) and Na/GaAs(110): a comparative photoemission [PE] study.—73-11370
**Evans, J. D.,** See Kakasaki, B. W.
**Evans, J. F.,** See Zazzera, L.
**Evans, J. M.,** See Spence, D. E.
**Evans, John,** See Carpenter, Joseph A., Jr.
**Evans, Julian R. G.**
Ceramic injection molding and related processes.—73-04903; See alsi Fawcett-Jones, A. J. W.; Greener, J.; Song, Jin-Hua; Zhang, T.
**Evans, K. R.,** See Reynolds, D. C.; Talwar, D. N.
**Evans, N. G.,** See Arai, M.
**Evans, P. J.,** See Hoffman, A.
**Evans, Philip**
New developments in bioceramics.—73-05175
**Evans, R. W.; Masroun, A.; Wilshire, B.**
Creep processes in SiAlON ceramics.—73-03254
**Evans, R. W.; Thompson, D. P.; Wilshire, B.**
Creep variability of SiAlON ceramics.—73-03255
**Evans, R. W.; Wilshire, B.**
Theta approach to creep of structural ceramics.—73-13606
**Evans, R.,** See Newman, J. D.
**Evarestov, R. A.,** See Bush, A. A.
**Evdokimova, T. V.,** See Oliferenko, G. L.
**Everett, M. G.,** See Simpson, D. E.
**Everett, Richard K.,** See Jessen, Todd L.
**Everleigh, C. A.,** See Johnson, A. C.; Lauf, R. J.
**Evers, J.; Oehlinger, G.; Polborn, K.; Sendlinger, B.**
Topological relation between the LaIrSi-type and the EuNiGe-type structures in ternary phases MPdSi (M=Ca, Eu, Sr, Ba).—73-02529
**Evetts, J. E.,** See Zhang, J. L.
**Evgen'yeva, M. I.,** See Smirnov, A. S.
**Evorenko, G. I.,** See Bazhenov, Yu. M.
**Evstrop'ev, S. K.; Efimov, A. V.; Smirnov, N. V.**
Drying of monolithic silica gels in a porous powder.—73-07121
**Evstrop'ev, S. K.; Ikramov, G. I.; Salimov, Sh. K.; Petrovskii, G. T.; Eshbekov, A. A.; Yudin, D. M.**
Structural microstresses in alkali silicate glass induced by low-temperature ion exchange.—73-14095
**Evstrop'ev, S. K.; Nikonorov, N. V.; Salimov, Sh. K.**
EPR spectra of alkali-metal silicate glasses subjected to ion exchange and γ-irradiation.—73-00336
**Evstrop'ev, S. K.**
Evolution of gel silica monoliths during convective drying.—73-07126; See also Glebov, L. B.
**Evstropov, V. V.; Zhilyaev, Yu. V.; Nazarov, N.; Sergeev, D. V.; Fedorov, L. M.; Shernyakov, Y. M.**
Electrical properties of epitaxial *p-n* GaP structures deposited on Si substrates.—73-11180
**Evstropov, V. V.; Zhilyaev, Yu. V.; Nazarov, N.; Sergeev, D. V.; Fedorov, L. M.**
Electroluminescence of epitaxial GaP *p-n* structures grown on Si substrates.—73-14877
**Evtikova, G. P.,** See Kurmanguzhina, L. K.
**Evtukhov, Yu. N.,** See Babentsov, V. N.
**Evwaraye, A. O.; Smith, S. R.; Skowronski, M.; Mitchel, W. C.**
Surface defects in 6H-SiC wafers.—73-13369
**Ewald, K. H.,** See Halverson, D. C.
**Ewen, P. J. S.,** See Ramirez-Malo, J.
**Ewertson, C.; Petersson, P. E.**
Influence of curing conditions on the permeability and durability of concrete. Results from a field exposure test.—73-03484
**Exarhos, Gregory J.; Hess, Nancy J.**
Deposition and characterization of multicomponent oxide films and multilayers from aqueous solution.—73-12973; Spectroscopic measurements of stress relaxation during thermally induced crystallization of amorphous titania films.—73-12881
**Exner, Herbert,** See Falz, Wolfgang
**Eyink, K. G.; Cong, Y. S.; Capano, M. A.; Haas, T. W.; Gilbert, R. A.; Streetman, B. G.**
Low-temperature GaAs growth regimes [observed] by real-time ellipsometry.—73-15022; In situ ellipsometric study of As capping and low-temperature [LT] molecular beam epitaxy GaAs growth and implications for the low-temperature critical thickness.—73-11264
**Eyraud, L.,** See Gonnard, P.
**Eyring, L.,** See Schweda, E.
**Eyring, L.,** See Sharma, R.
**Ezaki, Kenichi,** See Takahashi, Hisakazu
**Ezawa, T.,** See Miyamoto, I.
**Ezeldin, A. Samer; Balaguru, P. N.**
Toughness behavior of fiber-reinforced rapid-set materials: a preliminary study.—73-06727
**Ezer, Y.,** See Chaim, R.
**Ezerskaya, N. A.; Afanas'eva, M. V.; Bel'skii, N. K.; Ochertyanova, L. I.**
Determination of Cu in the high-temperature superconductor $YBa_2Cu_3O_{7-x}$ by amperometric titration with sodium diethyldithiocarbamate.—73-01519
**Ezerskaya, N. A.; Kiseleva, I. N.; Bel'skii, N. K.;**

**Ochertyanova, L. I.; Kulyzov, N. A.**
Determination of yttrium and lanthanum in high-$T_c$ superconducting materials by potassium ferrocyanide amperometric titration.—73-01522
**Ezerskaya, T. V.,** See Ivanova, I. F.
**Ezhovskii, Yu. K.,** See Murashev, S. V.
**Ezis, Andre**
Making hot-pressed silicon nitride by use of low-density reaction-bonded body.—73-12478; Monolithic, fully dense silicon carbide mirror and method of manufacturing.—73-12502
**Ezura, Eizi; Asano, Kiyomitsu; Hayano, Hitoshi; Hosoyama, Kenji; Inagaki, Shigemi; Isagawa, Shigeru**
Microwave surface resistance of plasma-sprayed YBaCuO thick films on large-area metallic substrates.—73-15557
**Ezz-Eldin, F. M.,** See Ahmed, A. A.
**Ezz-Eldin, F. M.; El-Batal, H. A.**
Radiation effects on thermal expansion of some ternary alkali silicate glasses.—73-00539
**Ezzeddine, Amin,** See Hegazi, Gamal M.
**Fabbri, Bruno**
Influence of the production cycle on the formulation and properties of bodies and glazes.—73-10859
**Faber, Anne J.,** See Fleischmann, Bernhard; Simons, D. R.
**Faber, Anne J.; Beerkens, Rudd G. C.; De Waal, Henk**
Heating process of glass batch.—73-14402; Thermal behavior of glass batch on batch heating.—73-03895
**Faber, Friedrich**
Comparative examinations of classic bonding oxides in ground coat porcelain enamels: I.—73-10206; Comparative examinations of classic bonding oxides in ground coat porcelain enamels: II.—73-10207
**Faber, K. T.,** See Cazzato, A.; Jordan, D. W.; Mumm, Daniel R.; Paulik, Steven W.; Steyer, T. E.
**Faber, Margaret K.,** See Aitken, Bruce G.
**Fabes, B. D.,** See Taylor, D. J.
**Fabre, A.; Tetard, D.; Goursat, Paul; Lecomte, A.; Dauger, A.; Lespade, Pierre**
Thermal decomposition of borazane $BH_3NH_3$ under HIP conditions and of the structural evolution of the products of pyrolysis.—73-13323
**Fabre, J. C.; Boccara, A. C.**
Circular dichroism microspectroscopy: evidence of broken symmetries in high-$T_c$ superconducting films.—73-08000
**Fabritchnyi, F. B.,** See Demazeau, Gerard
**Fabry, Pierre; Siebert, Elisabeth**
Ionic ceramic materials used in potentiometric electrochemical sensors.—73-00984
**Face, D. W.,** See Holstein, W. L.
**Fadeev, V. S.**
Formation of surface layers of ceramics during grinding and sharpening.—73-06607
**Fadeeva, E. E.; Ardashnikova, E. I.; Borzenkova, M. P.**
Interactions in the system $KF\text{-}CuF_2\text{-}BiF_3$.—73-16182
**Fadel, M.,** See Sedeek, K.
**Faetti, Sandro,** See Nobili, Maurizio
**Fafard, S.,** See Fortin, E.
**Fafilek, G.,** See Durakpasa, H.
**Fagherazzi, G.,** See Righini, Giancarlo C.; Zeng, Y. W.
**Fahey, J.,** See Kocon, Waldemar W.
**Fahlenbock, Terry D.,** See Davidson, J. Ian
**Fahlke, B.,** See Bruckner, A.
**Fahrenholtz, William G.; Smith, Douglas M.**
Densification and microstructure of sodium-doped colloidal mullite.—73-09442
**Faigon, A.; Straboni, A.; Miranda, E.; Redin, G.**
Tunneling in Al–silicon oxynitride–Si structures.—73-07372
**Fainchtein, R.,** See Bryden, W. A.
**Fainer, M. Sh.**
Concept of optimum designing of concretes.—73-13696; See also Batrakov, V. G.
**Fainstein, A.,** See Steren, L. B.; Zysler, R. D.
**Fair, J. A.,** See Tsai, W.
**Fairhurst, Carl W.**
Orthodontic bracket formed from porcelain fused to metallic material.—73-03699
**Faith, L.,** See Hansen, Staffan
**Faizrakhmanov, I. A.,** See Ibragimova, M. I.
**Fakeev, A. A.,** See Kurmanguzhina, L. K.
**Falabella, S.; Boercker, D. B.; Sanders, D. M.**
Fabrication of amorphous diamond films.—73-13054
**Falck, J. P.; Levy, A.; Kastner, M. A.; Birgeneau, R. J.**
Charge-transfer spectrum and its temperature dependence in $La_2CuO_4$.—73-08820
**Falcony, C.; Alonso, J. C.; Ortiz, A.; Garcia, M.; Zironi, E. P.; Rickards, J.**
High-quality, high-deposition-rate $SiO_2$ films at low temperatures using silicon fluorides and plasma-assisted deposition techniques.—73-16818
**Falikman, V. R.,** See Babaev, Sh. T.; Batrakov, V. G.
**Falin, M. L.,** See Ibragimov, I. R.
**Falk, L. K. L.,** See Bjorklund, H.
**Falk, L. K. L.; Engstrom, E. U.; Rundgren, K.**
Intergranular microstructure and oxidation behavior of $Si_3N_4$ ceramics formed with $Y_2O_3$, $Al_2O_3$, and $ZrO_2$.—73-06239
**Falke, U.,** See Ullmann, J.
**Fall, B.,** See Kiss, L. I.
**Fallahi, M.; McGreer, K. A.; Delage, A.; Normandin, R.; Templeton, I. M.; Barber, R.**
Echelle grating–curved waveguide demultiplexer for photonic integrated circuits.—73-07459
**Falta, J.,** See Heun, S.
**Falter, C.; Klenner, M.; Chen, Q.; Ludwig, W.**
Lattice dynamics of $La_2NiO_4$ in the charge fluctuation model.—73-16194
**Falz, Wolfgang; Bigorajski, Gunter; Exner, Herbert**
Granular abrasive material.—73-03418
**Fan Ji-Wei; Freer, R.**
Deep level transient spectroscopy of zinc oxide varistors doped with aluminum oxide and/or silver oxide.—73-14824
**Fan, C.-G.,** See Li, Ru-Kang
**Fan, Chi,** See Esener, Sadik C.
**Fan, En-Rong**
Production of foam glass brick with phlogopite.—73-10586; Production of glass-ceramic plates for decoration by sintering process.—73-10587
**Fan, Fu-Kang,** See Zhou, Quan
**Fan, Hong-Chang,** See Jin, Xin
**Fan, J.; Freer, R.**
Electrical properties and dc degradation characteristics of silver-doped ZnO varistors.—73-01144; Improvement of the nonlinearity and degradation behavior of ZnO varistors.—73-11259
**Fan, Jia-Fa; Toyoda, Koichi**
Dependence of the growth of $Al_2O_3$ films on the growth conditions in the [atomic layer epitaxy] ALE-like process.—73-05735
**Fan, Qi-Kang,** See Li, Zhen-Hua
**Fan, T. Y.**
Heat generation in Nd:YAG and Yb:YAG.—73-14957; Optimizing the efficiency and stored energy in quasi-three-level lasers.—73-08941
**Fan, W.-L.,** See Shih, H.-C.
**Fan, Xian-Ping,** See Wang, Min-Quan; Xiong, Guo-Hong
**Fan, Xian-Ping; Wang, Min-Quan; Xiong, Guo-Hong**
Comparison of the spectroscopic properties of $Eu^{3+}$-doped silica dried gel, silica gel glass, and conventional silicate glass.—73-10422; $Eu^{3+}$-doped luminescence glasses prepared by a sol-gel process.—73-10528
**Fan, Xiao-Jun,** See Wang, Tao
**Fan, Xui-Yun**
Improving thermal stability of porcelain.—73-07261
**Fan, Y.; Han, J.; He, L.; Saraie, J.; Gunshor, R. L.; Hagerott, M.**
Ohmic contacts to *p*-Zn(S, Se) using a pseudograded Zn(Te, Se) structure.—73-11355
**Fan, You-San,** See Yuan, Zhang-Fu
**Fan, Yu-Rong**
Kaolin-based nonlustrous glaze.—73-10863
**Fan, Zhang-Guo; Ji, Chun-Lin; Zhang, Guo-Fan**
High-$J_c$ YBaCuO superconducting materials prepared by zone melting.—73-11782
**Fan, Zhen-Kun; Liu, Xian-Ji; Sun, Ren-Hua**
Albite-based fine household porcelain.—73-07232
**Fancey, K. S.; Young, S. J.; James, A. S.; Matthews, A.**
Microstructural and thickness uniformity of zirconia coatings produced by rf ion plating.—73-09477
**Fanchon, E.; Hodeau, J. L.; Vicat, J.; Watts, J.**
Three-dimensional/one-dimensional transition in the $Cs^+$ sublattice of the mixed valence $CsTi_8O_{16}$ hollandite: structures at 297 K and 673 K.—73-02527
**Fanderlik, I.**
View on a structure of amorphous glassy materials.—73-14123
**Fanderlik, Ivan; Beranek, Frantisek**
Problems of protective colored glass shaping drawing the ribbon.—73-03876
**Fanderlik, Ivan; Skrivan, Miroslav**
Distribution and growth of isolated spherical particles of separated AgCl phase in photochromic glass from the standpoint of Greenwood theory.—73-00326
**Fanelli, Anthony J.,** See Rohrbach, Ronald P.
**Fanelli, Anthony J.; Marsh, Gary B.; Burlew, Joan V.; Ballard, Clifford P.; Fei, William S.**
Aqueous process for injection molding ceramic powders at high solids loadings.—73-04958
**Fanelli, Anthony J.; Solar, Jeffrey P.; Wu, Bei-Li L.; Yamanis, Jean**
Ternary silicon–rare-earth nitrides and process for their preparation.—73-12529
**Fang, C. C.; Prasad, V.; Jones, F.**
Molecular dynamics modeling of microstructure and stresses in sputter-deposited thin films.—73-17175
**Fang, C.-S.,** See Chen, Jiann-Ruey
**Fang, Chang-Ming; Gao, Hai-Chun; Ho, Yan; Cai, Z.-G.; Zhang, Y.**
Oxysulfide glasses: a new kind of lithium ion conductors.—73-01005
**Fang, Chang-Ming; Gao, Hai-Chun; Huo, Yan**
Fabrication and properties of oxysulfide glassy lithium ion conductors.—73-04100
**Fang, Chen-Ping,** See Ding, Zhen-Ya
**Fang, Der-Yang,** See Hwang, Chii-Shyang
**Fang, Der-Yang; Hwang, Chii-Shyang**
Effects of $Y_2O_3$ addition on the sinterability and microstructure of mullite: II, Crystallization of liquid phase and grain growth.—73-05784; 73-16756
**Fang, G. P.,** See Mayer, J. E., Jr.
**Fang, Ho T.,** See Menon, Mamballykalathil N.; Quinn, George D.
**Fang, Hong-Chang,** See Zhang, Yi-Tong
**Fang, Liang; Kong, Xian-Log; Zhou, Qing-De**
Wear tester capable of monitoring and evaluating the movement pattern of abrasive particles in three-body abrasion.—73-15760
**Fang, Rei,** See Chen, Kuo-Tong
**Fang, Rong-Chuan,** See Li, Qing-San
**Fang, T.-T.,** See Shiau, F.-S.
**Fang, W. C.,** See Chou, H.
**Fang, X. H.,** See Scripsick, M. P.
**Fang, Xian-Gyu,** See Du, Xin-Min
**Fang, Xiao-Dan,** See Wang, Min-Quan
**Fang, Xiao-Ming,** See Kim, Hong-Koo; Langer, Dietrich W.
**Fang, Xing,** See Liang, Jing-Kui
**Fang, Y.; Danyluk, Steven; Li, Z.; Lam, D. J.**
Knoop hardness anisotropy of $YBa_2Cu_3O_{7-\delta}$ single crystals.—73-08120
**Fang, Yi,** See Hu, Jia-Shan
**Fang, Yi; Agrawal, Dinesh K.; Roy, Della M.; Roy, Rustum**
Microwave sintering of calcium strontium zirconium phosphate [CSZP] ceramics.—73-05922
**Fang, Yi; Roy, Della M.; Cheng, J.; Roy, Rustum; Agrawal, Dinesh K.**
Microwave sintering of hydroxyapatite-based composites.—73-05923
**Fang, Yong-Hao, See Okada, Yoshihiko**
**Fang, Yue; Danyluk, Steven**
Coefficients of friction of YBCO-YBCO and YBCO-Ag ball-on-flat couples.—73-12755
**Fang, Z. Q.,** See Look, D. C.
**Fang, Z. Q.; Look, D. C.**
Excess dark current due to saw damage in semiinsulating GaAs.—73-14898; Hopping conduction and its photoquenching in molecular beam epitaxial GaAs grown at low temperatures [LT].—73-14966
**Fang, Z.-G.,** See Liu, J.-H.
**Fang, Zheng-Xiu,** See Xue, Song-Sheng
**Fanning, T.; Lee, M. B.; Casagrande, L. G.; Dimarzio, D.; Dudley, M.**
Synchrotron white beam X-ray topography [SWBXT] analysis of MBE-grown CdTe/CdTe(111)B.—73-11471
**Fantassi, S.; Vardelle, M.; Vardelle, A.; Fauchais, P.**
Influence of the velocity of plasma-sprayed particles on the splat formation.—73-09181
**Fantini, M. C. A.,** See Estrada, W.
**Fantozzi, G.,** See Jorand, Y.; Saadaoui, M.; Torrecillas, Ramon; Olagnon, Christian; Riedel, R.
**Fapohunda, Chris A.,** See Detwiler, Rachel J.
**Farabaugh, E. N.,** See Long, Gabrielle G.
**Farafonov, G. A.; Bas'yas, L. P.**
Stress relaxation in refractories during different modes of loading.—73-00869
**Farberovich, O. V.,** See Gegeshidze, K. R.
**Fareed, A. S.; Schiroky, Gerhard H.**
Microstructure and properties of Nextel 610 fiber-reinforced ceramic and metal matrix composite.—73-17164
**Fargeot, Dominique,** See Huger, Marc
**Farhi, R.,** See Foussigne, Y.
**Farias, M. H.,** See Espinoza-Beltran, F. J.
**Farkas, Janos,** See Huling, Jeffrey C.
**Farkasovsky, P.,** See Bat'ko, I.
**Farley, C. W.,** See McDermott, B. T.; Sullivan, G. J.
**Farmer, D.; Heitor, M. V.; Sentieiro, J.**
New methodology for furnace monitoring, analysis, and control.—73-12232
**Farmer, K. R.; Lundgren, P.; Andersson, M. O.; Engstrom, O.**
Injection-related damage in metal-oxide-silicon tunnel diodes.—73-05585
**Farmer, S. C.,** See Hurwitz, F. I.
**Farmer, S. C.; Dellacorte, Christopher; Book, P. O.**
Sliding wear of self-mated $Al_2O_3$-SiC whisker-reinforced composites at 23–1200°C.—73-03351
**Farnady, Ferenc**
Quality assurance of building materials [in Hungary].—73-13638
**Farneth, William E.,** See Higgins, Richard J.
**Farnsworth, Barry C.,** See Folweiler, Robert C.
**Farooq, Shaji,** See Aoude, Farid Y.
**Farr, J. D.,** See Klacka, R. W.
**Farrell, Charles W.; Hover, Kenneth C.; Plumley, Peter W.**
Natural remanent magnetization [NRM] of portland cement concrete.—73-00149
**Farrington, G. C.,** See Edstrom, Kristina
**Farris, Richard J.,** See Maden, Michele A.; Tong, Quinn K.
**Farris, T. N.,** See Ahn, Y.; Chauhan, R.; Chen, Y. M.
**Farrow, L. A.,** See Chan, Siu-Wai
**Farssi, Y.,** See Doussineau, F.
**Farzin-Nia, Farrokh; Petticrew, Richard W.**
Glass orthodontic bracket.—73-03922
**Faschinger, W.,** See Hauzenberger, F.; Sitter, H.
**Faschinger, W.; Hauzenberger, F.; Juza, P.; Pesek, A.; Sitter, H.**
Atomic layer epitaxy [ALE] of CdTe-ZnTe and CdTe-MnTe superlattices.—73-04245
**Fash, R. E.,** See Singh, K. N.
**Fassbender, S.,** See Askarpour, V.
**Fatehi, D.; Schneider, B.**
Surveillance of conveyor belts with visual sensors.—73-04949
**Fatemi, M.,** See Kyono, C. S.; Tadayon, Bijan
**Fatemi, Navid S.; Weizer, Victor G.**
Achievement of near-theoretical-minimum contact resistance to InP.—73-11061
**Fathauer, Robert W.,** See Pike, William T.
**Fathauer, Robert W.; George, Thomas; Pike, William T.; Schowalter, L. J.**
Subsurface growth of silicide structures in silicon.—73-15190
**Fathi, Zak,** See Boonyapiwat, A.; Cozzi, A. D.; Singh, Rajiv K.; Zhong, Ji-Pin
**Fathi, Zak; Folz, D. C.; Clark, David E.; Hutcheon, Ronald M.**
Surface modification of sodium aluminosilicate glasses using microwave energy: II.—73-03891
**Fathi, Zak; Folz, D. Rebecca; Schulz, R. L.; Clark, David E.; Hutcheon, Ronald M.**
Surface modification in a 2.45-GHz microwave field.—73-14118
**Fauchais, P.,** See Coudert, J. F.; Fantassi, S.; Planche, M. P.
**Faucher, M.; Moune, O. K.; Garcia, D.**
Determination of two-electron crystal field parameters in some neodymium compounds.—73-08600
**Fauchet, P. M.,** See Tousley, E. C.
**Faudot, Francoise,** See Michel, D.
**Faul, J.,** See Zhang, X. D.

**Faulk, N. M.**
Electrical discharge machining of advanced ceramics.—73-04914
**Faulques, Eric; Russo, Richard E.**
Raman spectra of iodide species in intercalated $IBi_2Sr_2CaCu_2O_{8+\delta}$.—73-11885
**Faur, Mircea; Honecy, Frank S.; Goradia, C.**
Closed-ampoule diffusion of sulfur into Cd-doped InP substrates: dependence of S profiles on diffusion temperature and time.—73-07415
**Faure, Annick; Bachelard, Roland**
Macrocrystalline alpha-alumina hexagonal platelets.—73-12311
**Faure, Sylvain P.,** See Gaucher, Philippe; Valente, Isabelle
**Faure, Sylvain P.; Barboux, Philippe; Gaucher, Philippe; Livage, M.**
Colloidal processing of $PbZr_{1-x}Ti_xO_3$ thin films.—73-12947
**Faurie, J. P.,** See Chen, Y. P.; Sporken, R.; Vitomirov, I. M.
**Fausch, T.,** See Buhler, M.
**Faust, Anne C.; Guth, Jean-Louis; Hoffner, Frederique; Popa, Jean-Michel**
Production of silica-based MFI zeolites.—73-02065
**Faust, William D.**
Current status of enameling in the U.S.—73-10212
**Fauth, F.,** See Staub, U. Switzerland
**Favenec, P. N.,** See Kechouane, M.; Barriere, A. S.; D'Avitaya, F. Arnaud
**Favennec, P. N.; L'Haridon, H.; Moutonnet, D.; Salvi, M.; Gauneau, M.**
Optical activation of ion-implanted rare earths.—73-04424
**Favrot, D.; Dechamps, M.**
Interpretation of a $YBa_2Cu_3O_{7-\delta}$ canvas structure in terms of elasticity.—73-01582
**Fawcett-Jones, A. J. W.; Evans, Julian R. G.; Edirisinghe, M. J.**
Diffusion measurements in ceramic-polymer suspensions.—73-09072
**Fayeulle, S.; Berroug, H.; Hamzaoui, B.; Treheux, D.; Le Gressus, C.**
Role of dielectric properties in the tribological behavior of insulators.—73-09665
**Fayfield, R. T.,** See Higman, T. K.
**Fazan, Pierre C.,** See Mathews, Viju K.
**Fazio, E.,** See Bertolotti, M.; Michelotti, F.
**Fazlizhanov, I. I.,** See Ibragimov, I. R.
**Fazzio, A.,** See Schmidt, T. M.
**Fecik, Michael T.,** See Rueter, Richard E.
**Fedders, P. A.,** See Jeong, Eun-Kee
**Feder, J.,** See Riste, T.
**Feder, M. S.; DiVito, M. P.; Fielder, K. J.; Salamon, A. W.**
DTA instrumentation for high-temperature materials characterization.—73-05041
**Federov, V.,** See Plakhty, V.
**Fedetova, V. V.,** See Karneeva, S. S.
**Fedkiw, Peter S.,** See Chao, Tsao-Fang
**Fedorenkov, A. L.,** See Samokhvalova, T. I.
**Fedorin, V. A.**
Superionic properties of semiconductor $Cr_{2-x}Se$ as a manifestation of a charge-transfer exciton phase.—73-15192
**Fedorov, A. A.,** See Fedorova, I. V.
**Fedorov, D. L.,** See Shternberg, A. A.
**Fedorov, E. A.,** See Lube, E. L.
**Fedorov, I. V.,** See Gorshunov, B. P.
**Fedorov, L. M.,** See Evstropov, V. V.
**Fedorov, N. F.; Akhetov, A. I.; Fedorova, G. F.; Oralov, T. A.**
Influence of pyrite candle-end phase composition on iron phosphate astringent compound properties.—73-16841
**Fedorov, P. P.,** See Golubev, A. M.; Ol'khovaya, L. A.
**Fedorov, P. P.; Bondareva, O. S.; Buchinskaya, I. I.**
New modifications of tetrafluorolutetiate of sodium, $NaLuF_4$.—73-12640
**Fedorov, P. P.; Sobolev, B. P.**
Concentration dependence of unit cell parameters of $M_{1-x}R_xF_{2+x}$ phases [M=Ca, Sr, Ba, Cd, Pb; R=rare-earth elements] with fluorite structure.—73-16066
**Fedorov, V. E.,** See Naumov, N. G.
**Fedorov, V. M.; Gordopolov, Yu. A.; Merzhanov, A. G.**
Explosive treatment of SHS products (high-temperature superconductors).—73-15465
**Fedorov, Yu. A.,** See Darinskii, B. M.; Baikova, L. G.; Dymnikov, A. A.; Il'khamov, R. A.; Lunter, S. G.
**Fedorova, G. F.,** See Fedorov, N. F.
**Fedorova, I. V.; Shchurov, V. A.; Fedorov, A. A.; Gaisinovich, M. S.**
Thermal decomposition of formiates of some *d*- and *f*-elements.—73-16371
**Fedorova, L. S.,** See Bakalin, Yu. I.
**Fedorova, L. V.,** See Varshal, B. G.
**Fedorova, R. A.; Sobolev, E. V.; Kravchenko, V. V.**
Structural transformations in a lithium aluminosilicate glass on thermal gradation crystallization.—73-00413
**Fedorowsky, Robert,** See Roncato, Giordano
**Fedoruk, R. M.,** See Pitak, N. V.
**Fedoruk, R. M.; Pitak, N. V.; Gud, O. T.; Baksheeva, V. S.**
Refractory lining of a furnace for pyrolysis of dichlorethane.—73-14616
**Fedosyuk, R. M.,** See Belushin, A. V.
**Fedotov, A. O.; Lavrov, B. A.; Ershov, V. A.**
Calculation of the CaO-$SiO_2$-$Me_xO_y$ system viscosity.—73-02554
**Fedotov, A. V.,** See Medvedovskii, E. Ya.
**Fedotov, V. G.; Gatal'skii, G. V.; Trukhan, V. M.**
Effect of irradiation on the luminescence of $CdP_2$ crystals.—73-14851
**Fedou, R.; Langlais, F.; Naslain, R.**
Model for the isothermal isobaric chemical vapor infiltration in a straight cylindrical pore: I. Description of the model.—73-13139
**Fedulov, I. O.,** See Khrapunov, V. E.
**Feeney, M. A.,** See Weyers, Richard E.
**Feeney, R. K.,** See Hill, D. N.; Ohlinger, W. L.
**Feenstra, R. M.,** See Cahill, David G.; Pashley, M. D.; Vaterlaus, A.
**Feenstra, R. M.; Woodall, J. M.; Pettit, G. D.**
Bulk defects [observed] by STM and spectroscopy: arsenic antisite defects in GaAs.—73-14788
**Fegerl, J.,** See Loschner, H.
**Fehlner, Thomas P.,** See Cen, Wei
**Fehrenbacher, R.; Rice, T. M.**
Unusual electronic structure in $PrBa_2Cu_3O_7$.—73-16390
**Fei, L.,** See Tang, Xiao-Yong
**Fei, Lan,** See Tong, Yu-Ye
**Fei, William S.,** See Fanelli, Anthony J.
**Fei, Xin,** See Wong, Kai-W.
**Feierseisen, J. P.,** See Masson, I.
**Feige, F.**
Cost-effective utilization of oil shale at Rohrbach Zement Co.—a review of two significant process developments.—73-09872
**Feigelson, R.,** See Emond, M. H. J.
**Feil, W. A.; Wessels, B. W.**
Defect structure of strontium titanate thin films.—73-09395
**Feile, R.,** See Wagner, W.
**Fejer, M. M.,** See Jundt, D. H.; Spielman, S.
**Feke, Donald L.,** See Mandralis, Zenon I.; Wernet, Judith H.
**Fel'dbakh, E.,** See Kyarner, T.
**Felch, S. B.; Salimian, S.; Hodul, D. T.**
Gate oxide damage [studied] in an electron cyclotron resonance argon plasma.—73-08876
**Felder, Gary N.,** See Felder, Richard M.
**Felder, Richard M.; Felder, Gary N.**
Is the quality of American students really declining.—73-17491
**Feldman, A.,** See Long, Gabrielle G.
**Feldman, D.; Mikhail, S. A.; Denes, G.; Banu, D.**
Preliminary study and laboratory characterization of the Carpentier pyrophyllite mineral.—73-05145
**Feldman, E. P.,** See Stefanovich, L. I.
**Feldman, J.; Preis, M.; Gobel, E. O.; Dawson, P.; Foxon, C. T.; Galbraith, I.**
Γ-X-Γ electron transfer in mixed type I–type II GaAs/AlAs quantum well structures.—73-01173
**Feldman, R. D.,** See Becker, P. C.; Doran, J. P.; Sher, A.
**Feldman, R. D.; Harris, T. D.; Zucker, J. E.; Lee, D.; Austin, R. F.; Johnson, A. M.**
Low threshold, room temperature, pulsed, and quasi-continuous lasing in optically pumped CdZnTe/ZnTe quantum wells.—73-04384
**Feldman, Raouf F.,** See Beaudoin, James J.
**Feldmann, J.,** See Koch, M.
**Felgner, Karl-Heinz; Nilius, Ulf; Langhammer, Hans T.; Abicht, Hans-Peter**
Wetting behavior of fresnoite and sphene on $BaTiO_3$ ceramics.—73-13464
**Felici, A. C.,** See Cricenti, A.
**Feliu, C.,** See Escardino, A.; Gonzalez, J. A.
**Feller, S.,** See Royle, M.
**Fellner, Pavel; Haviar, Miroslav; Koman, Marian; Chovancova, Marta**
Preparation of alumina membranes for microfiltration.—73-02942
**Felner, I.,** See Reich, S.
**Felt, D. Mark,** See Schmid, Frederick
**Fely, Daniel; Septier, Helene; Moreau, Michel; Maire, Jacques**
Porous carbon-carbon composite filtering membrane support with a carbon fiber mat substrate.—73-02120
**Fen, X.-B.,** See Gao, Q.-J.
**Fenelonov, V. B.,** See Shepeleva, M. N.
**Feng, Chang-Dong,** See Shimizu, Yasuhiro
**Feng, Duan,** See Zheng, Jian-Guo
**Feng, G. F.,** See Yang, Y. H.
**Feng, H. J.; Moore, John J.; Wirth, D. G.**
Combustion synthesis of dense ceramic metal composites.—73-06753; Combustion synthesis of TiC-$Al_2O_3$-Al and TiC-$Al_2O_3$-Ti ceramic-metal composites.—73-05713
**Feng, Hao; Li, Yang-Hua; Wang, Ming-Hua**
GaAs 2×2 Mach–Zehnder optic waveguide switch/modulator.—73-11216
**Feng, Jia-Rong; Du, Yan-Hai; Su, Qiu-Ying**
Change of spinel in magnesia chrome bricks used in vacuum-oxygen decarburization [VOD] refining furnaces.—73-07198
**Feng, Man; Goodenough, John B.**
Improving stabilized zirconia with strontium gallate.—73-13094
**Feng, Nai-Qian; Ma, Chang-Chen; Ji, Xi-Huang**
Natural zeolite for preventing expansion due to alkali-aggregate reaction.—73-06692
**Feng, Nai-Qian**
Properties of zeolite as an air-entraining agent in cellular concrete.—73-06708
**Feng, Q.-R.,** See Zhang, H.
**Feng, S.-Q.,** See Zhang, H.
**Feng, Shou-Hua,** See Tsai, Men-Ting
**Feng, Tom; Schwartz, Bradley D.**
Characteristics and origin of the 1.681-eV luminescence center in chemical vapor deposited diamond films.—73-02556
**Feng, X. D.; Warde, C.**
Influence of surface charge on the cathodoluminescence of Ce:YAG.—73-02620
**Feng, X. H.,** See Li, Dien
**Feng, X.; Cunnane, J. C.; Bastes, J. K.**
Literature review of surface alteration layer effects of waste glass behavior.—73-08299
**Feng, Xiu-Ji; Zhao, Fei**
Subcluster model of cement particle size distribution.—73-06723
**Feng, Xiu-Ping; Yu, Gui-Yu; Yang, Nan-Ru**
Mechanism for the thinning effect of diluents on cement raw slurry.—73-10036
**Feng, Y.-J.; Cheng, Q.-H.; Wu, P.-H.**
Spatial variation of the critical current density of the high-$T_c$ superconducting thin films.—73-11902
**Feng, Y.-P.; Teo, K.-L.; Li, M.-F.; Poon, H.-C.; Ong, C.-K.; Xia, J.-B.**
Empirical pseudopotential band structure calculation for $Zn_{1-x}Cd_xS_ySe_{1-y}$ quaternary alloy.—73-07503
**Feng, Yong; Zhou, Lian; Luo, Chang-Xun**
Effect of Ho addition on properties of Y-system superconductors.—73-04702
**Feng, Yong; Zhou, Lian; Wang, Ke-Guang; Zhang, Yu-Heng; Jin, Xin; Zhang, Yi-Tong**
Critical current density and magnetic properties of a melt-processed $Y_{0.8}Ho_{0.2}Ba_2Cu_3O_x$ superconductor.—73-11708
**Feng, Yong; Zhou, Lian**
Superconductivity and microstructure of powder-melting-processed YHoBaCuO and YGdBaCuO superconductor.—73-08226
**Feng, Z.-R.,** See Huang, N.-K.
**Feng, Z.; Komvopoulos, K.; Brown, Ian G.; Bogy, D. B.**
Effect of graphite carbon films on diamond nucleation by microwave-plasma-enhanced chemical vapor deposition.—73-09079
**Feng, Zhi-Jian,** See Shen, Ju-Yun
**Fenigstein, A.; Schacham, S. E.; Finkman, E.**
Covered electrode HgCdTe photoconductor under high illumination levels.—73-07424
**Fenlon, Paul F.; Knecht, Thomas A.; Witte, Robert S.; Skoda, William G.; Thompson, R. Victor**
Ultrathin surface mount crystal package.—73-04588
**Fennema, B.,** See Roberts, L.
**Fenske, G. R.,** See Ajayi, O. O.
**Fentiman, C. H.,** See Muhamad, M. N.
**Fenton, Alan**
Refined blow mold cooling.—73-15752
**Fenwick, Lloyd J.,** See Sommers, James H.
**Feodos'ev, S. B.,** See Startsev, S. V.
**Feoflov, S. P.,** See Basun, S. A.
**Feoktistov, N. A.,** See Zherzdev, A. V.
**Feoktistova, N. N.,** See Karger, J.
**Ferber, C.,** See Bergholz, A.
**Ferber, Mattison K.,** See Chawla, K. K.; Coffer, C. G.; Ghosh, Asish; Hong, William S.; Hsueh, Chun-Hway; Jenkins, M. G.; Jenkins, Michael G.; Lara-Curzio, Edgar; Lin, Chih-Kuang Jack; Lin, H.-T.; Menon, Mamballykalathil N.; Raghuraman, S.; Wereszczak, A. A.; Zutshi, Ajoy
**Ferber, Mattison K.; Jenkins, Michael G.; Nolan, Theodore A.; Yeckley, Russell L.**
Comparison of the creep and creep rupture performance of two HIPed silicon nitride ceramics.—73-06344
**Ferdeghini, C.,** See Calzona, V.
**Ferguson, G.,** See Sepulveda, Juan L.
**Ferguson, I.,** See Ivanov-Omskii, V. I.
**Fernandes, M. H.; Cable, M.**
Effect of water on the volatilization of sodium borate melts.—73-14364; Reactive vaporization of sodium tetraborate with water vapor.—73-06962
**Fernandez Navarro, J. M.,** See Balda, R.; Ferreira da Silva, M. G.; Miranda Salvado, I. M.; Villegas, Maria Angeles
**Fernandez Navarro, J. M.; Villegas, Maria Angeles**
Preparation of gold ruby glasses by the sol-gel method.—73-10581
**Fernandez, A. M.; Sebastian, P. J.**
Conversion of chemically deposited ZnS films to photoconducting ZnO films.—73-16687
**Fernandez, A.,** See Gonzalez-Elipe, A. R.
**Fernandez, D.,** See Gonzalez, P.
**Fernandez, D.; Gonzalez, P.; Pou, J.; Garcia, E.; Leon, B.; Perez-Amor, M.**
Geometrical factors affecting the $CO_2$ laser chemical vapor deposition of silicon oxide films in parallel configuration.—73-13074
**Fernandez, F.,** See Ramos, E.
**Fernandez, J. M,** See Kavanagh, K. L.
**Fernandez, J. M.; Chen, Jian-Hui; Wieder, H. H.**
Magnetotransport properties of two-dimensional channels in pseudomorphic and strain-relaxed $In_{0.17}Ga_{0.83}As$ heterojunctions.—73-07657; Transport in strained relaxed $In_{0.15}Al_{0.85}As$/- $In_{0.17}Ga_{0.83}As$ heterojunctions.—73-06180
**Fernandez, J.,** See Balda, R.; Macho, E.
**Fernandez, M.,** See De Castro, A. J.
**Fernandez, Maria C. Trabajo,** See Arean, Carlos Otero
**Fernandez, P.,** See Dominguez-Adame, F.
**Fernandez-Baca, Jaime A.,** See Wang, Xun-Li
**Fernandez-Saez, J.; Chao, J.; Duran, J.; Amo, J. M.**
Estimating lower-bound fracture parameters for brittle materials.—73-13524
**Fernie, John A.**
Sol-gel: principles and applications.—73-13283; See also Hanson, W. B.
**Ferrai, H.,** See Caneiro, A.
**Ferrand, B.,** See Hanna, D. C.
**Ferrante, M.; Pigoretti, E.**
Metallization of silicon carbide with chromium powder.—73-03616
**Ferrara, M.,** See Cingolani, R.; Dabbicco, M.
**Ferrari, A.,** See Bertolotti, M.
**Ferrari, L.,** See Cricenti, A.
**Ferraris, Giovanni,** See Porta, P.
**Ferrato, M.; Chartier, T.; Baumard, J. F.**
Debinding of ceramics.—73-02762
**Ferraz, A. C.,** See Alves, J. L. A.

**Ferreira da Silva, M. G.; Fernandez Navarro, J. M.**
Effect of thermal treatment on the structural incorporation of NiO in silicate materials prepared by sol-gel method.—73-14363
**Ferreira, J. R.,** See Cupini, N. L.
**Ferreira, R.; Bastard, G.**
Hole "spin" relaxation in the semiconductor quantum wells.—73-07568
**Ferreira, S.,** See Siguin, D.
**Ferreira, V. M.; Baptista, J. L.; Kamba, S.; Petzelt, J.**
Dielectric spectroscopy of $MgTiO_3$-based ceramics in the $10^9$–$10^{14}$ Hz region.—73-14692
**Ferrer, A.; Comin, F.; Martin, J. A.; Vazquez, L.; Bernard, P.**
Early stages of growth of crystalline, diamondlike films on Si(100) by pulsed laser evaporation of graphite.—73-02778
**Ferret, P.,** See Saoudre, R.
**Ferretti, A.,** See Roelofs, M. G.
**Ferretti, M.,** See Cannelli, G.
**Ferrieu, F.,** See Vallier, L.
**Ferrio, Kyle,** See Wang, Hai-Lin
**Ferro, Alberto C.; Derby, Brian**
Transient liquid phase joining of reaction-bonded silicon carbide.—73-03659
**Ferro, C.,** See Di Pietro, E.
**Fesenko, A. I.,** See Gogotsi, G. A.
**Fesenko, I. P.,** See Kuzenkova, M. A.
**Fesenko, O. E.,** See Shuvaeva, V. A.
**Fetikov, V. I.,** See Budov, V. V.
**Fetisov, G. V.; Zhukov, S. G.**
Effect of sample preparation technique on X-ray diffraction analysis results.—73-15791
**Fetisova, V. M.,** See Kovalevskaya, G. G.
**Fett, Theo,** See Bahr, Hans-Achim
**Fett, Theo; Keller, K.; Kubler, J.; Munz, Dieter**
Thermal fatigue of glass.—73-03815
**Fett, Theo; Munz, Dietrich**
Subcritical crack growth [SCG] of macro- and microcracks in ceramics.—73-06535; Lifetime prediction for ceramic materials under constant and cyclic load.—73-17371; Indirect method for the determination of $da/dN$-$\Delta K$ curves.—73-06458
**Feuer, H.,** See Woetting, G.
**Feuerstein, Robert J.,** See Pankove, Jacques I.
**Feuillard, G.; Lethiecq, M.; Amazit, Y.; Certon, D.; Millar, C.; Patat, F.**
Experimental determination of the surface acoustic wave properties of new fine-grain piezoelectric ceramics.—73-11572
**Feuillet, G.,** See Hamoudi, A.
**Feyereisen, M.,** See Chen, H.
**Fiaccadori, Guido**
France is an open market.—73-17480
**Fiala, Jaroslav**
Paracrystals[—literature review].—73-12645
**Fiaud, Christian,** See Hachani, Leila
**Fichtner-Schmittler, H.; Lutz, W.; Amin, S.; Dyer, Alan; Wark, M.**
Hydrothermal damage of ion-exchanged A-type zeolite cation-directed mechanisms of phase transformation.—73-12597
**Fickel, Albrecht F.; Schnabel, Michael**
Quality assurance during manufacture of refractory kiln furniture according to DIN ISO 9000.—73-00845
**Fickel, Albrecht F.**
Refractory materials for kiln furniture in the ceramic industry.—73-00856
**Fiddyment, Phil J.,** See Burton, Julie D.
**Fidrya, N. A.,** See Bobiitskii, Ya. V.; Venger, E. F.
**Fiechter, S.,** See Hopfner, C.
**Fiedler, Wallace A.**
Guide hole sleeves for boat transports supporting semiconductor device assemblies.—73-11523
**Fiel, Larry D.**
Can graphite materials ovrcome thermal checking.—73-10503
**Field, J. S.,** See Bell, T. J.
**Field, Robert E.; Viskanta, Raymond**
Spectral remote sensing of the dynamic temperature distribution in glass plates.—73-07076
**Fielder, K. J.,** See Feder, M. S.
**Fields, Richard E.**
Standardizing test methods for composite materials.—73-15849
**Fiermans, L.,** See Poellmann, H.
**Fierro, Jose Luis G.,** See Agudo, Antonio Lopez; Anderson, James A.
**Fievet, F.; Fievet-Vincent, F.; Lagier, J. P.**
Metallic powders and thick film materials for electronic applications.—73-04136
**Fievet-Vincent, F.,** See Fievet, F.
**Figueiredo Neto, A. M.,** See Matuo, C. Y.
**Figueras, A.,** See Aspar, B.
**Figueroa, L.,** See Derry, P. L.
**Figura, P. M.**
Standardless X-ray fluorescence (XRF) analysis of liquids.—73-08446
**Figura, P. V.; Nepomnyashchikh, A. I.**
Mechanism of slow excitation in X-ray luminescence and thermoluminescence of $CaF_2$:Tm crystals.—73-08916
**Figush, V.,** See Mukas'yan, A. S.
**Filatov, A. M.,** See Mel'nik, M. T.; Belopol'skaya, T. V.; Bubnova, R. S.; Petrov, S. A.
**Filatova, I. V.,** See Kudoyarova, V. K.
**Filatova, L. A.,** See Mamontova, M. Yu.
**Files-Sesler, L. A.,** See Celii, F. G.
**Filges, R.**
Structural features of the PYRORAPID short rotary kiln.—73-01971
**Filin, Y. N.,** See Ryzhov, V. A.
**Filina, L. V.; Komkov, N. A.; Krotikov, V. A.**
Effect of phenol formaldehyde oligomer additive composition and structure on sintering and characteristics of corundum materials.—73-02792
**Filipkowski, M. E.,** See Hoff, H. A.
**Filipovich, V. N.,** See Kalinina, A. M.; Yuritsin, N. S.
**Filippelli, A. R.,** See Basford, James A.
**Filippelli, Gabriel M.; Delaney, Margaret L.**
Effects of manganese(II) and iron(II) on the cathodoluminescence signal in synthetic apatite.—73-12779
**Filippi, F.,** See Morterra, Claudio
**Filippovich, L. I.,** See Blank, A. B.
**Filipuzzi, Ludovic,** See Mocaer, D.
**Filipuzzi, Ludovic; Camus, Gerald; Naslain, R.; Thebault, Jacques**
Oxidation mechanisms and kinetics of 1D-SiC/C/SiC composite materials: I, An experimental approach.—73-06317
**Filipuzzi, Ludovic; Naslain, R.**
Oxidation mechanisms and kinetics of 1D-SiC/C/SiC composite materials: II, Modeling.—73-06318
**Fillard, J. P.,** See Montgomery, P. C.
**Fillion, Raymond A.,** See Iacovangelo, Charles D.
**Filonenko, E. V.,** See Perechinskii, S. I.
**Filonenko, V. P.,** See Barabanenkov, Yu. A.
**Filonenko, Yu. Ya.,** See Shershnev, A. A.
**Filson, James L.,** See Morgart, James R.
**Finch, D.,** See Yu, Ga-Er
**Fincher, Curtis R., Jr.,** See Blanchet-Fincher, Graciela B.
**Fincke, J. R.; Swank, W. D.; Haggard, D. C.**
Entrainment and demixing in subsonic argon/helium thermal plasma jets.—73-09119
**Finders, J.,** See Maassen, M.
**Findikoglu, A.,** See Venkatesan, T.
**Fine, Morris E.,** See Liu, Hai-Yan
**Finefield, Mark A.,** See Harmon, David M.
**Finger, G.,** See Schultze, Dietrich; Werner, Lutz
**Fink, A.,** See Agnello, P. D.
**Fink, C.,** See Mennig, M.
**Fink, R.,** See Kip, D.
**Finke, Steven J.,** See Kimock, Fred M.
**Finkel, V. M.; Sergeeva, O. G.; Shegai, V. V.**
Sharp crack self-healing in $CaCO_3$.—73-02686
**Finkelstein, K. D.; Shen, Qun; Shastri, S.**
Resonant X-ray diffraction near the iron $K$-edge in hematite ($\alpha$-$Fe_2O_3$).—73-08725
**Finkelstein, Leo,** See Dumesnil, Maurice E.
**Finkman, E.,** See Fenigstein, A.
**Finlayson, Trevor R.; Gross, Anita K.; Griffiths, John R.; Kisi, Erich H.**
Creep of Mg-PSZ at room temperature.—73-06358
**Finnefrock, A. C.,** See Vitomirov, I. M.
**Finnemore, Douglas K.,** See Gleixner, Richard A.; Polonka, J.
**Finnemore, Douglas K.; Miller, Theodore A.; Ostenson, Jerome E.; Schwartzkopf, Louis A.; Sanders, Steven C.**
Method for producing strain tolerant multifilamentary oxide superconducting wire.—73-15685
**Finnis, Michael W.,** See Kruse, Carsten
**Fiordalice, R.,** See Kottke, M.
**Fiordalice, Robert W.,** See Hegde, Rama I.
**Fiovani, D.,** See Leccabue, F.
**Firsov, V. A.,** See Belousov, Yu. L.
**Fischer, A.,** See Wang, H. S.
**Fischer, Bernd; Kohler, Gunter**
Microanalytical investigation of bonded ceramic materials.—73-03162
**Fischer, Bernd**
Metallographical and microanalytical investigations to reduce platinum corrosion in glass melts.—73-14427
**Fischer, Donald F.,** See Lewis, Michele A.
**Fischer, Peter**
Microstructural compromise in the heavy clay industry.—73-03981; See also Golosovsky, I. V.; Guillaume, M.; Kramer, K.; Roessli, B.; Rogl, P.
**Fischer, R. J.,** See Lee, H. G.
**Fischer, R.,** See Kulibekov, A.; Loschner, H.
**Fischer, R.; Franz, E. D.; Telle, R.**
Structural examination of injection-molded ceramics by polarized transmission microscopy.—73-06289
**Fischer, Traugott E.; Mullins, William M.**
Ceramics, friction, and chemistry.—73-08506
**Fischer, Udo K. R.,** See Hartzell, E. Torbjorn
**Fischman, Gary S.,** See Wing, Douglas R.
**Fiser, J.,** See Panjan, P.
**Fiset, M.,** See Baril, D.; Pelletier, Sylvian
**Fish, D. A.,** See Jeffrey, P. M.
**Fish, D. A.; Powell, A. K.; Hall, T. J.; Jeffrey, P. M.; Eason, R. W.**
Theoretical analysis of mechanism of photorefractive enhancement of photochromic gratings in bismuth silicon oxide.—73-05650
**Fish, J.,** See Beall, M. W.
**Fish, Suzanne**
Furnace design in hours with combustion simulation.—73-15875
**Fishchev, V. N.,** See Suvorov, S. A.
**Fisher, B.,** See Contour, J. P.; Willert-Porada, M.
**Fisher, B.; Kuper, C. G.; Koren, G.; Israelit, S.; Patiagan, L.**
Variable range hopping in $Pr_{1-x}Ca_xBa_2Cu_3O_{7-\delta}$.—73-08273
**Fisher, Edward S.,** See Manghnani, M. H.
**Fisher, F.,** See Furrer, A.
**Fisher, L. M.; Il'in, N. V.; Podlevskikh, N. A.**
Pinning and the size of grains in high-$T_c$ ceramics.—73-08166
**Fisher, Matthew P. A.,** See Dorsey, Alan T.
**Fisher, R. F.,** See Vydyanath, H. R.
**Fisher, Udo K. R.,** See Waldenstrom, Mats G.
**Fishkis, Maya; Misra, Chanakya; Wefers, Karl**
Method for increasing the wettability of aluminum metal to alumina-containing fibers.—73-10325
**Fisk, Z.,** See Hammel, P. C.; Miljak, M.; Reyes, A. P.; Zysler, R. D.
**Fisson, S.,** See Rivory, J.; Vuye, G.
**Fisun, V. V.,** See Yanson, I. K.
**Fita, I. M.; Doroshenko, N. A.; D'yakonov, V. P.; Zubov, E. E.; Levchenko, G. G.; Markovich, V. I.**
Ferromagnetic phase in $SmBa_2Cu_3O_{6+x}$ at low temperatures.—73-16153
**Fita, I. M.**
Pressure-induced magnetic ordering in $CoSiF_6{\cdot}6H_2O$.—73-02406
**Fitch, Andrew N.,** See Collins, David R.
**Fitch, J. T.; Denning, D. J.; Beard, D.**
Pattern dependence of selectivity in low-pressure selective epitaxial silicon growth.—73-15083
**Fitting, Dale W.,** See Prosser, William H.
**Fitting, H.-J.**
Vacuum emission of hot electrons from insulating and semiconducting films.—73-11501
**Fitz, John,** See Wu, Ming-Cho
**Fitzer, E.,** See Stumm, T.
**Fitzgerald, E. A.,** See Kuo, J. M.
**Fitzgerald, E. A.; Xie, Y.-H.; Monroe, D.; Silverman, P. J.; Kuo, J. M.; Kortan, A. R.**
Relaxed $Ge_xSi_{1-x}$ structures for III-V integration with Si and high-mobility two-dimensional electron gases in Si.—73-07768
**Fitzgerald, G.,** See Chen, H.
**FitzPatrick, E. A.,** See Kapur, S.
**Fives, K.,** See McGovern, I. T.
**Fjellvag, H.,** See Karen, Pavel; Norby, P.
**Flachbart, K.,** See Bat'ko, I.
**Flahaut, J.,** See Pardo, M.-P.
**Flaherty, J. E.,** See Adjerid, S.
**Flaitz, Philip L.; Neisser, Mark**
Polishing of substrates.—73-12054
**Flanagan, J.**
Investing for tomorrow—assistance from the EEO.—73-03398; Rational use of energy in the European Community (EC) glass industry.—73-13639
**Flanagan, Mark; Wright, Peter**
Ceramic simulated log.—73-12348
**Flanders, Michael W.**
Process for obtaining side metallization and articles produced thereby.—73-10340
**Flandrois, S.,** See Dubois, C.
**Flanigen, Edith M.,** See Skeels, Gary W.
**Flatte, Michael E.**
Image of the energy gap anisotropy in the vibrational spectrum of a high-temperature superconductor.—73-15506
**Flaugher, Jeffrey R.; Nissen, Timothy A.; Procaccini, Vincent N.; Deb, Sugato**
Method and apparatus for controlling the temperature of glass sheets in press bending.—73-10641
**Flavell, D.,** See Mundon, C. C.
**Fleck, H. K.**
Experience with magnesium-aluminum-spinel bricks in a 3000 ton/day [cement] rotary kiln.—73-10727; Storage of additives for cement production at the Marker Cement Works, Harburg [Germany].—73-13780
**Fleddermann, C. B.,** See Blair, A. J.
**Fleet, M. E.**
Tetrahedral-site occupancies in sodium aluminum-gallium feldspar solid solutions $[Na(Al)_{1-x}(Ga_x)Si_3O_8]$.—73-02520; See also Li, Dien; Sherriff, B. L.
**Fleischer, James F.,** See Anthony, Thomas R.; Bovenkerk, Harold P.
**Fleischer, Maximilian,** See Lohwasser, Werner
**Fleischer, Maximilian; Meixner, Hans**
Characterization and crystallite growth of semiconducting high-temperature-stable $Ga_2O_3$ thin films.—73-04265; Electron mobility in single- and polycrystalline $Ga_2O_3$.—73-07493
**Fleischer, R. L.**
Nuclear track method for neutron-induced radionuclide mapping with applications to uranium distributions in superconductors.—73-08152
**Fleischer, S.; Lai, P.-T.; Cheng, Y.-C.**
Effects of nitridation temperature on the electron trap characteristics of nitrided-oxide metal-oxide-semiconductor capacitors.—73-07474; Simplified closed-form trap-assisted tunneling model applied to nitrided oxide dielectric capacitors.—73-10987
**Fleischer, Veronika,** See Klug, Thomas
**Fleischmann, Bernhard; Faber, Anne J.; Breeuwer, Rene**
Development of an ultrasonic method to determine the residual thickness of refractory blocks.—73-08392
**Fleischmann, Bernhard; Mergler, K. W.; Barklage-Hilgefort, H.**
Application of electrochemical passivation methods for molybdenum electrodes in industrial glass tanks.—73-15866; Industrial experience with a cathodic electrochemical method to reduce the molybdenum electrode corrosion.—73-08474
**Flemig, G.,** See Samlenski, R.
**Fleming, Debra A.,** See Chandross, Edwin A.
**Fleming, James W.**
Method of producing a glass body.—73-10647
**Fleming, Michael P.; Berry, Celia A.; Shisler, Robert W.**
Laser welding process for attaching metal to ceramic substrate.—73-10320
**Fleming, R. M.,** See James, A. C. W. P.
**Flemings, Merton C.,** See Mortensen, Andreas
**Flemish, J. R.; Pfeffer, R. L.; Buchwald, W.; Jones, K. A.**
Silicon nitride deposited at very low silane pressures using electron cyclotron resonance plasmas.—73-06044

**Flemish, J. R.; Pfeffer, R. L.**
Low-hydrogen-content silicon nitride films from electron cyclotron resonance plasmas.—73-07644
**Flerov, I. N.,** See Gorev, M. V.
**Flerov, I. N.; Gorev, M. V.; Mel'nikova, S. V.; Misyul, S. V.; Voronov, V. N.; Aleksandrov, K. S.**
$Fm3m \rightarrow 14/m \rightarrow P2_1/n$ successive phase transitions in $Rb_2KInF_6$ and $Rb_2KLuF_6$ elpasolites.—73-16145; Phase transitions in elpasolite, $Rb_2KScF_6$.—73-16266
**Flerov, I. N.; Gorev, M. V.**
Effect of hydrostatic pressure on phase transitions in perovskite-like crystals of $RbCl/CdCl_2$ system.—73-16116
**Fleshler, S.,** See Kwok, W. K.; Welp, U.
**Fletcher, J. G.; Glasser, Fredrick P.**
Phase relations in the system $CaO-B_2O_3-SiO_2$.—73-08695
**Fletcher, Joseph P.; Kirkpatrick, R. James; Howell, David; Risbud, S. H.**
$^{31}P$ MAS-NMR spectroscopy of calcium phosphate glasses.—73-10391
**Fletcher, P. R.; Leach, C.**
Impurity phase recognition in YBCO high-$T_c$ superconductors by cathodoluminescence [CL] spectroscopy.—73-15507
**Fleuster, M.,** See Fluck, D.
**Flevaris, N. K.,** See Krishnan, R.
**Flicstein, J.,** See Debauche, C.
**Fliedner, Christine; Rehfeld, Gerhard; Maschmeyer, Dietrich**
Polycrystalline sintered abrasive granules based on $\alpha$-$Al_2O_3$.—73-03420
**Flik, Markus I.,** See Bang, Christopher A.; Choi, B. I.; Westerheim, A. C.
**Flintham, T. J.; Haspel, D. W.**
Practical application of rule- and knowledge-based system techniques to industrial processes.—73-01815
**Flintoff, John F.,** See DeNatale, Jeffrey D.
**Flis, A. A.,** See Novitskaya, G. N.
**Flis, V. S.,** See Novitskaya, G. N.
**Flodstrom, S. A.,** See Yu, Z.-M.
**Flokstra, J.; Ijsselsteijn, R. P. J.; Hilgenkamp, J. W. M.**
Basic elements for photodeposited high-$T_c$ thin-film devices.—73-11692
**Flom, Yury; Royston, James**
Improved superconducting magnetic rotary bearings.—73-11795
**Flores, F.,** See Ortega, J.
**Florescu, L.,** See Frunza, Ligia
**Florez, L. T.,** See Chen, W.; Duszak, R.; Kamiya, Itaru; Kash, K.
**Florry, J. S.,** See Zandian, V.
**Flowers, Michael C.; Jonathan, Neville B. H.; Laurie, Angus B.; Morris, A.; Parker, G. J.**
New precursor for growing nitride films.—73-13149
**Floyd, P. D.,** See Yokogawa, T.
**Fluck, D.; Binder, B.; Kupfer, M.; Looser, H.; Buchal, C.; Gunter, P.**
Phase-matched second harmonic blue light generation in ion-implanted $KNbO_3$ planar waveguides with 29% conversion efficiency.—73-07904
**Fluck, D.; Jundt, D. H.; Gunter, P.; Fleuster, M.; Buchal, C.**
Modeling of refractive index profiles of $He^+$ ion-implanted $KNbO_3$ waveguides based on the irradiation parameters.—73-11590
**Fluegel, B. D.; Paul, A.; Meissner, K.; Binder, R.; Koch, S. W.; Peyghambarian, N.**
Experimental and theoretical investigation of femtosecond carrier relaxation in CdSe.—73-07521
**Flukiger, R.,** See Seibt, E. W.
**Fluss, M. J.,** See Moalem, M.
**Flynn, Anita M.; Tavrow, Lee S.; Brooks, Rodney A.; Cross, Leslie E.; Bart, Stephen F.**
Miniature actuator.—73-11635
**Flytzanis, C.,** See Hugonnard-Bruyere, S.
**Flytzanis-Stephanopoulos, M.,** See Wang, C. A.
**Foad, M. A.; Thoms, S.; Wilkinson, C. D. W.**
New technique for dry etch damage assessment of semiconductors.—73-11350
**Fodchuk, I. M.,** See Shcherbak, L. P.
**Foden, C. L.; Rando, N.; Peacock, A.; Van Dordrecht A.**
Optimization of superconducting tunnel-junction-based X-ray detectors.—73-11852
**Fodor, M.,** See Wojnarovits, I.
**Fody, Jody**
Cleaning by blasting with pellets of dry ice.—73-12117
**Foerster, S. C.; Graule, T.; Gauckler, Ludwig J.**
Strength and toughness of reinforced chemically bonded ceramics [CBC's].—73-10164
**Fofanov, A. D.,** See Aleshina, L. A.
**Foing, J.-P.; Hulin, D.; Joffre, M.; Jackson, M. K.; Oudar, J. L.; Tanguy, C.**
Absorption edge singularities in highly excited semiconductors.—73-07375
**Fok, Siu L.,** See Smart, John
**Fok, Siu L; Smart, John**
Discriminating between fracture criteria in the prediction of failure probability of brittle materials.—73-13503
**Fokin, A. V.,** See Chekhovskii, V. G.
**Fokin, V. M.,** See Yuritsin, N. S.
**Folch, A.,** See Sorokin, N. I.
**Foldeaki, Maria,** See Paranthaman, M.; Yamamoto, Tatsuya
**Foldvari, Istvan; Martin, Joel J.; Hunt, Charles A.; Powell, R. C.; Peter, Agnes**
Temperature dependence of the photorefractive effect in undoped $Bi_{12}GeO_{20}$.—73-08978
**Foldyari, Istvan; Taheri, Bahman; Reeves, Roger J.; Powell, R. C.**
Nonlinear absorption of laser light in $Bi_2TeO_5$ single crystals.—73-16549
**Folea, Antoaneta,** See Teoreanu, Ion
**Foley, Michael R.,** See Quinn, George D.
**Foley, Michael R.; Pujari, Vimal K.; Sales, Lenny C.; Tracey, Dennis M.**
Silicon nitride tensile strength database from Ceramic Technology Program Processing for Reliability Project.—73-17428
**Folgner, T.,** See Hoffl, K.
**Folkard, M. A.,** See Hartley, R. H.
**Folkard, M. A.; Shen, G.; Kumar, V.; Steele, T. A.; Rees, D.; Varga, I. K.**
In situ ellipsometric measurements of the MBE growth of CdTe/HgTe and CdTe/ZnTe superlattices.—73-11263
**Folonari, C. V.,** See Morterra, Claudio
**Folsberg, J.**
New generation of high efficiency separators for ball mills and roller presses.—73-01803
**Folsch, J.,** See Rubel, H.
**Folsch, J.; Rubel, H.; Schade, H.**
Differences in the structure of amorphous hydrogenated silicon carbide layers prepared with either methane or silylmethanes.—73-08601
**Folsom, Craig A.; Zok, Frank W.; Lange, Fred F.**
Flexural properties of brittle multilayer materials: I, Modeling.—73-06424; Flexural properties of brittle multilayer materials: II, Experiments.—73-17321
**Foltyn, S. R.,** See Wu, X.-D.
**Foltynowicz, Z. A.; Urbaniak, W.; Marciniec, B.; Janowski, F.; Heyer, W.**
Effect of silane treatment on the pore structure of porous glasses.—73-10523
**Folweiler, Robert C.; Farnsworth, Barry C.**
Process for chemical vapor purification of group IIIA metal fluorides.—73-02122
**Folz, D. C.,** See Boonyapiwat, A.; Fathi, Zak; Schulz, Rebecca L.; Zhong, Ji-Pin
**Fomicheva, O. I.,** See Boikova, Alexandra I.; Luginina, I. G.
**Fomin, E. S.,** See Osadchii, M. S.
**Fomin, V. G.,** See Govorkov, A. V.
**Fomin, V. I.,** See Gnezdilov, V. P.
**Fomina, G. A.,** See Barinov, Sergej M.
**Fonash, S. J.,** See Awadelkarim, O. O.; Gu, Tieer
**Fonash, S. J.; Liu, Gang**
Low-temperature crystallization and patterning of amorphous silicon films on electrically insulating substrates.—73-11527
**Fong, C. Y.,** See Hemstreet, L. A.
**Fong, Keith B.,** See Weiser, Martin W.
**Fonstad, Clifton G.,** See McCann, Patrick J.
**Fontana, Antonio,** See Esposito, Leonardo
**Fontana, F.,** See Andreone, A.
**Fontana, M. D.; Kugel, G. E.; Foussadier, L.; Kress, W.; Rytz, D.**
Anomalous behavior of the transverse acoustic phonons in $KTa_{1-x}Nb_xO_3$.—73-08551
**Fontanella, J. J.,** See McGowan, P. C.
**Fonteneau, Gilles,** See Charron, Christophe; Matecki, Marc
**Foo, P. D.,** See Huo, D. T. C.; Pai, C. S.
**Foot, P. J. S.,** See Hill, P. G.
**Foote, Marc C.,** See Vasquez, Richard P.
**Foote, Marc C.; Hunter, Brian D.**
Sandwich-geometry $YBa_2Cu_3O_{7-\delta}$/Au/Nb SNS [superconductor/normal-conductor/superconductor] devices.—73-08192
**Forberg, Sevald,** See Hermansson, Leif
**Ford, A. C.,** See Shen, T.-H.
**Ford, B. A.,** See Cox, G. A.
**Ford, P. J.,** See Senin, H. B.
**Ford, Steven J.,** See Christensen, Bruce J.
**Ford, W. K.,** See Lessor, D. L.
**Forest, R. E.,** See Rigby, A. J.
**Forgan, E. M.,** See Mook, H. A.; Yethiraj, M.
**Fork, D. K.,** See Troger, L.
**Forkel, Klaus,** See Gottwald, Gunther
**Forkel, Klaus; Calov, Ursula; Wilde, Peter-Michael**
Microanalytical investigation of cement specimens with encased, chlor-tri-fluoroethane coated, continuous E-glass fibers.—73-00140
**Forkel, Klaus; Gottwald, Guenther; Wihsmann, Fred Gustav**
Use of experimental design for developing glasses with a comparatively low $ZrO_2$ content which are highly resistant to alkali and which can be formed by a melt-spinning process.—73-03900
**Forkel, Klaus; Masthoff, Klaus; Bochynek, Georg**
Examination of the surface of sparkling wine bottle cullet by means of ESCA, SEM, and EDS.—73-00340
**Formago, I. A.,** See Nemkovich, I. K.
**Forman, J.,** See Ilarsky, J.; Kolman, B.
**Formanek, B.; Swadzba, L.; Maciejny, A.**
Multicomponent hard coatings for WC-Co sintered carbides.—73-10255
**Formica, Riccardo; Parolini, Tullio**
Casting of sanitary ware comparison of technology.—73-14563
**Formier, A.,** See Bulou, A.
**Fornasini, P.,** See Kisiel, A.
**Fornes, Vicente,** See Rey, Fernando; Camblor, M. A.
**Fornoni, M.,** See Bulou, A.
**Forrai, Tamas**
Jet mills in the silicate industries.—73-12039
**Forrer, M.,** See Konz, Flurin
**Forrest, David,** See Matsuoka, Kaoru
**Forrest, David; Matsuoka, Kaoru; Tse, Mung-Kai; Rabinowicz, E.**
Accelerated wear testing using the grit size effect.—73-05016
**Forro, L.,** See Mandrus, D.; Romero, D. B.
**Forse, R. J.,** See Scharen, M. J.
**Forsling, W.,** See Bhaskar Raju, G.
**Forslund, Bertil,** See Ekelund, Magnus
**Forslund, Bertil; Zheng, J.**
Carbothermal synthesis of aluminum nitride at elevated nitrogen pressures: I, Effect of process parameters on conversion rate.—73-09027; Carbothermal synthesis of aluminum nitride at elevated nitrogen pressures: II, Effect of process parameters on particle size and morphology.—73-09028
**Forster, A.; Lange, J.; Gerthsen, D.; Dieker, C.; Luth, Hans**
Effect of interface roughness and scattering on the performance of AlAs/InGaAs resonant tunneling diodes.—73-11157
**Forster, Hansgeorg; Tiesler, Hartmut**
Contribution to comparability of in vitro and in vivo manmade mineral fiber (MMMF) durability experiments.—73-10424
**Forster, James A.,** See Breit, Henry F.
**Forsthofer, F.,** See Hastreiter, G.
**Forsyth, Donald W.**
Ceramic sequence at Nakbe, Guatemala.—73-06612
**Fort, A. F.,** See Varkey, A. J.
**Forthmann, R.,** See Drazic, G.
**Fortin, E.; Fafard, S.; Mysyrowicz, A.**
Exciton transport in $Cu_2O$: evidence for excitonic superfluidity.—73-17079
**Fortin, E.; Serpi, A.**
Influence of the substrate on the photoconductivity of InGaAs/GaAs quantum wells.—73-04369
**Fortov, V. E.,** See Razorenov, S. V.
**Fortunati, Stefano,** See Marini, Paolo
**Fortunato, G.,** See Scaglione, S.
**Fortunato, G.; Mariucci, L.**
Instability in amorphous silicon dioxide/amorphous silicon structures.—73-04120
**Foss, Colby A., Jr.; Hornyak, Gabor L.; Stocker, Jon A.; Martin, Charles R.**
Template synthesis and optical properties of small metal particle composite materials: effects of particle shape and orientation on plasmon resonance maxima.—73-06111
**Foster, C. M.,** See Skandan, Ganesh
**Foster, C. M.; Bai, G. R.; Parker, J. C.; Ali, M. N.**
Phase characterization and grain size effects of nanophase $Y_2O_3$, $ZrO_2$, and $Y_2O_3$-$ZrO_2$ composites produced by the gas-phase condensation technique.—73-05446
**Foster, C. M.; Chan, S.-K.; Chang, H. L. M.; Chiarello, R. P.; Zhang, T. J.; Guo, Jun**
Electromagnetic modes and prism-film coupling in anisotropic planar waveguides of epitaxial (101) rutile thin films.—73-08860
**Foster, C. M.; Chiarello, R. P.; Chang, H. L. M.; You, H.; Zhang, T. J.; Frase, H.**
Raman scattering and X-ray diffractometry studies of epitaxial $TiO_2$ and $VO_2$ thin films and multilayers on $\alpha$-$Al_2O_3(11\bar{2}0)$.—73-02413
**Foster, M.,** See Rempel, A. A.
**Fotiev, A. A.,** See Polyakov, E. V.; Slobodin, B. V.
**Fotiev, A. A.; Koshcheeva, S. N.; Zhuravlev, V. D.**
Synthesis of $YBa_2Cu_3O_{7-\delta}$ using barium nitrate.—73-01686
**Fotiev, A. A.; Koshcheeva, S. N.**
Conditions of formation of $YBa_2Cu_3O_{7-\delta}$ from CuO, $Y_2O_3$, and $BaCO_3$.—73-04684
**Fotou, George P.; Pratsinis, Sotiris E.**
Particle coating of silica fibers by aerosol and sol-gel processes.—73-09232
**Fouassier, C.,** See Gaewdang, T.; Zhang, H. J.
**Fouassier, M.,** See Sourisseau, C.
**Fouche, P. M.; Armstrong, B.; Butcher, B. M.**
Determination of trace levels of free carbon in lime.—73-09885
**Fouda, M. F. R.,** See Amin, R. S.
**Fougeres, R.,** See Hamann, R.
**Fouillant, C.,** See Leclercq, J. L.
**Fouletier, Jacques,** See Chatain, Dominique; Iharada, T.
**Foulon, Y.; Priester, C.; Allan, G.; Garcia, J. C.; Landesman, J. P.**
How does the chemical nature of the interface modify the band offset.—73-07570
**Fountain, G. G.,** See Hattangady, S. V.
**Fourier-Lamer, A.,** See Badot, Jean-Claude
**Fourmeaux, R.,** See Dugne, O.
**Fourment, J.; Fromentin, J.; Milla, P.**
Glass-melting furnaces faced with environmental problems: evolution or revolution.—73-12223
**Fournerie, B.,** See Gillet, P.
**Fournes, L.,** See Demazeau, Gerard
**Fournier, B.; Berube, M. A.**
Application of the NBRI accelerated mortar bar tests to siliceous carbonate aggregates produced in the St. Lawrence Lowlands (Quebec, Canada): II, Proposed limits, rates of expansion, and microstructure of reaction products.—73-00024; Applications of the NBRI accelerated mortar bar test to siliceous carbonate aggregates produced in the St. Lawrence Lowlands (Quebec, Canada): I, Influence of various parameters on the test results.—73-00025
**Fournier, Patricia,** See Aronson, Meredith A.
**Fournier, T.,** See Collomb, A.
**Fourrier-Lamer, A.,** See Gacoin, T.
**Fourvel, Pascal,** See Gomina, Moussa
**Foussadier, L.,** See Fontana, M. D.
**Foussigne, Y.; Farhi, R.; Dugautier, C.; Godard, J.**
Raman study of both phases of $BaB_2O_4$.—73-08719
**Fowler, B.,** See Lian, S.
**Fowler, B.; Lian, S.; Krishnan, S.; Jung, L.; Li, C.; Samara, D.**
Mechanisms of low-temperature epitaxial silicon growth using ArF excimer laser photochemical vapor deposition from disilane.—73-13132

**Fowler, C. M.; Freeman, B. L.; Hults, William L.; King, J. C.; Mueller, F. M.; Smith, J. L.**
de Haas-van Alpen effect and Fermi surface of $YBa_2Cu_3O_{6.97}$.—73-11721
**Fowler, David,** See Garner, Andre
**Fowler, Patrick W.,** See Ceulemans, Arnout
**Fowler, R. W.,** See Schreiber, Henry D.
**Fox, Dennis S.**
Burner rig oxidation of continuous carbon fiber-reinforced silicon carbide.—73-09524
**Fox, G. R.; Krupanidhi, S. B.**
Nonlinear electrical properties of lead lanthanum titanate thin films deposited by multi-ion-beam reactive sputtering.—73-07903
**Foxon, C. T.,** See Feldman, J.; Nicholas, R. J.
**Foy, Paul,** See Wu, Feng-Qing
**Fraas, L. M.,** See Sundaram, V. S.
**Frade, Jorge R.,** See Labrincha, J. A.
**Frade, Jorge R.; Cable, M.**
Diffusion-controlled growth or dissolution of spheres with variable temperature.—73-09401
**Fraenzel, Wolfgang,** See Grau, Peter
**Fragala, I. L.,** See Ciliberto, Enrico
**Fraiman, Lev S.,** See Ioganson, A. K.; Ryzhik, A. B.
**Fraissard, J. P.,** See Springuel-Huet, M. A.
**Fraissard, J.,** See Grosse, R.
**Frait, Z.,** See Mendik, M.
**Frame, S. W.**
Bricks containing electric arc furnace dust.—73-03987
**Francavilla, T. S.,** See Gubser, Donald U.
**Francescangeli, O.,** See Albertini, G.
**Franciosi, A.,** See Biasiol, G.
**Franciosi, A.; Sorba, L.; Bratina, G.; Biasiol, G.**
Modification of heterojunction band offsets at III-V/IV/III-V interfaces.—73-11320
**Francis, A. F.,** See Tenne, R.
**Francis, Gaylord L.; Morena, Robert M.**
Nonlead sealing glasses.—73-10651
**Francis, Gaylord L.**
Composite article and method.—73-03915
**Francis, Hubert C.**
Gypsum, the silent partner.—73-06664
**Franck, J. P.; Harker, S.; Brewer, J. H.**
Copper and oxygen isotope effects in $La_{2-x}Sr_xCuO_4$.—73-15405
**Francki, R. C.,** See Donadson, K. M.
**Francklin, A. J.,** See Chadwick, Alan V.
**Franco, M. J.; Perez-Pariente, J.; Mifsud, A.; Blasco, T.; Sanz, J.**
Crystallization kinetics of SAPO-37.—73-05722
**Franco, Sofia C. S.,** See Boatner, Lynn A.
**Francois, Eric,** See Lecloux, Andre J.
**Francois, J. C.; Massiani, Y.; Gravier, P.; Grimblot, J.; Gengembre, L.**
Characterization and optical properties of thin films formed on TiN coatings during electrochemical treatments.—73-02558
**Francombe, M. H.,** See Buhay, H.; Coon, D. D.; Sinharoy, S.
**Franek, A.**
Bubbling in the three-dimensional flow-temperature model.—73-14332; See also Chmelar, Josef
**Frangi, Francesca; Dwir, Benjamin; James, Jonathan H.; Gauzzi, Andrea; Pavuna, Davor**
Preparation, processing, and tunneling in $YBa_2Cu_3O_{7-\delta}$-Pb native-barrier structures.—73-15600
**Frangi, Francesca; Dwir, Benjamin; Pavuna, Davor**
Tunneling characteristics of $YBa_2Cu_3O_{7-\delta}$-Pb: Josephson junctions.—73-08264
**Frank, Arthur J.,** See Pugh, J. Richard
**Frank, G.,** See Maul, M.
**Frank, Robert G.,** See Rueter, Richard E.
**Frank-Kamenetskaya, O. V.,** See Tsytsenko, A. K.
**Franke, G.,** See Kaps, Christian
**Franke, Matthias**
Cascade heating system reduces $NO_x$.—73-15868
**Franke, Ralph; Hommel, Richard O.**
U.S. dinnerware industry: marching to a stronger beat.—73-14671
**Franke, Wilfried**
Mechanics of conveying bulk materials with bucket elevators.—73-12045; Operational variables of redundant equipment in transport systems.—73-04939
**Frankenthal, R. P.; Lobnig, R.; Siconolfi, D. J.; Sinclair, J. D.**
Role of particle contamination in the corrosion of electronic materials and devices.—73-09537
**Frankevich, E. L.,** See Kadyrov, D. I.
**Franklin, Thomas C.; Oliver, Greg; Nnodimele, Remi; Couch, Kevin**
Destruction of halogenated hydrocarbons accompanied by generation of electricity.—73-00946
**Frankovskii, L. V.,** See Asanbekov, Kh. A.
**Franks, A.**
Nanometric surface metrology at the National Physical Laboratory.—73-05069
**Franks, Larry A.,** See Artuso, Joseph F.
**Franse, J. J. M.,** See Gerber, A.; Koziol, Z.
**Fransen, T.,** See Haanappel, V. A. C.
**Franukevichius, D.,** See Vengelis, B.
**Franz, E. D.,** See Fischer, R.; Tumback, M.
**Franz, E. D.; Tumback, M.; Telle, R.**
Reaction sintering of $TiO_2$ with $ZrB_2$, a new method for the production of $ZrO_2$-reinforced $TiB_2$ composite ceramics.—73-13231
**Franz, K. D.,** See Grebner, M. D.
**Franzo, G.,** See Coffa, S.
**Frase, H.,** See Foster, C. M.; Skandan, Ganesh
**Fraser, Hamish L.,** See Breslin, Michael C.
**Frechet, Jean M. J.,** See Kocon, Waldemar W.
**Frechette, Francis J.; Boecker, Wolfgang D. G.**
Protective coating for nonoxide sintered fibers generated by in situ chemical reaction.—73-05333
**Frechette, Van Derck,** See Adams, Margaret Byrd
**Frederes, K. P.,** See Varshneya, Arun K.
**Fredj, E.,** See Benguigui, L.
**Freeman, B. L.,** See Fowler, C. M.
**Freeman, C. J.,** See Elliott, M. L.
**Freeman, C. J.; Cooper, M. F.**
Vitrification of heterogeneous weapon components.—73-08312
**Freeman, Harvey A.; Langley, Neal R.; Li, Chi-Tang; Lipowitz, Jonathan; Rabe, James A.**
Polymer-derived ceramic fibers having improved thermal stability.—73-02056
**Freeman, M.,** See Kesan, V. P.
**Freeman, S. A.; Booske, John H.; Cooper, Reid F.; Meng, B.; Kieffer, John; Reardon, Brian J.**
Microwave field effects on ionic transport in ionic crystalline solids.—73-06168
**Freer, R.**
Microwave dielectric ceramics—an overview.—73-10974; See also Al-Saffar, R.; Azough, F.; Dennis, P. F.; Fan, J.; Pigram, A. J.
**Frefer, A.,** See Sato, K.
**Frefer, A.; Suryanarayana, C.; Froes, F. H.**
Effect of mechanical alloying on γ-TiAl alloys.—73-05762
**Frei, H.; Grathwohl, Georg**
New test methods for engineering ceramics—in situ microscopy investigation.—73-01920
**Freik, A. D.,** See Freik, D. M.; Mansfeld, G. D.
**Freik, D. M.; Ogorodnik, Ya. V.; Mezhilovskaya, L. I.; Kupchak, V. N.**
Substructural transformations in irradiated and aged PbTe films.—73-16343
**Freik, D. M.; Salii, Ya. P.; Ruvinskii, M. A.; Gorichok, I. Y.; Freik, A. D.; Dobrovolskaya, A. M.**
Formation and annealing of radiation defects during proton bombardment of *p*-type $Pb_{0.76}Sn_{0.24}Te$ films.—73-07532
**Freiman, Stephen W.,** See Lindsay, Curtis G.; White, Grady S.
**Freire, F. L., Jr.,** See Achete, C. A.; Lepienski, C. M.
**Freire, V. N.,** See Pires, A. P. C.
**Freiser, H.,** See Sperline, R. P.
**Freitag, I.,** See Golla, D.
**Freitag, I.; Kropke, I.; Tunnermann, A.; Welling, H.**
Electrooptically fast tunable miniature diode-pumped Nd:YAG ring laser.—73-12797
**French, Jonathan D.; Zhao, Jun-Hong; Harmer, Martin P.; Chan, Helen M.; Miller, Gary A.**
Creep of duplex microstructures.—73-17267
**French, Kenneth W.,** See Bandyopadhyay, Gautam
**French, Roger H.,** See Chiang, Yet-Ming; Handwerker, Carol A.
**French, Roger H.; Jones, David J.; Loughin, Stephen**
Interband electronic structure of α-alumina up to 2167 K.—73-05423
**Frenkel, A. C.,** See Liu, H.
**Frenol, C.,** See Doussineau, F.
**Frenz, Martin,** See Konz, Flurin
**Frese, E.; Brull, W.**
Cleaning system for coolant in glass cutting industry.—73-12017
**Fresina, M. T.,** See Stockman, S. A.
**Fresno-Ruiz, S.,** See Goni-Elizalde, S.
**Fretzdorff, Susanne B.,** See Pingitore, Nicholase E., Jr.
**Freude, Dieter,** See Voltzke, Dieter
**Freudenberg, Bernhard,** See Gugel, Ernst
**Freund, Friedemann; Whang, Eun-Joo; Batllo, Francois; Desgranges, Lionel; Desgranges, Corinne; Freund, Minoru**
Positive hole-type charge carriers on oxide materials.—73-13363
**Freund, Minoru,** See Freund, Friedemann
**Freund, T.,** See Raether, F.; Sebastian, K.
**Freundlich, A.,** See Bensaoula, A. H.
**Freundlich, A.; Bensaoula, A. H.; Rossignol, V.**
Chemical beam epitaxy and structural analysis of InAs/InP strained single- and multi-quantum well heterostructures.—73-04269; Interface and relaxation properties of chemical beam epitaxy grown GaP/GaAs structures.—73-11278
**Frey, F.,** See Lerch, M.
**Frey, R.,** See Hugonnard-Bruyere, S.
**Frias, M.,** See Sanchez de Rojas, M. I.
**Frias, M.; Luxan, M. P.; Sanchez de Rojas, M. I.**
Possibilities of laser diffraction application for a comparison of pozzolan materials.—73-12179; Determination of specific surface area by the laser diffraction technique: comparison with the Blaine [air] permeability method.—73-00058
**Fribo, H. J.,** See Phuvoravan, S.
**Fricke, J.,** See Gross, J.
**Fricke, R.,** See Kosslick, Hendrik
**Fricke, William**
Cutting tools with wire EDM [electrical discharge machining].—73-04907
**Fridez, Jean-Daniel; Keller, Georges W.**
Roller body, method of its manufacture, and of [coated ceramic] roller or plain bearings.—73-16015
**Fridlyand, M. G.**
Beneficial effects of mixtures of hydrocarbons and carbon dioxide in thermal plasma spraying.—73-08321; Continuously restoring cathode [CRC].—73-08328
**Fridrikh, A. D.,** See Dabizha, A. A.
**Fridrikh, E. S.,** See Buyanov, A. V.
**Fried, Daniel; Kushida, Toshimoto; Reck, Gene P.; Rothe, Erhard W.**
Yttrium oxide chemiluminescence from the 308-nm excimer laser ablation of $YBa_2Cu_3O_{7-x}$, $Y_2O_3$, and $YCl_3$.—73-08281
**Friederichs, John W.,** See Mirchandani, Prakash K.
**Friedl, B.; Thomsen, C.; Habermeier, H.-U.; Cardona, M.**
Effects of Landau damping on the Raman-active phonons of $YBa_2Cu_3O_{7-\delta}$.—73-07472
**Friedman, D. J.,** See Alonso, R. G.
**Friedman, Gerald M.; Schultz, Douglas J.; Guo, Bai-Ying; Sanders, J. E.**
Vaterite (an uncommon polymorph of $CaCO_3$): occurrence in boreholes demonstrate unexpected longevity.—73-15916
**Friedman, Stephen,** See Carter, Kevin
**Friedrich, K.,** See Lu, Z.
**Friedt, Jean-Marie,** See Kojima, Toshinori
**Friehmelt, Volker,** See Davidovits, Joseph
**Friel, John J.; Greenhut, Viktor; Oliver, Jon**
Computer-aided imaging in ceramics.—73-08386
**Fries, Terry L.,** See Jackson, Larry L.
**Friese, M.; Wanka, E.**
Fuel savings in industrial drying operations by the Vapormid process.—73-05117
**Friesel, M.,** See Clark, David E.; Schulz, R. L.
**Frigerio, J. M.,** See Parjadis de Lariviere, G.; Dancygier, M.
**Frigione, Giuseppe,** See Sersale, Riccardo
**Frigo, Sean P.,** See Nelson, Arthur J.
**Fripp, A. L., Jr.,** See Rosch, William R.; Sorokach, S. E.
**Frisch, Bertram; Drumm, Robert; Thiele, Wolf-Rudiger**
Nonthermal granulation—the effect of additives on granulates and pressed bodies.—73-01805
**Frischat, G. H.,** See Buckermann, Wilhelm-August; Chaissac, Martine; De Kever, Ebba; Heinz, J.; Hogerl, K.; Meier, M.; Meyer, L.; Raedlein, E.; Szabo, I.; Wellbrock, U.; Frolow, Peter
**Frischat, Heinz Gunther,** See Schmidt-Zum Berge, Anke
**Frischherz, M. C.; Kirk, M. A.; Zhang, J. P.; Weber, H. W.**
Transmission electron microscopy of defect cascades in $YBa_2Cu_3O_{7-\delta}$ produced by ion irradiation.—73-08262
**Frit, B.,** See El Omari, M.; Mercurio, D.; Souirti, A.
**Fritsch, J.; Pavone, P.; Schroder, U.**
Ab initio calculation of the surface phonons in GaAs(110).—73-11059
**Fritsche, W. E.,** See Kukla, R.
**Fritz, I. J.,** See Hammons, B. E.
**Fritz, S. J.,** See Whitworth, T. M.
**Fritzsche, H.,** See Pashmakov, B.
**Fritzsche, H.**
Origin of photostructural changes in chalcogenide glasses.—73-14062
**Frobel, P.,** See Trost, J.
**Froes, F. H.,** See Chen, G.-H.; Frefer, A.; Mukhopadhyay, D. K.; Sato, K.
**Froes, Marilia Cruz B.**
Monobloc mold for engraving pressed glass containers.—73-01872
**Frohlich, D.; Uebbing, B.; Willms, T.; Zimmerman, R.**
Intraband optical Stark effect in CdTe.—73-07621
**Frohlich, Ladislav; Giduska, Michal**
Metallurgical wastes—an important raw material base for ceramic industry.—73-05144
**Frohner, M.,** See Schneider, H.
**Frohning, Carl D.,** See Horn, Gerhard
**Frohnsdorff, Geoffrey,** See Hill, Eugene D.
**Frolov, A. A.,** See Zakharov, S. I.
**Frolov, A. A.**
Ceramic materials for producing high-purity compounds of niobium and tantalum.—73-08492; Forming aspherical pieces from optical glass by external coupling with force and temperature fields.—73-07131; Temperature and strain distortion of the shape of optical elements during processing.—73-07183; Thermoelastic deformation of optical elements caused by light absorption in glass.—73-07089
**Frolov, A. V.,** See Tsygankov, V. N.
**Frolova, L. S.,** See Bulakh, V. L.
**Frolova, L. S.; Drozd, V. L.; Prokudin, V. Yu.**
Lining of the oblique movement zone of a unit for dry quenching of coke after service.—73-00830
**Frolova, V. P.,** See Popov, O. N.
**Frolow, Peter; Frischat, H. G.**
Influence of different $Al_2O_3$-containing batch materials on melting, fining, and properties of soda-lime-silica glass.—73-07145
**Froment, M.,** See Loizos, Z.
**Fromentin, J.,** See Fourment, J.
**Fromm, M.,** See Takadoum, J.
**Fromzel, V. A.,** See Petrov, A. A.
**Fronk, Dale A.,** See Schorr, J. Richard
**Frorip, A. G.,** See Ibragimov, K. I.
**Frost, Rodney I.,** See Bush, Edward A.
**Froufe, L.,** See Siguin, D.
**Frova, A.,** See Sobiesierski, Z.
**Froyen, Sverre,** See Alonso, R. G.; Northrup, John E.; Osorio, Roberto
**Frunza, Ligia; Dinca, Viorica; Vagaon, M.; Crisan, Dorel; Florescu, I.; Manoiu, D.**
Ir spectroscopic measurements of crystallinity and phase purity of ZSM-5 samples.—73-08651
**Frushour, Robert H.**
High-pressure/high-temperature piston-cylinder apparatus.—73-00282
**Frusteri, F.,** See Arena, F.
**Frye, G. C.,** See Brinker, C. Jeffrey
**Frye, J. S.,** See Kohli, J. T.
**Frye, Robert C.; Shah, Akshay V.**
Targeting low-cost high volume MCM [multichip modules] applications.—73-06596
**Ftikos, C.,** See Georgiades, A.
**Ftikos, C.; Georgiades, A.; Philippou, T.**
Preparation and hydration study of alinite cement.—73-00169
**Fu, Chen-Tsu; Li, Ai-Kang; Wu, Jenn-Ming**
Effects of $Cr_3C_2$ particulate-reinforced alumina composites on microstructure and mechanical properties.—73-16748
**Fu, Gang,** See Qin, Hu-Cun

**Fu, J.; Osaka, Akiyoshi; Nanba, T.; Miura, Yoshinari**
Local structure around aluminum in glasses of the system $Al_2O_3$-PbO-CdO.—73-06935
**Fu, Jian-Ming,** See Kim, J.
**Fu, L. P.,** See Jonker, B. T.
**Fu, L. W.,** See Wang, H.
**Fu, R. J.,** See Derry, P. L.
**Fu, S. S.,** See Buechele, A. C.; Wang, E.
**Fu, Sabrina S.; Somorjai, Gabor A.**
Comparative study of $ZnO_x$ overlayers on Cu(311), Cu(110), and a high defect concentration Cu(111).—73-13811
**Fu, T. C.,** See Collins, D. A.
**Fu, W. T.; Mijlhoff, F. C.; Ijdo, D. J. W.; Ponec, V.**
Crystal structure of the new metallic copper oxide, $La_2Sr_6Cu_8O_{18-\delta}$.—73-08013
**Fu, Wei,** See Shu, Xing-Tian
**Fu, Xi-Ren,** See Tong, Yi-Dong; Zhang, Bao-Lin
**Fu, Yan,** See Gu, Ping
**Fu, Yan; Xie, Ping; Gu, Ping; Beaudoin, James J.**
Preferred nucleation of secondary ettringite in preexisting cracks of steam-cured cement paste.—73-13763
**Fu, Yao-Xian,** See Cai, Chuan-Bing
**Fu, Zi-Cheng; Cui, En-Shu; Qin, Zhi-Gang**
Characteristics of masonry cement produced at 975°C in fluidized bed boiler.—73-06636
**Fubanek, F.,** See Zeiske, Thomas
**Fubini, Bice,** See Bolis, Vera; Morterra, Claudio
**Fubini, Bice; Bolis, Vera; Cavenago, Alberto; Garrone, E.; Ugliengo, P.**
Structural and induced heterogeneity at the surface of some $SiO_2$ polymorphs from the enthalpy of adsorption of various molecules.—73-16319
**Fubini, Bice; Bolis, Vera; Cavenago, Alberto; Ugliengo, P.**
Ammonia and water as probes for the surface reactivity of covalent solids: cristobalite and SiC.—73-08372
**Fuchita, Eiji,** See Oda, Masaaki
**Fuchs, A.; Scherer, J.; Jung, K.; Ehrhardt, H.**
Determination of $sp^2/sp^3$ carbon bonding ratio in a-C:H including irradiation damage by factor analysis of Auger electron spectra.—73-16106
**Fuchs, D. R.,** See Leissner, J.; Romich, H.
**Fuchs, F.; Koidl, P.**
Cross relaxation and radiative recombination of $Co^{2+}$ ions in ZnS.—73-14819
**Fuchs, K. P.,** See Allman, D. D. J.
**Fueki, Kazuo,** See Idemoto, Y.; Mizusaki, Junichiro
**Fuentes, Ricardo I.; Progler, C.; Bukofsky, S.; Kimmel, K.**
Impact of different X-ray mask substrate materials on optical alignment.—73-16830
**Fuentes, Ricardo I.**
Chemical vapor deposition of SiC thin films for X-ray mask applications.—73-16673
**Fuenzalida, Victor M.,** See Pilleux, Mauricio E.
**Fuerst, L.,** See Li, Z.
**Fuerstenau, D. W.; Abouzeid, A. Z. M.**
Effect of fine particles on the kinetics and energetics of grinding coarse particles.—73-01777
**Fuertes, A.,** See Navarro, J. M.
**Fuess, H.,** See Maul, M.; Paulus, E. F.
**Fuggle, J. C.,** See Soriano, L.
**Fugol, I. Ya.; Samovarov, V. N.; Rainer, A. M.**
Manifestation of a superconducting gap in the optical absorption of $YBa_2Cu_3O_{7-\delta}$ and $Bi_2Sr_2CaCu_2O_8$ in the visible spectral range.—73-08128
**Fugol, I. Ya.; Samovarov, V. N.; Rybalko, Yu. I.**
Photoinduced changes in the absorption spectrum of superconducting $YBa_2Cu_3O_{7-\delta}$ films in the 1.5–3 eV region.—73-08165
**Fuhrman, Nathan,** See Bryan, William J.
**Fuhrmann, L.,** See Jung, W.
**Fuhs, W.,** See Nickel, N. H.
**Fuierer, Paul,** See Pan, Wu-Yi
**Fuith, Armin,** See Ohno, Nobuhito
**Fujihara, S.; Kozuka, Hiromitsu; Yoko, Toshinobu; Sakka, Sumio**
Superconductivity of $La_{2-x}Sr_xCuO_4$ with high strontium concentration by sulfur doping.—73-08230
**Fujii, Eiji; Torii, Hideo; Hattori, Masumi**
Microstructure of Co ferrite films and Co ferrite/Zn ferrite double layered films prepared by plasma-enhanced MOCVD.—73-06258
**Fujii, H.,** See Ishikawa, Shin
**Fujii, Hideo**
Surface reflector with oxide undercoat.—73-10352
**Fujii, Hiroaki,** See Mizuno, Noritaka
**Fujii, Hironobu; Nakaga, Hiroshi**
Science and technology in composite materials—permanent magnetic materials based on interstitially modified rare-earth iron nitride alloys.—73-04648
**Fujii, Hiroyuki,** See Ueno, Yoshiyasu
**Fujii, K.,** See Oda, Shunri
**Fujii, Kanenaga,** See Fukumi, Kohei
**Fujii, Kazuaki,** See Mizoguchi, Kenji
**Fujii, Kazuhiko; Furusato, Isao; Takita, Ichiro**
Composition of spinel clinker for teeming ladle casting materials.—73-14580
**Fujii, Koichiro,** See Kurihara, Kenro
**Fujii, M.,** See Kobayashi, K.
**Fujii, Satoshi,** See Kobune, Masafumi; Sugie, Yosohiro
**Fujii, Satoshi; Sugie, Yosohiro; Kobune, Masafumi; Yamamoto, Tomihiko**
Effects of $Li_2O$ and $Na_2O$ addition on growth and electrical properties of $PbTiO_3$ single crystals.—73-00954; 73-12778; Electrical properties of $PbTiO_3$ single crystals grown from PbO-$Cu_2O$ flux method.—73-16479
**Fujii, Satoshi; Sugie, Yosohiro; Takahashi, Yusuke; Fujiwara, H.**
Growth of PZT crystal by using PbO-KF-$PbCl_2$ flux.—73-05834
**Fujii, Souichi,** See Matsumoto, Yousuke; Shima□aki, M.
**Fujii, T.,** See Takano, M.; Yamamoto, Tsuyoshi
**Fujii, Tatsuhiko,** See Iwabuchi, Mamoru
**Fujii, Tatsuhiko; Nagano, Yoshihisa; Shirafuji, Junji**
Growth by self-flux method and postannealing effect of $Bi_2Sr_2Ca_1Cu_2O_x$ single crystals.—73-01562
**Fujii, Tatsuo,** See Osaka, Akiyoshi
**Fujii, Toshio,** See Tomioka, Takeshi
**Fujii, Yoshihisa,** See Furukawa, Katsuki; Suzuki, Akira
**Fujikake, H.,** See Tanino, Hiroshi
**Fujikawa, Nobuyoshi,** See Koyasu, Shigeji
**Fujikawa, Takao,** See Nanko, Makoto
**Fujikawa, Takashi; Usui, Kazushi; Ohki, Katsuyoshi**
Proces for producing catalyst composition for use in hydrodesulfurization of hydrocarbon oil and process for hydrodesulfurizing hydrocarbon oil.—73-02059
**Fujiki, Yoichi,** See Oikawa, Takahito
**Fujiki, Yoshinori,** See Nishio, Toshiyuki; Sasaki, T.; Watanabe, M.
**Fujiki, Yoshinori; Michiue, Yuichi; Watanabe, Mamoru**
Synthesis of a new compound $NaGaTi_5O_{12}$.—73-06086
**Fujiki, Yoshinori; Nishio, Toshiyuki; Watanabe, Mamoru**
Preparation of $Na_{1-x}Ti_{2+x}Al_{5-x}O_{12}$ [NTAO] whiskers by calcining with excess $Na_2O$.—73-02960; 73-13196
**Fujiki, Yoshinori; Sasaki, Takayoshi; Nishio, Toshiyuki**
Single-crystal growth of $A_xMg_{x/2}Ti_{2-x/2}O_4$ (A=K, Rb, Cs) and synthesis of priderite by a compositional-structural change process from those crystals.—73-12683
**Fujikura, Hajime,** See Kodama, Satoshi
**Fujima, Hiroshi**
Izumo-Yaki ceramic wares—historical survey.—73-00009
**Fujimaki, S.,** See Kokaku, Y.
**Fujimaki, Takashi,** See Hirose, Yoichi
**Fujimaru, Takuya; Nishida, Masamitsu; Kugimiya, Koichi**
Dielectric ceramics.—73-01049
**Fujimaru, Takuya; Yoneda, Takehiko; Tokunaga, Hiromi; Taki, Hiromitsu**
Dielectric ceramic composition.—73-04203
**Fujimine, S.,** See Sakka, Sumio
**Fujimori, Hirotaka,** See Kakihana, Masato
**Fujimori, Naoji,** See Ikegaya, Akihiko; Nagaishi, Tatsuoki; Nakahata, Hideaki; Ota, Nobuhiro; Shiomi, Hiromu; Tanabe, Keiichiro
**Fujimori, Naoji**
Recent progress and application of synthesized diamond (present status and future of vapor phase deposition of diamond).—73-02086
**Fujimoto, F.,** See Miyake, S.
**Fujimoto, Hidetoshi,** See Uemoto, Tsutomu
**Fujimoto, Izumi,** See Maruta, Toshihisa
**Fujimoto, Manabu; Nojima, Hideo; Shintaku, Hidetaka; Taniguchi, Hiroshi; Nagata, Masaya; Koba, Masayoshi**
Ag addition to $YBa_2Cu_3O_{7-x}$ films prepared using electrophoretic deposition.—73-15383
**Fujimoto, Masayuki,** See Akita, Chiyoshi; Tsuzuku, Koichiro
**Fujimoto, Masayuki**
Grain-boundary microstructure and magnetic properties of low-temperature-fired Ni-Zn-Cu ferrite.—73-11655; Inner stress induced by Cu metal precipitation at grain boundaries in low-temperature-fired Ni-Zn-Cu ferrite.—73-14711
**Fujimoto, Shirou,** See Aruga, Atsushi
**Fujimoto, Y.,** See Sugano, Mikio
**Fujimura, K.,** See Shiomi, Haruhisa
**Fujinami, M.; Chilton, N. B.; Ishii, K.; Ohki, Yoshimichi**
Defects in silicon dioxide films on Si(100) [studied] by a variable energy positron beam.—73-13344
**Fujino, Shigeru,** See Takebe, Hiromichi
**Fujino, Yuzo,** See Ino, Takashi
**Fujinuma, Haruko,** See Chida, Nakaya
**Fujinuma, Kenji,** See Okano, Kazuo
**Fujioka, Hiroshi,** See Verma, Ashish K.
**Fujioka, Hiroshi; Sohn, Hyun-Chul; Weber, E. R.; Verma, Ashish K.**
Application of low-temperature [LT] GaAs to $GaAs/_{Si}$.—73-14777
**Fujioka, Junzo,** See Nishiyama, Yukio
**Fujisaka, Kosei,** See Takada, Jun
**Fujisawa, Hiroyuki,** See Tobinai, Keishi
**Fujisawa, Masami,** See Guo, Qi-Xin
**Fujisawa, Toshiro**
Processing and recycling of the waste materials in ceramic tile industry.—73-10886
**Fujishima, Y.,** See Tokura, Y.
**Fujishiro, Hiroyuki; Furukawa, Shoji; Takahashi, Ikuo; Kuwashima, Takayuki**
Structural and electrical properties of low-pressure plasma-sprayed silicon-based materials.—73-16318
**Fujishita, H.,** See Sera, Masafumi
**Fujita, H.,** See Mori, H.
**Fujita, Hideo; Funakoshi, Jun; Kaba, Takahiro; Shinosaki, Akira; Araragi, Hiroyuki**
Heat-resistant materials.—73-10315
**Fujita, Hiroharu,** See Ikeda, Susumu
**Fujita, Hiromasa,** See Ohsawa, Fumiyuki
**Fujita, Junichi,** See Kim, Hyun-Tak
**Fujita, Keijiro,** See Sakuma, Shuji
**Fujita, Masahiro,** See Tomoshige, Ryuichi
**Fujita, Minoru,** See Kakizaki, Koichi
**Fujita, N.,** See Tanihara, M.
**Fujita, Nobuhiko,** See Itozaki, Hideo; Kimoto, Tsunenobu; Tomikawa, Tadashi
**Fujita, Nobuhiko; Kobayashi, Tadakazu; Itozaki, Hideo; Tanaka, Saburo; Yazu, Shuji; Jodai, Tetsuji**
High-$T_c$ superconducting film.—73-11956
**Fujita, S. G.,** See Ichino, K.
**Fujita, S. Z.,** See Ichino, K.
**Fujita, S.,** See Murawala, P. A.
**Fujita, Shigeo,** See Fujita, Shizuo; Ichimura, Masaya
**Fujita, Shizuo,** See Ichimura, Masaya
**Fujita, Shizuo; Matsumoto, Satoshi; Fujita, Shigeo**
Composition control by photoirradiation in MOVPE of ZnCdSe and ZnCdS alloy layers and multilayered structures.—73-04273
**Fujita, T.,** See Sasaki, Gen; Shimizu-Iwayama, Tsutomu
**Fujita, Taketoshi; Sugimori, Kenichiro; Nakazawa, Hiromoto**
Conversion of fluorphlogopite to hydroxyphlogopite in NaOH and LiOH hydrothermal solutions.—73-02173; Formation of "Na-sepiolite" fibers by hydrothermal treatment of Na-fluor-taeniolite and Na-fluor-tetra-silicic mica.—73-05812; Formation of "Na-sepiolite" fibers by hydrothermal treatment of Na-fluor-taeniolite and Na-fluor-tetra-silicic mica.—73-16787
**Fujita, Teruaki,** See Sasaki, Gen; Suganuma, Katsuaki
**Fujita, Toshihiro,** See Tohmon, Genji
**Fujita, Tsuyosi,** See Toda, Gyozou
**Fujitsu, S.,** See Omata, T.
**Fujitsu, Satoru,** See Hasegawa, Akira; Ito, Hidetaka
**Fujitsu, Satoru; Takayama, Hirotaka; Yanagida, Hiroaki**
Silver ionic conduction depending on atmosphere in ZnO films.—73-01025
**Fujiu, Takamitsu; Messing, Gary L.**
Analysis and modeling of sol foaming for the preparation of low-density ceramics.—73-12917
**Fujiura, K.; Nishida, Yoshiki; Kobayashi, K.; Kanamori, Terutoshi; Takahashi, S.**
Preparation and properties of new zirconium oxyfluoride glass by plasma-enhanced chemical vapor deposition.—73-14470
**Fujiura, K.; Nishida, Yoshiki; Sato, H.; Sugawara, S.; Kobayashi, K.; Terunuma, Y.**
Plasma-enhanced chemical vapor deposition of $ZrF_4$-based fluoride glasses.—73-07161
**Fujiwara, Akihiko,** See Yokoya, Takayoshi
**Fujiwara, Fumio,** See Kobayashi, Toshio
**Fujiwara, H.,** See Fujii, Satoshi
**Fujiwara, Hiromi,** See Kubota, Hiroyasu
**Fujiwara, Hiroyuki; Gotoh, Jun; Shirai, Hajime; Shimizu, Isamu**
Low-temperature growth of $ZnS_xSe_{1-x}$ alloys fabricated by hydrogen-radical-enhanced chemical vapor deposition in an atomic layer epitaxy mode.—73-13121
**Fujiwara, Shigeki,** See Kasanami, Tohru
**Fujiwara, Tadashi; Kayaba, Masakazu; Akita, Hiroshi**
Water movement within concrete due to drying under various temperature conditions.—73-10191
**Fujiwara, Toshiki,** See Ito, Hiromasa
**Fujiwara, Yasuaki,** See Suzuki, Hajime
**Fujiyama, Osamu,** See Sone, Tokuaki
**Fujiyama, T.,** See Horita, Susumu
**Fujiyasu, H.,** See Tatsuoka, H.
**Fujiyasu, H.; Takeuchi, Y.; Hikida, K.; Kiichi, T.; Masuo, K.; Gotou, Y.**
Preparation of CdSSe-ZnS superlattices, SrS, and CdSSe-SrS superlattice by hot wall epitaxy, and applications to electroluminescent devices.—73-04452
**Fukada, Takeshi; Sakamoto, Naoya**
Glass substrate for a semiconductor device and method for making [the] same.—73-11019
**Fukagai, Kazuo,** See Ishikawa, Shin
**Fukai, Mari; Inaba, Akira; Matsuo, Takasuke; Suga, H.**
Calorimetric study of the deuteration effect on the phase behavior in $Rb_3H(SeO_4)_2$ and $Rb_3D(SeO_4)_2$: II. Heat capacities at very low temperatures.—73-16042
**Fukai, Mari; Matsuo, Takasuke; Suga, H.**
Calorimetric study of the deuteration effect in the phase behavior of $Rb_3H(SeO_4)_2$ and $Rb_3D(SeO_4)_2$.—73-02155
**Fukai, Seiki,** See Tanaka, Hiroshi
**Fukami, Shinako,** See Shiragami, Tsutomu
**Fukami, T.; Yamamoto, T.; Nishizaki, T.; Horie, Y.; Ichikawa, F.; Aomine, T.**
Depinning of flux lines in $Bi_2Sr_2CaCu_2O_{8+y}$.—73-04694
**Fukami, Tatsuo; Karasawa, Junichi**
Dielectric properties of Ni-doped (Ba, Sr)$TiO_3$ ceramics at very low frequencies.—73-04078; 73-16446
**Fukasawa, Takayuki; Goto, Yasuhiro; Tsuge, Akihiko**
Fracture behavior and properties of SiC whisker/$Si_3N_4$ composites.—73-17325
**Fukatsu, Sumusu,** See Takahashi, Yutaka
**Fukatsu, Sumusu; Usami, N.; Shiraki, Y.**
Luminescence from $Si_{1-x}Ge_x$/Si quantum wells grown by Si molecular beam epitaxy.—73-11304
**Fukatsu, Tamotsu,** See Katsumura, Yuji
**Fukawa, Atsushi**
Properties of CVD-coated cemented carbides affected by those of substrate.—73-13887
**Fukaya, Kenji,** See Hayashi, Shinsuke
**Fukaya, Y.,** See Sueda, M.
**Fukazawa, Tokuumi,** See Hasegawa, Haruhiro; Kabasawa, U.; Nishino, Toshikazu; Saitoh, Shinichiroh
**Fukubayashi, Yukio,** See Uchida, Kiyohiko
**Fukuda, Eiji,** See Kohno, Kiyoshi
**Fukuda, Koichiro,** See Hasegawa, Akihiro; Maki, Iwao; Mukaida, Masakazu; Watanabe, Akio
**Fukuda, Kanao,** See Ono, Toru

**Fukuda, Koichi; Kitoh, Ryozo; Awai, Ikuo**
Far-infrared reflection spectra of dielectric ceramics for microwave applications.—73-04101
**Fukuda, Koichiro; Maki, Iwao; Ikeda, Susumu; Ito, Suketoshi**
Microtextures formed by the remelting reaction in belite crystals.—73-03178
**Fukuda, Koichiro; Maki, Iwao; Ito, Suketoshi; Yoshida, Hideto; Aoki, Katsumi**
Structure and microtexture changes in phosphorous-bearing $Ca_2SiO_4$ solid solutions.—73-16331
**Fukuda, Koichiro; Maki, Iwao; Ito, Suketoshi; Yoshida, Hideto; Kato, Chika**
Effect of Al/Fe ratio in belite on the microtexture induced by the remelting reaction.—73-16115
**Fukuda, Koichiro; Maki, Iwao**
Orientation of coherent interphase boundaries formed by the α-to-$\alpha'_H$ phase transition in belite crystals.—73-08683
**Fukuda, Masahide; Tsuchiya, Kazuhiko; Tsuchiya, Nobujiro; Miyatani, Kazuo**
Effect of milled particle size on transverse rupture strength of sintered Mg-PSZ.—73-17291
**Fukuda, Momoya,** See Maeda, Yasuhiro
**Fukuda, Muneyuki,** See Hattori, Takeo
**Fukuda, Sanae; Shigyo, Naoyuki**
Semiconductor devices having an improved gate.—73-04534
**Fukuda, Shinji,** See Nishida, Akio
**Fukuda, Shuzo,** See Suzuki, Makoto
**Fukuda, Toshihiro,** See Osaka, Tetsuya
**Fukuhara, M.; Abe, Y.**
High-temperature elastic moduli and internal frictions of α-SiC ceramic.—73-05576
**Fukuhara, M.; Yamauchi, I.**
Temperature dependence of the elastic moduli, dilational and shear internal frictions, and acoustic wave velocity for alumina, (Y)TZP, and β′-SiAlON ceramics.—73-09684
**Fukuhara, Minoru,** See Asaga, Kiyoshi; Kittaka, S.; Kobayashi, Naoya
**Fukuhira, Masanori,** See Fukuoka, Hirofumi
**Fukui, Hideo,** See Ito, Shigeru
**Fukui, Masuo,** See Haraguchi, Masanobu; Hirao, Yuji
**Fukui, Satoshi,** See Tanaka, Tsuneshichi
**Fukui, T.,** See Sobiesierski, Z.
**Fukui, Takehisa,** See Tsunooka, Tsutomu
**Fukui, Takehisa; Kawasaki, Shinji; Bougauchi, Takehito; Kubo, Yukio**
Effect of YSZ addition to solid oxide fuel cell electrodes on electrical performance.—73-00953
**Fukui, Toshimi,** See Okuyama, Masahiko
**Fukui, Toshimi; Sakurai, Chihiro; Okuyama, Masahiko**
Chemical structure of a complex alkoxide as a precursor of $Pb(Mg_{1/3}Nb_{2/3})O_3$.—73-16054; Effect of prehydrolysis on the structure of a complex alkoxide as a cordierite precursor and their crystallization behavior.—73-08607; Structural change and sintering behavior of $BaTi_5O_{11}$ coating film derived from metal alkoxide.—73-09342; Structural change and sintering behavior of $BaTi_5O_{11}$ coating film derived from metal alkoxide.—73-17010
**Fukumi, Kohei,** See Kitamura, Naoyuki
**Fukumi, Kohei; Chayahara, Akiyoshi; Makihara, Masaki; Fujii, Kanenaga; Hayakawa, Junji; Satou, Mamoru**
Chemical states of implanted aluminum ions in silica and silicon ions in alumina.—73-16053
**Fukumi, Kohei; Chayahara, Akiyoshi; Yamanaka, Hiroshi; Fujii, K.; Hayakawa, J.; Satou, M.**
Thermal annealing behavior of ion-implanted silica glass.—73-06978
**Fukumi, Kohei; Ogawa, Kyouji; Hayakawa, Junji**
Intensities of Raman bands in borate glasses.—73-10383
**Fukumi, Kohei**
Modification of optical properties by ion implantation.—73-03803
**Fukumi, T.,** See Kadono, Kohei
**Fukumoto, Yoshito; Ogawa, Rikuo; Kawate, Yoshio**
Millimeter-wave detection by YBaCuO step-edge microbridge Josephson junction.—73-08137; Optimum bias conditions for *K*-band microwave mixing using YBaCuO step-edge microbridge Josephson junction.—73-11853
**Fukunaga, Akio,** See Abe, Hisao
**Fukunaga, H.,** See Ning, X.-G.
**Fukunaga, Jiro,** See Hara, Tatsuo; Kuribayashi, Hideyuki; **Mishima, Naofumi; Nishikawa, Yoshinori; Ota, Rikuo**
**Fukunaga, Shinichi,** See Kurata, K.
**Fukunaga, T.,** See Kamiya, K.
**Fukuoka, Hirofumi; Shimizu, Mutsuo; Ochiai, Hidemitsu; Shimizu, Hideaki; Fukuhira, Masanori**
Preparation of silicon nitride powder by partially nitriding in a fluidized bed and then completing nitridation in a moving bed.—73-02121
**Fukuoka, M.,** See Ohmori, A.
**Fukushima, Kunihito,** See Sugihara, Sunao
**Fukushima, Noburu,** See Takeno, S.; Tanaka, Shigenori
**Fukushima, Takahiro,** See Nakamura, Masahiko; Furuya, Akira
**Fukushima, Toru,** See Kasukawa, Akihiko
**Fukushima, Toru; Kasukawa, Akihiko; Iwase, Masayuki; Namegaya, T.; Shibata, M.**
Compressively strained 1.3-μm InAsP/InP and GaInAsP/InP multiple quantum-well lasers for high-speed parallel data transmission systems.—73-14815
**Fukusho, Takashi; Toshmiya, Yoshinori**
Process for fabricating gate insulating structure of a charge coupled device.—73-01064
**Fukuta, Junzo,** See Inoue, Akira
**Fukutomi, Masao,** See Tanaka, Yoshiaki
**Fukuyama, Hidetoshi,** See Tanamoto, Tetsufumi
**Fukuzawa, Kimio,** See Numao, Tatsuya
**Fukuzawa, Yasushi,** See Tateno, M.
**Fukuzawa, Yasushi; Kojima, Yo; Ito, Yoshiro; Takuwa, Toshio; Andoh, Katsumi**
High-temperature strength of ion-implanted SiAlON and nickel joints.—73-03596
**Fulford, George D.**
High-efficiency process for producing high-purity alumina.—73-12369
**Fuller, Edwin R., Jr.,** See Paulik, Steven W.; Sridhar, Narayanaswamy
**Fuller, James J.; White, Robert H.**
Temperature distribution in a nailed gypsum-stud joint exposed to fire.—73-13787
**Fuller, R. L.; Greenblatt, M.**
Synthesis, structure, and properties of a new T* structure copper oxychloride of $MLnCuO_3Cl$ (M=Ca, Sr, and Ln=Nd, Sm, Eu, Gd).—73-02507
**Fuller, Sharon M.,** See Hwang, C. James
**Fullerton, Eric E.; Guimpel, J.; Nakamura, O.; Schuller, I. K.**
Structure of high-$T_c$ superlattices.—73-08214
**Fullowan, T. R.,** See Pearton, S. J.; Ren, F.
**Fumagalli, P.,** See Gambino, R. J.; Spaggiari, C.
**Funahashi, Satoru,** See Iida, Junji
**Funaki, H.,** See Shimizu, K.
**Funaki, Kazuo,** See Ni, Bao-Rong
**Funakoshi, Jun,** See Fujita, Hideo
**Funakubo, Hiroshi,** See Otsu, Masato; Yamamoto, Hiroki
**Funakubo, Hiroshi; Imashita, Katsuhiro; Kieda, Nobuo; Mizutani, N.**
Formation of epitaxial $Pb(Zr,Ti)O_3$ thin film by CVD.—73-02832
**Funakubo, Hiroshi; Imashita, Katsuhiro; Mizutani, Nobuyasu**
Growth of epitaxial PLZT film by CVD.—73-02846
**Funakubo, Hiroshi; Imashita, Katsuhiro; Shinozaki, Kazuo; Mizutani, Nobuyasu**
Characterization of epitaxially grown CVD $Pb(Zr, Ti)O_3$ films with high deposition rate.—73-17115
**Funakubo, Hiroshi; Kieda, Nobuo; Shinozaki, Kazuo; Mizutani, Nobuyasu**
Microstructure of iron nitride–titanium nitride films prepared by CVD.—73-09489; 73-17170
**Funatani, Kiyoshi**
Fine ceramics in Japan.—73-05168; Advancement of processing applications and fine ceramic products.—73-08502
**Funatani, Kiyoshi,** See Kohler, Nicola
**Funato, Kenichi,** See Hotta, Katsuyoshi
**Funayama, Masahiro; Mukaihara, Katsuji; Morita, Hiroyuki; Okada, T.; Tomonaga, N.; Izumi, J.**
Continuously tunable coherent source over 202–3180 nm based on a Ti:sapphire laser.—73-16429
**Funayama, Osamu,** See Matsuo, Hideki; Sato, Kiyoshi
**Funayama, Osamu; Kato, Tomohiro; Takatsu, Rika; Tashiro, Yuuji; Kishi, Toshihide; Date, Takayuki**
Thermosetting copolymers, silicon-carbide-based fiber, and processes for producing [the] same.—73-12531
**Fundamenskii, V. S.,** See Tsytsenko, A. K.
**Fung, Anthony S.,** See Apelian, Minas R.
**Fung, Kuan-Zong; Virkar, Anil V.; Drobeck, David L.**
Massive transformation in the $Y_2O_3$-$Bi_2O_3$ system.—73-12625
**Fung, P. C. W.,** See Cui, C.-G.; Zhu, J.-S.
**Fung, S.-C.,** See Tang, Tong-B.
**Funk, James E.,** See Dinger, Dennis R.
**Funk, James E.; Dinger, Dennis R.**
Particle packing: I, Fundamentals of particle packing monodisperse spheres.—73-10876; Particle size control for high-solids castable refractories.—73-14608; Predictive Process Control of Crowded Particulate Suspensions Applied to Ceramic Manufacturing.—73-17535
**Funken, J.,** See Voss, A.
**Funo, Shigeki,** See Kitamura, Naoyuki
**Furdyna, J. K.,** See Heremans, J.; Luo, H.; Meyer, J. R.; Smyth, J. A.; Yokogawa, T.
**Furlani, C.,** See Passamonti, M. R.
**Furlong, D. Neil,** See Grieser, Franz
**Furrer, A.,** See Guillaume, M.; Mesot, J.; Roessli, B.; Ruf, T.; Staub, U.
**Furrer, A.; Fisher, F.; Roessli, B.; Petrakovskii, G. A.; Sablina, K.; Valkov, V.**
Spin waves in single-crystal $Bi_2CuO_4$ [investigated] by inelastic neutron scattering.—73-08737
**Furtak, T. E.,** See DiGregorio, J. F.
**Furubayashi, Toshiki,** See Harato, Takuo
**Furukawa, Katsuki,** See Suzuki, Akira
**Furukawa, Katsuki; Tajima, Yoshimitsu; Saito, Hajime; Fujii, Yoshihisa; Suzuki, Akira; Nakajima, Shigeo**
Bulk growth of single-crystal cubic silicon carbide by vacuum sublimation method.—73-16660
**Furukawa, Katsuki; Tajima, Yoshimitsu; Suzuki, Akira**
Method for growing a silicon carbide single crystal.—73-12483
**Furukawa, Osamu,** See Kanai, Hideyuki
**Furukawa, Shigeru; Kojima, Akira; Asada, Toshihiko**
Behavior of lightweight mortar including powder of scrap FRP [fiber-reinforced plastic].—73-09828
**Furukawa, Shoji,** See Fujishiro, Hiroyuki
**Furukawa, Yasunori; Sato, Masayoshi; Kitamura, Kenji**
Optical damage resistance and crystal quality of $LiNbO_3$ single crystals with various [Li]/[Nb] ratios.—73-11592
**Furukawa, Yuji; Wada, Shinji; Yamada, Yoshihiro**
Phase transition from antiferromagnetic [AF] insulator to ferromagnetic metal in $La_{2-x}Sr_xCoO_4$—magnetization and NMR studies.—73-08696
**Furusaki, Tsuyoshi; Takahashi, Junichi; Kodaira, Kohei**
Preparation of ITO thin films by sol-gel methods.—73-14257
**Furusaki, Tsuyoshi; Takahashi, Junichi; Takaha, Hiroshi; Kodaira, Kohei**
Formation process of $SnO_2$ thin films by sol-gel method.—73-05817; 73-16795
**Furusato, Isao,** See Fujii, Kazuhiko; Yu, Zhong-Da
**Furusawa, Shinichi; Hayasi, Hisaaki; Ishibashi, Yoshihiro; Miyamoto, Akio; Sasaki, Takatomo**
Ionic conductivity of quasi-one-dimensional superionic conductor $KTiOPO_4$ (KTP) single crystal.—73-00987
**Furusawa, Shinichi; Miyaoka, Satoshi; Ishibashi, Yoshihiro**
Particle size effect of conductivity enhancement in $BaTiO_3$-dispersed AgI.—73-01006
**Furusawa, Yasuhiko; Uomoto, Taketo**
Alkali-silica reaction mechanism of aggregates showing different mortar bar expansion behaviors.—73-09812
**Furuse, M.,** See Takahashi, Kazue
**Furuse, Yutaka,** See Tsuruta, Hideyoshi
**Furuta, Sachiko,** See Kawahara, Akihiko
**Furuta, Sachiko; Nakao, H.; Katsuki, Hiroaki**
Preparation of porous ceramics from industrial waste silica mineral.—73-02963
**Furuya, Akinori; Tanaka, Hidenao**
Superposed multiquantum barriers for InGaAlP heterojunctions.—73-01332
**Furuya, Akira; Kito, Yasuhiro; Fukushima, Takehiro; Sugano, M.; Sudo, H.; Anayama, C.**
Self-aligned bend waveguide AlGaInP visible laser diode with small beam astigmatism.—73-11441
**Furuya, H.,** See Hanada, Teiichi
**Furuya, Mitsuru,** See Mori, Toru
**Fusayama, K.,** See Doi, A.
**Fusegawa, Izumi,** See Oda, Tetsuhiro
**Fusegawa, Izumi; Yamagishi, Hirotoshi**
Method for pulling up semiconductor single crystal.—73-11529
**Fushimi, Koji,** See Ichikawa, Yukihito
**Futagawa, Tosiaki,** See Sakakibara, Hiroyuki
**Futaki, N.,** See Iijima, Y.
**Futei, A. V.,** See Bolesta, I. M.
**Futemma, Tomoyoshi,** See Tomiki, Tetsuhiko
**Futing, Manfred,** See Gleditzsch, Siegfried
**Futterknecht, Fritz; Huber, Robert**
Mechanism for use in a glassware forming machine.—73-04982
**Fuwa, K.,** See Shimizu, S.
**Fuyama, M.,** See Onisawa, Kenichi
**Fuyama, Moriaki,** See Soeya, Susumu
**Fuyuki, Takashi; Yoshinobu, Tatsuo; Matsunami, Hiroyuki**
Atomic layer epitaxy controlled by surface superstructures in SiC.—73-06189
**Fwa, Tieu-Fang,** See Tan, Stew-Ann
**Fyodorov, A. A.,** See Baryshevsky, V. G.
**Fyodorova, V.,** See Guloyan, Yu.
**Gaa, Peter C.; Davis, R. Alan; Watkins, H. Kenyon**
Chemically treated glass fibers with improved reinforcement properties.—73-03910
**Gabibov, T. A.,** See Abilov, Ch. I.
**Gaborieau, L. M.,** See Autran, J. L.
**Gabriel, Calvin T.**
Method for moisture sealing integrated circuits using silicon nitride spacer protection of oxide passivation edges.—73-11030
**Gabrielyan, V. T.,** See Asrarov, Sh. A.; Lebedeva, E. L.
**Gabrisove, A.; Havlica, J.; Sahu, S.**
Stability of calcium sulfoaluminate hydrates in water solutions with various pH values.—73-00192
**Gabrovsek, R.; Kurbus, B.; Mueller, D.; Wieker, W.**
Tobermorite formation in the system CaO, $C_2S$-$SiO_2$-$Al_2O_3$-NaOH-$H_2O$ under hydrothermal conditions.—73-00200
**Gabulkhaev, R. I.,** See Klyachin, V. V.
**Gachigi, Kamau Wa,** See Brodeur, Russell P.
**Gacoin, T.; Badot, J. C.; Baffier, Noel; Fourrier-Lamer, A.**
Dielectric relaxations (1 MHz–10 GHz) in tungsten trioxide hydrates synthesized by sol-gel process.—73-02573
**Gadaev, O. A.,** See Andrukhiv, A. M.; Ivanov-Omskii, V. I.
**Gadaleta, C. K.,** See Scamarcio, G.
**Gadalla, Ahmed**
EDMing ceramics and composites.—73-15720
**Gadave, K. M.; Lokhande, C. D.**
Formation of $Cu_xS$ films through a chemical bath deposition process.—73-07535
**Gadberry, James F.,** See Vreugdenhil, Willem
**Gadenne, M.; Gadenne, P.; Martin, J. C.; Sella, C.**
Composition and electrical properties of Au-$Al_2O_3$ cermet thin films: a critical study.—73-10209
**Gadenne, M.; Gadenne, P.; Ramdou, M. T.; Segaud, J. P.; Lassri, H.; Krishnan, R.**
Influence of the deposition conditions on the optical, electrical, and magnetic properties of sputtered Fe-$Al_2O_3$ and Ni-$Al_2O_3$ nanocermet films.—73-10239
**Gadenne, P.,** See Gadenne, M.
**Gadepally, Kamesh; Reddy, Padala Krishna; Hiew, Siew; Merrill, Richard; Lahri, Rajeeva; Biswal, Madan**
Effect of TiW as adhesion layer and underlying metal on electromigration characteristics of tungsten via plugs.—73-03584
**Gadgil, P.; Dane, D.; Mantei, T. D.**
Selective and uniform high rate etching of polysilicon in a magnetically confined microwave discharge.—73-13247
**Gadja, John W.,** See Tresouthick, Stewart W.
**Gadkaree, Kishor P.**
Glass-doped ceramic matrix composites.—73-03928; Glass-doped ceramic matrix composites.—73-10631

**Gady, B.,** See Chen, L. M.
**Gadzhialiev, M. M.**
Magnetothermoelectric power of $Mn_{0.18}Hg_{0.82}Te$.—73-01236
**Gadzhiev, A. Z.,** See Abdullaev, A. A.
**Gadzhiev, S. M.,** See Aliev, O. M.
**Gaewdang, T.; Chaminade, J. P.; Gravereau, P.; Garcia, A.; Fouassier, C.; Hagenmuller, P.**
Crystal structure and luminescent properties of indium titanate.—73-08586
**Gafarov, S. F.; Dzhafarov, T. D.; Kulikov, G. S.; Malkovich, R. Sh.; Skoryatina, E. A.; Usacheva, V. P.**
Effect of gamma irradiation on silver diffusion in $YBa_2Cu_3O_{7-y}$.—73-15426
**Gaffet, C.,** See Michel, D.
**Gaffet, Eric,** See Michel, D.
**Gafka, Dariusz; Tani, Junji**
Sensitivity of surface acoustic wave velocity in lithium niobate to electric field or biasing stress.—73-07919
**Gafney, H. D.,** See Sunil, D.
**Gafurova, M. V.,** See Urmanov, N. A.
**Gagarina, E. S.,** See Bokov, A. A.; Topolov, V. Yu.
**Gagliardi, Federica, See Lockhart, Thomas P.**
**Gagliardi, G.,** See Geotti-Bianchini, F.
**Gagnaire, A.,** See Saoudre, R.
**Gagniard, Patrick; Zanoli, A.**
Use of ultrasonic transmission for the control of the structure of fused cast blocks.—73-15860
**Gagniard, Patrick**
Control of the internal structure of electromelted blocks by ultrasonic test on transmission.—73-12121
**Gagnon, G.; Currie, John F.; Brebner, J. L.; Gujrathi, S. C.; Ouellet, L.**
Use of elastic recoil detection for stoichiometry determination of reactively evaporated TiN layers.—73-08454
**Gaibullaev, S.,** See Brunkov, P. N.
**Gaidar, I. V.,** See Dudnik, E. F.
**Gaidash, B. I.; Aleko, V. A.; Nevol'nichenko, B. I.**
New electromagnetic separators.—73-01477; New electromagnetic separators.—73-01802
**Gaier, James R.**
Intercalated hybrid graphite fiber composite.—73-05305
**Gail, M.,** See Brunner, J.
**Gaillard, S.,** See Rolland, M.
**Gailus, D.,** See Manley, M. E.
**Gaines, J. M.,** See Petruzzello, J.
**Gaines, J. M.; Petruzzello, J.; Greenberg, B.**
Structural properties of ZnSe films grown by migration-enhanced epitaxy.—73-01323
**Gaiovich, I. Yu.; Golovach, G. P.; Zavislyak, I. V.**
Dipole and exchange spin excitations in inhomogeneous ferrite films.—73-15314
**Gaisinovich, M. S.,** See Fedorova, I. V.
**Gaj, J. A.,** See Mac, W.
**Gaj, J. A.; Galazka, R. R.; Nawrocki, M.**
Giant exciton Faraday rotation in $Cd_{1-x}Mn_xTe$ mixed crystals.—73-14942
**Gajek, Z.,** See Kaczorowski, D.
**Gajewski, D.,** See Allenspach, P.
**Gajewski, W.**
Catalytic converter materials for pollution control.—73-02005
**Gajic, R.; Konstantinovic, M. J.; Popovic, Z. V.; Konig, W.; Zec, S.; Bradaric, I.**
Phonon softening in the far-infrared spectra of $YBa_2(Cu_{1-x}Ni_x)_3O_7$.—73-01628
**Gaken, M. V.,** See Girshtel, G. B.
**Gal'chenko, T. G.; Usatikov, I. F.; Karaulov, A. G.**
Effect of silica-containing additives on the properties of corundum concrete.—73-10723
**Gal'perin, Yu. M.; Kozub, V. I.**
Thermomagnetic effect in inhomogeneous superconducting films.—73-15657
**Gal'perina, M. K.; Kanaev, V. K.; Kolyshkina, N. V.**
Shaping technology for ceramic sheets using vacuum filtration.—73-08363; Technology of forming ceramic tile by vacuum filtration.—73-04049
**Gal'perina, M. K.; Tarantul, N. P.**
Ceramic tile from raw material from Kazakhstan.—73-00896
**Gal'tseva, E. V.; Dubinskii, A. A.; Karpov, G. V.; Morozov, I. I.; Podoinitsyn, S. N.; Poluektov, O. G.**
Treatment of $YBa_2Cu_3O_{6+x}$ powder with a high-frequency oxygen discharge.—73-01700
**Gal, M.,** See Shwe, C.
**Galakhov, A. V.; Kutsev, S. V.; Kryuchkov, V. A.**
Effect of compaction pressure on the sinterability of submicron powders of tetragonal zirconia.—73-16725
**Galakhov, A. V.; Shevchenko, V. Ya.; Stebunov, A. A.**
Phase inversions in Al-Si-Mg gels. Influence of Ti, Ce, and Zr additions.—73-02385
**Galakhov, A. V.; Shevchenko, V. Ya.**
Influence of gel formation conditions on phase changes in polymer aluminosilicate gels of mullite composition.—73-02293
**Galakhov, V. R.,** See Butorin, S. M.
**Galan, L.,** See Montero, I.
**Galan, M.; Llorens, J.; Gutierrez, J. M.**
Ceramic membranes from sol-gel technology.—73-12936
**Galant, V. E.; Nosyreva, E. B.**
High refractive index glasses for cinematography.—73-00498; Highly refractive glass for cinephotooptics.—73-00640; Optical properties of new borolanthanum oxyfluoride glasses.—73-14245
**Galassi, C.; Roncari, E.**
Electrostatic and steric effects in $Si_3N_4$-based suspensions.—73-09117
**Galasso, Francis S.,** See Shen, Lu
**Galazka, R. R.,** See Gaj, J. A.
**Galbraith, I.,** See Feldman, J.
**Galchinetskii, L. P.,** See Embergenov, B.
**Galdikas, A.; Pranevichius, P.; Vosylius, Y.**
Anisotropy of silicon etching in fluorine plasma: phenomenological model.—73-16655
**Galdin, S.,** See Dollfus, P.
**Galduk, A. L.,** See Burma, N. G.
**Gale, Julian D.; Cheetham, Anthony K.**
Computer simulation of the structure of ZSM-18.—73-12557
**Gale, Robert J.,** See Acar, Y. B.; Li, He-Yi
**Galeener, Frank L.,** See Kerwin, David B.
**Galembeck, F.,** See Medeiros Neto, J. A.
**Galenko, V. L,** See Gogotsi, G. A.
**Gali, S.,** See Martinez, B.; Sandiumenge, F.
**Galiano, M. L.,** See Hoinkis, M.
**Galica, Leo M.,** See Clark, Douglas T.
**Galina, T. M.; Volod'ko, V. G.; Demidov, E. S.; Podchishchaeva, O. V.**
Ion implantation of a donor impurity in InP.—73-11284
**Galindo, H.; Vincent, A. B.; Sanchez-R., J. C.; Laude, L. D.**
Excimer laser processing for surface improvement of tin oxide thin films.—73-09122
**Galindo, R.,** See Dumas, P.
**Galinetto, P.,** See Camagni, P.
**Galitskii, I. N.; Demidov, A. I.; Morachevskii, A. G.**
Solid electrolytes on the basis of the $Li_2O$-$La_2O_3$ system.—73-14730; Solid electrolytes on the basis of the $Li_4SiO_4$-$Li_3NbO_4$ system.—73-14731
**Galkin, Igor M.,** See Chaplanov, Victor
**Galkin, Igor M.; Nefedov, A. A.; Chaplanov, V. A.; Shipov, I. A.; Yakimov, S. S.**
X-ray diffraction study of the interfaces between $Hg_{1-x}Cd_xTe$ crystals and anodic films.—73-15230
**Galkin, Yu. M.,** See Ust'yantsev, V. M.
**Galkina, T. Yu.,** See Korolev, K. M.
**Galla, Elli K.**
Method for coating a dielectric ceramic piece.—73-11027
**Gallagher, A.,** See Stutzin, G. C.
**Gallagher, M. C.,** See Kim, J.
**Gallagher, M. C.; Kim, J.; Willis, R. F.**
Effect of bulk doping on scanning tunneling microscopy images of GaAs(001) $2\times4$ *surfaces.—73-07461*
**Gallagher, Matt; Osterberg, Ulf**
Spectroscopy of defects in germanium-doped silica glass.—73-07077
**Gallagher, Patrick K.,** See O'Bryan, Henry M.
**Gallaher, George R.,** See Liu, Paul K. T.
**Gallas, Marcia R.; Hockey, Bernard; Pechenik, Alexander; Piermarini, Gasper J.**
Fabrication of transparent $\gamma$-$Al_2O_3$ from nanosize particles.—73-16777
**Gallas, Marcia R.; Piermarini, Gasper J.**
Bulk modulus and Young's modulus of nanocrystalline $\gamma$-alumina.—73-17242
**Gallego, J. M.; Siddle, J. R.**
Solid-state electrochromic variable transmission windows.—73-00545
**Gallego, M. A.,** See Escardino, A.
**Gallet, D.; Hollinger, G.; Santinelli, C.; Goldstein, L.**
In situ characterization of InP surfaces after low energy hydrogen ion cleaning.—73-07578
**Galli, C.,** See Bindal, A.
**Galliano, Pablo G.; Porto Lopez, J. M.**
Magnesium content effects on the crystallization behavior of bioactive glasses in the system CaO-MgO-$SiO_2$-$P_2O_5$-$CaF_2$.—73-14031
**Gallo, Anthony J.**
Clean Air Act Amendments $NO_x$ compliance requirements—glass industry.—73-09704
**Gallo, Thomas A.,** See Greco, Carl G.
**Gallois, Bernard M.; Besmann, Theodore M.; Stott, Michael W.**
Chemical etching of silicon (100) by hydrogen.—73-16671
**Galloni, Marco,** See Vallana, Franco
**Galloway, Terry R.; Bowles, Anthony J. G.**
Very-high-temperature [porous ceramic foam] heat exchanger.—73-15958
**Galperin, Yu. M.,** See Zou, Nan-Zhi
**Galperin, Yu. M.**
Disorder-induced flicker noise in high-$T_c$ rf superconducting quantum magnetometers.—73-01524
**Galusek, D.,** See Sajgalik, P.
**Galvan, D. H.; Cota-Araiza, L.; Cruz, J.**
Ternary system of a ceramic superconductor Y-Ba-Cu-O.—73-04819
**Galy, J.,** See Millet, P.; Mosset, A.; Schnuriger, B.
**Galyas, A. I.**
Crystal and magnetic structures of hardened CrSe and $Mn_{0.1}Cr_{0.9}Se$.—73-16074
**Gamal, S.,** See Locatelli, M. L.
**Gamants, E. M.; Dobromyslov, P. A.; Krylov, V. A.; Prisenko, S. V.; Jakushenko, E. A.; Safarov, V. I.**
Characterization of stress in semiconductor wafers using birefringence measurements.—73-07411
**Gamarnik, M. Ya.; Brik, A. B.**
Discrete mechanism of amorphization of crystals with radioactive impurities.—73-02239
**Gambino, J. P.,** See Kobeda, E.
**Gambino, R. J.; Ruf, R. R.; Fumagalli, P.**
Role of vacancies in the magnetic and magnetooptic properties of Tb-doped EuO and EuS films.—73-04646
**Gambino, Richard J.,** See Eidolloth, Walter
**Gamblin, G. B.,** See Whitworth, T. M.
**Gambone, M. L.; Gundel, D. B.; Wawner, F. E.**
Effect of isothermal exposure on SiC fibers.—73-12425
**Gamidov, R. S.,** See Rustamov, P. G.; Safarov, M. G.
**Gamiz, F.,** See Banqueri, J.; Bishop, David J.
**Gammel, P. L.,** See Safar, H.
**Gammel, P. L.; Duran, C. A.; Bishop, David J.; Kogan, V. G.; Ledvij, M.; Simonov, A. Y.**
Vortex structure driven by magnetic interactions near a sawtooth twin boundary in $YBa_2Cu_3O_{7-\delta}$.—73-08276
**Gamo, K.,** See Meguro, T.; Nakamota, Ichiro; Takaoka, S.
**Gamzaev, D. O.,** See Alekperov, O. Z.
**Gan'shina, E. A.; Zenkov, A. V.; Krinchik, G. S.; Moskvin, A. S.; Nishanova, M. M.**
Exchange-relativistic interactions and anisotropy of circular magnetooptics in Er and Ho orthoferrites.—73-15323
**Gan'shina, E. A.; Zenkov, A. V.; Krinchik, G. S.**
Exchange-relativistic interactions and magnetooptical properties of orthoferrites.—73-01459
**Gan, Chang-Cheng; Liang, Wen-Fan; Bai, Guang**
Manufacture of manganese-iron slag cement with low content of clinker.—73-10032
**Gan, Der-Shin,** See Chen, Shuei-Yuan
**Gan, Fu-Xi,** See Deng, Pei-Zhen; Xue, Song-Sheng; Zhou, Yong
**Gan, Fu-Xi; Chen, Yi-Hong**
Fluorescence line narrowing of $Sm^{3+}$ in ZBLAN fluoride glasses.—73-07026; Superfluorescence in RE-doped silica fiber.—73-14286
**Gan, K. K.,** See Pan, L. S.
**Gan, Z.-H.,** See Li, Yi-Jie
**Gan, Zi-Zhao,** See Han, Ru-Shan; Li, Yi-Jie; Xiong, Guang-Cheng
**Ganaga, P. N.; Aref, Kh.; Biryukov, A. G.**
Influence of the age of concrete on the strength and rigidity of beams.—73-00125
**Ganago, L. I.,** See Ivanova, I. F.
**Ganaha, Yoshiiku,** See Tomiki, Tetsuhiko
**Gandais, M.; Allais, M.; Ramos, A.**
Growth of Cd(S,Se) nanocrystals in silicate glasses: high-resolution electron microscopy and small-angle X-ray scattering.—73-00350
**Gandhi, Haren S.,** See Montreuil, Clifford
**Gandhi, R. K.,** See Ghosh, S. P.
**Gandia, J. J.; Gutierrez, M. T.; Carabe, J.**
Alternative doping of *p*-type amorphous silicon films using boron trifluoride.—73-01071
**Gandini, P.; Vianello, L.**
Automatic raw mix preparation process in the cement works of Vibo Valentia and Salerno.—73-09825
**Gandra, F. G.,** See Nakamura, O.
**Ganeev, R. A.,** See Ametov, S. A.
**Ganesan, R.,** See Srinivasan, A.
**Ganesan, V.; Srinivasan, R.; Aswarthy, S.; Chandrasekaran, K. D.; Rao, G. V. S.; Rajasekaran, T.**
Magnetic shielding studies using cylinders of $YBa_2Cu_3O_{7-x}$ prepared by isostatic compression.—73-15546
**Ganesan, V.; Srivnivasan, R.; Gopalan, R.; Rajasekaran, T.**
$J_c$ of a sample of melt-grown YBCO.—73-15525
**Ganetsos, G.,** See Collins, J. F.
**Gangadhatan, R.,** See Hsieh, Peter Y.
**Gangolli, S. G.,** See Groat, E. A.
**Gangopadhyay S.,** See Palsule, C.
**Gangopadhyay, Arup K.,** See Tamor, Michael A.
**Ganguli, A. K.,** See Rurow, T. N. G.; Subramanian, M. A.
**Ganguli, A. K.; Subramanian, M. A.; Kwei, G. H.**
Oxides of the type $TlSr_2Cu_{1-x}M_xO_5$ (M=Fe, Co) having the 121 structure.—73-02367
**Ganguli, A. K.; Subramanian, M. A.**
$Tl_2Ba_{2-x}Sr_xCuO_6$: a system exhibiting a compositionally controlled superconductor–metal transition.—73-01695
**Ganguli, D.,** See Atta, A. K.; Chatterjee, M.; De, G.; Patra, A.; Ray, J.; Roy, Sutapa
**Ganguli, Kalyan K.**
Retardation of calcium silicate and calcium aluminate hydration at 150°C, 86.2 MPa.—73-03530
**Ganguli, Partha S.; Sundaresan, Sankaran**
Precious metal catalysts utilizing composites of oxygen ion-conducting and inert support materials.—73-12394; Precious metal catalysts with oxygen-ion conducting support.—73-00294
**Ganguly, B.; Garscadden, A.; Williams, J.; Haaland, P.**
Growth and morphology of carbon grains.—73-09458
**Ganiev, Sh. M.,** See Drokin, N. A.
**Ganiev, U.,** See Rasulov, R. Ya.
**Ganikhanov, F. Sh.,** See Ametov, S. A.; Zaitseva, N. P.
**Ganin, V. V.; Vinokurov, A. A.; Derlyukova, L. E.; Baluev, A. V.**
Interactions in the system $Fe_2O_3$-$SO_2$-$Cl_2$ investigated by the mass spectrometric method.—73-16181
**Ganne, J. P.,** See Gaucher, Philippe
**Ganor, Richard D.**
Cement strength and concrete strength—an apparition or a dichotomy.—73-09839
**Ganser, P.,** See Batke, E.
**Gantmakher, V. F.; Klinkova, L. A.; Neminskii, A. M.**
Magnetic penetration depth in KBaBiO from measurements of the dynamic susceptibility of powder in an alternating magnetic field.—73-05593
**Ganyuchenko, V. M.,** See Vologdina, S. G.
**Ganyushkina, L. V.,** See Drozhzhina, T. V.
**Gao, Bao-Qin; Yang, Qing; Chen, Xiu-Lan**
Development of reinforced porcelain using high-alumina bauxite.—73-07244
**Gao, Chao; Bredell, Lorus; Kuhlmann-Wilsdorf, D.; Makel, David D.**
Micromechanics of $MoS_2$ lubrication.—73-06490
**Gao, G. B.,** See Shen, T. C.
**Gao, Gui-Jun,** See Wang, Lei-Ming
**Gao, Hai-Chun,** See Fang, Chang-Ming
**Gao, Hang-Jun,** See Zhang, Zhong-Xian
**Gao, Ji-Qiang,** See Wang, Li-Jun
**Gao, Jian-Cun,** See Wang, Jian-Cheng
**Gao, Jin-Ying,** See Wang, Wan-Lu

**Gao, Jun,** See Yu, You-Long

**Gao, Li-Ming,** See Nie, Man-Yun

**Gao, Li-Zhen,** See Yu, Zhou-Long

**Gao, Q.-J.; Yuan, H.; Zhang, X.; Fen, X.-B.; Li, J.-H.; Yang, Y.-C.**
Interface structure between diamond film and silicon substrate.—73-13407

**Gao, Q.-J.; Zhang, Z.-X.; Lu, M.; Wang, Y.; Pang, P.; Huang, Z.-Y.**
Direct observation of atomic images of ultrathin diamond and diamondlike films.—73-03130

**Gao, Qiong-Ying,** See Mao, Ruo-Qing; Yuan, Run-Zhang

**Gao, Qiong-Ying; Hou, Hao-Bo**
Structural model and hydraulic activity of granulated cinder in electric factories.—73-00194

**Gao, Shi-Jian,** See Yao, Xing-Wen

**Gao, Shi-Ping; Chen, Meng-Zhen**
Fabrication of deep submicron patterns with high aspect ratio using magnetron reactive ion etching and sidewall process.—73-08337

**Gao, Shi-Wu**
Inelastic hot electron scattering at GaAs(110) surface.—73-01198

**Gao, Shu-Heng,** See Jin, Fu-Shun

**Gao, Si-Jian; Gu, Zhe-Nan**
Structural behavior of fluorine in silica gels and glasses.—73-14089

**Gao, Tie,** See Nishikawa, Tadahiro

**Gao, Tie; Nishikawa, Tadahiro; Harada, Naoyuki; Takatsu, Masahu**
Effect of temperature dependence of material properties on the critical quenching temperature difference under thermal shock test of ceramics.—73-16461

**Gao, Tie; Nishikawa, Tadahiro; Hibi, Masayoshi; Takatsu, Munahu**
Temperature dependence of so-called heat transfer coefficient under thermal shock test.—73-08976; Temperature dependence of so-called heat transfer coefficient under thermal shock test.—73-16611

**Gao, Wei,** See Chen, Chen-Jia; Zeng, Lin-Ke

**Gao, Wei-Xing**
Extrusion properties of clay.—73-07191

**Gao, X.,** See Wang, J.

**Gao, Xian-Cheng,** See Zhuang, Jian

**Gao, Xian-Cheng; Huang, Y.-H.; Weng, Y.-Y.; Chen, L.-N.; Lu, J.; Wu, Z.-H.**
Measurement of intensity-dependent absorption coefficient and transport parameter $\sigma\mu\tau$ in BST.—73-01240

**Gao, Xiao-Hui; Li, Hai-Ping; Li, Jie**
Electronic structure and chemical bond of (Y, La, Sc)-BaCu(O, F) superconductors [studied] by quantum chemistry.—73-04714

**Gao, Xiao-Hui; Yin, Zhou-Lan; Li, Jie**
Structures and properties of F-doped Bi-system superconductors.—73-11910

**Gao, Xing-Tao; Shen, Jian-Yi; Hsia, Yuan-Fu; Chen, Y.**
Reduction of supported iron oxide studied by temperature-programmed reduction combined with Mossbauer spectroscopy and XRD.—73-12674

**Gao, Y.,** See Balachandran, Uthamalingam; Balasubramanian, T.; Chang, H. L. M.; Colbow, K. M.; Guery, J.

**Gao, Y.-M.; Wu, P.; Dwight, K.; Wold, A.**
Growth and characterization of thin films of $Y_2O_3$, $La_2O_3$, and $La_2CuO_4$.—73-02279

**Gao, Y.; Bai, B.; Merkle, K. L.; Chang, H. L. M.; Lam, D. J.**
Effects of substrate orientation and cooling rate on microstructure of $PbTiO_3$ thin films grown by metallorganic chemical vapor deposition.—73-13391

**Gao, Y.**
Modulated structures of bismuth-based superconductors.—73-04776

**Gao, Ya-Chun; Geng, Qian**
Fabrication of glazed tiles using Qi county weathered clay and sulfuric acid tailings.—73-10839

**Gao, Ying; Zhao, Jia-Long; Liu, Xue-Yan**
Temperature dependence of near-ir photoluminescence in $Ga_{0.5}In_{0.5}P$ epilayer grown on GaAs substrate by metallorganic chemical vapor deposition (MOCVD) method.—73-11476

**Gao, Yu-Chen,** See Zhou, Li-Min

**Gao, Yu-Shu,** See Caldwell, Karin D.

**Gao, Yuan-Kai; Han, Ai-Zhen; Lin, Li-Qing; Zhao, Y.-C.; Zhang, J.-D.**
Electrodeposited GaAs films.—73-14876

**Gao, Z. X.; Osquiguil, E.; Maenhoudt, M.; Wuyts, B.; Libbrecht, S.; Bruynseraede, Y.**
Three 3-D–2-D dimensional crossover in $YBa_2Cu_3O_7$ films.—73-11938

**Gapanov, S. V.,** See Basovich, A. J.

**Gaponov, S.,** See Brazdeikis, A.

**Gaprindashvili, Kh. I.; Papunashvili, N. A.; Ryabtseva, V. D.**
Possibility of synthesis of photochromic glasses for the core of an optical fiber.—73-00390; Possibility of synthesizing photochromic glasses for the core of an optical fiber.—73-00680

**Garabedian, C.,** See Gonnard, P.

**Garard, R. S.,** See Johnson, A. C.

**Garawal, N. S.,** See Pickering, C.

**Garboczi, Edward J.,** See Christensen, Bruce J.

**Garboczi, Edward J.; Bentz, Dale P.**
Computational materials science of cement-based materials.—73-06641

**Garbuzov, D.,** See Bert, N. A.

**Garces, J.,** See Aligia, A. A.

**Garcia del Muro, M.,** See Batlle, Xavier

**Garcia Hernandez, J.,** See Caceres, J.; Romero, M.

**Garcia, A. R.,** See Wu, X.-D.

**Garcia, A.,** See Barriere, A. S.; Gaewdang, T.; Zhang, H. J.

**Garcia, Adrian; Kordesch, Martin E.**
Sample tilting mechanism and transfer system for high-temperature thin-film deposition and ultrahigh vacuum photoelectron emission microscopy [PEEM].—73-05085

**Garcia, D. E.,** See Wendorff, J.

**Garcia, D. E.; Wendorff, J.; Janssen, Rolf; Claussen, Nils**
Formation of needlelike grains in $Al_2O_3$.—73-16792

**Garcia, D.,** See Faucher, M.

**Garcia, E.,** See Fernandez, D.; Gonzalez, P.

**Garcia, F.,** See Siguin, D.

**Garcia, G. A.,** See De la Houssaye, P. R.

**Garcia, J. C.,** See Foulon, Y.; Landesman, J. P.

**Garcia, J.; Gonzales, M.; Caceres, J.; Notario, J.**
Structural modification in phillipsite-rich tuff induced by thermal treatment.—73-12700

**Garcia, M.,** See Falcony, C.; Sanchez de Rojas, M. I.

**Garcia, P.,** See Goullet, A.

**Garcia, R.,** See Molina, S. I.

**Garcia, S.,** See Portelles, J.

**Garcia-Alejandre, Juventino,** See Saniger, Jose M.

**Garcia-Chain, P.,** See Rojas, R. M.

**Garcia-Clavel, M. E.,** See Goni-Elizalde, S.

**Garcia-Hernandez, J. E.,** See Caceres, J.

**Garcia-Matres, E.; Rodriguez-Carjaval, J.; Martinez, J. L.; Salinas-Sanchez, A.; Saez-Puche, R.**
Magnetic structure of $Ho_2BaNiO_5$.—73-07957

**Garcia-Munoz, J. L.; Rodriguez-Carvajal, J.; Lacorre, P.**
Sudden appearance of an unusual spin density wave at the metal-insulator transition in the perovskite $RNiO_3$ (R=Pr, Nd).—73-16605

**Garcia-Rosales, Carmen; Schulze, Horst A.; Naoumidis, Aristides; Nickel, Hubertus**
Influence of oxygen partial pressure on the quasi-ternary system Cr-Mn-Ti oxide.—73-02294

**Garcin, C.,** See Imbert, P.

**Garcin, Eric; Cartier, Claude-Bernard; Quemere, Eric**
Alumina-based adsorbents for the purification of polyolefins.—73-12338

**Gardeni, J.,** See Ignat, M.

**Gardette, M.-F.,** See Pardo, M.-P.

**Gardiner, Robin A.,** See Kirlin, Peter S.

**Gardinier, Clayton F.,** See Herb, John A.

**Gardner, Mickey R.; Young, R. Scott; O'Brien, T. Kevin**
Testing machine exerts longitudinal and transverse loads.—73-15853

**Gardziella, A.; Suren, J.; Belsue, M.**
Carbon from phenolic resins: carbon yield and volatile components—recent studies.—73-10707

**Garette, M. F.,** See Winterberger, M.

**Garg, Diwakar,** See Kelly, C. Michael

**Garg, Diwakar; Dyer, Paul N.; Dimos, Duane**
Heat-treated chemically vapor deposited products and treatment method.—73-03683

**Garg, Diwakar; Dyer, Paul N.; Stevens, Robert E.; Ceccarelli, Christopher**
High-hardness fine-grained beta tungsten carbide.—73-12469

**Garg, Diwakar; Dyer, Paul N.**
Erosive wear behavior of chemical-vapor-deposited multilayer tungsten carbide coating.—73-06784

**Garg, K. B.,** See Saini, N. L.; Srivastava, P.

**Garg, K. B.; Saini, N. L.; Merrien, N.; Studer, F.; Durcok, S.; Tourillon, G.**
XAS study of hole density and symmetry in a $Bi_2Sr_2CaCu_2O_{8+\delta}$ single crystal.—73-05526

**Garg, Mridul,** See Singh, Manjit

**Garg, Nandini,** See Somayazulu, M. S.

**Garg, R. K.,** See Zia, P.

**Garif'yanov, N. N.,** See Garifullin, I. A.

**Garifullin, I. A.; Garif'yanov, N. N.; Maramzin, V. Yu.; Khaliulin, G. G.**
Antiferromagnetic correlations in $Na_xWO_3$ of superconducting compositions.—73-07988

**Garin, B. M.; Nikitin, I. P.; Zverev, N. D.**
Spectral characteristics of $Ga_2Se_3$ at millimeter and submillimeter wavelengths.—73-04487

**Garke, B.,** See Stolze, F.

**Garkovich, N. V.,** See Sokolov, M. T.

**Garland, J. C.,** See Calabrese, J. J.; Wan, Y. M.

**Garmire, Elsa M.,** See Jupina, M. H.; Tsou, Y.

**Garnashevich, G. S.; Podluzskii, E. Ya.; Sazhnev, N. P.**
Thermophysical and operational properties of cellular concrete.—73-13789

**Garneau, J.-F.; Angers, R.; Krishnadev, M. R.; Collins, L.**
Fabrication and characterization of SiC/6061 composites.—73-06788

**Garner, Andre; Carrasquillo, Ramon; Fowler, David**
Stabilization/solidification of contaminated spent blasting media in portland cement mortars.—73-03539

**Garnier, C.,** See Videau, J. J.

**Garnier, P.,** See Bonneau, P.; Kiat, J. M.

**Garnier, Patrick; Abriou, Daniel; Gaudiot, Jean-Jacques**
Apparatus for production of hollow glass microspheres.—73-04957

**Garofalini, Stephen H.,** See Liu, Feng

**Garozzo, Marcello**
New materials for the photovoltaic conversion of solar energy.—73-07693

**Garrett, M. H.,** See Ross, Graeme W.

**Garriga, M.; Kelly, M.; Ploog, K.**
Temperature dependence of the dielectric function and interband critical points of AlAs obtained on an MBE-grown layer.—73-16612

**Garrone, E.,** See Bolis, Vera; Fubini, Bice

**Garscadden, Alan,** See Ganguly, B.; Miyoshi, Kazuhisa

**Garshin, A. P.; Lavrenova, E. A.; Vodakov, Yu. A.; Mokhov, E. N.**
Effect of impurities and intrinsic defects on physicomechanical properties of silicon carbide single crystals.—73-17290

**Garshin, A. P.; Shvaiko-Shvaikovskii, V. E.**
Mechanism of oxidation and nonstoichiometry of cBN.—73-06310; Mechanism of oxidation of 8-BN.—73-13478

**Gartner, E. M.; Koynta, H.; Scheiner, P.**
Influence of aqueous phase composition on the zeta potential of cement in the presence of water-reducing admixtures.—73-10002

**Gartner, E. M.; Uchikawa, Hiroshi**
Ceramic Transactions, Volume 40: Cement Technology.—73-17520

**Gartner, M.,** See Zaharescu, Maria

**Gartner, M.; Parlog, C.; Osiceanu, P.**
Spectroellipsometric [SE] characterization of lanthanide-doped $TiO_2$ films obtained via the sol-gel technique.—73-12688

**Garvey, Garry J.; Iacobucci, Paul A.; Nowak, John D.**
Extrusion, collection, and drying of ceramic precursor gel to form dried gel particles.—73-01854

**Garvie, Ronald C.**
Composite refractory materials.—73-12356

**Garyagdyev, G.; Gorodetskii, I. Yu.; Dzhumaev, B. R.; Korsunskaya, N. E.; Rarenko, I. M.; Sheinkman, M. K.**
Mechanisms of ultrasound-induced changes in electrical and photoelectric properties of single crystals of $Zn_xCd_{1-x}Te$ solid solutions.—73-01242

**Garza, L.,** See Diaz, C.

**Garzon, Fernando H.,** See Brosha, Eric L.

**Gasan-Zade, S. G.,** See Buyanov, A. V.

**Gasan-Zade, S. G.; Bogoboyashchii, V. V.; Zhad'ko, I. P.; Zinchenko, E. A.; Shepelskii, G. A.**
Characteristic features of the temperature and spectral dependenes of the photoconductivity and photomagnetic effect in *p*-type $Cd_xHg_{1-x}Te$ at low temperatures.—73-11096

**Gasan-Zade, S. G.; Shepel'skii, G. A.**
Recombination mechanisms and transport phenomena in uniaxially compressed $Cd_xHg_{1-x}Te$.—73-11415

**Gasan-Zade, S. G.; Zhad'ko, I. P.; Zinchenko, E. A.; Kalenik, V. I.; Rarenko, I. M.; Romanov, V. A.**
Characteristics of the photoconductivity and of the photomagnetic effect in $Mn_xHg_{1-x}Te$ crystals with anodically oxidized surfaces.—73-04263

**Gasanly, N. M.,** See Aydinli, A.

**Gasanov, Yu. M.,** See Efremov, V. A.

**Gasdaska, Charles J.,** See Li, Chien-Wei

**Gasdaska, Charles J.**
Tensile creep in an in-situ-reinforced silicon nitride.—73-17442

**Gasgnier, M.,** See Suryanarayanan, R.

**Gashi, F.,** See Music, S.

**Gasic, M.,** See Kicevic, D.

**Gasik, M. M.; Ostrik, P. N.; Popov, E. B.**
Nonoxide ceramics with nanocrystalline layers made by chemical liquid deposition.—73-13154

**Gaskell, David R.,** See Kim, Jung-Sik

**Gaskell, P. H.**
Novel aspects of the structure of glasses.—73-14056

**Gaskill, D. K.,** See Giodana, A.; Justus, Brian L.

**Gaspard, J.-P.**
Hume-Rothery rule in V-VI compounds.—73-04356

**Gasser, Oswald,** See Guggenberger, Rainer

**Gasumyants, V. E.,** See Nemov, S. A.

**Gasworth, Steven M.**
Diamond crystal growth apparatus.—73-04971

**Gasymov, G. B.,** See Asadov, Yu. G.

**Gasymov, Sh. G ,** See Ismailov, A. A.

**Gat, E.,** See Chaker, M.; Cros, B.; Jean, A.

**Gat, Roy; Angus, John C.**
Hydrogen atom recombination on tungsten and diamond in hot-filament-assisted deposition of diamond.—73-13090

**Gatal'skii, G. V.,** See Fedotov, V. G.

**Gates, William E.,** See Soled, Stuart L.

**Gatesman, A. J.; Giles, R. H.; Waldman, J.**
Submillimeter optical properties of hexagonal boron nitride.—73-02696

**Gatsenko, N. A.**
Energy-saving technology for scrubbing waste gases from frit furnaces.—73-08333

**Gatte, Robert R.**
Dual zeolite fluid cracking catalyst composition for improved gasoline octane.—73-02034

**Gattef, E.,** See Dimitriev, Y.

**Gatti, Antonietta Maria,** See Vallana, Franco

**Gatto, Mitsuru,** See Kojima, Masahiko

**Gatzke, Horst**
$NO_x$ reduction using new firing technology.—73-12233

**Gaubas, E.,** See Grivickas, V.

**Gaucher, Philippe,** See Elissalde, C.; Faure, Sylvain P.; Valente, Isabelle

**Gaucher, Philippe; Faure, Sylvain P.; Barboux, Philippe**
Ferroelectric thin-film research in France.—73-11578

**Gaucher, Philippe; Hector, J.; Ganne, J. P.**
Barrier layer at metal-ceramic interface in ferroelectric MIM [metal-insulator-metal] structures.—73-07870

**Gauckler, Ludwig J.,** See Foerster, S. C.; Hasselman, D. P. H.; Heeb, B.; Hidber, P.; Suzuki, Ryosuke O.

**Gaudiot, Jean-Jacques,** See Garnier, Patrick

**Gauer, P.,** See Matthes, B.

**Gaulin, B. D.; Raimers, J. N.; Mason, T. E.; Greedan, J. E.; Tun, Z.**
Spin freezing in the geometrically frustrated pyrochlore antiferromagnet $Tb_2Mo_2O_7$.—73-08736

**Gault, Christian, See Huger, Marc**

**Gault, M.; Mawby, P. A.; Towers, M. S.**
Solution to the wave equation in the numerical simulation of buried heterostructure lasers.—73-15166

**Gaune-Escard, M.,** See Hatem, G.

**Gauneau, M.,** See Favennec, P. N.; Kechouane, M.

**Gauss, S.; Lang, Christoph**
Influences of the precursor powder on the microstructure of HTSC tapes.—73-11806

**Gauthier, B.,** See Dallaire, S.

**Gauthier, E.,** See Ducos, M.

**Gauthier, Jean-Claude,** See Endres, Gerhard

**Gauthier, M.,** See Hoffmann, L.

**Gautier, Martine; Renaud, Gilles; Pham Van, Laurent; Villette, Bruno; Pollak, Maud; Thromat, Nathalie**
$\alpha$-$Al_2O_3$ (0001) surfaces: atomic and electronic structures.—73-05349

**Gautier, P.; Kato, K.**
Wear mechanisms of silicon nitride, partially stabilized zirconia, and alumina in unlubricated sliding against steel.—73-06550

**Gauvin, R.; Legros, N.; Bernier, M.-A.; Joy, David C.; Schmidt, M.**
Mechanical alloying [MA] of TiAl: preliminary results.—73-06818

**Gauzzi, Andrea,** See Frangi, Francesca

**Gavaleshko, N. P.,** See Aliev, G. N.

**Gavarri, J. R.,** See Bonneau, P.

**Gavigan, William J.; Snyder, Craig L.; Tufano, Frank J.; Miller, Ronald S.**
Process for producing crack-free nitride-hardened surface on titanium by laser beams.—73-10342

**Gavrikova, T. A.; Zykov, V. A.; Nemov, S. A.**
Characteristic features of self-compensation in PbSe:Tl:$Pb_{ex}$ films.—73-14796

**Gavrilenko, M. V.,** See Bar'yakhtar, V. G.

**Gavrilov, V. V.,** See Aluker, E. D.

**Gavrilovich, A.,** See Cricenti, A.

**Gavriluk, V.**
Electrical and thermodynamic properties of Li-$V_2O_5$-$P_2O_5$-$Bi_2O_3$ glasses.—73-14700

**Gavrilyachenko, V. G.,** See Dul'kin, E. A.

**Gavrin, A.; Chien, C. L.**
Magnetic ordering in granular Ni-$Al_2O_3$.—73-04619

**Gavrish, A. M.,** See Vasil'eva, N. M.

**Gavulic, J. M.,** See Chao, Benjamin S.

**Gawne, D. T.,** See Bao, Y.; Curtis, C. L.; Nogueira, R. E.

**Gay, H. C.,** See Covas, M.

**Gay, J. M.,** See Chevrier, J.

**Gay, R.,** See Ermer, J.

**Gaynor, S.,** See Kim, Y.

**Gazalet, M. G.,** See Kastelik, J. C.

**Gazda, M.,** See Murawski, L.

**Gazda, M.; Kusz, B.; Baczynski, R. J.; Murawski, L.; Gzowski, O.; Davoli, I.**
Mechanical energy dissipation phenomena in Y superconductors.—73-04770

**Gazza, George,** See **Gilde, Gary**

**Ge, C.; Xia, Y.; Chen, L.**
Nonoxide additives as sintering aids for $Si_3N_4$-based ceramics.—73-05934

**Ge, Liang,** See Yang, Bao-Cheng

**Ge, Man-Zhen; Yang, Hui; Jiang, Zhong-Hua**
Ultrafine pure mullite powder prepared by the sol-gel method.—73-13330

**Ge, Q.-L.; Lei, T.-C.; Mao, J.-F.; Zhou, Y.**
In situ TEM observations of the tetragonal-to-monoclinic phase transformation of zirconia in $Al_2O_3$-$ZrO_2$ (2 mol% $Y_2O_3$) composite.—73-09465

**Ge, R.; Zheng, D.; Zhao, T.; Zhu, X.**
Model for the characterization of agglomerated ceramic powder compaction.—73-09213

**Ge, Sen-Li,** See Zhang, Xiao-Dong

**Ge, Wei-Kun; Schmidt, W. D.; Sturge, M. D.; Pfeiffer, L. N.; West, K. W.**
Space group symmetry of the conduction band minimum in very short period GaAs/AlAs superlattices.—73-07802

**Ge, X.; Schmauder, S.**
Elastic modulus and interface stress constraint of particle-reinforced composites.—73-12782

**Ge, Y. P.,** See Kong, J.

**Gea, L.,** See Bauer, M.

**Geatches, R. M.,** See Bush, Timothy S.

**Geballe, T. H.,** See Spielman, S.

**Gebbhardt, Ronald F.**
Why performance standards for hydraulic cement.—73-10192

**Gebhardt, W.,** See Bauer, S.; Naumov, A.; Stanzl, H.

**Gedeon, A.,** See Grosse, R.

**Gedridge, R. W.,** See Irvine, S. J. C.; Korenstein, R.

**Gee, M. A.,** See Templeton, T. L.

**Gee, M. G.; Butterfield, D.**
Combined effect of speed and humidity on the wear and friction of silicon nitride.—73-06343

**Gee, Mark,** See Morrell, Roger

**Gegeshidze, K. R.; Nizknikova, G. P.; Farberovich, O. V.; Gigienishvili, A. V.; Piavinskii, T. L.; Glurdzhidze, L. N.**
Band structure and optical characteristics of thullium monoantimonide.—73-16413

**Gegout, P.; Revertegat, E.; Moine, G.**
Action of chloride ions on hydrated cement pastes: influence of the cement type and long-time effect of the concentration of chlorides.—73-03433

**Gehl, S. M.,** See Viswanathan, R.

**Gehman, B. L.; Jonsson, S.; Rudolph, T.; Scherer, M.; Weigert, M.; Werner, R.**
Influence of manufacturing process of indium tin oxide sputtering targets on sputtering behavior.—73-13097

**Geho, Mikio; Palmour, Hayne, III**
Sources of sintering inhibition in tape-cast aluminas.—73-09339

**Geib, K. M.,** See Shin, J.

**Geibel, C.,** See Lang, M.

**Geiderikh, V. P.,** See Punagin, V. N.

**Geiger, Alan L.,** See Liu, Hai-Yan

**Geiger, Greg**
Advances in dielectric ceramics.—73-14678; Environmental and energy issues in the glass industry.—73-07125; Refractory installation and tearout.—73-14615; Thermal analysis for improved quality.—73-01933; Trends in refractory technology.—73-07228

**Geller, Volker,** See Clement, Marc

**Geiman, K. I.,** See Valeiko, M. V.

**Geis, Michael W.; Angus, John C.**
Diamond film semiconductors.—73-11137

**Geis, Michael W.**
Device application of diamonds.—73-12422

**Geiss, R. H.**
Analytical electron microscopy of thin films and interfaces.—73-13373

**Geith, A.,** See Jaschek, R.

**Gel'mont, B. L.,** See Andaspaeva, A. A.

**Gelatos, Avgerinos V.; Poon, Stephen S.**
Semiconductor device having a ternary boron nitride film and a method for forming the same.—73-15242

**Gelatos, Carol,** See Olowplafe, J. O.

**Gelder, A. M.**
Bubbling in glass furnaces.—73-00591

**Gelder, D.; Unwin, G.; Wiechers, J.**
Stress prediction and measurement in chemical toughening.—73-00404

**Gelfand, S. M.,** See Solonenko, O. P.

**Gelinas, Claude,** See Lambert, Paul

**Geller, Bernard,** See Hegazi, Gamal M.

**Gellings, P. J.,** See Haanappel, V. A. C.

**Gelmont, B. L.; Peatman, W.; Shur, M.**
Heterodimensional Schottky metal–two-dimensional electron gas interfaces.—73-11241

**Geltser, I. S.,** See Davies, C. H. J.

**Gembarovic, Jozef,** See Kaluzna, Marta

**Gencarelli, F.**
Fiber for secondary reinforcement.—73-00090

**Gencer, F.; Abell, J. S.**
Growth of $YBa_2Cu_3O_{7-\delta}$ single crystals with the aid of an NaCl-KCl flux.—73-01565

**Gencten, A.,** See Han, Z. P

**Gendry, M.; Drouot, V.; Satinelli, C.; Hollinger, G.; Miossi, C.; Pitaval, M.**
Growth modes and relaxation mechanisms of strained InGaAs layers grown on InP(001).—73-07550

**Generali, P.,** See Carani, G.; Esposito, Leonardo

**Generazio, Edward R.,** See Sathish, Shamachary

**Geng, D.-S.,** See Liu, Z.-T.

**Geng, Q.; Goto, E.**
Flux trapping in superconducting thin films in weak magnetic fields.—73-11766

**Geng, Qian,** See Gao, Ya-Chun

**Geng, Qian**
Material phases and properties of household talc porcelain.—73-12626

**Geng, Xiao-Mei,** See Li, Nan

**Gengembre, L.,** See Francois, J. C.

**Genito, Joseph R.,** See Misra, Chanakya

**Genkina, E. A.,** See Malinovskii, Yu. A.; Radaev, S. F.; Rastsvetaeva, R. K.

**Genkina, E. A.; Andrianov, V. I.; Belokoneva, E. L.; Mill, B. V.; Maksimov, B. A.; Tamazyan, R. A.**
Synthetic $GdGaTi_2O_7$—new polymorphic modification of polymignyte.—73-02509

**Genkina, E. A.; Belokoneva, E. L.; Mill, B. V.; Butashin, A. V.; Maksimov, B. A.**
Synthesis and crystal structure of new double silicate $RbNbSiO_5 = Rb_3Nb_3[Si_4O_{16}]O_8$.—73-16351

**Genkina, E. A.; Kalinin, V. B.; Maksimov, B. A.**
Specific features of structure and properties of $Na_3Cr_2(PO_4)_3$ crystals.—73-02437

**Genkina, E. A.; Khomyakov, A. P.**
Refinement of structure of natural sodium phosphate.—73-16293

**Genkina, E. A.; Maksimov, B. A.; Mill, B. V.**
Crystal structure of $LaFe_5Ge_3O_{15}$-$LaFe_5[GeO_4][Ge_2O_7]O_4$.—73-02199

**Genkina, E. A.; Maksimov, B. A.; Sigarev, S. E.**
X-ray diffractometry study of orthorhombic modification of $Li_3Cr_2(PO_4)_3$ at 293, 473, and 573 K.—73-02544

**Genkina, E. A.; Maksimov, B. A.; Zvereva, O. V.; Mininzon, Yu. M.; Lyubutin, I. S.; Luchko, S. V.**
Synthesis, crystal structure, and properties of new iron phosphate, $Fe_2^{3+}Fe_5^{2+}[P_2O_7]_4$.—73-16356

**Genkina, E. A.; Malinovskii, Yu. A.; Khomyakov, A. P.**
Crystal structure of Sr-containing britholite.—73-02214

**Genkina, E. A.; Mill, B. V.**
Crystal structures of sphenes, $NaSbGeO_5$, $NaTaGeO_5$, and $LiTaSiO_5$.—73-16098

**Genkina, E. A.; Zhdanov, R. Sh.; Malinovskii, Yu. A.; Mityagin, N. V.; Sorokin, N. I.; Yasonov, I. V.**
Synthesis, atomic structure, and electrical conductivity of mixed crystals of (K, Ba)(Zn, Li)$F_3$.—73-16355

**Genkina, E. A.**
Refinement of crystal structure of $LiSbO_3$.—73-16290

**Gennaro, A. M.; Martins, G. B.; Rettori, C.; Barberis, G. E.; An, C. Y.**
ESR of rare-earth impurities ($Dy^{3+}$, $Er^{3+}$, $Yb^{3+}$) in the narrow gap semiconductor PbTe.—73-04330

**Gennser, Ulf; Keson, V. P.; Iyer, S. S.; Ott, J. A.; Yang, E. S.**
Influence of device structure and growth conditions on the tunneling characteristics of $Si/Si_{1-x}Ge_x$ double barrier structures.—73-11270

**Genoud, J.-Y.,** See Van Eenige, E. N.

**Gensel, Karin,** See Ullrich, Bernd

**Genter, David P.,** See Bentz, Joseph C.

**Genzel, L.; Bauer, M.; Yoder, R.; Haber-Meier, H. U.**
Far-ir investigation on $YBa_2Cu_3O_7$ films with the use of a reflection Fabry-Perot interferometer.—73-08077

**Genzel, L.,** See Bauer, M.

**Geobaldo, F.,** See Scarano, D.

**Geohegan, David B.**
Physics and diagnostics of laser ablation plume propagation for high-$T_c$ superconductor film growth.—73-11863

**Georg, H.**
Ceramic raw materials and their uses.—73-00895

**Georgakilas, A.,** See Peiro, F.

**George, C. M.,** See Bayoux, J. P.

**George, Eric R.; Liao, Kin; Reifsnider, Kenneth L.**
Method for the ply-level elastic characterization of composite materials using thick tubular angle-ply specimens.—73-15819

**George, M. A.,** See Azoulay, M.

**George, T.,** See Kuo, T. C.; Rich, D. H.

**George, Thomas,** See Fathauer, Robert W.; Wu, Albert T.

**Georges, T.,** See Allain, J. Y.; Xie, W. X.

**Georgescu, M.,** See Teoreanu, Ion

**Georgiades, A.,** See Ftikos, C.

**Georgiades, A.; Ftikos, C.; Marinos, J.**
Effect of micropore structure on autoclaved aerated concrete shrinkage.—73-00074

**Georgiev, D.,** See Petrov, V.

**Georgieva, I.; Nesheva, D.; Dimitrov, D.; Kozhukharov, V.**
Influence of crystallization on electrical and optical properties of Te-Se-Sn and Te-Se-Sn-O films.—73-08887

**Georgieva, O. Zh.,** See Plachkova, S. K.

**Georgitse, E. I.,** See Tsypishka, D. I.

**Georgitse, E. I.; Gutsulyak, L. M.; Ivanov-Omskii, V. I.; Masterov, V. F.; Smirnov, V. A.; Shtelmakh, K. F.**
Structure of an Mn impurity center in GaSb.—73-07817

**Georgobiani, A. N.; Gruzintsev, A. N.; Zayats, A. V.; Bureev, A. V.; Levit, A. D.**
Influence of low-temperature annealing on the defect structure of CdS:Li crystals.—73-01206

**Geotti-Bianchini, F.,** See Albertini, G.; Barbon, F.; Dal Maschio, Roberto; Passamonti, M. R.; Verita, M.

**Geotti-Bianchini, F.; De Riu, L.; Gagliardi, G.**
New interpretation of the ir reflectance spectra of $SiO_2$-rich films on soda-lime glass.—73-03744

**Geotti-Bianchini, F.; Lohrengel, Joachim**
Thermal conductivity of float glass at room temperature.—73-07085

**Geotti-Bianchini, F.**
Parameters affecting the workability of container glass.—73-07159

**Gerard, H.**
Measurement of temperature and time behavior to evaluate hydration characteristics of gypsum.—73-00133

**Gerardi, G. J.; Rong, F. C.; Poindexter, E. H.; Harmatz, M.; Shen, H.; Warren, W. L.**
GaAs surface stabilization by vacuum anneal with SiO.—73-04108

**Gerardin, Cornine M.; Taulelle, F.; Livage, Jacques**
Structural characterization of silicon carbonitride ceramics from polymeric precursors using nuclear magnetic resonance.—73-05491

**Gerashchenko, I. I.; Tertyshnaya, E. V.; Lytsyuk, N. B.; Bogomaz, V. I.**
Comparative study of sorptional capacity of silica-containing phases of various nature in respect to protein.—73-16422

**Gerasimchuk, A. L.,** See Mazurenko, E. A.

**Gerasimenko, N. N.; Myasnikov, A. M.; Obodnikov, V. I.; Safronov, L. N.**
Redistribution of Mg in InAs during postimplantation annealing.—73-01300

**Gerasimov, V.**
Structural regions of ordering in single-component glasses.—73-14097

**Gerasimova, L. V.; Ivanova, V. M.; Peskova, E. Yu.**
Improvement of the technology of article decoration with gold.—73-00912; Improving gold decorating techniques.—73-00642

**Gerasimovich, L. S.; Ignatenko, S. P.; Vlasenko, A. P.**
Cermet surface-distributive heaters based on nickel-titanium powder.—73-00214

**Gerasimovich, Svetlana,** See **Chaplanov, Victor**

**Gerber, A.; Franse, J. J. M.**
Self-heating vs quantum creep in bulk superconductors.—73-15618

**Gerber, Arthur H.**
Accelerators for refractory magnesia.—73-00885

**Gerber, T.,** See Bender, A.; Himmel, B.

**Gerber, T.; Himmel, B.; Weigelt, J.**
Middle-range order of glasses.—73-14037

**Gerberich, William W.,** See Dabiran, A. M.; Tsai, Chung-Hsien; Wang, Hsin-Fu

**Gerberick, Wayne E.**
Ceramic adhesive composition and use thereof.—73-04028

**Gerblinger, Josef,** See Lohwasser, Werner

**Gerchikov, L. G.; Rozhnov, G. V.; Subashiev, A. V.**
Band structure of superlattices of semiconductors with degenerate valence band.—73-04255

**Gerchikov, L. G.; Subashiev, A. V.; Dalla, Salman**
Effect of the layer composition on the band spectrum of $Cd_xHg_{1-x}Te$-$Cd_yHg_{1-y}Te$ superlattices.—73-14858

**Gerchikov, L. G.; Subashiev, A. V.**
Masses of quantum-size hole subbands of semiconductor heterostructures with different orientations.—73-15037

**Gerdanian, P.,** See Picard, C.; Yan, Yong

**Gerdes, E.,** See Pakulat, B.

**Gerdes, T.,** See Willert-Porada, M.

**Gerdes, William H.,** See Koradia, Pramod B.

**Gergel, V. A.; Il'ichev, E. A.; Luk'yanchenko, A. I.; Poltoratskii, E. A.; Shchamakhalov, K. S.**
Backgating in GaAs field effect transistors.—73-01081

**Gerhard, G.,** See Bohmer, R.

**Gerhardt, R.; Sure, S.; Dotsch, H.; Linkewitz, T.; Tolksdorf, W.**
Optical properties of Bi- and Ga-substituted Tm-Fe garnet films.—73-12850

**Gerhardt, R.**
Microstructural characterization of composites via electrical measurements.—73-17154

**Gerhardt, U.,** See Ratz, S.; Schroeder, N.

**Gerhauser, W.; Ries, G.; Neumuller, H. W.; Schmidt, W.; Eibl, O.; Seamannischenko, G.**
Flux-line pinning of $Bi_2Sr_2Ca_1Cu_2O_x$ crystals: interplay of intrinsic 2-D behavior and irradiation-induced columnar defects.—73-08085

**Gerhold, Bruce W.,** See Schuette, George F.; Schuette, George F.

**Gering, G. I.,** See Savenko, O. M.

**Gerlovin, I. Y.,** See Abramov, A. P.

**Germain, J.-P.,** See Dogo, S.

**German, Randall M.,** See Raman, R.

**German, Randall M.**
Homogeneity effects on feedstock viscosity in powder injection molding.—73-05844; Role of particle packing density in powder injection molding.—73-13241

**Germanenko, A. V.; Larionova, V. A.; Minkov, G. M.; Rut, O. E.**
Langmuir-Blodgett film as an insulator in an MIS transistor made from $Cd_xHg_{1-x}Te$.—73-07632

**Germani, Mark S.**
Application of automated electron microscopy (AEM) to individual particle analysis.—73-05021

**Germann, Ronald,** See Unger, Peter

**Germanova, K.,** See Russev, S.

**Germanskii, G. I.,** See Nanazashvili, V. I.

**Germond, D.; Vignesoult, S.**
Automated rotating cylinder viscometer for glass.—73-01887

**Gernert, Nelson J.,** See Gillier, Donald C.

**Gernert, Nelson J.; Shaubach, Robert M.**
Moving-gradient furnace with constant-temperature cold zone.—73-12231; Single-heater, three-zone furnace.—73-15891

**Gernies, Bernard,** See Iatrides, Jean-Yves

**Geronov, Y.,** See Bojinov, M.

**Gerritsma, G. J.,** See De Nivelle, M. J. M. E.

**Gershenzon, E. M.; Grachev, S. A.; Litvak-Gorskaya, L. B.**
Role of $H_2^+$ complexes in optimization of *n*-type InSb mixers in the millimeter-wavelength range.—73-11423

**Gerson, Ralph J.**
Four leading factors in the growth of the Asian construction market.—73-17479

**Gerstenberg, H.,** See Wiesinger, H. P.

**Gerth, K.,** See Stelzner, Thomas

**Gerth, Kirsten; Kloss, Thomas; Stein, Elfi; Wickardt, Andrea**
Optical crown glass having negative anomalous partial dispersion and high uv transmission.—73-10652

**Gerthsen, D.,** See Bimberg, D.; Forster, A.

**Gertner, E. R.,** See Edwall, D. D.; Irvine, S. J. C.

**Gervais, Francois,** See Vaills, Yann

**Gervais, Francois; Lobo, Ricardo P. S. M.; Allancon, Christine; Pellerin, N.; Bassat, J. M.; Loup, J. P.**
Ir reflectivity of $PrNiO_4$ single crystals.—73-16189

**Gervais, J.**
Experimental measurement of the optical absorption coefficient of the multicrystalline *p*-type solar-grade silicon.—73-07522

**Ges, A. P.,** See Barilo, S. N.

**Gesing, Adam J.; Luce, Edward S.; Raghavan, Narashima S.; White, Danny R.**
Production of metal carbide articles.—73-05332

**Geslot, Robert,** See Verney, Serge

**Gessert, T. A.,** See Qu, Y.

**Gessler, Herbert A.,** See Gessler, Herbert A., II

**Gessler, Herbert A., II; Gessler, Herbert A.; Gessler, Matthew A.**
Tin float bath for manufacturing sheet glass utilizing recuperative gas burners.—73-12098

**Gessler, Matthew A.,** See Gessler, Herbert A., II

**Gessner, W.,** See Rettel, A.

**Get'man, E. I.,** See Tkachenko, T. V.

**Get'man, E. I.; Al'ragig Salekh, M. M.; Marchenko, V. I.**
Interactions in the system $SnO_2$-$GaSbO_4$.—73-12608

**Gettings, R. J.; Quinn, George D.; Ruff, A. W.; Ives, L. K.**
New hardness standard reference materials (SRM's) for advanced ceramics.—73-15824

**Gettings, Robert J.,** See Quinn, George D.

**Geurts, J.,** See Hermans, J.; Maassen, M.

**Geurts, Johan**
Advanced ceramics in The Netherlands.—73-06554

**Geus, Edward R.; Den Exter, Marcel J.; Van Bekkum, Herman**
Synthesis and characterization of zeolite (MFI) membranes on porous ceramic supports.—73-16349; Synthesis and characterization of zeolite (MFI) membranes on porous ceramic supports.—73-08764

**Gevorkian, V. A.,** See Arutunian, V. V.

**Gewinner, G.,** See Kafader, U.; Wetzel, P.

**Gey, B.,** See Cales, B.

**Geyer, V.; Russel, Christian**
Pyrolytic route for the preparation of oxynitride glasses.—73-14483

**Geyzers, K. P.,** See Schneider, A.

**Ghaffari, M.,** See Van Berlo, W. H.

**Ghafoori, N.; Chang, W. F.**
Phosphogypsum waste for construction materials.—73-03517

**Ghanashyam, Krishna M.; Narosimha Rao, K.; Mohan, S.**
Optical properties of ion-assisted deposited zirconia thin films.—73-11362

**Ghandhi, S. K.,** See Bhat, Ishwara B.; Karam, N. H.

**Gharbage, B.,** See Scotti, C.

**Ghatak, K. P.; Biswas, S. N.**
Einstein relation in ultrathin films of nonparabolic semiconductors under magnetic quantization.—73-04299

**Ghatak, S. K.,** See Mandal, K.

**Gheorghe, G.,** See Stoica, A. D.

**Gheorghiu, A.,** See Senemaud, C.

**Gheorghiu, Tudor C.; Guile, Donald L.; Hillman, Arthur E.;**

**Lipp, G. Daniel; Zook, Larry J.**
Rotary dielectric drying of ceramic honeycomb ware.—73-05141

**Ghergia, Vittorio**
New materials for optoelectronic devices.—73-07692

**Ghetta, Veronique,** See Chatain, Dominique

**Ghetti, Raffaella**
Technical standards and [the] ceramic industry.—73-17506

**Ghigliazza, M.,** See Agnesi, A.; Banfi, GianPiero

**Ghilotti, G.,** See Elena, M.

**Ghiti, A.,** See Jones, G.

**Ghodssi, R.; Denton, D. D.; Seireg, A. A.; Howland, B.**
Rolling friction in a linear microactuator.—73-05632

**Ghoneim, A. A.,** See Mogoda, A. S.

**Ghoneimy, Hussein F.,** See Misak, Nasr Z.

**Ghonge, Subodh G.; Goo, Edward; Ramesh, Ramamoorthy;**

**Sands, T.; Keramidas, V. G.**
Microstructure of epitaxial ferroelectric $YBa_2Cu_3O_{7-x}/Pb_{0.9}La_{0.1}$-$(Zr_{0.2}Ti_{0.8})_{0.975}O_3$-$YBa_2Cu_3O_{7-x}$ heterostructures on $LaAlO_3$ [LAO].—73-03171

**Ghorab, H. Y.,** See Abdelaliim, A. M. K.

**Ghorab, H. Y.; Abdelalim, A. M. K.; Ahmed, O. M.**
Hardening characteristics of some clay minerals.—73-02614

**Ghorab, H. Y.; Ahmed, S. T.; Ahmed, H. M.**
Alkali-cement system.—73-09811

**Ghorai, S.,** See Pal, U.

**Ghosh, A. K.,** See De, S. S.

**Ghosh, A.**
Hopping transport in vanadium tellurite glasses containing antimony oxide.—73-07569; Transport mechanism in semiconducting glassy silicon vanadates.—73-09424

**Ghosh, Amit K.**
Consolidation of [SiC] fiber materials with particulate metal aluminide alloys.—73-13915

**Ghosh, Asish,** See Gulati, S. T.; Sakai, Tatsuo

**Ghosh, Asish; Cha, Chin Y.; Vaidyanathan, Sridhar**
Design methodology for manufacturing glass cathode ray tubes.—73-03831

**Ghosh, Asish; Jenkins, Michael G.; Ferber, Mattison K.;**

**Peussa, Jouko; Salem, Jonathan A.**
Elevated-temperature fracture resistances of monolithic and composite ceramics using chevron-notched bend tests.—73-06403

**Ghosh, B.,** See Santra, K.

**Ghosh, Syamal K.; Chatterjee, Dilip K.; Koziol, D. R.;**

**Majumdar, Debasis**
Net-shape fabrication of Y-TZ ceramic through a statistically designed experiment.—73-09220

**Ghosh, S. N.,** See Sharma, R. C.

**Ghosh, S. P.,** See Mohan, K.

**Ghosh, S. P.; Mohan, K.; Gandhi, R. K.**
Effects of using rice husk and its ash as fuel and raw material component, respectively, in cement manufacture.—73-09940

**Ghosh, S. P.; Padmanathan, P.; Mohan, K.**
Effects of kiln dust addition to portland and blended cements.—73-13713

**Ghosh, S.,** See Nandi, A. K.; Zhang, G. M.

**Ghosh, Subhasis; Kumar, Vikram**
Transient photoconductivity in Si-doped $Al_{0.26}Ga_{0.74}As$.—73-07841

**Ghosh, Syamal K.,** See Chatterjee, Dilip K.

**Ghosh, U. S.,** See Mukherjee, S.

**Ghoshal, S. K.,** See Dattagupta, S.

**Giacobbo, Paulo**
Considerations on the optimization of the manufacturing process of super-lightweight glass bottles.—73-03828

**Giacometti, J. A.,** See Lepienski, C. M.

**Giamarchi, T.,** See Sudbo, A.

**Giamei, Anthony F.**
Solidification process modeling: status and barriers.—73-09338

**Giannakopoulos, A. E.; Gudmundson, P.**
Stresses around a partly microcracked hole in certain ceramic materials under internal pressure.—73-03358

**Giannelis, Emmanuel P.,** See Keddie, Joseph L.

**Giannelis, Emmanuel P.; Keddie, Joseph L.**
Preparing densified low-porosity titania sol-gel forms.—73-05240

**Giannelis, Emmanuel P.**
New strategy for synthesizing polymer-ceramic nanocomposites.—73-13151

**Giannuzzi, Lucille A.; Rugg, Kevin L.; Tressler, Richard E.**
High-temperature strength and creep behavior of Carborundum alpha silicon carbide fibers.—73-09613

**Giapintzakis, J.,** See Safar, H.

**Giapis, Konstantinos P.,** See Aydil, Eray S.

**Gibb, T. C.,** See Battle, P. D.

**Gibb, Terence C.; Whitehead, Roger J.**
Order-disorder and magnetic clusters in some mixed-metal perovskites.—73-04633

**Gibb, Terence C.**
Spin-glass $Sr_2FeNbO_6$ [investigated] by extended X-ray absorption fine structure and Mossbauer spectroscopy.—73-05487

**Gibbons, G.; Taylor, A.; Dupree, R.; Kohn, S. C.**
NMR studies of cation ordering in crystalline silicates.—73-03745

**Gibbons, J. F.,** See Kamins, T. I.

**Gibbs, C. D.,** See Berry, Frank J.

**Gibbs, G. V.,** See Boisen, M. B., Jr.

**Gibbs, W. B.; Turner, Warren**
Sulfate utilization in float glass production.—73-07177

**Gibler, Martin J.,** See Able, Edward C.

**Gibner, Ya. I.,** See Vasil'eva, I. G.

**Gibson, Ian A.**
Competitive pricing—gas supplies to the ceramic industry.—73-05104

**Gibson, M. L.,** See Watts, A. J.

**Gibson, Roderick A. G.,** See Masaki, Yuichi

**Gibson, V. C.,** See Abrahams, I.

**Giddings, J. Calvin; Williams, P. S.**
Multifaceted analysis of 0.01- to 100-$\mu$m particles by sedimentation field flow fractionation (FFF).—73-12170

**Giduska, Michal,** See Frohlich, Ladislav

**Gielisse, Peter J.,** See Owusu, Yaw A.

**Gielly, J.,** See Curtil, L.

**Gier, Thurman E.,** See Harrison, William T. A.; Moran, Kelly L.; Nenoff, Tina M.; Parise, John B.

**Gieres, G.,** See Barth, R.

**Giesche, Herbert**
Sintering of coated powders: I, Silica–yttria system.—73-06058

**Giese, Douglas D.**
Design, materials, and process optimization by Taguchi experiment.—73-13818

**Giese, G. L.,** See Ajimine, Eric M.

**Giese, Ross F.,** See Li, Zhao-Hui

**Gieselmann, Mary J.**
Permeabilities of unsupported ceramic membranes of alumina.—73-12854

**Giess, Edward A.,** See Aoude, Farid Y.

**Giess, J.,** See Young, M. L.

**Giester, G.; Wildner, M.**
Hydrothermal synthesis and crystal structure of $Mn(SeO_3)_2$.—73-02286

**Giethmann, C.,** See Bauer, P.

**Gigenalte, G.,** See Vengelis, B.

**Gigleishvili, A. V.,** See Gegeshidze, K. R.

**Giguere, S.; Pilon, L. P.**
Low-cement castable replaces silicon carbide bricks used to line shaft furnace at CCR.—73-10739

**Gijs, M. A. M.; Okada, M.; Wolf, R. M.; Van Rooy, T.;**

**Gilabert, A.; Medici, M. G.**
Superconducting proximity effect in $YBa_2Cu_3O_{7-\delta}$-Ag-Pb junctions.—73-08222

**Gil, B.,** See Briot, N.; Chen, Y.; Datka, J.

**Gil, L.; Ramos, M. A.; Bringer, A.; Buchenau, U.**
Low-temperature specific heat and thermal conductivity of glasses.—73-14219

**Gil, R. V.,** See Irvine, S. J. C.; Zucca, R.

**Gilabert, A.,** See Gijs, M. A. M.

**Gilbart, E.,** See Szepvolgyi, J.

**Gilbert, R. A.,** See Eyink, K. G.

**Gilbert, R.,** See Eyink, K. G.

**Gilbert, Thomas R., See Barron, Andrew R.**

**Gilde, Gary; Gazza, George**
Effect of powder processing on slip-casting parameters and sintering of $Si_3N_4$-$SiO_2$-$Y_2O_3$.—73-05766

**Gildenhaar, R.,** See Ravaglioli, A.

**Giles, N. C.,** See Gold, Jeffrey S.

**Giles, N. C.; Lee, Jae-Sun; Rajavel, D.**
Photoluminescence of *n*-type CdTe:I grown by molecular beam epitaxy.—73-02666

**Giles, R. H.,** See Gatesman, A. J.

**Gill, Phil,** See Sauerbrunn, Steve

**Gillan, Michael J.,** See Kruse, Carsten; Manassidis, Ioannis

**Gilleron, M.,** See Blez, Monique

**Gilles, J.,** See Zahorski, D.

**Gilles, R.,** See Huang, T. C.

**Gillespie, Chris**
One small step: an SC [superconductor] motor is tested successfully.—73-15571

**Gillespie, D. J.,** See Tritt, T. M.

**Gillespie, W. A.,** See Soutar, C.

**Gillet, M.,** See Regnier, S.

**Gillet, P.,** See Guyot, F.

**Gillet, P.; Guyot, F.; Price, G. D.; Fournerie, B.; Le Cleach, A.**
Phase changes and thermodynamic properties of $CaTiO_3$. Spectroscopic data, vibrational modeling, and some insights on the properties of $MgSiO_3$ perovskite.—73-08691

**Gillett, John B.**
New packaging challenges posed by high-power CMOS.—73-04145

**Gilliam, O. R.,** See Watterich, A.

**Gillier, Donald C.; Lehoczky, Sandor L.; Gernert, Nelson J.**
Moving temperature gradient heat pipe furnace element.—73-15735

**Gilliland, G. D.; Antonelli, A.; Wolford, D. J.; Bajaj, K. K.;**

**Klem, J.; Bradley, J. A.**
Direct measurement of heavy-hole exciton transport in type-II GaAs/AlAs superlattices.—73-11142

**Gilliland, G. D.; Wolford, D. J.; Bradley, J. A.; Klem, J.;**

**Jaros, M.**
Exciton transport and localization in type-II GaAs/AlAs superlattices.—73-11204

**Gilliland, G. D.; Wolford, D. J.; Northrop, G. A.; Petrovic, M. S.; Kuech, T. F.; Bradley, J. A.**
Interface states and the transport of two-dimensional interface excitons in AlGaAs/GaAs structures.—73-07614

**Gillin, W. P.; Bradley, I. V.; Homewood, K. P.; Webb, R. P.**
Effect of Ga implantation on the intermixing of InGaAs/GaAs strained quantum wells.—73-04289

**Gillis-D'Hamers, I.; Vrancken, Karl C.; Possemiers, K.;**

**Vansant, E. F.; Deroy, G.**
Hydroxyl-type specificity of diborane chemisorbed on the surface of silica gel.—73-16170

**Gillis-D'Hamers, Iwan; Vrancken, Karl C.; Possemiers, K.;**

**Vansant, E. F.; Deroy, G.**
Hydroxyl-type specificity of diborane chemisorbed on the surface of silica gel.—73-06926

**Gillot, B.; Kharroub, M.; Metz, R.; Legros, R.; Rousset, A.**
Thermal behavior and oxidation mechanism of tetragonal manganite spinels $Cu_xMn_{3-x}O_4$, $0<x<1$.—73-02521; Electrical properties and cationic distribution in cubic nickel manganite spinels $Ni_xMn_{3-x}O_4$, $0.57<x<1$.—73-02600

**Gillot, B.; Kharroubi, M.; Metz, R.; Rousset, A.**
Thermal stability, crystallographic, and electrical properties in undoped and Ba-doped Cu-Ni manganite spinels.—73-05676

**Gillot, C.; Michenaud, J. P.; Maglione, M.; Jannot, B.**
Dc electrical resistivity of Nb-doped $BaTiO_3$ and EPR measurements.—73-12762

**Gillot, Jacques,** See Soria, Raymond

**Gillott, J. E.,** See Wang, Hong

**Gillott, J. E.; Wang, H.**
Improved control of alkali-silica reaction by combined use of admixtures.—73-06672

**Gillson, J. L.,** See Sleight, A. W.

**Gilman, Mike**
Quantum leap in cup technology.—73-04047

**Gilmore, M.,** See McGruer, N. E.

**Gilpin, J. B.,** See Tennant, William E.

**Gilson, J. P.,** See De Man, A. J. M.

**Gimenez, S.,** See Escardino, A.

**Gimenez, S.; Blanco, M. T.; Palomo, A.; Puertas, F.**
Production of cement requiring low energy expenditure—an industrial test.—73-00171

**Giminez-Molina, S.; Teresa Blanco, M.; Marr, J.**
Phase relations in the system $Ca_2SiO_4$-CaO-$CaSO_4$-$CaF_2$ relevant to cement clinkering.—73-10080

**Gimpel'man, E. Ya.,** See Uzberg, L. V.

**Gimzewski, J. K.,** See Dumas, P.

**Gindin, E. I.,** See Polyakov, S. M.

**Ginori, Richard,** See Signorini, E.

**Ginsberg, D. M.,** See Cooper, S. L.; Safar, H.; Wollman, D. A.

**Ginter, D. M.; Bell, A. T.; Radke, C. J.**
Effects of gel aging on the synthesis of NaY zeolite from colloidal silica.—73-13031

**Ginter, D. M.; Went, G. T.; Bell, A. T.; Radke, C. J.**
Physicochemical study of the aging of colloidal silica gels used in zeolite Y synthesis.—73-13437

**Ginzberg, A. V.,** See Tikhomirova, N. A.

**Giodana, A.; Glembocki, O. J.; Glaser, E. R.; Gaskill, D. K.; Kyono, C. S.; Twigg, M. E.**
Characterization of crystalline low-temperature GaAs layers annealed from an amorphous phase.—73-14798

**Giordana, A.,** See Kyono, C. S.

**Giordani, M.,** See Beruto, Dario

**Giordano, N.,** See Arena, F.

**Giordano, N.; Monnier, J. D.**
Alteration of electron-electron interaction effects in metal-insulator-metal trilayers.—73-14679

**Giorgi, L.,** See Ingo, G. M.

**Giorgi, R.,** See Borsella, E.

**Gippius, A. A.,** See Gukasyan, A. M.

**Girard, R.,** See Villeneuve, D.

**Giret, Henri,** See Maumus, Jean-Pierre

**Giriat, W.,** See Chen, Chen-Jia; Kisiel, A.

**Giridhar, A.,** See Mahadevan, Sudha

**Girka, A. I.,** See Vodakov, Yu. A.

**Girouard, F. E.,** See Benaissa, K.; Benkhelifa, F.; Benkhelifa, F.

**Giroult-Matlakowski, G.,** See Charles, C.

**Giroux, M.,** See Villeneuve, D.

**Girshick, S. L.,** See Singh, S. K.

**Girshtel, G. B.; Glazkova, S. V.; Gaken, M. V.; Belik, P. I.; Komarov, A. I.; Saldugei, M. M.**
Use of the volcanic rock of Zakarpatya as active mineral admixture in cement.—73-15915

**Girvin, S. M.,** See Massey, M. J.

**Gitlitz, Mel H.; Dirkx, Ryan; Russo, Dave A.**
Letting light in; keeping heat out.—73-03796

**Gittsovich, A. V.,** See Sobolev, M. M.

**Giunchi, Giovanni; Credali, Lino**
Composite materials: new opportunities for industrial applications in construction and transportation.—73-09705

**Giuraldenq, P.,** See Charnay, R.

**Giusti, Aldo,** See Bellussi, Giuseppe

**Givargizov, E. I.,** See Grinberg, S. A.

**Givens, Michael E.,** See Coleman, James J.

**Givord, D.; Li, H. S.; De La Bathie, R. P.**
Magnetic properties of $Y_2Fe_{14}B$ and $Nd_2Fe_{14}B$ single crystals.—73-15343

**Gizhevskii, B. A.,** See Loshkareva, N. N.

**Gjorv, Odd E.,** See Kjellsen, Knut O.; Zhang, Min-Hong

**Gladic, J.; Milat, O.; Vucic, Z.; Horvatic, V.**
Structural variants in the low-temperature ß-phase of stoichiometric cuprous selenide.—73-02457

**Gladkaya, I. S.; Kremkova, G. N.; Bendeliani, N. A.**
Phase diagram of magnesium nitride at high pressures and temperatures.—73-12653

**Gladkii, V. V.,** See Pakhomov, V. I.

**Gladun, C.,** See Heinrich, A.

**Gladush, V. M.; Tverskaya, K. B.; Nazarenko, L. I.**
Enamel–metal bonding strength with different firing cycles.—73-00227

**Gladyshchuk, A. A.,** See Gribkovskii, V. P.

**Gladyshevskii, E. I.; Gorelenko, Yu. K.; Grin, Yu. N.; Yarovets, V. I.**
Coordination of atoms in structures of ternary compounds of rare-earth element–transition element–silicon systems.—73-16070

**Glaeser, Andreas M.,** See Bullard, Jeffrey W.; Rodel, Jurgen; Shalz, M. L.

**Glaeser, Andreas M.**
Transient liquid phase ceramic bonding.—73-00302

**Glandus, Jean Claude; Tranchand, V.**
Thermal shock by water quench: numerical simulation.—73-05668

**Glaser, E. R.,** See Giodana, A.; Molnar, B.

**Glasrud, G. G.; Navarrete, R. C.; Scriven, L. E.; Macosko, C. W.**
Settling behavior of iron oxide suspensions.—73-06035

**Glass, Iain**
Mold reader evolution.—73-15734

**Glass, Jeffrey T.,** See Stoner, B. R.; Yang, Pei-Chun

**Glass, Lain,** See Tana, Sergio Dalla

**Glass, R. C.,** See Wahab, Q.

**Glass, Robert C.; Palmour, John W.; Davis, Robert F.;**

**Porter, Lisa S.**
Platinum ohmic contact to *p*-type silicon carbide.—73-15240

**Glasser, Fredrick P.,** See Atkins, M.; Bell, G. M. M.; Cowie, J.; Damidot, Denis; De Silva, P. S.; Fletcher, J. G.; Jappy, T. G.; Macphee, Donald E.; Moir, G. K.; Sagoe-Crentsil, K. K.; Sourie, A.; Yilmaz, V. T.; Zhang, Wen-Bang; Jing, Xi-Ping

Laser melting of refractory $Al_2O_3$-$ZrO_2$ ceramics.—73-13116

**Glasson, Nigel**
Benefits of Dorset ball clay in traditional whiteware applications.—73-10801

**Glatzmaier, Gregory C.**
Method for silicon carbide production by reacting silica with hydrocarbon gas.—73-16003

**Glavin, Edward L., Jr.,** See Thibault, Theresa R.

**Glazkova, S. V.,** See Aleshina, L. A.; Girshtel, G. B.

**Glazyrina, V. I.,** See Butorin, S. M.

**Gleason, Edward F.,** See Bernstein, J. B.; Burns, James A.

**Gleason, K. K.,** See Levy, D. H.; Wolden, C.

**Glebov, A. P.,** See Khabibullaev, P. K.

**Glebov, L. B.,** See Barinova, N. A.

**Glebov, L. B.; Derzhavin, S. N.; Evstrop'ev, S. K.**
Effect of diffusion stresses on the properties of ion-exchanged layers of alkali zirconium silicate glasses.—73-00453

**Glebov, L. B.; Nikonorov, N. V.; Petrovskii, G. T.;**

**Tshavelev, O. S.**
New possibilities of glasses for integrated optics.—73-14235

**Gleditzsch, Siegfried; Hopfe, Jurgen; Futing, Manfred**
Sintering of ceramic bodies containing glass.—73-00924

**Gleitzer, C.,** See Colin, S.

**Gleixner, Richard A.; LaCount, Dale F.; Finnemore, Douglas K.**
Efficient incorporation of silver to improve superconducting fibers.—73-11952

**Glembocki, O. J.,** See Giodana, A.

**Glenister, Rodney L.; Singh, Rajiv R. P.**
Temperature and doping dependence of the magnetic susceptibility in the cuprates.—73-05648

**Glesener, J. W.,** See Snail, K. A.

**Glesener, J. W.; Tonucci, Ronald J.**
Micropatterned diamond substrates.—73-13416

**Glezer, Victor; Lev, Ovadia**
Sol-gel vanadium pentoxide glucose biosensor.—73-05180

**Glibert, J.,** See Claes, P.

**Gliermann, G.,** See Xu, Wu

**Glinchuk, K. D.,** See Vinnik, E. V.

**Glinchuk, K. D.; Guroshev, V. I.; Prokhorovich, A. V.**
Composition dependence of the radiation stability of the luminescence emitted by solid solutions of III-V compounds.—73-11117; Dependence of the radiation stability of the intensity of luminescence emitted by solid solutions of III-V compounds on their composition.—73-14829

**Glinchuk, M. D.,** See Bykov, I. P.; Westphal, V.

**Glinskii, G. F.; Lupal, M. V.; Parfenova, I. I.; Pikhtin, A. N.**
Fine structure of the A line of bound excitons in $GaAs_xP_{1-x}$:N solid solutions.—73-01165

**Glisenti, A.,** See Bertoncello, R.

**Glocker, D. A.,** See Bell, B. C.

**Glockle, W. G.,** See Baur, G.

**Glockner, David A.**
Influence of the plasma on substrate heating during low-frequency reactive sputtering of AlN.—73-16843

**Glodic, S. D.,** See Plecas, I. B.

**Gloerstad, T. K.,** See Dey, S.K.

**Glogar, Petr,** See Balik, Karel

**Glosser, R.,** See Badakhshan, Ali

**Glovan, R. J.; Tierney, J. C.**
Controlled aspiration—a new thermal spray process.—73-08329

**Glover, Darren J.,** See Jackson, James D. J.

**Glucker, M.,** See Schuster, T.

**Gluckler, H.,** See Niedermayer, C.

**Glurdzhidze, L. N.,** See Gegeshidze, K. R.

**Glushko, V. I.; Kovalenko, V. P.; Mileiko, S. T.;**

**Tvardovsky, V. V.**
Evaluation of fiber strength characteristics on the basis of the fiber fragmentation test.—73-17309

**Glushkova, T. M.,** See Krivandina, E. A.

**Glushkova, V. B.,** See Morozova, L. V.; Panova, T. I.; Tikhonov, V. B.

**Gmeiner, M.,** See Bohner, B.

**Gnall, R. P.,** See Tennant, D M.

**Gnann, Alan,** See Grumblatt, Gerard

**Gnappi, G.,** See Avramov, I.; Lan, Luo; Lottici, Pier Paolo

**Gnatyuk, V. A.,** See Artamonov, V. V.; Baidullaeva, A.

**Gnedina, I. A.,** See Vasil'ev, V. I.

**Gnezdilov, V. P.; Eremenko, V. V.; Peschanskii, A. V.;**

**Fomin, V. I.**
Structural phase transition in $MnSiF_6{\cdot}6H_2O$ [crystal].—73-16326

**Gnezdilov, V. P.; Lockwood, David J.; Webb, J. B.; Maigne, P.**
Raman scattering from $In_{1-x}Al_xSb$ metastable epilayers.—73-11411

**Gnjatovic, Milutin**
Method for insulating a furnace and furnace manufactured according to the method.—73-05139

**Gobel, E. O.,** See Feldman, J.; Hellmann, R.; Koch, M.

**Gobel, Roland,** See Grunler, Bernd

**Gobin, P. F.,** See Hamann, R.; Beck, Gerard

**Gobolos, Sandor; Talas, Emilia; Hanko, Klara**
Modification of the pore structure and surface properties of controlled pore glasses.—73-00668

**Goda, Koji; Kuwabara, Makoto**
Complex impedance analysis of unusual dielectric properties in $(Pb,La)TiO_3$ ceramics.—73-02563

**Goda, Takuji,** See Sakai, Y.

**Goda, Takuji; Sakai, Yasuto; Hishinuma, Akihiro; Kawahara, Hideo; Deki, Shigehito**
Method for producing silicon dioxide film which prevents escape of Si component to the environment.—73-14550

**Godard, H. T.,** See Larsen, D. C.

**Godard, J.,** See Foussigne, Y.

**Godart, C.,** See Mazumdar, Chandan

**Godbey, D. J.,** See Thompson, Philip E.; Zvanut, M. E.

**Godby, R. W.,** See Charlesworth, J. P. A.

**Godlewski, J.,** See Sodolski, H.

**Godlewski, M.,** See Gregorkiewicz, T.

**Godlewski, M.; Swiatek, K.; Monemar, B.**
Eu and Yb excitation mechanisms in ZnS, CaS, SrS, and InP.—73-04331

**Godovannikov, A. M.,** See Punagin, V. N.

**Godzhaev, M. O.,** See Abdulaev, G. B.

**Godzhieva, O. V.; Porotnikov, N. V.; Pikhidchuk, V. P.**
Physicochemical study of ternary oxides formed in the system $In_2O_3$-CaO-CuO.—73-16274

**Goeckner, H. P.; Kouvel, J. S.**
Rotational vortex-flux properties of $Ba_{0.575}K_{0.425}BiO_3$.—73-04802

**Goeke, N. H.,** See Dessa, R. M.

**Goel, Arvind**
Versatile, cost-effective, strongly adherent, highly stable, wear-resistant coatings.—73-15975

**Goel, T. C.,** See Pramila, C.

**Goell, Gert,** See Uhlig, D.

**Goerke, F.,** See Schilling, M.

**Goethe, J. E.,** See Dharani, L. R.

**Goettler, R.,** See Liao, Kin

**Goetz, O.; Schulz, H.-J.**
Influence of the impurity concentration on the microstructure of compound semiconductors—the example of ZnS:Cr optical spectra.—73-01209

**Goeuriot, D.,** See Merle, Therese

**Goffman, M. F.,** See Rodriguez, E.

**Gogia, Balvinder,** See Padam, G. K.

**Gogna, P.,** See Waechter, D.

**Gogoladze, D. T.; Dolginov, L. M.; Mal'kova, N. V.;**

**Milvidskii, M. G.; Novikova, V. M.; Solovena, E. V.**
Characteristics of LPE and of electrophysical properties of epitaxial $In_{0.53}Ga_{0.47}As$:Sb films.—73-01097

**Gogotsi, G. A.; Galenko, V. I.; Zavada, V. P.; Swain, Michael V.**
Influence of heating rate on the thermal strain induced fracture of Mg-PSZ samples.—73-05583

**Gogotsi, G. A.; Lomonova, E. E.; Osiko, V. V.**
Mechanical characteristics of zirconia monocrystals for structural applications.—73-03325

**Gogotsi, G. A.; Ostrovoi, D. Yu.; Lomonova, E. E.**
Deformation characteristics of cubic zirconia monocrystals.—73-13502

**Gogotsi, G. A.; Swain, Michael V.; Davis, J.**
Partially stabilized $ZrO_2$ ceramic and its behavior under load.—73-00834

**Gogotsi, G. A.; Zavada, V. A.; Fesenko, A. I.**
Healing of cracks in glass.—73-07033

**Gogotsi, G. A.; Zavada, V. P.; Fesenko, A. I.**
Method and some results of the investigation of *R*-curves in ceramics.—73-09646

**Gogotsi, G. A.**
Significance of nonelastic deformation in the thermal shock fracture of heterogeneous ceramic materials [HCM's].—73-06518

**Gogotsi, Yu. G.; Grathwohl, Georg**
Creep of silicon nitride–titanium nitride composites.—73-09564; Stress-enhanced oxidation of silicon nitride ceramics.—73-03231

**Gogotsi, Yu. G.; Grigor'ev, O. N.; Orlovskaya, N. A.**
Influence of batch preparation method on the structure and properties of ceramics in the $Al_2O_3$-$ZrO_2$-$Y_2O_3$ system.—73-02865

**Gogotsi, Yu. G.; Ostrovoi, D. Yu.; Shcherbina, O. D.**
Effect of oxygen on the strength of reaction-bonded silicon nitride.—73-03271

**Goguel, R. L.; St. John, D. A.**
Chemical identification of portland cements in New Zealand concretes: II, The Ca-Sr-Mn plot in cement identification and the effect of aggregates.—73-06638

**Goguen, J. D.,** See Strock, Harold B.

**Goh, F. C.,** See Sidhwa, A. J.

**Goh, Seng C.**
Red, green, and blue upconversions in erbium-doped fluorozirconate glass.—73-07068

**Goh, T.-N.; Rahman, M.; Seah, K. H. W.; Lee, C.-H.**
Influence of the substrate material on the effectiveness of coating in metal cutting.—73-13849

**Gohar, I. A.,** See Doweidar, H.; El-Damrawi, G.

**Gohar, I. A.**
Property–structure correlations of glasses in the system PbO-$B_2O_3$-$MoO_3$.—73-10475

**Goikhman, V. Yu.,** See Atkarskaya, A. B.

**Goiran, M.,** See Voillot, F.

**Goiran, M.; Guasch, C.; Voillot, F.; Carles, R.; Peyrade, J. P.; Bedel, E.**
Dimensional reduction of GaAs quantum well cut by dislocation slip observed by photoluminescence.—73-07445

**Gojhman, V. Yu.,** See Atkarskaya, A. B.

**Gokagac, Gulsun; Kennedy, Brendan J.**
Surface stability of bismuth-ruthenium oxide electrodes.—73-07363

**Gokhman, A.**
Texture and residual macrostress of Ti-N coatings.—73-05649
**Gokhman, V. L.; Roitsin, A. B.; Brik, A. B.**
Local vibronic instability of low-symmetry centers.—73-16199
**Goktas, A. A.; Weinberg, Michael C.; Kreidl, N. J.**
Preparation and properties of calcium aluminate compositions via sol-gel processing: effects of precursors.—73-14469
**Gokularathnam, C. V.,** See Annamalai, V. E.; Ponraj, R.; Somakumar, T.
**Gol'dberg, Yu. A.; Posse, E. A.; Tsarenkov, B. V.; Shulga, M. I.**
Thermionic reverse current in GaAs surface-barrier structures.—73-01353
**Gol'man, E. K.,** See Ilisavskii, Yu. V.
**Golan, A.; Shapira, Yoram; Elzenberg, M.**
Effect of substrate temperature on ultrahigh vacuum interfaces of indium oxide/GaAs(110).—73-11165
**Golan, Y.; Margulis, Lev; Rubinstein, I.; Hodes, Gary**
Epitaxial electrodeposition of CdSe nanocrystals on gold.—73-14891
**Golant, K. M.,** See Biriukov, A. S.
**Golaski, Leszek,** See Rudzinski, Lech
**Gold, Jeffrey S.; Myers, T. H.; Giles, N. C.; Harris, K. A.; Mohnkern, L. M.; Yanka, R. W.**
Photoluminescence from heteroepitaxial (211)B CdTe grown on (211)B GaAs by molecular beam epitaxy.—73-11384
**Goldacker, Jeffrey,** See Li, Chien-Wei
**Goldberg, Harris A.; Kalnin, Ilmar L.; Williams, Clyde C.**
Controlled resistivity ceramic fibers and process for making them.—73-12456
**Goldberg, Perry B.,** See Lesher, H. D.
**Goldburg, W. I.,** See Wu, X.-I.
**Golden, S. J.; Yamashita, T.; Bhargava, A.; Barry, J. C.; Mackinnon, Ian D. R.**
Interface effects in Bi-2212/Ag and Bi-2223/Ag superconductors.—73-11809
**Golden, Steve J.; Bloomer, Tamara E.; Clarke, David R.; Lange, Fred F.; Vaidya, Kaushik**
Processing of thin films of the three-layer superconducting phase in the Pb-doped Bi-Sr-Ca-Cu-O system by metallorganic deposition.—73-04795
**Golden, Teresa D.,** See Raffaelle, R. P.
**Golden, Teresa D.; Raffaelle, R. P.; Phillips, Richard J.; Switzer, Jay A.**
Real-space imaging of nanoscale electrodeposited ceramic superlattices in the scanning tunneling microscope.—73-06275
**Goldenberg, S. S.,** See Long, J. P.
**Golder, Peter; Hammer, H.; Klima, Rolf; Schulte, Meinhard**
Improvement of the life of lightweight refractory bricks and radiant roof burners.—73-14595
**Golding, T. D.,** See Dura, J. A.; Wang, W. C.
**Goldman, A. I.,** See Polonka, J.
**Goldman, A. M.,** See Achutharaman, V. S.; Chandrasekhar, N.; Liu, Jin-Xiang
**Goldman, A.; Bentur, Arnon**
Influence of microfillers on enhancement of concrete strength.—73-06675
**Goldman, L.,** See Pan, N.
**Goldner, P.,** See Wu, Xu
**Goldsby, Jon C.,** See Sayir, Ali; Yun, H. M.
**Goldsby, Jon C.; Morscher, Gregory N.**
Thermomechanical and microstructural stability of Nextel 610 polycrystalline alumina fiber.—73-12334
**Goldsmith, S.,** See Ben-Shalom, A.
**Goldstein, J. I.,** See Brow, R. K.
**Goldstein, L.,** See Gallet, D.
**Goldstein, Michael; Chu, Paul K.; Bleiler, Roger J.**
Determination of oxygen concentration in heavily doped silicon.—73-12128
**Goldstein, Rocky**
Solid oxide fuel cell development.—73-10991
**Golenishchev-Kutozov, V. A.,** See Bogdanova, Kh. G.; Akhmadulin, I. Sh.; Vladimirtsev, Yu. V.
**Goletti, C.,** See Cricenti, A.
**Goletti, C.; Chiaradia, P.; Jian, Wang; Chiarotti, G.**
Sb-induced optical transitions of the Sb/GaAs(110) interface.—73-01308
**Golikov, Yu. V.; Ovchinnikova, L. A.; Zakharov, R. G.**
Equilibrium and quenched states of the system Cu-Mn-O in air.—73-02271
**Goll, G.,** See Akimenko, A. I.
**Goll, G.; Seemann, K.; Brauchle, G.**
Point-contact spectroscopy on oxygen-deficient $YBa_2Cu_3O_{7-\delta}$ single crystals.—73-08167
**Golla, D.; Freltag, I.; Zellmer, H.; Schone, W.; Kropke, I.; Welling, H.**
15-W single-frequency operation of a cw diode laser-pumped Nd:YAG ring laser.—73-08870
**Gollop, R. S.; Taylor, H. F. W.**
Microstructural and microanalytical studies of sulfate attack: I. Ordinary portland cement paste.—73-10047
**Golnik, V.,** See Borisov, Y.
**Golob, S.,** See Ryba-Romanowski, W.
**Gololobov, Yu. P.; Perga, V. M.; Salivonov, I. N.; Shchigol, E. E.**
Acoustic emission and memory effects in $TlGaSe_2$ [crystals].—73-16025
**Gololobov, Yu. P.; Salivonov, I. N.**
Acoustic emission in symmetric-incommensurate-commensurate phase transformations [PT].—73-01069
**Golosovskii, I. V.; Plakhtii, V. P.; Kharchenkov, V. P.**
Magnetic and crystal structure of [polycrystalline] rare-earth cuprates $R_2BaCuO_5$ [R=Dy, Ho, Er, Tm, Yb].—73-16205
**Golosovsky, I. V.; Boni, P.; Fischer, P.**
Magnetic structure of $Y_2BaCuO_5$.—73-15547
**Golovach, G. P.,** See Gaiovich, I. Yu.
**Golovanova, T. I.,** See Sokolova, M. N.
**Golovashkin, A. I.; Shelekhov, A. I.**
Electronic structure of $YBa_2Cu_3O_{7-x}$ single crystals [studied] by λ-modulation optical technique.—73-15455
**Golovashkin, I. A.,** See Panova, G. Kh.
**Golovenchits, E. I.,** See Babinskii, A. V.
**Golovenchits, E. I.; Morozov, N. V.; Sanina, V. A.; Sapozhnikova, L. V.**
Correlation between magnetic and dielectric properties of $EuMn_2O_5$ single crystals.—73-16432
**Golovin, A. I.; Pavlovski, V. K.; Shchavelev, O. S.**
Corrosion resistance of ceramic refractories and platinum to lead phosphate glasses.—73-07203
**Golovkin, B. G.**
Phase equilibria in the system $Y_2O_3$-$V_2O_5$-CuO-$Cu_2O$ in atmospheric air.—73-16251
**Golovko, E. I.; Neshpor, V. S.; Ponomarenko, V. A.**
Oxidation of a composite material based on cubic boron nitride.—73-13484
**Golovko, E. I.; Serebryakova, T. I.; Voitovich, R. F.**
Oxidation of $TiB_2$-$CaB_6$ composite material.—73-13486
**Golubev, A. M.,** See Kalinin, V. B.
**Golubev, A. M.; Fedorov, P. P.; Bondareva, O. S.; Sobolev, B. P.; Simonov, V. I.**
Model of atomic structure of $Na_7Lu_{13}F_{46}$.—73-16218
**Golubev, A. M.; Fedorov, P. P.; Bondareva, O. S.**
Structural model of $NaYb_2F_7$ fluoritelike phase.—73-02449
**Golubev, A. M.; Kalinin, V. B.**
Zirconlike aspect of $KTi_2(PO_4)_3$ structures.—73-16402
**Golubev, G. P.,** See Barysheva, T. P.
**Golubev, Valeri,** See Zakharenkov, L. F.
**Golubeva, I. V.,** See Nedil'ko, S. A.
**Golubjatnikov, Ken A.; Stangle, Gregory C.; Spriggs, Richard M.**
Economics of advanced self-propagating, high-temperature synthesis materials fabrication.—73-04911
**Golubkov, A. V.,** See Egorov, V. M.
**Golubkov, V. V.; Pivovarov, M. M.**
Structure of glasses of the $B_2O_3$-$Sb_2O_3$ system using small-angle X-ray scattering data.—73-01029
**Golubkov, V. V.; Porai-Koshits, E. A.**
Thermal expansion and glass transition of borate melts.—73-00556; Thermal expansion and vitrification of borate melts.—73-00557
**Golubkov, V. V.; Titov, A. P.; Porai-Koshits, E. A.**
Structure of lithium borate glasses according to data of X-ray scattering at small angles.—73-14111
**Golubkov, V. V.; Titov, A. P.**
Liquation and crystallization in melts of the system $Al_2O_3$-$B_2O_3$.—73-00367
**Golubkov, V. V.**
Structure of $B_2O_3$ and alkali borates in vitreous and molten states.—73-14107
**Golubnichaya, G. V.; Zagoskin, V. T.; Kirichenko, A. Ya.**
Intergranular link nature in $YBa_2Cu_3O_{7-x}$ ceramics and their dependence on sample density.—73-01580
**Golz, John W.,** See Zhang, J.-Z.
**Golz, John W.; Di, Y. D.; Halpern, B. L.; Schmitt, J. J.; Cirino, Phil; Bartlett, A.**
Jet vapor deposition of lead zirconate titanate (PZT) for thin-film pyroelectric detectors.—73-04557
**Gombert, A.; Graf, W.; Heinzel, A.; Joerger, R.; Kohl, M.; Weimar, U.**
Refractive index of metal/ceramic composites and their components [determined] by spectroscopic ellipsometry [SE] and effective medium theories.—73-10271
**Gombert, A.; Kohl, M.; Weimar, U.**
Broadband spectroscopic ellipsometry based on a Fourier transform spectrometer.—73-12112
**Gomeniuk, Yu. V.; Lozovski, V. Z.; Lysenko, V. S.; Tyagulski, I. P.**
Excess conductivity and thermally activated dissipation studies under strong electrostatic field in $YBa_2Cu_3O_{7-\delta}$ thin films.—73-04718
**Gomenyuk, Yu. V.,** See Varyukhin, V. N.
**Gomes, A. S. L.,** See Ma, H.
**Gomes, A. S. L.; Boyer, G. R.; Demouchy, G.; Mysyrowicz, A.; Poignant, H.; Monerie, M.**
Ir to visible upconversion spectroscopy in $Tm^{3+}$-doped fluorozirconate fibers.—73-08896
**Gomes, J. M.,** See Silva, R. F.
**Gomez, M. E.,** See Prieto, P.
**Gomez, P.; Jimenez, J.; Martin, P.; Piqueras, J.; Dominguez-Adame, F.**
Cathodoluminescence and micro-Raman analysis of oxygen loss in electron-irradiated $YBa_2Cu_3O_{7-x}$.—73-11699
**Gomez-Aleixandre, C.,** See Sanchez, O.
**Gomez-Romero, P.,** See Navarro, J. M.; Palacin, Maria Rosa
**Gomi, Manabu**
Thin films for magnetooptical [MO] applications.—73-01482
**Gomina, Moussa; Chermant, Jean-Louis; Fourvel, Pascal**
Effects of temperature and oxidation on the mechanical behavior of uncoated SiC-SiC composite materials.—73-06400
**Gomina, Moussa; Rouillon, Marie-Helene**
Crack growth resistance of SiC-SiC ceramic composite materials.—73-06351
**Gomina, Mousse,** See Saadi, L.; Sebire-Lhermitte, I.
**Gomon, V. M.; Dubovik, V. N.; Raikhel, A. M.**
Developing methods and a technology for strengthening glass-ceramics for design purposes.—73-00610; Development of methods and the technology of hardening glass-ceramics for structural use.—73-00611; Hardening of glass-ceramics.—73-00638; Strengthening glass-ceramics.—73-00706
**Gomoyunova, M. V.; Grigor'ev, A. K.; Pronin, I. I.; Rodnyanskii, A. E.**
Electron scattering by $Bi_2Sr_2CaCu_2O_x$ single crystals.—73-15451
**Gomyo, A.,** See Ueno, Yoshiyasu
**Gomyo, K.; Sakaguchi, I.; Shinya, Y.**
Three-phase zirconia sensor for rapid determination of silicon levels in hot metal.—73-10997
**Goncalves, M. C.,** See Santos, L. F.
**Goncalves, V.,** See Serrano, A.
**Gonchar, N. P.,** See Ditrikh, I. V.
**Goncharenko, A. V.,** See Venger, E. F.
**Goncharov, E. G.,** See Semenova, G. V.
**Goncharova, L. A.,** See Os'minin, N. I.
**Goncharuk, I. N.,** See Bush, A. A.
**Goncharuk, I. N.; Limonov, M. F.; Markov, Yu. F.**
Raman scattering in $(Y_{1-x}Gd_x)Ba_2Cu_3O_y$ system and relationship between structure of vibrational spectra and critical temperature in (123) superconductors.—73-01644
**Goncharuk, V. K.,** See Bayukov, O. A.; Ignatyuk, V. A.; Kabun, V. Ya.; Lukiyanchuk, G. D.; Merkulov, E. B.
**Gonczy, Stephen T.,** See Campbell, S. S.; Leung, Roger Y.; Yu, S. H.
**Gonczy, Stephen T.; Leung, Roger Y.; Dietrich, H.**
CVD carbide coatings on Blackglas–Nicalon (C) composites for oxidation protection.—73-10514
**Gonczy, Stephen T.; Leung, Roger Y.; Shum, Ming S.**
Carbon-containing black glass.—73-03907; Ceramic fiber-reinforced silicon carboxide composite.—73-02909
**Gonczy, Stephen T.; Leung, Roger Y.; Stranford, Gerard T.**
High-flexural-strength ceramic fiber-reinforced silicon carboxide composite.—73-03930
**Gondolf, M.,** See Guille, J. L.
**Gonella, F.,** See Battaglin, G.
**Gonella, F.; Mazzi, G.; Quaranta, A.; Caccavale, F.**
Optical characterizations of ion-exchanged glass waveguides.—73-14239
**Gong, Chang-De,** See Hao, Biao
**Gong, H.,** See Oh, K.-H.
**Gong, H.; Le Gressus, C.; Oh, K.-H.; Ding, X.-Z.; Ong, C.-K.; Tan, B. T. G.**
Charge trapping on different cuts of a single-crystalline α-$SiO_2$.—73-07288
**Gong, Hua-Yang,** See Kong, Lin-Shu
**Gong, J. R.; Nakamura, S.; Leonard, M.; Bedair, Salah M.; Elmasry, N. A.**
Low-temperature growth of AlGaP and GaP on Si substrates by atomic layer epitaxy.—73-11297
**Gong, J.-H.; Guan, Z.-D.; Jiang, D.-C.**
Analysis for strength degradation of indented specimens due to thermal shock.—73-05528
**Gong, J.-H.; Guan, Z.-D.**
Effect of residual stress due to Knoop indentation on subcritical crack growth [SCG] behavior in ceramics.—73-06389
**Gong, Jian-Ping,** See Kawasaki, Masashi
**Gong, Luo-Shu; Ding, Wei; Guan, Shu-Jun**
Application of thermal insulation core plate of expanded perlite to energy-saving buildings.—73-09820
**Gong, Shang-Min,** See Wei, Wang-Shui
**Gong, Shi-Ming,** See Zhong, Fu-Min
**Gong, W. H.; Greedan, J. E.; Liu, G.; Bjorgvinsson, M.**
Crystal structure and magnetic properties of orthorhombic $Sr_2VO_4$ with tetrahedral vanadium(IV).—73-02180
**Gong, W. H.; Xue, J. S.; Greedan, J. E.**
Single crystals of new Ruddlesden-Popper phases $(SrLa)_3V_2O_7$ and $Sr_4V_3O_{9.7}$: preparation, crystal structure, and electrical resistivity.—73-02432
**Gong, W. H.; Yun, H.; Ning, Y. B.; Greedan, J. E.; Datars, W. R.; Stager, C. V.**
Oxygen-deficient $SrTiO_{3-x}$, $x$=0.28, 0.17, and 0.08: crystal growth, crystal structure, and magnetic and transport properties.—73-02369
**Gong, X.,** See Pompe, W.
**Gong, Xin-Gao; Pan, Wei; Zheng, Qing-Qi**
Hole distribution and pressure effect in YBCO superconductor ionic model study.—73-11791
**Gong, Z.-X.,** See Jin, S.
**Goni, A.; Pinczuk, A.; Weiner, J. S.; Dennis, B. S.; Pfeiffer, L. N.; West, K. W.**
Magnetoplasmons, protons, and spin-flip excitations in GaAs quantum wires.—73-15034
**Goni, S.; Andrade, Carmen; Page, C. L.**
Corrosion behavior of steel in high-alumina cement mortar samples: effect of chloride.—73-00052
**Goni-Elizalde, S.; Fresno-Ruiz, S.; Garcia-Clavel, M. E.**
Obtaining meta- and pyrovanadates of cadmium from an unusual low-energy process: I, α-metavanadate.—73-02365; Obtaining meta- and pyrovanadates of cadmium from an unusual low energy process: II, Pyrovanadate.—73-02364
**Goni-Elizalde, S.; Garcia-Clavel, M. E.**
Reactivity of ionic oxides through water molecule adsorption process. MgO-$V_2O_5$ behavior.—73-02419
**Gonnard, P.; Garabedian, C.; Richard, C.; Audigier, D.; Eyraud, L.**
Nonlinearities of the mechanical and piezoelectric coefficients during mechanoelectrical conversion in spark generators.—73-11591
**Gonnet, V.; Vel, L.; Demazeau, Gerard**
Influence of the B/N ratio on the elaboration of cubic boron nitride.—73-16175
**Gonon, Maurice,** See Riedel, R.
**Gonsalves, K. E.,** See Xiao, T. D.
**Gonseth, D. R.,** See Mari, D.
**Gontarenko, Y. V.,** See Kolesnichenko, K. A.
**Gontermann-Gehl, Ute,** See Opitz, Joachim F. A.
**Gonzales, M.,** See Garcia, J.
**Gonzales, Sandra; Brown, Nancy; Brown, Jesse J.**
Compositions for forming high-temperature ceramic particulate filters.—73-04029
**Gonzalez de la Cruz, G.,** See Ramirez-Bon, R.
**Gonzalez Oliver, C. J. R.; James, P. F.**
Rates of crystal nucleation and growth in $(100-x)Na_2O$·$2CaO$·$3SiO_2$·$xNaF$ glasses.—73-14484

**Gonzalez Oliver, C. J. R.; Tippmann, H.; Colombin, L.; Aoyagi, M.; Kusano, H.**
Control of the porous structure of silicate beads made by organometallic gelation.—73-14344
**Gonzalez, C.; Gutierrez, J. M.; Llorens, J.**
Rheology of alumina sols.—73-13238
**Gonzalez, L.**, See Portelles, J.
**Gonzalez, J. A.**, See Lopez, W.
**Gonzalez, J. A.; Otero, E.; Feliu, S.; Lopez, W.**
Initial steps of corrosion in the steel/$Ca(OH)_2$+$Cl^-$ system—the role of heterogeneities on the steel surface and oxygen supply.—73-03492
**Gonzalez, J. M.**, See Andres-Verges, M.
**Gonzalez, J.**, See Guerrero, E.
; Molina, S. I.
**Gonzalez, M. L.**, See Alonso, M.; Mendez, M. A.
**Gonzalez, M.; Moure, C.; Jurado, J. R.; Duran, P.**
Solid-state reaction, microstructure, and phase relations in the $ZrO_2$-rich region of the $ZrO_2$-$Yb_2O_3$ system.—73-09507
**Gonzalez, P.**, See Fernandez, D.
**Gonzalez, P.; Fernandez, D.; Pou, J.; Garcia, E.; Serra, J.; Leon, B.**
Photoinduced chemical vapor deposition of silicon oxide thin films.—73-13164; Role of the buffer gas in the ArF laser chemical vapor deposition of silicon oxide.—73-09310
**Gonzalez, Y.**, See Molina, S. I.
**Gonzalez-Calbet, J. M.**, See Caneiro, A.; Nicolopoulos, S.
**Gonzalez-Calbet, J. M.; Parras, M.; Vallet-Regi, M.; Grenier, J. C.**
Anionic vacancy distribution in reduced barium-lanthanum ferrites: $Ba_xLa_{1-x}FeO_{3-x/2}$ ($1/2 \le x \le 2/3$).—73-03121
**Gonzalez-Carreno, T.**, See Bickley, R. I.
**Gonzalez-Diaz, G.**, See Hernandez-Rojas, J. L.
**Gonzalez-Elipe, A. R.; Fernandez, A.; Holgado, J. P.; Caballero, Angel; Munuera, G.**
Mixing effects in $CeO_2$/$TiO_2$ and $CeO_2$/$SiO_2$ systems submitted to $Ar^+$ sputtering.—73-05437
**Gonzalez-Hernandez, J.**, See Chao, Benjamin S.
**Gonzalez-Hernandez, J.; Zelaya, O.; Mendoza-Alverez, J. G.; Lopez-Cruz, E.; Pawlik, D. A.; Allred, D. D.**
Structure and optical characterization of $Zn_xCd_{1-x}Te$ thin films prepared by the close-spaced vapor transport method.—73-01324
**Gonzalvez, J. M.; Luna, R. G.; Tudanca, M.; Sanchez, O.; Albella, J. M.; Martinez-Duart, J. M.**
Plasma-enhanced chemically vapor deposited $Si_3N_4$ thin films for optical waveguides.—73-13167
**Gonzalvez, L.**, See Coulon, C.
**Gonzo, L.; Marchetti, F.; Sarkar, M.**
Thin $SiO_2$-$Si_3N_4$-$SiO_2$ films: Auger depth profile evaluation by means of factor analysis.—73-05519
**Goo, Edward**, See Chang, K. T.; Ghonge, Subodh G.; Ramakrishnan, V.
**Goo, J. K.**, See Matsuyama, I.
**Goodall, Nigel J.**, See Marshall, Ross E.
**Goode, P. A.; Ramakrishnan, T. S.**
Momentum transfer across fluid-fluid interfaces in porous media: a network model.—73-08920
**Goodenough, John B.**, See Feng, Man; Manthiram, A.; Paranthaman, M.
**Goodes, S. R.**, See Morris, I. L.
**Goodhue, W. D.**, See Mueller, E. R.
**Goodhue, W. D.; Le, H. Q.; Di Cecca, S.**
Molecular beam epitaxy growth of semiconductor heterostructure optical converter lasers using the InGaAs/AlGaAs materials system.—73-11333
**Goodhue, W. D.; Mueller, E. R.; Larsen, D. M.; Waldman, J.; Chai, Y. H.; Lai, S. C.**
Quantum well GaAs/AlGaAs shallow-donor far-infrared photoconductors grown by molecular beam epitaxy.—73-11410
**Goodman, D. W.**, See Wu, Ming-Cheng
**Goodman, S. A.**, See Auret, F. D.
**Goodnick, Stephen M.**, See Bhattacharyya, K.; Harbury, Henry K.
**Goodwin, D. G.**, See Corat, E. J.
**Goodwin, D. G.**
Scaling laws for diamond chemical vapor deposition: I, Diamond surface chemistry.—73-13244; Scaling laws for diamond chemical vapor deposition: II, Atomic hydrogen transport.—73-13245
**Goodwin, F.**, See Dionne, S.
**Goodwin, J.**, See Hagston, W. E.
**Goodwin, M. W.**, See Chandra, D.
**Goodwin, T. J.**, See Bennahmias, M.
**Goossen, K. W.**, See Planken, Paul C. M.
**Gopal, E. S. R.**, See Prasad, M. V. N.; Rabinal, M. K.; Titus, S. S. K.
**Gopal, S.**, See Ravindrachary, V.
**Gopal, Shree**, See Parashar, A. K.
**Gopal, V.**, See Ashokan, R.
**Gopalakrishnan, J.**, See Uma, Seetharaman; Vijayaraghavan, R.
**Gopalakrishnan, P. S.; Lakshminarasimham, P. S.**
Preparation of fiberlike silicon nitride from silicon powder.—73-13187
**Gopalakrishnan, Sudhakar**, See Schulze, Walter A.
**Gopalan, M. K.**
Nucleation and pozzolanic factors in strength development of class F fly ash concrete.—73-00152
**Gopalan, R.**, See Ganesan, V.
**Gopalan, S.**, See Rice, T. M.
**Gopalan, Sudha**, See Kircher, J.
**Gopinathan, K. P.**, See SenGupta, A.
**Gora, Frieder**, See Burckhardt, Hans-Georg
**Goradia, C.**, See Faur, Mircea
**Gorai, Toshiharu**, See Ohta, Fukuo
**Gorban, I. S.**, See Boiko, S. I.; Niilisk, A.
**Gorban, S. I.**, See Babentsov, V. N.
**Gorbatenko, I. V.**, See Zaytsev, V. A.
**Gorbatkin, S. M.; Burgie, R. F.; Oliver, W. C.; Barbour, J. C.; Mayer, T. M.; Thomas, M. L.**
Boron nitride thin-film deposition using electron cyclotron resonance microwave plasmas.—73-09024
**Gorbatov, I. N.; Terent'ev, A. E.; Rozental, O. M.**
Plasma coating made from zirconium dioxide powder produced by the sol-gel technique.—73-02923
**Gorbatyuk, I. N.**, See Bodnaruk, O. A.; Vertii, A. A.
**Gorbenko, O. Yu; Kaul, A. R.; Pogosova, I. V.; Polyakov, S. N.; Kolosova, E. V.; Pozigun, S. A.**
Optimizing metalloorganic chemical vapor deposition of YBCO films: substrates and $pO_2$-$T$ conditions.—73-01621
**Gorbik, P. P.; Bakuntseva, M. V.; Shalyapine, G. M.**
Diffusion of sulfur, selenium, and bismuth in HTSC $YBa_2Cu_3O_{7-\delta}$ and $(Pb_xBi_{1-x})_2Ca_2Sr_2Cu_3O_y$ ceramics.—73-03092
**Gorbunov, A. V.**, See Bazhenov, A. V.
**Gorbunov, A.**, See Shapilova, M.
**Gorbunov, S. V.**, See Sobolev, A. B.
**Gorbunov, V. V.; Darinskii, B. M.**
Vacancy emission from intercrystallite boundary.—73-17215
**Gorbylev, V. A.; Zalevskii, I. D.; Petrov, A. I.; Chelnyi, A. A.; Avetisyan, G. K.; Kulikov, V. B.**
Ir photoconductivity and luminescence of quantum wells in multilayer GaAs/AlGaAs heterostructures.—73-11287
**Gordeev, S. I.; Gridnev, B. V.**
Surface electron traps in alkali halide, [gallium arsenide], and metal oxide crystals.—73-16347
**Gordiichuk, O. V.**, See Yeremenko, V. N.
**Gordon, Andrew**, See Chekan, Paul N.
**Gordon, F. H.**, See Turner, S. P.
**Gordon, Roy G.**, See Hu, Jian-Hua; Proscia, James W.
**Gordon, W. L.**, See Bhasin, Kul B.
**Gordopolov, Yu. A.**, See Adadurov, G. A.; Fedorov, V. M.
**Gordz, A. S.**, See Kash, K.
**Gore, V. K.**, See Krishnan, N. A.
**Gore, V. K.; Khadilkar, S. A.; Lele, P. G.**
Conservation of raw material through use of industrial wastes in cement manufacture.—73-09864
**Gorecki, J.**, See Laczka, M.
**Gorelenko, Yu. K.**, See Gladyshevskii, E. I.
**Gorelenok, A. A.**, See Baranov, A. N.
**Gorelenok, A. T.**, See Belyakova, E. D.; Borisov, V. I.
**Goremychkin, E. A.**, See Muzichka, Y. U.
**Gorenstein, A.**, See Estrada, W.
**Goretta, K. C.**, See Miller, D. J.
**Goretta, K. C.; Wu, C.-T.; Lanagan, M. T.; Poeppel, R. B.; Schwartz, J.; Wu, S.**
Pure and lithium-doped $Bi_2Sr_2CaCu_2O_x$ silver-clad tapes.—73-11883
**Gorev, M. V.**, See Flerov, I. N.
**Gorev, M. V.; Flerov, I. N.**
Phase $p$-$T$ diagrams of $Cs_2RbDyF_6$ and $Cs_2NaTmBr_6$ elpasolites.—73-16245
**Gorev, N. B.; Kostylev, S. A.; Makarova, T. V.; Prokhorov, E. F.; Ukolov, A. T.**
Capacitance-voltage characteristics of thin-film structures made of $n$-type GaAs.—73-01091
**Gorev, N. B.; Makarov, T. V.; Prokhorov, E. F.; Ukolov, A. T.; Eppel, V. I.**
Capacitance-voltage characteristics of selectively doped heterostructures containing deep centers.—73-01090; Deep levels and reduction in the conductance of a direct selectively doped heterostructure on application of a triggering voltage pulse to the gate.—73-14825
**Gorey, N. A.**, See Tiegs, Terry N.
**Gorichok, I. Y.**, See Freik, D. M.
**Gorima, J.; Kaljujnaia, G. A.; Kttorov, V. I.; Martovitsky, V. P.; Rodin, V. V.; Stepanov, V. A.**
Superconducting and structural properties of homogeneous BiSrCaCuO (2212) single crystals prepared by solution growth.—73-08215
**Gorin, Andrew H.; Holcombe, Cressie E.**
Segmented ceramic liner for induction furnaces.—73-14640
**Gorina, I. N.; Zhil'tsov, A. P.**
Composition dependence of sheet glass properties (review).—73-00438; Dependence of sheet glass properties on its composition—review.—73-00608
**Goring, Rolf**, See Kaps, Christian
**Goringe, M. J.**, See Zhao, Ru-Peng
**Gorkov, V. P.**, See Demazeau, Gerard
**Gorman, Grace**, See MacManus-Driscoll, Judith L.
**Gormezano, Anne; Weller, Mark T.**
New quadruple perovskite $Gd_2Ba_2Ti_2Cu_2O_{11}$: a potential superconducting parent phase.—73-08144; New quadruple perovskites $Ln_2Ba_2Ti_xSn_{2-x}Cu_2O_{11}$ ($0 \le x \le 2$): controlling copper-oxygen distances in potential superconducting parent phases.—73-08145
**Gornert, P.**, See Batlle, Xavier
**Gornik, E.**, See Voronova, I. D.; Wirner, C.
**Gornostaeva, S. A.**, See Gulamova, D. D.
**Gornushkina, E. D.**, See Mokhov, E. N.
**Gorochov, O.**, See Ravot, D.; Sacuto, A.; Suryanarayanan, R.
**Gorodetskaya, O.; Reisfeld, R.; Jorgensen, C. K.**
Glasses doped by $Cu^+$, $Cr^{3+}$, $Ce^{3+}$, $Mn^{2+}$ and their optical properties and potential application for high-intensity radiation.—73-14198
**Gorodetskii, I. Ya.**, See Garyagdyev, G.
**Gorodnichenko, O. K.; Kovalenko, V. F.; Prokhorovich, A. V.**
Deformation-stimulated changes in the concentration of light-emitting centers in GaAs.—73-01121; High-temperature plastic deformation and luminescence properties of GaAs.—73-16506
**Gorodnik, L. B.; Petrov, A. V.; Petrukhin, A. G.**
Influence of phase transition on the optical recharging processes in the ferroelectric film on a silicon substrate.—73-04556
**Gorokhov, E. B.**, See Semenova, O. I.
**Gorokhovskii, A. V.**, See Polyakov, K. V.; Solinov, V. F.
**Gorokhovskii, A. V.; Bezlyudnaya, V. S.; Semenov, N. N.**
State of the surface of glass treated by water suspension of sawdust.—73-03760; State of the surface of glass treated with an aqueous suspension of wood flour.—73-07176
**Gorokhovskii, A. V.; Polyakov, K. V.; Kaplina, T. V.**
Strength levels of flat glasses.—73-07078
**Gorokhovskii, A. V.; Polyakov, K. V.**
Effects of gas composition in the shaping zone on the thermomechanical properties of glass.—73-00619; Gas composition in the annealing zone and glass-working properties.—73-00635
**Gorokhovskii, A.; Solinov, V.; Kaplina, T. V.**
High-temperature coatings for the sheet glass.—73-14404; Kinetics of leaching and structural features of the surface layers of silicate sheet glass.—73-14213
**Gorokhovskii, T. V.**, See Solinov, V. F.
**Goroshko, N. N.**, See Malchenko, S. N.
**Gorovits, E. V.**, See Dzhurzha, V. V.
**Gorshkov, V. A.**, See Mashir, Yu. I.
**Gorshkov, V. N.**, See Vladimirov, V. V.
**Gorshkova, O. V.; Drozd, I. A.; Stafeev, V. I.**
Photoelectric properties induced by microinhomogeneities and macroinhomogeneities in epitaxial $Pb_{1-x}Sn_xS$ films and structures made from them.—73-07714
**Gorshunov, B. P.; Fedorov, I. V.; Kozlov, G. V.; Volkov, A. A.; Semenov, A. D.**
Dynamic conductivity and the coherence peak in the submillimeter spectra of superconducting YbN films.—73-15422
**Gorshunova, N.; Ivannik, G.; Chimisov, Y.**
Devices for noncontact temperature control of glass under production and laboratory conditions.—73-14351
**Gorshunova, N.; Ivannik, G.**
Portable microprocessor infrared noncontact thermometer for glass.—73-14462
**Goryaga, A. N.**, See Antoshina, L. G.
**Goryunov, A. V.**, See Pakhomov, V. I.
**Goryunov, A. V.; Popov, A. I.**
Crystal structure of $LiYF_4$.—73-12562
**Goryushkin, V. F.**, See Astakhova, I. S.
**Goryushkin, V. F.; Poshevneva, A. I.**
Thermal constants of fusion of lutetium iodide.—73-16370; Thermographic investigation of gadolinium iodide.—73-16380
**Gosele, U.**, See Tong, Q.-Y.
**Goshorn, D. P.**, See Huan, G. H.
**Goslar, J.**, See Hilczer, W.
**Gospodinov, M.**, See Marinova, V.; Nesheva, D.; Sainov, V.
**Gospodinov, M.; Marinova, V.; Sainov, V.**
Growth and optical properties of doped bismuth titanate.—73-02613
**Gossard, A. C.**, See Ibbetson, J. P.; Merlin, R.; Yin, L.-W.
**Gossett, K. J.**, See Vaudo, R. P.
**Gostishchev, V. V.; Val'tsev, V. K.; Demina, N. V.**
Synthesis of laminar silicates of magnesium and aluminum in molten salts.—73-12713
**Goswami, G.; Mohapatra, B. N.; Panda, J. D.**
Characterization of burning condition of cement clinker by X-ray diffractometry.—73-00035; Effect of fluorine-bearing limestone on clinker quality.—73-09904
**Goswami, R. K.**, See Ahluwalia, S. C.; Handoo, S. K.
**Gota, S.; Gunnella, R.; Wu, Zi-Yu; Jezquel, G.; Natoli, C. R.; Sebilleau, D.**
Chemical shift low-energy photoelectron diffraction: a determination of the InP(110) clean surface structural relaxation.—73-11110
**Gota, S.; Sebilleau, D.; Guillot, C.; Lecante, J.; Bullock, E. L.; Quemerais, A.**
Experimental low-energy photoelectron diffraction study of the InP(110) surface.—73-01163
**Gotani, Kiyoshi**, See Yamamoto, Yoshiharu
**Gotman, I.**, See Gutmanas, E. Y.; Mogilevsky, P.
**Goto, E.**, See Geng, Q.
**Goto, Hideaki; Baba, Kenzo; Goto, Terutaka; Nakamura, Shintaro; Tamaki, Akira; Ochiai, Akira**
Dielectric dispersion of valence fluctuation compound $Sm_3Se_4$.—73-08835
**Goto, Hitoshi; Tomioka, Hiroshi; Gunji, Takahir; Nagao, Yukinori; Misono, Takahisa; Abe, Yoshimoto**
Preparation of continuous $ZrO_2$-$Y_2O_3$ fibers by precursor method using polyzirconoxane.—73-05971; Preparation of continuous $ZrO_2$-$Y_2O_3$ fibers by precursor method using polyzirconoxane.—73-16920
**Goto, Kazumasa**, See Kawai, Kazuyuki
**Goto, Naoyuki**, See Yamaguchi, Katsuhiko
**Goto, Nobuyoshi**, See Okutani, Takeshi
**Goto, Ryo**, See Iwata, Hitoshi
**Goto, Seishi**, See Asaga, Kiyoshi; Ogura, Takashi
**Goto, Seishi; Akazawa, Kiyoshi; Daimon, Masaki**
Solubility of silica–alumina gels in different pH solutions—discussion on the hydration of slags and fly ashes in cement.—73-10158
**Goto, Seishi; Inoue, Shinsuke**
Ir spectroscopic study on exchange reaction between $H_2O$ and $D_2O$ (heavy water) in gypsum and lime.—73-10022
**Goto, Seishi; Ueki, Yasutomu; Yasumura, N.**
Exchange of water and heavy water in gypsum, lime, and hydrogarnet.—73-09955
**Goto, Takashi**, See Chen, Li-Dong; Jiang, C.-C.; Narushima, Takayuki
**Goto, Takashi; West, Anthony R.**
Dc polarization of defect perovskite $LaTa_3O_9$.—73-09393
**Goto, Takenari**, See Kodaira, Tetsuya; Nozue, Yasuo

**Goto, Terutaka,** See Goto, Hideaki
**Goto, Tomoko; Iwatsuki, Takane**
Preparation of infinite layer of $Ca_{1-x}Sr_xCuO_2$ filaments by solution spinning method under ambient pressure.—73-15596
**Goto, Toshinari,** See Kobayashi, Tadayuki
**Goto, Yasuhiro,** See Fukasawa, Takayuki; Shibata, Kenichi
**Goto, Yoshiko,** See Kasori, Mitsuo
**Gotoh, Jun,** See Fujiwara, Hiroyuki
**Gotoh, K.,** See Tamari, Nobuyuki
**Gotoh, Kenichi,** See Hayashi, Kunio
**Gotoh, Kohtaroh,** See Yoshida, Akira
**Gotoh, Tomoji,** See Yamauchi, Kazuhisa
**Gotou, Y.,** See Fujiyasu, H.
**Gotte, Matthias,** See Ruscher, Claus H.
**Gottschamel, Georg,** See Winkler, Herwig
**Gottscho, Richard A.,** See Aydil, Eray S.; Yoon, Eui-Joos
**Gottwald, Guenther,** See Forkel, Klaus
**Gottwald, Gunther; Wihsmann, Fred Gustav; Forkel, Klaus**
Employment of existing data sets of technical glasses for the development of new glass compositions using a modified simplex method of sequential optimization.—73-03728
**Gotz, Jiri,** See Kasik, Ivan
**Gotz, W.,** See Holand, W.; Wange, P.
**Gotz, W.; Schoner, A.; Pensl, G.; Suttrop, W.; Choyke, J.; Stein, R.**
Nitrogen donors in 4H silicon carbide.—73-02647
**Gotz, W.; Winter, H.**
Evaluation of the magnetic susceptibility of $YBa_2Cu_3O_7$.—73-08065
**Gotze, S.; Schulle, Wolfgang; Hennicke, Hans-Walter**
Deflocculation and casting behavior of SiC slips.—73-12968
**Gotzmann, Johannes**
Influence of quartz and particle size on the blast wear of ceramic materials.—73-17360; Particle size of quartz sand and its effects on the erosive wear of ceramics.—73-12853
**Gounaichault-Brugel, N.; Pugnet, M.; Collet, J. H.**
Index gratings stabilized by deep centers for fast optical addressing.—73-07589
**Goubeaux, Ronald J.,** See Zirnbeld, Richard A.
**Gouda, Hironori,** See Suzuki, Yoji
**Gouedard, C.,** See Veron, D.
**Gougeon, P.,** See Saint-Paul, M.
**Gough, J. S.,** See Young, M. L.
**Gould, J.,** See Schwartz, D. S.
**Gould, Reginald J.**
Gage measures hot erosion of insulation.—73-12142
**Gould, Thomas H.,** See Larson, Edward W.
**Goullet, A.,** See Charles, C.
**Goullet, A.; Charles, C.; Garcia, P.; Turban, G.**
Quantitative infrared analysis of the stretching peak of $SiO_2$ films deposited from tetraethoxysilane plasmas.—73-13223
**Gourbilleau, F.,** See Hillel, R.; Smaihi, M.
**Gourier, D.,** See Badot, J. C.
**Gourier, D.; Vivien, D.; Wyon, C.**
Electron nuclear double resonance [ENDOR] study of $LaMgAl_{11}O_{19}:Ti^{3+}$.—73-02255
**Gourlaouen, V.; Schnedecker, G.; Lejus, A. M.**
Metastable phases in yttrium oxide plasma spray deposits and their effect on coating properties.—73-02892
**Goursat, Paul,** See Fabre, A.; Rouxel, Tanguy
**Gouveia, E. A.; Borges, N. M.; Gouveia-Neto, A. S.**
Nonlinear propagation of incoherent light in single-mode semiconductor-doped glass fiber with saturable nonlinearity.—73-15061
**Gouveia-Neto, A. S.,** See Gouveia, E. A.
**Gouy-Pailler, P.; Pauleau, Y.**
Characterization of tungsten films and hard tungsten-carbon coatings prepared by dc magnetron sputtering process.—73-03568; Tungsten and tungsten-carbon thin films deposited by magnetron sputtering.—73-06128
**Gouyoi, Y.; Bausa, L. E.; Camarillo, E.**
Infrared fluorescence spectra of $Nd^{3+}$ sites in gadolinium gallium garnet:Nd and gadolinium gallium garnet:Nd,Cr.—73-12603
**Gouzerh, J.,** See Stashkevich, A. A.
**Govorkov, A. V.; Efimov, A. G.; Novikov, A. G.; Fomin, V. G.; Shlenskii, A. A.; Yugova, T. G.**
Influence of doping and heat treatment on lattice parameter in homoepitaxial GaAs layers obtained by LPE.—73-01202
**Govorkov, A. V.; Mil'vidskii, M. G.; Novikov, A. G.; Fomin, V. G.; Shlenskii, A. A.; Yugova, T. G.**
Effect of orientation of substrate surface on properties of homoepitaxial GaAs layers grown by liquid phase epitaxy technique.—73-14854
**Govorukhina, O. A.; Brusentsova, V. N.; Mikhailova, N. L.**
Binary system $ZrO_2$-$Y_2O_3$.—73-02151
**Gower, Malcolm**
Excimer lasers and their treatment of advanced ceramic materials.—73-04918; Excimer lasers and their treatment of advanced ceramic materials.—73-04919
**Goworek, J.; Kusak, R.; Stefaniak, R.**
Molecular adsorption on silica gel surface from liquid mixtures.—73-16545
**Gowri, S.; Narayanasamy, K.; Krishnamurthy, R.**
Recent developments in ceramic materials processing and applications.—73-15932
**Goyal, D. J.; Agashe, Chitra; Marathe, B. R.; Takwale, M. G.; Bhide, V. G.**
Effect of dopant incorporation on structural and electrical properties of sprayed $SnO_2$:Sb films.—73-08838
**Goyal, D. R.,** See Maan, A. S.
**Goyal, Navdeep,** See Lal, Manohar; Pinto, R.
**Goyette, J.,** See Villeneuve, D.
**Gozalbo, A.,** See Orts, M. J.
**Gozzelino, Giuseppe,** See Delmastro, Alessandro
**Gozzi, Daniele,** See Cellucci, Fabio
**Grabbe, Alexis,** See Horn, Roger G.
**Grabbe, Dimitry G.**
Method of manufacture of a contact guide.—73-04996
**Grabezhev, D. V.,** See Tomil'tsev, E. A.
**Grabis, Janis,** See Kuzjukevics, Anatolijs
**Grabko, D. Z.,** See Boyarskaya, Yu. S.
**Grabovskii, V. A.,** See Vlokh, O. G.
**Grabovskis, V. Ya.,** See Arbuzov, V. I.
**Grabow, B. E.; Boone, B. G.; Sova, R. M.**
Model of the microwave response in granular Bi-Sr-Ca-Cu-O thin films.—73-11839
**Grabowski, Danuta,** See Clement, Marc
**Grabowski, K. S.,** See Leuchtner, R. E.
**Grace, J. M.,** See Roberts, T. A.
**Grachev, S. A.,** See Gershenzon, E. M.
**Grachev, V. G.,** See Malovichko, G. I.
**Gracheva, T. A.,** See Malygin, N. D.
**Grader, Gideon S.,** See Shter, Gennady E.
**Grady, Dennis E.,** See Manghnani, M. H.
**Graebner, John E.; Jin, Sung-Ho; McCormack, Mark T.**
Thinning a diamond body by means of molten rare-earth-containing alloys.—73-16021
**Graef, Renee C.,** See Schwab, Stuart T.
**Graeffe, M.,** See Hupa, L.
**Graf, D.; Bauer-Mayer, S.; Schnegg, A.**
Reaction of $NH_4F$/HF solutions on Si(100) and Si(111) surfaces.—73-04465
**Graf, Gerhard,** See Dosinger, Klaus
**Graf, Isolde; Kainer, Ulrich**
Effect of heat treatment on alumina short-fiber-reinforced magnesium composites.—73-16727
**Graf, Konrad,** See Mevec, Gernot
**Graf, M. J.,** See Dong, F.
**Graf, W.,** See Gombert, A.
**Graham, A. L.,** See Reimanis, Ivar E.
**Graham, David W.; Stinton, David P.**
Development of tantalum pentoxide coatings by chemical vapor deposition.—73-15923
**Graham, W. R.,** See Kaatz, F. W.
**Grahmann, Carlos R.,** See Pilleux, Mauricio E.
**Grahn, H. T.,** See Agullo-Rueda, F.; Kwok, S. H.
**Grajcar, M.,** See Plecenik, A.
**Grall, P.,** See Meunier, G.
**Grallath, E.,** See Graule, T.
**Granasy, L.**
Diffuse interface theory of nucleation.—73-06904
**Grancher, Roy A.**
U.S. Cement: restructured and positioned for awaited upturn.—73-03549
**Grande, T.,** See Aasland, S.
**Grande, T.; Aasland, S.; Julsrud, S.**
Thermodynamics of the ZBN glass-forming system.—73-06981
**Grande, T.; Oye, H. A.; Julsrud, S.**
Viscosity and density of molten barium zirconate and related melts.—73-09007
**Grandet, J.,** See Breton, Dannys; Carles-Gibergues, Andre; Benabbas, A.; Benabbas, A.; Benhamada, L.; Costentin, G.
**Grandjean, Didier,** See Colomban, Philippe
**Grange, P.,** See Bernier, A.; Clarebout, G.
**Grange, Paul,** See Skaribas, Stellos P.
**Granger, R.,** See Pelant, I.
**Granier, W.; Ala, Taha; Vilminot, S.; Battut, J. P.; Dupuis, J.; Soudani, S.**
NMR study of fluoride ion and proton motion in $N_2H_5Sn_3F_7$.—73-01002
**Granier, W.; Jabobker, K.; Pradel, A.**
Photoconductivity of PbO-doped borosilicate glass prepared by the sol-gel process.—73-10469
**Grankina, A. L,** See Prisyazhny, V. D.
**Grankina, V. A.,** See Kruglik, A. I.
**Granneman, E. H. A.**
Thin films on the integrated circuit industry: requirements and deposition methods.—73-06118
**Granozzi, G.,** See Bertoncello, R.
**Granqvist, C. G.**
Electrochromic materials: metal oxide nanocomposites with variable optical properties.—73-12793
**Grant, M. W.,** See Seiberling, L. E.
**Grant, R. W.,** See Waldrop, J. R.; Wang, M. W.
**Grant, Robert W.; Novak, Richard E.; Molinaro, James S.**
High-temperature ceramic nut.—73-15945
**Grant, William B.**
Optical remote sensing for measurement of toxic gases.—73-15740
**Grantscharova, E.**
Texture transition in thin metal films vacuum condensed on glass: a general consideration.—73-03651
**Gras, R.,** See Liu, G. H.
**Gras-Marti, A.,** See Moreno-Marin, J. A.
**Grassi, John A.**
Thermal barrier coating for metallic components.—73-00298
**Grasso, G.,** See Calzona, V.
**Grateau, Luc; Laborde, Pascale; Prassas, Michel**
Glasses with very high index of refraction and low density.—73-10634
**Grateau, Luc; Prassas, Michel**
Photochromic glasses which darken to a pink hue.—73-10656
**Grathwohl, Georg,** See Frei, H.; Gogotsi, Yu. G.; Kuhne, Arnd; Spallek, Michael
**Grattan, K. T. V.,** See Zhang, Zhi-Yi
**Gratzel, Michael,** See Kiwi, John
**Grau, Peter; Berg, Gunnar; Fraenzel, Wolfgang; Schinker, Martin**
Load dependence of the hardness of silicate glasses—not just due to indenter tip defects.—73-12158
**Grauel, A.,** See Lang, M.
**Graule, T.,** See Foerster, S. C.; Hidber, P.
**Graule, T.; Tschopel, P.; Grallath, E.**
Analysis of high-purity ceramic powders and sinters by optical emission (OES) and atomic absorption (AAS) spectrometry.—73-01882
**Graupner, R. K.; Van Vechten, J. A.; Harwood, P.**
Characterization of point defect generation at silicon surfaces using gold diffusion.—73-09392
**Gravereau, P.,** See Alami, M.; Cocciantelli, J. M.; Gaewdang, T.
**Gravey, P.,** See Ozkul, C.; Wolffer, H.; Wolffer, N.; Francois, J. C.; Massiani, Y.
**Gray, D. E.,** See Greef, R.
**Gray, Dennis M.,** See Rumaner, Lee E.
**Gray, K. E.,** See Roberts, T. A.
**Gray, K. E.; Kim, D. H.**
Interlayer tunneling model for the *c*-axis resistivity in high-temperature superconductors.—73-15522
**Gray, Paul**
Direct electrical heating of ceramic matrix composites to determine tensile-stressed oxidation properties.—73-12132
**Graybeal, J. M.,** See Luo, J.
**Graziani, T.,** See Baxter, D. J.; Bellosi, A.
**Graziani, T.; Landi, E.; Bellosi, A.**
Oxidation of $TiB_2$-20 vol% $B_4$ composite.—73-09534
**Grazzini, E. A.**
Ground floor.—73-00097
**Greaves, C.,** See Babu, T. G. N.; Berry, Frank J.; Moze, O.; Slater, Peter R.
**Greaves, G. N.,** See Bush, Timothy S.; Christy, R. K.; Houde-Walter, S. N.; Oversluizen, M.
**Greaves, I.; Yates, J. R.; Atkinson, H. V.**
Bending fatigue behavior of unidirectionally reinforced SCS6/Ti-15-3.—73-03241
**Grebe, Vernon J.; Saad, Elie E.; Sproson, Derek W.; Stidham, Arthur C.**
Rare-earth-containing frits having a high glass transition temperature and their use for the production of enamels having improved heat resistance.—73-03965
**Grebenshchikov, L. T.; Ivashevskii, M. A.; Kudryavtsev, V. A.**
Experimental investigation of optical-thermophysical characteristics of condensed combustion products and heat-resistant materials.—73-12136
**Grebenyuk, A. M.; Charykov, N. A.; Puchkov, L. V.**
Phase equilibrium melt-solid in the system Pb-InSb-GaSb and Pb-InAs-GaAs.—73-11373
**Grebinskii, S. I.,** See Dagis, R.
**Grebner, M. D.; Reich, A.; Schuth, F.; Unger, K. K.; Franz, K. D.**
Influence of synthesis conditions on the morphology of dodecasil 1H.—73-09179
**Grebnik, V. G.; Duginov, V. N.; Zhukov, V. A.; Kirillov, B. F.; Morozov, A. I.; Ol'shevskii, V. G.**
Magnetic relaxation of positive muon spin in $HoBa_2Cu_3O_{7-\delta}$ and $Ho_{0.5}Y_{0.5}Ba_2Cu_3O_{7-\delta}$ compounds.—73-15545
**Grechanik, L. A.,** See Shashkov, A. Yu.
**Grechushnikov, B. N.,** See Konstantinova, A. F.
**Greco, A.,** See Dobry, A.
**Greco, Carl G.; Gallo, Thomas A.; Sherif, Fawzy G.**
Group VIB metal carbides from metal salicylate precursors.—73-02097
**Gredic, T.,** See Zlatanovic, M.
**Gredic, T.; Zlatanovic, M.; Popovic, N.; Bogdanov, Z.**
Effect of plasma nitriding on the properties of (Ti, Al)N coatings deposited onto hot-work steel substrates.—73-03580
**Greedan, J. E.,** See Davidson, I.; Gaulin, B. D.; Gong, W. H.; Nakua, A.; Subramanian, M. A.
**Greedan, J. E.; Avelar, J.; Subramanian, M. A.**
Ferromagnetic correlations in the highly frustrated, spin-glass-like, pyrochlore oxide, $Y_2Mn_2O_7$, a neutron scattering study.—73-05567
**Greeden, J. E.,** See Soderholm, L.
**Greef, R.; Gray, D. E.; Dartnell, N. J.; Zhu, J.; Lynch, S.; Crean, G. M.**
Characterization of silicon-on-insulator multilayers using ex situ spectroscopic ellipsometry and in situ monochromatic ellipsometry during plasma etching.—73-14804
**Green, A. M.,** See Spicer, W. E.
**Green, A. M.; Spicer, W. E.**
Do we need a new methodology for GaAs passivation.—73-07452
**Green, A. M.; Yamada, M.; Kendelewicz, T.; Herrera-Gomez, A.; Spicer, W. E.**
In overlayers on Sb-passivated GaAs.—73-07577
**Green, D. M.,** See Rees, William S., Jr.
**Green, David J.,** See Brown, David D.; Marple, B. R.; Tandon, R.; Watkins, Thomas R.
**Green, Deborah A.,** See Carleton, James J.
**Green, Kenneth E.,** See Roy, Donald W.
**Green, Kevin J.; Rudham, Robert**
Photocatalytic oxidation of propan-2-ol by semiconductor-zeolite composites.—73-11375
**Green, Mino; Hussain, Z.**
Optical properties of lithium tungsten bronze thin films.—73-08933
**Green, R. L.,** See Maletta, H.
**Greenberg, B.,** See Gaines, J. M.
**Greenblatt, M.,** See Fuller, R. L.; Szu, S.-P.; Teweldemedhin, Z. S.; Tsai, Men-Ting; Wang, B.
**Greene, Benjamin I.,** See Saeta, Peter N.
**Greene, J. E.,** See Hultman, L.; Petrov, I.; Wahlstrom, U.
**Greene, J. E.**
Physics of film growth from the vapor phase.—73-05949
**Greene, Margaret E.,** See Aitken, Bruce G.
**Greene, Ronald L.; Bajaj, K. K.**
Binding energies of Wannier excitons in GaAs-$Ga_{1-x}Al_xAs$ quantum well structures.—73-14785

**Greene, W. J.,** See Kubby, J. A.

**Greener, J.; Evans, Julian R. G.**
Film blowing of ceramics.—73-16782

**Greenhut, Victor,** See Friel, John J.

**Greening, D. R.,** See Mustoe, G. G. W.

**Greenwald, Anton C.; Rees, William S., Jr.; Lay, Uwe W.**
MOCVD erbium sources.—73-04407

**Greer, Lawrence C.,** See Sayir, Ali

**Gregor, M. J.,** See Wenderoth, M.

**Gregora, I.,** See Irmer, G.; Spitzer, J.

**Gregorkiewicz, T.; Liesert, B. J. Heijmink; Tsimperidis, I.; De Maat-Gersdorf, I.; Ammerlaan, C. A. J.; Godlewski, M.**
Excitation and deexcitation mechanisms of rare-earth ions in III-V compounds: optically detected microwave-induced impact ionization of Yb dopants in InP.—73-04336

**Gregory, A.; Usher, Sarah; Majumder, F. A.; Phillips, R. T.**
Hot carrier relaxation in bulk $In_{0.53}Ga_{0.47}As$.—73-14967

**Gregory, R. B.,** See Olowolafe, J. O.

**Gregory, S.,** See Aspnes, D. E.

**Greil, P.,** See Huttinger, K. J.; Scholz, H.

**Grein, C. H.; Young, P. M.; Ehrenreich, H.; McGill, T. C.**
Auger lifetimes in ideal InGaSb/InAs superlattices.—73-11078

**Greiner-Bar, Gerhard**
Microfine glass fibers, manufacture and applications.—73-00663

**Grekova, I. I.,** See Semenova, G. V.

**Grellinger, Daniel J.; Janney, Mark A.**
Temperature measurement in a 2.45-GHz microwave furnace.—73-05089

**Gremenok, V. F.,** See Kindyak, V. V.

**Gremenok, V. F.; Zaretskaya, E. P.; Bodnar, I. V.; Rud, Yu. V.; Magomedov, M. A.**
Photosensitivity of In-*p*-$CuIn_xGa_{1-x}Se_2$ thin-film structures.—73-15100

**Grempel, D. R.; Lavagna, M.**
Magnetic excitations in the *t*-J model: application to neutron and NMR experiments in high-$T_c$ materials.—73-04758

**Grendahl, S.,** See Katz, R. N.

**Grenier, J. C.,** See Gonzalez-Calbet, J. M.

**Gresslehner, K. H.,** See Neswal, M.

**Gressner, Wolfgang,** See Seefeld, Verena

**Greulich, Karl-Otto,** See Pfleiderer, Christoph

**Greulich, N.,** See Kiefer, W.

**Greulich-Weber, S.,** See Reinke, J.

**Greve, D. W.,** See Misra, R.

**Greve, D. W.; Racanelli, Marco**
Incorporation of boron into uhv/CVD-grown germanium-silicon epitaxial layers.—73-14977

**Grevey, D. F.,** See Lemoine, F.

**Grey, I. E.; Collomb, A.; Obradors, X.**
Crystal structure of a new quaternary ferrite: $Ba_{12}Fe_{28}Ti_{15}O_{84}$.—73-02187

**Grezes-Besset, Raoul,** See Prince, William

**Gribanov, N. M.,** See Bibik, E. E.

**Gribkovskii, V. P.; Gladyshchuk, A. A.; Gurskii, A. L.; Lutsenko, E. V.; Morozova, N. K.; Shulga, T. S.**
Crystallographic orientation and impurity luminescence of streamer discharges in ZnS and ZnSe single crystals.—73-07429

**Gridin, Vladimir V.,** See De Villiers, Patrick

**Gridnev, B. V.,** See Gordeev, S. I.

**Gridneva, L. K.,** See Aguekian, V. F.

**Griebler, Wolf-Dieter,** See Hayashi, Takao

**Griesbach, P.,** See Hanzel, Darko

**Grieser, Franz,** See Scales, Peter J.

**Grieser, Franz; Furlong, D. Neil; Scoberg, David; Ichinose, I.; Kimizuka, N.; Kunitake, T.**
Size-quantized semiconductor cadmium chalcogenide particles in Langmuir-Blodgett films.—73-07801

**Griesinger, U.,** See Kaden, C.

**Griessen, R.,** See Van Enige, E. N.

**Griessmann, H.,** See Bruckner, W.

**Griessmann, H.; Bruckner, W.; Schreiber, H.**
Growth of oxide layers on CrSi-O films.—73-05833

**Griffin, Christopher J.; Moss, Renny N.**
CVD process for the manufacture of ceramic fibers.—73-04969

**Griffin, Curtis; Daufenbach, Jo Dee; McMillin, Scott**
Desktop manufacturing: LOM [laminated object mfg.] vs pressing.—73-15713

**Griffin, Curtis**
Rapid prototyping of structural ceramic parts by laminated object manufacturing.—73-15748

**Griffith, Trevor R.; Dixon, James**
Optical absorption spectroscopy on $ThO_2$: analysis of oxidizing and reducing anneals and gamma and uv radiation on both flux-grown and arc-fused single crystals.—73-08680

**Griffiths, C. L.,** See Jenkins, L. C.

**Griffiths, G. J.,** See Chin, V. W. L.

**Griffiths, John R.,** See Finlayson, Trevor R.

**Grifford, Peter M.; Langan, Brian W.; Ward, Michael A.**
Use of fly ash in heat-cured concrete and the effect of postcuring storage regimes on strength, modulus of elasticity, and freezing-thawing durability.—73-10186

**Grigas, Y.,** See Banys, Y.

**Grigelionis, G.,** See Tornau, E. A.

**Grigonene, K. M.,** See Kerene, Ya. K.

**Grigonis, A.**
Elemental and structural state of the surface layer of silicon and formation of dielectric coatings on it after reactive ion etching.—73-14705

**Grigor'ev, A. K.,** See Gomoyunova, M. V.

**Grigor'ev, I. V.,** See Chernyakhovskii, V. A.

**Grigor'ev, L. A.,** See Barash, I. S.; Kamzin, A. S.

**Grigor'ev, N. N.; Karachevtseva, L. A.; Kurbanov, K. R.; Lyubchenko, A. V.**
Influence of growth dislocations on the electron lifetime in *n*-type $Cd_xHg_{1-x}Te$.—73-01204

**Grigor'ev, O. N.,** See Gogotsi, Yu. G.

**Grigor'ev, O. N.; Krivoshei, G. S.; Perepelitsa, N. I.; Khoroshun, L. P.**
Internal stresses in $Si_3N_4$-based quasi-binary composites.—73-16523

**Grigor'ev, O. N.; Krivoshei, G. S.**
Determination of thermal stresses in multiphase ceramic materials.—73-16442

**Grigor'ev, S. R.; Novikov, B. V.**
Time-and-spectral studies of fluctuation surface luminescence in CdS crystals.—73-16382

**Grigor'ev, Yu. M.,** See Orlov, A. V.

**Grigor'ev, Yu. N.,** See Baklanov, M. R.

**Grigor'eva, L. F.,** See Petrov, S. A.

**Grigor'eva, N. A.,** See Vasil'ev, M. I.

**Grigoras, B.,** See Barna, S.

**Grigorchak, I. I.,** See Koz'mik, I. D.; Netyaga, V. V.

**Grigorenko, B. L.,** See Stepanyuk, V. S.

**Grigorescu, I. C.,** See Lira, Joaquin

**Grigorev, S. R.,** See Abramov, A. P.

**Grigorev, Yu. M.,** See Andrienko, P. I.

**Grigorian, N. E.,** See Arutunian, V. V.

**Grigoriev, O. N.,** See Trefilov, V. I.

**Grigorieva, Irena,** See Sasaki, Katsuhiro

**Grigorov, G.,** See Antonova, K.

**Grigorovich, G. M.,** See Andrukhiv, M. G.

**Grigoryan, E. S.,** See Kuvshinova, K. A.

**Grigoryan, L. N.,** See Vardanyan, G. A.

**Grigsby, Jeffry D.**
Chemical fingerprinting in detrital ilmenite: a viable alternative in provenance research.—73-15899

**Grigut, O. V.,** See Svistunov, V. M.

**Grilikhes, S. F.; Polyanskii, M. N.; Porzhetskii, S. A.**
Formation of a profile of refractive index of sodium silicate glass upon electrodiffusion treatment in a melt of potassium nitrate.—73-00486; Profile of the index of refraction of sodium silicate glass in electrodiffusion treatment in potassium nitrate melt.—73-00534

**Grillet, Y.,** See Llewellyn, P. L.

**Grillo, D. C.; Xie, W.; Kobayashi, M.; Gunshor, R. L.; Hua, G.-C.; Otsuka, N.**
MBE growth and microstructural evaluation of Zn(S, Se)-based LED's and diode lasers.—73-04398

**Grimaud, A.,** See Planche, M. P.

**Grimblot, J.,** See Francois, J. C.; Ponthieu, Eric

**Grimes, Amy M.,** See Larson, Bruce W.

**Grimes, Robin W.,** See Baetzold, R. C.

**Grimes, Robin W.**
Solution of MgO, CaO, and $TiO_2$ in $\alpha$-$Al_2O_3$.—73-05481

**Grimley, David I.,** See Vedishcheva, Natalia M.

**Grimm, U.,** See Zschech, E.

**Grimmer, A. R.,** See Rassem, R.

**Grimsditch, M.,** See McNeil, L. E.; Polian, A.; Welp, U.

**Grin'ko, V. V.,** See Odin, I. N.

**Grin, Yu. N.,** See Gladyshevskii, E. I.; Il'nitskaya, O. N.

**Grinberg, M.; Brenier, A.; Boulon, G.; Pedrini, C.; Madej, C.; Suchocki, A.**
Jahn-Teller effect in $V^{4+}$-doped $Gd_3Ga_5O_{12}$ garnet.—73-08654

**Grinberg, S. A.; Sumbatov, A. A.; Givargizov, E. I.**
Interference effects at initial stages of recrystallization under laser irradiation of cadmium sulfide films on substrates with artificial microrelief.—73-14997

**Grinberg, V. Ya.; Abramova, N. I.; Zhebrunov, S. V.; Chernavin, S. B.; Kozlova, N. A.; Mulerova, A. V.**
Tests of thermal insulation plates of the unpreheated lining of continuous casting machine tundishes.—73-00877

**Grinchenko, A. Yu.; Konevskii, V. S.; Krivinosov, E. V.; Litvinov, L. A.; Olenik, V. A.**
Positions of 3-valent and 4-valent titanium ions in [corundum] lattice.—73-16275

**Grinev, V. I.**
Edge luminescence of electron-bombarded ZnSe:Li.—73-14847

**Grinyaev, S. N.; Chermyshov, V. N.**
Scattering of electrons in multibarrier GaAs/$Al_xGa_{1-x}As$ structures.—73-07786

**Griott, Donald E.**
Combination metallic ceramic orthodontic bracket.—73-05209

**Griscom, David L.,** See Cases, R.

**Griscom, David L.**
Defect centers in heavy-metal fluoride glasses: a review.—73-06902; Optical properties and structure of defects in silica glass.—73-00522

**Grisel, A.,** See Hanni, W.

**Grishaev, V. V.; Tostanovskii, V. I.**
Properties of structural oxide ceramics made from mechanically ground powers.—73-16961

**Grishchenko, L. V.,** See Boikova, Alexandra I.

**Grishin, A. M.; Dellalov, V. S.; Nikolaev, E. I.; Shkar, V. F.; Yampolskii, S. V.**
FMR [ferromagnetic resonance] doublet in two-layer ferrite-garnet films.—73-11654

**Grishin, A. M.; Gusakov, G. V.; Ulyanov, A. N.**
Selective etching of YBCO target by ion-plasma sputtering.—73-04803

**Grishin, V. E.,** See Cherenkov, V. A.

**Grissinger, E. H.,** See Rhoton, F. E.

**Gritsenko, B. P.; Denisov, I. P.; Kabanova, E. V.; Yakovlev, V. Yu.**
Time-resolved optical spectroscopy of MgO crystals deformed by uniaxial compression.—73-16384

**Gritsenko, V. A.,** See Belousov, I. I.

**Gritsenko, V. A.; Kostikov, Yu. P.; Khramova, L. V.**
Constitution and electronic structure of Si–H and N–H bonds in amorphous $SiN_x$:H.—73-16067

**Gritsyuk, B. N.; Rarenko, A. I.; Sirota, A. V.; Khalameida, D. D.**
Natural aging changes in galvanomagnetic properties of undoped CdSb.—73-11343

**Gritzner, G.,** See Abraham, I.; Spielbuechler, P.

**Grivckas, V.,** See Basmaji, Pierre

**Grivickas, V.; Basmaji, Pierre**
Optical absorption in porous silicon of high porosity.—73-12844

**Grivickas, V.; Bikbayev, V.; Shechkus, J.**
Carrier lifetime and material study in intrinsically gettered silicon wafers for high precipite density.—73-04260

**Grivickas, V.; Gaubas, E.; Karinave, A. G.**
Charge-carrier lifetime in Si wafers.—73-14806

**Grivon, Fernand; Bouthegourd, Jacques**
Method of manufacturing an electrical contact for a superconductive ceramic.—73-11973

**Groat, Eric A.; Mroz, Thomas J.; Partch, Richard E.; Gangolli, S. G.**
Preparation and characterization of coated SiC whiskers.—73-09249

**Groat, Eric A.,** See Mroz, Thomas J.

**Grobbelaar, A. P.**
Refractories in South Africa.—73-10762

**Grodzinski, Piotr,** See Osinski, Julian S.; Zou, Yao

**Groen, W. A.; Van Lierop, J. G.; Roosten, A.**
Electrical and thermal conductivity of AlN ceramics doped with beryllium and oxygen.—73-08851

**Gromashchevskii, V. L.,** See Artamonov, V. V.

**Gromilov, S. A.,** See Koselov, B. A.

**Gromkov, B. K.,** See Kalygin, V. G.

**Gromov, S. A.,** See Kalibaeva, G. M.

**Gromov, V. V.,** See Lipson, A. G.

**Gromovoi, Y. S.; Plyatsko, S. V.; Kadyshev, S. K.**
Position and charge state of the Eu impurity in the PbSe lattice.—73-01288

**Gromovoi, Yu. S.,** See Plyatsko, S. V.

**Gromovoi, Yu. S.; Kadyshev, S. K.; Plyatsko, S. V.**
Photostimulated changes in the position of $Mn^{2+}$ ions in the crystal lattice of PbSe.—73-07732

**Gromovoj, Yu. S.,** See Plyatsko, S. V.

**Gronsky, Ronald,** See Adelman, D.; Nguyen, Tai D.

**Groppetti, R.; Cattaneo, A.**
Model for Hydro and Hydro-Abrasive Jet Machining of carbon fiber-reinforced plastic composites.—73-05928

**Groppi, David P.,** See Leung, Roger Y.

**Gropyanov, A. V.,** See Novikov, V. I.

**Gropyanov, V. M.,** See Novikov, V. I.; Vesikova, R. M.

**Gros, H.,** See Torrecillas, Ramon

**Grosjean, Abel,** See Derleth, Helmut

**Gross, Anita K.,** See Finlayson, Trevor R.

**Gross, B. J.,** See Richardson, J. T.

**Gross, J.; Schlief, T.; Fricke, J.**
Ultrasonic evaluation of elastic properties of silica aerogels.—73-12904

**Gross, L. E.,** See Li, J. F.

**Gross, M.,** See Shwe, C.

**Gross, M.; Horwitz, C. M.**
Silicon dioxide trench filling process in a radio-frequency hollow cathode reactor.—73-13254

**Grosse, P.,** See Dittmar, G.

**Grosse, R.; Gedeon, A.; Watermann, J.; Fraissard, J.; Boddenberg, B.**
Adsorption and $^{129}Xe$ NMR of xenon in silver-exchanged Y zeolites: application to the location of silver cations.—73-08803

**Grosskopf, Klaus,** See Nowak, Rainer

**Groszek, A. J.; Partyka, S.**
Measurements of hydrophobic and hydrophilic surface sites by flow microcalorimetry.—73-16537

**Grovenor, Christopher R. M., See Snowling, David C. H.**

**Groves, G. W.,** See Brough, Adrian R.; Richardson, I. G.

**Groves, S. H.,** See Wang, C. A.

**Groza, J. R.**
Nonconventional pressure-assisted powder consolidation methods.—73-13153; Novel consolidation method for engineered structural materials.—73-05935

**Grozhik, V. A.; Bychko, G. V.; Khodskii, L. G.**
Effect of additives on the properties of the lead borosilicate glasses and the thin-film coatings based on them.—73-07302

**Gruber, John B.,** See Merkle, Larry D.; Seltzer, Michael D.

**Gruber, John B.; Hills, Marian E.; Seltzer, Michael D.**
Analysis of the optical spectra of trivalent holmium in yttrium scandium gallium garnet.—73-12744

**Grudinskii, V. I.,** See Nisaev, I. P.

**Gruen, D. M.,** See Chen, L. M.; Krauss, A. R.

**Gruen, D. M.**
Conversion of fullerenes to diamond.—73-15985

**Grum-Grzhimailo, O. S.; Kyvatkovskaya, K. K.; Kondrasheva, E. F.**
Low-melting zirconia glazes based on glass fiber wastes.—73-04044; Activating crystallization in zirconia glazes.—73-07231; Fluorides in zirconia glazes.—73-00907

**Grum-Grzhimailo, O. S.; Makarov, V. V.**
Surface activity of calcined kaolins having different degrees of crystallinity.—73-02699

**Grumblatt, Gerard; Gnann, Alan; Takabataka, Kazuo; Yurek, Greg; Maple, M. B.; Efferson, Kenneth**
Exploring the SC [superconductor] industry from within.—73-15464

**Grun, J. B.,** See Netiksis, V.; Oberle, J.

**Grun, M.,** See Bogdanov, S. V.

**Grunbaum, E.,** See Barkay, Z.

**Grunberg, P.,** See Leclercq, J. L.

**Gruncharov, I.,** See Pelovsky, Y.

**Grundmann, M.; Krost, A.; Bimberg, D.; Cerva, H.**
InGaAs/InP quantum wells on vicinal Si(001): structural and optical properties.—73-07607
**Grunewald, Herbert; Bastert, Karl**
Composition and technology of glossy/satinized glaze systems for fast firing of earthenware.—73-00902
**Grunewald, W.,** See Ullmann, J.
**Grunin, V. S.; Patrina, I. B.; Razumeenko, M. V.; Makeeva, N. P.**
Point defects and collective interactions in $Ti_{1-x}V_xO_2$ single crystals.—73-03106
**Gruninger, M. F.,** See Jarosinski, W. J.
**Grunler, Bernd; Gobel, Roland; Tiller, Hans-Jurgen**
Ir spectroscopic investigation of condensation in $SiO_2$-sol-gel layers.—73-00360
**Grunthaner, F. J.,** See Rich, D. H.
**Grusczscinski, E.; Brown, Paul W.; Bothe, J. V., Jr.**
Formation of ettringite at elevated temperature.—73-06657
**Gruska, B.; Wandel, K.**
Influence of temperature and pressure on the structure of remote plasma-enhanced chemically vapor deposited $SiO_2$ investigated by spectroscopic ellipsometry.—73-17147
**Gruskova, Anna,** See Valko, Pavol
**Grutz, A.,** See Braunisch, W.
**Grutzeck, Michael W.,** See Kwan, Stephen; LaRosa, Judith L.; Moukwa, M.
**Grutzeck, Michael W.; Shi, Di-Xiang; Liu, Gang; Kwan, Stephen**
Computer simulations of interfacial packing in concrete.—73-06642
**Grutzmacher, D. A.,** See Meyer, R.
**Grutzmacher, D. A.; Sedgwick, T. O.; Northrop, G. A.; Zaslavskii, A.; Powell, A. R.; Kesan, V. P.**
Very narrow SiGe/Si quantum wells deposited by low-temperature atmospheric pressure chemical vapor deposition.—73-11505
**Gruver, J. S.,** See Breunig, T. M.
**Gruy, Frederic; Pijolat, Michele**
Kinetics of $CeO_2$ surface area reduction in a mixture of HCl, $H_2O$, and $O_2$.—73-13414
**Gruzintsev, A. N.,** See Georgobiani, A. N.
**Gruzza, B.,** See Soukiassian, P.
**Gryadunov, A. N.,** See Shcherbakov, V. A.
**Gryazina, Z. S.; Semirova, V. P.; Kisilenko, N. G.**
Coloring glass in processing flows.—73-00598
**Grybos, J.,** See Zeiske, Thomas
**Grynberg, M.,** See Lusakowski, J.
**Grzegorzewski, J.,** See Marciniak, M.
**Grzeszczyk, Stefania**
Possibilities of utilization of wastes from desulfurization in building materials manufacturing.—73-10088
**Gu, B. X.**
Influence of $Cu^{2+}$ ion on magnetic moment and Curie temperature of $Zn_2$-X hexaferrites.—73-07941
**Gu, Bing-Lin,** See Ni, Jun
**Gu, G.-D.,** See Nakamura, N.
**Gu, H.,** See Aguillon-Levillain, C.
**Gu, H.; Colliex, C.; Senoussi, S.; Aguillon-LeVillain, C.; Manuel, P.**
Generation and dissociation of dislocations in $YBa_2Cu_3O_{7-\delta}$ single crystals and deformed oriented powders.—73-08088
**Gu, Hau-Zhi; Wang, Hou-Zhi; Wu, Yun-Xiang**
Wear mechanism of periclase spinel brick for crown of open hearth furnace.—73-07230
**Gu, Kou-Fen,** See Liang, Kai-Ming
**Gu, M.,** See Dumas, P.
**Gu, Ping,** See Fu, Yan; Xie, Ping; Xu, Zhong-Zi
**Gu, Ping; Fu, Yan; Xie, Ping; Beaudoin, James J.**
Electrochemical behavior of portland-cement/high-alumina-cement systems at early hydration times.—73-13716
**Gu, Ping; Xie, Ping; Beaudoin, James J.; Brousseau, R.**
Ac impedance spectroscopy: II, Microstructural characterization of hydrating cement–silica fume systems.—73-06619
**Gu, Ping; Xie, Ping; Beaudoin, James J.**
Microstructural characterization of the transition zone in cement systems by means of ac impedance spectroscopy.—73-06687
**Gu, Ping; Xu, Zhong-Zi; Xie, Ping; Beaudoin, James J.**
Ac impedance spectroscopy study of microcracking in cement-based composites during compressive loading.—73-03430; Application of ac impedance techniques in studies of porous cementitious materials: I, Influence of solid phase and pore solution on high-frequency resistance.—73-06624
**Gu, Ping; Xu, Zhong-Zi; Xie, Ping**
Impedance studies of wollastonite microfiber-reinforced cement paste systems.—73-06671
**Gu, S. L.,** See Wu, Z. L.
**Gu, Shang-Zhe; Wang, Xian-Jin; Liu, Chun-Yu**
Cement without clinker using calcium-adding liquid slag.—73-06634
**Gu, T.,** See Awadelkarim, O. O.
**Gu, Tieer; Ditizio, R. A.; Awadelkarim, O. O.; Fonash, S. J.; Rembetski, J. F.; Aum, P.**
Reactive-ion-etching-induced damage to $SiO_2$ and $SiO_2$-Si interfaces in polycrystalline Si overetch.—73-07763
**Gu, Wei-Fang,** See Cai, Pei-Xin
**Gu, Wei-Zhong; Porter, John R.; Langdon, Terence G.**
Evidence for anelastic creep recovery in silicon carbide whisker-reinforced alumina.—73-13528
**Gu, Zhe-Nan,** See Gao, Si-Jian
**Guadagnino, Emanuel; De Diana, Giancarlo C.; Rizzo, Graziella**
Determination of mercury in glass: a new analytical need in the evaluation of the packaging waste quality.—73-06903
**Guadagnino, Emanuel; Morucchio, P.**
Cold decomposition and potentiometric titration of chlorine in glass and raw materials.—73-05028
**Gualtieri, D. M.,** See Silliman, S. C.
**Gualtieri, D. M.; Morris, R. C.**
Epitaxial waveguides of aluminum garnet.—73-08514
**Gualtieri, D. M.**
Magnetooptical waveguides of aluminum garnet.—73-01490; Magnetooptical waveguides of aluminum garnet.—73-04626
**Guan, Chang-Bin,** See Shen, De-Jiu
**Guan, J.,** See Li, X.
**Guan, Jian-Shi; Zou, Yi-Cong**
Preparation of low-clinker cement using cinder from fluidized bed furnace of power plant.—73-10092
**Guan, Qin-Cai,** See Ye, Pei-Xian
**Guan, Qing-Cai,** See Yang, Chang-Xi
**Guan, Qing-Cai; Wang, Ji-Yang; Wei, Jing-Qian**
Two-wave mixer properties of Fe:$KTa_{1-x}Nb_xO_3$ (KTN) crystal.—73-11627
**Guan, Shu-Jun,** See Gong, Luo-Shu
**Guan, Wen-Jie,** See Jiao, Shu-Liang; Liu, Da-Ming
**Guan, Z.-D.,** See Gong, J.-H.; Zeng, L.-X.
**Guang, C.,** See Huang, Yi-Dong
**Guardian, J.,** See Inal, O. T.
**Guasch, C.,** See Goiran, M.; Voillot, F.
**Guazzone, Laurent; White, Kenneth W.**
Fracture toughening mechanisms in the $SiC_w/Al_2O_3$ composite system.—73-06437
**Gubaidullin, R. K.; Aminov, T. G.**
Magnetic structure and exchange interactions in $Fe_{1-x}Cu_xCr_2S_4$ spinels.—73-15345
**Gubanov, V. A.,** See Kuznetsov, M. V.
**Gubanov, V. A.; Ivanovsky, I. L.; Zhukov, V. P.**
Electronic Structure of Refractory Carbides and Nitrides.—73-09763
**Gubanova, V. A.,** See Alybakov, A. A.; Polyba, A. N.
**Gubarev, S. I.; Ruf, T.; Cardona, M.; Ploog, K.**
Resonant magnetoluminescence of high-quality GaAs.—73-07772
**Gubarevich, T. M.; Tyshetskaya, A. V.**
Synthesis and study of diamond-oxide systems on the basis of ultradispersed diamonds.—73-16353
**Gubich, I. B.,** See Kuz'ma, Yu. B.
**Gubich, I. B.; Kuz'ma, Yu. B.; Bruskov, V. A.**
Crystal structure of new $HoNi_2B_2$ boride.—73-02204
**Gubser, Donald U.; Francavilla, T. S.; Soulen, Robert J., Jr.; Mitchell, Dean L.**
High-temperature superconductivity: magnets and applications of naval interest.—73-11789
**Gud, O. T.,** See Fedoruk, R. M.
**Gudat, G.; Albers, J.**
New generation of diaphragms in tube mills for cement grinding.—73-12049
**Gudel, H. U.,** See Kramer, K.
**Gudenau, Heinrich Wilhelm; Pietzko, Guenter; Scheiwe, Michael; Piel, K. T.; Seiger, R.**
Carbon bricks for blast-furnace hearth lining under the effect of hot metal.—73-14577
**Gudich, G. E.,** See Konorova, L. F.
**Gudmundson, P.,** See Giannakopoulos, A. E.
**Gue, A. M.,** See Rouhani, M. Djafari
**Guedes de Sousa, Eduardo,** See Almeida Valente, Manuel
**Guegan, H.,** See Barriere, A. S.
**Guel, G.; Armour, E. A.; Sun, S. Z.; Srinavasan, S. T.;**
**Malloy, K. J.; Hersee, S. D.**
Reduction of deep levels in MOCVD-regrown $Al_xGa_{1-x}As$ interfaces by $(NH_4)_2S$ passivation and in situ HCl etching.—73-11416
**Guenard, C.,** See Colin, S.
**Guenther, R.,** See Scholz, H.
**Guerard, D.,** See Codazzi, V.
**Guerfi, N.,** See Veuillen, J. Y.
**Guerrero, Antonio,** See Castell, Ricardo
**Guerrero, E.; Quintero, M.; Tovar, R.; Tinoco, T.;**
**Gonzalez, J.; Woodley, J.**
*T*(*z*) diagram and optical energy gap values of $Cd_{1-x}Mn_xGa_2Se_4$ alloys.—73-07827
**Guerrieri, Antonio,** See Torsi, Luisa
**Guerriero, Renato; Tangerini, Ilario**
Process for producing composite materials with a metal matrix with a controlled content of reinforcer agent.—73-03701
**Guerrini, F.,** See Skou, E.
**Guery, C.,** See Guery, J.
**Guery, J.; Guery, C.; Gao, Y.; Jacoboni, C.**
Hydrochloric acid corrosion of ZBLAN fluoride glasses.—73-06924
**Guess, A. P.,** See Karneeva, S. S.
**Guette, A.,** See Dugne, O.
**Guette, Alain,** See Lespade, Pierre; Prouhet, Stephane
**Gufan, Yu. M.,** See Makarov, V. I.; Prisyazhny, V. D.
**Gugel, E.,** See Woetting, G.
**Gugel, Ernst; Freudenberg, Bernhard; Seyer, Johannes**
Ceramics based on aluminum titanate, process for their production, and their use.—73-12351
**Guggenberger, Rainer; Ellrich, Klaus; Gasser, Oswald; McLean, John W.; Makinson, Owen**
Dental material in powder form, process for its preparation and use.—73-03916
**Guggi, D.,** See Lubig, A.
**Guglielmi, M.; Innocenzi, P.; Brusatin, G.; Caccavale, F.; Tombolan, N.**
Ion migration in thin sol-gel silica coatings.—73-14020
**Guha, J. P.,** See Nair, K. M.
**Guhl, R.,** See Wewel, M.
**Gui, Zhi-Lun,** See Wu, Zhong-Lin
**Guibert, M.,** See Ibrahim, H.
**Guiberteau, Fernando,** See Dransmann, Gerhard W.; Pajares, Antonia
**Guiberteau, Fernando; Padture, Nitin P.; Cai, Hong-Da; Lawn, Brian R.**
Indentation fatigue: a simple cyclic Hertzian test for measuring damage accumulation in polycrystalline ceramics.—73-15805
**Guilberteau, Fernando; Padture, Nitia P.; Lawn, Brian R.**
Effect of grain size on Hertzian contact damage in alumina.—73-13507
**Guicciardi, Stefano,** See Bellosi, A.; Tampieri, Anna
**Guido, T. S.,** See Yellen, S. L.
**Guiheen, James,** See Liu, Felix
**Guilbert, G.,** See Langlais, C.
**Guild, F. J.; Summerscales, J.**
Microstructural image analysis applied to fiber composite materials—a review.—73-08417
**Guile, Donald L.,** See Gheorghiu, Tudor C.
**Guillamet, R.; Lenglet, M.; Adam, F.**
Reflectance spectroscopy of oxide films of $\alpha$-$Cr_2O_3$ and $\alpha$-$Fe_2O_3$.—73-08722
**Guillaume, C. B.,** See Maaref, M.
**Guillaume, M.,** See Staub, U. Switzerland
**Guillaume, M.; Allenspach, P.; Mesot, J.; Staub, U.; Furrer, A.; Osborn, R.**
Neutron spectroscopy of the crystalline electric field (CEF) in high-$T_c$ $YbBa_2Cu_3O_7$.—73-08141
**Guillaume, M.; Fischer, P.; Roessli, B.; Podlesnyak, A.; Schefer, J.; Furrer, A.**
Magnetic order of Pr ions in $PrBa_2Cu_3O_6$.—73-16207
**Guille, J. L.; Bernier, J. C.**
Materials for multilayer interconnection substrates.—73-00993
**Guille, J. L.; Gondolf, M.; Chardon, N.**
Copper diffusion during copper cordierite cosintering.—73-06146
**Guille, J. L.; Mercier, S.; Hammer, J. M.**
Determination of the residual stresses in a vitreous enamel by indentation.—73-06766
**Guillem, M. C.,** See Martinez, R.
**Guillemet, C.; Gy, R.; Larbot, M.; Neuville, D.; Sipp, A.; Richet, P.**
Viscosity, configurational energy, and structural relaxation of a silica-soda-lime glass.—73-14311
**Guillemet, C.**
Thermophysical properties controlling annealing and tempering.—73-07090
**Guillet, A.,** See Legoux, J. G.
**Guillon, F.,** See Campbell, J. W. M.
**Guillot, C.,** See Gota, S.
**Guillot, G.,** See Souifi, A.
**Guillot, M.; Rodic, D.; Mitric, M.**
Temperature dependences of the lattice constants and thermal expansion coefficients of $Sm_3Fe_5O_{12}$ and $Er_3Fe_5O_{12}$ single crystals.—73-04661
**Guillou, M. O.; Henshall, J. L.; Hooper, R. M.; Carter, G. M.**
Indentation hardness and fracture in single-crystal magnesia, zirconia, and silicon carbide.—73-03314
**Guilloux-Viry, M.,** See Kechouane, M.
**Guilloux-Viry, M.; Thivet, C.; Karkut, M. G.**
Thin films of $(RE)Ba_2Cu_3O_7$ [RE=Y, Pr, Eu, Gd, Ho] epitaxially grown in situ by excimer laser ablation: structural and superconducting behavior.—73-01693
**Guilmard, Y.; Denape, J.; Petit, J. A.**
Friction and wear thresholds of alumina-chromium steel pairs sliding at high speeds under dry and wet conditions.—73-17337
**Guimaraes, F. E. G.,** See Maassen, M.
**Guimpel, J.,** See Fullerton, Eric E.
**Guinebretiere, R.; Dauger, A.; Lecomte, A.**
Tetragonal zirconia powders from the zirconium *n*-propoxide–acetylacetone–water–isopropanol system.—73-13318
**Guirguis, Samia**
New cement standard in Australia—its implication and further development.—73-10062
**Guiton, Theresa A.,** See Knudsen, Arne K.
**Guiton, Theresa A.; Mills, Lynne K.**
Process for sintering aluminum nitride to a high thermal conductivity and resultant sintered bodies.—73-16014
**Guizol, C.**
Development and trends in the erection of heavy clay works.—73-04910
**Guizzetti, G.,** See Borghesi, A.
**Gujrathi, S. C.,** See Gagnon, G.
**Gukasyan, A. M.; Ushakov, V. V.; Gippius, A. A.; Markov, A. V.**
Photoinduced formation of surface recombination centers in GaAs.—73-04438
**Gulamova, D. D.; Gornostaeva, S. A.; Kiprushenkova, G. V.; Novoselova, S. N.**
Effects of synthesis by melting in solar and radiation furnaces on changes in phase composition in the systems $ZrO_2$-$Ge_2O_3$-CaO(MgO).—73-02249
**Gulamova, D. D.; Novoselova, S. N.; Nigmanov, B. S.**
Phase relations in the ternary system $ZrO_2$-MgO-$Gd_2O_3$ and its dependence on synthesis method.—73-16260
**Gulamova, D. D.; Novoselova, S. N.**
Polymorphism of calcium titanate.—73-02395; Polymorphism of the dioxides of zirconium and hafnium.—73-02396
**Gulamova, D. D.; Sarkisova, M. Kh.**
Effect of the microstructural features on the stability of aluminum titanate.—73-03139
**Gulati, S. T.; Ghosh, Asish**
Strength and fracture behavior of alkali strontium silicate glass.—73-14280
**Guldner, Karl-Heinz,** See Burckhardt, Hans-Georg
**Gulens, J.,** See Komorowski, P. G.
**Gulevich, A. L.,** See Borovskii, E. S.
**Gulgun, Mehmet A.; Popoola, Oludele O.; Kriven, Waltraud M.**
Chemical synthesis and characterization of calcium aluminate powders—correction.—73-12942; Chemical synthesis and characterization of calcium aluminate powders.—73-05705

**Gullev, R. A.,** See Kerimova, T. G.

**Gulin, A. N.,** See Ivanov, I. A.; Stefanovskii, S. V.

**Gullett, B. K.,** See Jozewicz, W.

**Gulotta, Joseph A.; Shelestak, Larry J.**
Ultraviolet absorbing, green-tinted glass.—73-00764

**Guloyan, Yu.; Fyodorova, V.**
Kinetic aspects of oxidation of variable valency element compounds in glasses.—73-14022

**Gulyaeva, L. V.,** See Adrianova, T. N.

**Gumlich, H.-E.,** See Bressler, P. R.; Dreyhsig, J.

**Gummow, R. J.; Liles, D. C.; Thackeray, M. M.**
Lithium extraction from orthorhombic lithium manganese oxide and the phase transformation to spinel.—73-16197

**Gunasekaran, R. A.; Yakhmi, J. V.; Iyer, R. M.**
Influence of substitution of terbium on the superconducting behavior of $YBa_2Cu_3O_{7-\delta}$.—73-08109

**Gundel, D. B.,** See Gambone, M. L.

**Gundiah, S.,** See Pradip,

**Gunji, Takahir,** See Goto, Hitoshi

**Gunji, Takahiro; Nagao, Yukinori; Misono, Takahisa**
Synthesis of polymetalloxanes and their properties as a precursor for amorphous oxide: VI, Preparation of $SiO_2$-$TiO_2$ fibers containing various $TiO_2$ contents from polytitanosiloxane [PTS].—73-03051

**Gunnar, L.,** See Johansson, Per G.

**Gunnella, R.,** See Gota, S.

**Gunshor, R. L.,** See Fan, Y.; Grillo, D. C.; Han, J.; Nurmikko, A. V.

**Gunshor, R. L.; Nurmikko, A. V.; Otsuka, N.**
Molecular beam epitaxial growth of wide-gap II-VI injection lasers and light-emitting diodes.—73-15045

**Gunter, P.,** See Fluck, D.; Zgonik, M.

**Gunter, William D.,** See Zhou, Zhi-Hong

**Gunther, Peter; Xia, Xhong-Fu**
Transport of detrapped charges in thermally wet-grown $SiO_2$ electrets.—73-13371

**Guntherod, Hans-Joachim,** See Meyer, Ernst

**Guntherodt, H. J.,** See Haefke, H.

**Guo, Bai-Ying,** See Friedman, Gerald M.

**Guo, Da-Hao,** See Wu, Hong-Xing

**Guo, Gi-Xin,** See Hirao, Yuji

**Guo, Gong-Yi; Chen, Yu-Li**
Optical properties of a chemically durable phosphate glass.—73-00523

**Guo, Heng-Qun; Ye, Tian-Shui; Zeng, Jin-Chuan**
Transient response of amorphous CdSe and glow-discharge amorphous Si to mode-locked laser pulses.—73-11486

**Guo, J. D.,** See Schilling, A.

**Guo, Jing-Hua,** See He, Hui-Juang

**Guo, Jing-Kun,** See Cai, Jie; Xu, Yue-Ping; Zeng, Shao-Xian

**Guo, Jing-Kun; Ma, Li-Tai; Li, Bao-Shun**
Interface of multiphase ceramic composites.—73-03156

**Guo, Jun,** See Ellis, Donald E.; Foster, C. M.

**Guo, L.,** See Li, L.

**Guo, Li-E.,** See Wang, Yong

**Guo, Li-Hui,** See Li, Jin-Min

**Guo, Pei-Ling,** See Wang, Yuan

**Guo, Qi-Jun**
Developments and applications of fly ash wall panels in China.—73-09892

**Guo, Qi-Xin; Kato, Osamu; Fujisawa, Masami; Yoshida, Akira**
Optical constants of indium nitride.—73-05601

**Guo, Qi-Xin; Kato, Osamu; Yoshida, Akira**
Thermal stability of indium nitride single-crystal films.—73-05675

**Guo, Rui-Ben**
Cordierite and mullite-containing kiln furniture with low thermal expansivity.—73-10711

**Guo, Shao-Ling,** See Shen, Jin-Xi

**Guo, Shu-Jiao,** See Ling, Qi-Fen

**Guo, X. S.,** See Li, S. C.; Murarka, S. P.

**Guo, X.,** See Warren, A. C.

**Guo, X.-Y.,** See Zhang, S.-J.

**Guo, Xi-Bin,** See Zhuang, Jian

**Guo, Y. M.,** See Chen, W. S.

**Guo, Yan-Yi; Li, Guo-Zhen**
Scientific analysis of ancient Jun wares in China.—73-09796

**Guo, Yan-Yi**
Bodies and glazes of Jingdezhen porcelain in ancientry.—73-06609

**Guo, Yu-Shun**
Controllability of expansion of lightweight aggregates with natural zeolites on firing.—73-09870

**Guppy, R. M.; Atkinson, A.**
Cracking behavior of sol-gel films.—73-02756

**Gupta, A.,** See Chern, M. Y.; Dekker, C.; Kawasaki, M.; Kopelevich, Y.; Thouless, Michael D.

**Gupta, Arunava**
Gas-phase oxidation chemistry during pulsed laser deposition of $YBa_2Cu_3O_{7-\delta}$ films.—73-04730

**Gupta, B. K.,** See Bhushan, Bharat

**Gupta, K. P.,** See Sharma, S. V.

**Gupta, L. C.,** See Mazumdar, Chandan; Mertelj, T.

**Gupta, P.; Bhattacharyya, D.; Chaudhuri, S.; Pal, A. K.**
Preparation and characterization of polycrystalline $ZnS_xSe_{1-x}$ films prepared by a two-zone hot wall technique.—73-11399

**Gupta, Prabhat K.,** See Huang, J.

**Gupta, Prabhat K.; Cooper, Alfred R.**
Topologically disordered networks of rigid polytopes: III, Edge and face sharing.—73-14122

**Gupta, Prabhat K.; Huang, J.**
Structural relaxation under conditions far from equilibrium.—73-14099

**Gupta, Prabhat K.; Inniss, Daryl; Kurkjian, Charles R.; Brownlow, Darryl L.**
Determination of crack velocity as a function of stress intensity from static fatigue data.—73-17275

**Gupta, Pradeep,** See Bhattacharya, H.

**Gupta, R. S.,** See Mathur, V. K.

**Gupta, S. K.,** See Seth, V. P.

**Gupta, S. M.; Kulkarni, A. R.**
Synthesis of perovskite lead magnesium niobate using partial oxalate method.—73-17045

**Gupta, S.,** See Liliental-Weber, Z.

**Gupta, S.; Sethi, S.; Bhattacharya, P. K.; Williamson, S.**
Er-doped GaAs for high-speed photoconductor applications.—73-04327

**Gupta, S.; Whitaker, John F.; Mourou, Gerard A.**
Ultrafast carrier dynamics in III-V semiconductors grown by MBE at very low substrate temperatures.—73-01359

**Gupta, S.; Whitaker, John F.; Williamson, S. L.; Mourou, G. A.; Lester, L.; Hwang, K. C.**
High-speed photodetector applications of GaAs and $In_xGa_{1-x}As$/GaAs grown by low-temperature molecular beam epitaxy.—73-14964

**Gupta, Sanjeev,** See Seth, V. P.

**Gupta, Saroj,** See Seehra, S. S.

**Gupta, Tapan K.,** See Jean, Jau-Ho

**Gupta, Tapan K.; Bich, George J.; Lawless, William N.**
Method of coating superconductors with inorganic insulation.—73-02050

**Gupta, Tapan K.; Permbhusri, Kulapat**
Characteristic dispersion frequencies of resonance-type soft mode system of lead titanium oxide in far infrared.—73-02555

**Gupta, V.; Yuan, J.**
Measurement of interface strength by the modified laser spallation technique: II, Application to metal/ceramic interfaces.—73-09629

**Gur'yanov, V. S.,** See Sel'tser, V. B.

**Gur, M.,** See Barth, H.-J.

**Gur, Turgut M.,** See Tanaka, Yusuke

**Gurary, A.; Tompa, G. S.; Liang, S.; Stall, R. A.; Lu, Y.; Hwang, C.-Y.**
Elemental vapor transport epitaxy [EVTE] of II-VI semiconductors.—73-04316

**Gurbanov, A. G.; Lyakhovich, T. T.**
Geochemical features of quartz from the deep parts of Eldzhurtinsk granite massif (northern Caucasus).—73-15904

**Guretskii, A. M.,** See Barilo, S. N.

**Gurevich, Leon**
Ceramic coating material for a microfuse.—73-04190

**Gurevich, S. A; Ekimov, A. I.; Kudryavtsev, I. A.; Osinskii, A. V.; Skopina, V. I.; Chepik, D. I.**
Preparation and investigation of $SiO_2$ films activated by CdS semiconductor nanocrystals.—73-07744

**Gurinovich, L. M.,** See Koretskaya, L. S.

**Gurinovich, V. A.,** See Makarenko, L. F.

**Gurko, A. F.,** See Mazurenko, E. A.

**Guroshev, V. I.,** See Glinchuk, K. D.; Vinnik, E. V.

**Gurov, A. F.,** See Bashkin, I. O.

**Gurova, N. N.,** See Vopilov, V. A.

**Gurskii, A. L.,** See Gribkovskii, V. P.

**Gurtov, V. A.; Travkov, I. V.**
Modeling of the process of space charge accumulation in insulator layers of MIS structures subjected to irradiation—Me-$Si_3N_4$-$SiO_2$-Si MNOS structures.—73-01249

**Gururaja, T. R.**
Piezoelectrics for medical ultrasonic imaging.—73-11600

**Guruswamy, P.,** See Simon, A.

**Guryanov, A. N.,** See Bubnov, M. M.

**Guryev, N. V.,** See Kasymova, S. S.

**Gusakov, G. M.; Kondratova, T. N.; Minazhdinov, M. S.; Laryushin, A. I.**
Nature of point defects generated in GaAs by pulsed laser radiation.—73-01255

**Gusakov, G. V.,** See Grishin, A. M.

**Gusakova, E. I.,** See Kovalenko, A. S.

**Gusarov, V. V.,** See Dolgushev, N. V.

**Gusarov, V. V.; Semin, E. G.**
Phase diagram of the subsolidus region of the quasi-binary system $BeAl_2O_4$-$(BeFe_2O_3)$.—73-16247

**Gusarov, V. V.; Suvorov, S. A.**
Transformation-transport processes in polycrystal systems and material creeping.—73-17452; Transformations of nonautonomous phases and polycrystalline system compaction.—73-17065

**Guseinov, T. D.,** See Kerimova, T. G.

**Guseinova, Sh. A.,** See Akhmedova, N. A.

**Gusev, A. I.,** See Kuznetsov, V. Ya.

**Gusev, A. I.**
Phase diagrams of ordered nonstoichiometric HfC and TiN.—73-05449

**Gusev, A. N.; Rempel, A. A.; Detkov, P. G.**
Pure $Nb_2O_5$ and $Ta_2O_5$.—73-05623

**Gusev, A. O.,** See Berkovits, V. L.

**Gusev, B. V.; Vasil'ev, V. G.; Toishibaev, N. K.**
Activity of cement stone treated by hydrodynamical method.—73-00016

**Gusev, G. M.; Kvon, Z. D.; Oi'shanetskii, E. B.**
Universal fluctuations and impurity charge exchange in GaAs-based microstructures.—73-04505

**Gusev, O. B.,** See Bresler, M. S.

**Gusev, O. B.; Bresler, M. S.; Zotova, N. V.; Stus, N. M.**
Crossover from heterostructures of the first type to those of the second type in the InAs/InAsSbP system.—73-01116

**Gusev, O. K.; Kireenko, V. P.; Yarzhembitskii, V. B.**
Anomalous photo-Hall effect in *p*-type InAs crystals.—73-04243

**Gushikem, Yoshitaka,** See Benvenutti, Edison V.

**Gusinskii, G. M.; D'yakonova, N. V.; Levinshtein, M. E.; Rumyantsev, S. L.**
Noise of the l/f type and electrical and photoelectric properties of GaAs bombarded with high-energy ions.—73-04418

**Guski, M.**
Chemical products and additives for isostatic pressing.—73-10806

**Gusmano, Gualtiero; Montesperelli, Giampiero; Nunziante, Patrizia; Traversa, Enrico; Montenero, A.; Braghini, Marco**
Humidity-sensitive properties of titania films prepared using the sol-gel process.—73-16510; Humidity-sensitive properties of titania films prepared using the sol-gel process.—73-16511

**Gusmano, Gualtiero; Montesperelli, Giampiero; Nunziante, Patrizia; Traversa, Enrico**
Humidity-sensitive electrical response of sintered $MgFe_2O_4$.—73-16509; Microstructure and electrical properties of $MgAl_2O_4$ and $MgFe_2O_4$ spinel porous compacts for use in humidity sensors.—73-08918

**Gustafsson, A.,** See Maximov, I.

**Gustafsson, Per,** See Weinl, Gerold

**Gustafsson, Torbjorn,** See Ichikawa, Mizuhiko

**Gustav, Krystyna; Krecikij, Krzysztof; Twanciw, Janusz**
Anhydrite binders activated with portland cement and potassium sulfate with addition of fly ash filler.—73-09816

**Gustaw, Krystyna; Dziedzic, Pietron Jozef**
Examination of the durability of anhydrite binder activated with portland cement and potassium sulfate.—73-09954

**Gutenev, M. S.,** See Aksenov, N. D.

**Gutenev, M. S.; Tabolin, A. R.; Rykova, T. S.**
Dielectric losses in glasses of the Ag-Ge-Se system.—73-00448

**Gutenev, M. S.; Tabolin, A. R.; Turkina, E. Yu.**
Chemical interaction in melts of the glassy systems $(A_2S_3)_{1-x}(P_2S_3)_x$ (A=As, Sb).—73-00307

**Guter, Ernest P.**
Quality cullet is required for fiberglass, too.—73-03880

**Gutersohn, Heinrich**
Emission limits of air pollution and their legal background for the glass industry in the 18 EC and EFTA countries with reference to the values in Japan and the U.S.—73-03390

**Guth, J. L.,** See Caullet, P.; Merrouche, A.

**Guth, J. L.; Delmotte, L.; Soulard, M.; Brunard, N.; Joly, J. F.; Espinat, D.**
Synthesis of Al,Si-MFI-type zeolites in the presence of $F^-$ anions: structural and physicochemical characteristics.—73-08767

**Guth, J. R.; Lake, M. L.; Cornie, J. A.; Zhang, S.**
Pyrolytic carbon fiber/aluminum composites.—73-10268

**Guth, Jean-Louis,** See Des Courieres, Thierry; Faust, Anne C.

**Gutierres, I.,** See Rincon, J. M.

**Gutierrez, J. M.,** See Galan, M.; Gonzalez, C.

**Gutierrez, M. T.,** See Gandia, J. J.

**Gutierrez-Puebla, E.,** See Campa, J. A.

**Gutkin, A. A.,** See Averkiev, N. S.

**Gutkin, A. A.; Reshchikov, M. A.; Sosnovskii, V. R.**
$V_{Ga}Sn_{Ga}$ complex in GaAs [investigated] by the polarization photoluminescence [PL] and piezospectroscopic methods: I, Structure of the complex and its reorientation under low uniaxial pressure.—73-11498

**Gutkin, A. A.; Sedov, V. E.; Tsatsul'nikov, A. F.**
Photoluminescence associated with $Au_{Ga}$ centers in GaAs:Au.—73-01279

**Gutlich, P.,** See Hanzel, Darko; Sprenger, D.

**Gutman, V. I.; Reznikov, A. G.; Lyubalin, M. D.**
Use of induction melting for synthesis of oxide ceramics in the $ZrO_2$-$Y_2O_3$-$Al_2O_3$ system.—73-04953

**Gutmanas, E. Y.,** See Mogilevsky, P.

**Gutmanas, E. Y.; Gotman, I.; Kaysser, W. A.**
Coating of nonoxide ceramics by interaction with metal powders.—73-02749

**Gutmann, Benjamin; Chalup, Alan**
Barium carbonate.—73-12257

**Gutowski, J.,** See Hoffmann, A.

**Gutsche, D.,** See Reinhardt, F.

**Gutsulyak, L. M.,** See Georgitse, E. I.; Tsypishka, D. I.

**Gutteridge, R.,** See Ristic, L.

**Guttmann, Paul F.**
Silica.—73-12297

**Gutul, Melania,** See Muntean, Marcela

**Gutzov, Stoyan; Ponahlo, Johann; Lengauer, Christian L.; Beran, Anton**
Phase characterization of precipitated zirconia.—73-12651

**Gutzow, I.,** See Dobreva, A.; Pascova, R.; Schmelzer, J.

**Gutzow, I.; Dobreva, A.; Schmelzer, J.**
Rheology of non-Newtonian glass-forming melts: II, Kinetics of relaxation and retardation.—73-07170; Structure, non-Newtonian flow, and relaxation in glass-forming melts.—73-14506

**Guven, G.,** See Yun, J.

**Guvenilir, A.,** See Breunig, T. M.

**Guyomard, D.; Pagnoux, C.; Letho, J. J. Z.; Verbaere, A.; Piffard, Y.**
Preparation and crystal structure of $Na_3SbO(PO_4)_2$.—73-02399

**Guyot, Daniel,** See Pasquier, Michel

**Guyot, F.,** See Gillet, P.

**Guyot, F.; Richet, P.; Courtial, P.; Gillet, P.**
High-temperature heat capacity and phase transitions of $CaTiO_3$ perovskite.—73-08637

**Guyot, Yannick; Moncorge, Richard**
Excited-state absorption in the infrared emission domain of $Nd^{3+}$-doped $Y_3Al_5O_{12}$, $YLiF_4$, and $LaMgAl_{11}O_{19}$.—73-08867

**Guzman, G.; Aegerter, M. A.; Barboux, Philippe; Livage, Jacques**
Synthesis of ferroelectric perovskites through aqueous-solution techniques.—73-15289

**Guzman, L.,** See Laidani, N.

**Gwo, S.; Chao, K.-J.; Shih, C. K.; Sadra, K.; Streetman, B. G.**
Direct mapping [by STM] of electronic structure across $Al_{0.3}Ga_{0.7}As$/GaAs heterojunctions: band offsets, asymmetrical transition widths, and multiple-valley band structures.—73-14836

**Gwo, S.; Chao, K.-J.; Smith, A. R.; Shih, C. K.; Sadra, K.; Streetman, B. G.**
Scanning tunneling microscopy of doping and compositional III-V homo- and heterostructures.—73-11431
**Gwo, S.; Smith, A. R.; Shih, C. K.**
Vacancy migration, adatom motion, and atomic bistability on the GaAs(110) surface studied by scanning tunneling microscopy.—73-09427
**Gy, R.,** See Guillemet, C.
**Gyekenyesi, J. P.,** See Szatmary, S. A.
**Gyekenyesi, John P.,** See Choi, Sung-R.; Nemeth, Noel N.
**Gyekenyesi, John Z.; Papadopoulos, Demetrious S.**
Graphite/polymide tabs for high-temperature tensile tests.—73-08403
**Gyorgy, Ernst M.; Johnson, David W., Jr.**
Apparatus comprising a ceramic superconductive body and method for producing such a body.—73-04830
**Gyoten, Hisaaki,** See Nakagiri, Yasushi
**Gysling, H. J.,** See Chen, Samuel
**Gyunner, T. V.; Smirnov, O. V.**
Formation of dispersed cement rocks.—73-00095
**Gyurov, G.; Khristova, I.; Peshev, P.; Abrashev, M. V.**
Preparation of a calcium-substituted copper-rich yttrium barium copper oxide superconductor from a spray-dried nitrate precursor.—73-08175
**Gzowski, O.,** See Gazda, M.; Murawski, L.; Szaniawska, K.
**Ha, Dong-Han; Oka, Kunihiko; Iga, Fumitoshi; Nishihara, Yoshikazu**
Homogeneity of $Bi_2Sr_2Ca_1Cu_2O_{8+\delta}$ crystal boules grown by the traveling solvent floating zone method [TSFZ].—73-15504
**Ha, Ho; Kim, Kwang-Rae; Lee, Hee-Cheol**
Synthesis of titanium nitride by SHS method.—73-17047
**Ha, Jung-Soo; Chawla, K. K.; Engdahl, Richard E.**
Effect of processing and fiber coating on fiber-matrix interaction in mullite fiber–mullite matrix composites.—73-05768; Effect of processing and fiber coating on fiber-matrix interaction in mullite fiber–mullite matrix composites.—73-09090
**Ha, Jung-Soo; Chawla, K. K.**
Effect of SiC/BN double coating on fiber pullout in mullite fiber/mullite matrix composites.—73-02795
**Haaland, P.,** See Ganguly, B.
**Haanappel, V. A. C.; Van Corbach, H. D.; Fransen, T.; Gellings, P. J.**
Corrosion-resistant coatings ($Al_2O_3$) produced by metallorganic chemical vapor deposition using aluminum–tri-sec-butoxide.—73-06762; Cracking and delamination of metallorganic vapor-deposited alumina and silica films.—73-09052
**Haarer, D.,** See Kulibekov, A.
**Haas, O.,** See Kotz, R.
**Haas, T. W.,** See Eyink, K. G.
**Haase, Dieter,** See Dornen, Achim
**Haase, Ingrid,** See Himpel, Gert; Reetz, Teja
**Habeck, A.; Brueckner, R.**
Direct connection between anisotropic optical properties, polarizability, and rheological behavior of single-phase glass melts.—73-07011
**Habel, Wolfgang,** See Hurtado, Antonio M.
**Haber, Richard A.,** See Haerle, A. G.; Smith, Peter A.; Tsao, In-Lin; Zutshi, Ajoy
**Haber-Meier, H. U.,** See Genzel, I.
**Haberer, B.,** See Paul, M.
**Haberern, K. W.,** See Pashley, M. D.
**Habermehl, S.,** See Lucovsky, G.; Yasuda, T.
**Habermeier, H.-U.,** See Bauer, M.; Friedl, B.; Humlicek, J.; Thomsen, C.
**Habib, F. A.,** See Cooke, R. G.
**Habib, F. A.; Taylor, R. A. J.; Cooke, R. G.; Harris, B.**
Fatigue damage in SiC/CAS composites.—73-03293
**Habib, M. Ahsan; Maheswari, Shyam P.**
Effect of temperature on a complementary $WO_3$-Prussian blue electrochromic system.—73-01137
**Habib, T.,** See Ibrahim, A. K.
**Habibi, Hamid R.,** See Agrawal, Anoop
**Habig, K.-H.,** See Loffelbein, B.
**Habraken, F. H. P. M.,** See Cros, Y.
**Hachani, Leila; Carpio, Juan; Fiaud, Christian; Raharinaivo, R.; Triki, E.**
Steel corrosion in concretes deteriorated by chlorides and sulfates: electrochemical study using impedance spectrometry and "Stepping Down the Current" method.—73-03540
**Hachigo, Akihiro,** See Nakahata, Hideaki
**Hackett, C. M.; Settles, G. S.; Miller, J. D.**
Gas dynamics of HVOF [high-velocity oxy-fuel] thermal sprays.—73-09146
**Hackett, P. A.,** See Bourne, Orson L.
**Hackl, R.,** See Staufer, T.
**Hackley, V. A.** See Malghan, Subhas G.
**Hackley, V. A.; Premachandran, R. S.; Malghan, Subhas G.**
Electrokinetic sonic analysis [ESA] of silicon nitride suspensions.—73-09113
**Hackney, S. A.** See McCarty, E. D.
**Haddad, G. I.** See Chen, W. L.; Sherwin, M. E.
**Haddad, M.** See Berger, R.
**Haddad, M.; Berger, R.; Servant, Y.**
Paramagnetic centers in lithium thioborate glasses.—73-03748
**Haddow, Andrew J.**
Preparing titanium dioxide by the vapor phase oxidation of titanium tetrachloride.—73-12395
**Haderbache, L.** See Wetzel, P.
**Hadfield, M.; Stolarski, T. A.; Cundill, R. T.; Horton, S.**
Failure modes of ceramic elements with ring-crack defects.—73-17316
**Hadj Moussa, S.** See Sahli, S.
**Hadjiiskii, Yu. A.; Levitin, R. Z.; Mill, B. V.; Paukov, I. V.;**
**Popova, M. N.; Snegirev, V. V.**
Spectral and magnetic studies of nickelates $Lu_2BaNiO_5$ and $Yb_2BaNiO_5$.—73-08968
**Hadjivanov, Konstantin I.** See Kantcheva, Margarita M.
**Haefke, H.** See Meyer, Ernst
**Haefke, H.; Lang, H. P.; Sum, R.; Guntherodt, H. J.;**
**Berthold, L.; Hesse, D.**
Growth and structure of $YBa_2Cu_3O_{7-\delta}$ thin films studied by scanning tunneling microscopy and electron microscopy.—73-06223
**Haegel, N. M.** See Kao, Y. J.
**Haerle, A. G.; Haber, Richard A.**
Real-time monitoring of cake thickness during slip casting.—73-15749
**Haertling, Gene H.** See Hsi, Chi-Shiung; Wang, F.
**Haertling, Gene H.; Buckley, John D.**
Preformed superconductive devices.—73-11867
**Haertling, Gene H.**
Ferroelectric thin films for electronic applications.—73-01414; Intelligent processing of ferroelectric films.—73-15269; Rainbow ceramics—a new type of ultra-high-displacement actuator.—73-04569
**Haese, U.**
Comparative tests with classifiers: I.—73-12018
**Hafele, H. G.** See Zhang, Z.
**Hafizi, M.** See Metzger, R. A.
**Hafner, H. W.**
Ceramic hollow bodies and method of manufacturing such bodies.—73-04962; Metered feeding of fly ash and [cement] additives with the URW [Universal Rotor Weighfeeder].—73-10042
**Hafner, K.-H.**
Pulverized coal fueling for rotary cement kilns with rotor weight feeders.—73-01965
**Haga, Hisashi; Onodera, Akira; Tokunaga, Masaharu; Shiozaki, Yoichi**
Critical behavior of specific heat in ferroelectric $K_2ZnCl_4$ and $(NH_4)_2BeF_4$ at normal-incommensurate phase transition.—73-07875
**Haga, Makoto** See Takizawa, Kazutaka
**Hagan, D. J.** See Bolger, J. A.
**Hagberg, Mats; Jonson, Bjorn; Larsson, Anders**
Fabrication of ultrahigh quality vertical facets in GaAs using pattern corrected electron beam lithography.—73-04342
**Hagedorn, M. S.** See Higman, T. K.
**Hagege, S.** See Backhaus-Ricoult, Monika
**Hagenmuller, P.** See Alami, M.; Cocciantelli, J. M.; Gaewdang, T.; Kyung-Soo, S.; Lu, Zhi-Gao; Pizarro, J. L.
**Hagenstein, K.** See Daweritz, L.
**Hager, A.** See Kaps, Christian
**Hagerott, M.** See Ding, J.; Fan, Y.; Han, J.
**Haggard, D. C.** See Fincke, J. R.
**Hagi, H.** See Wakatsuki, M.
**Hagino, Sadaaki** See Yamaguchi, Tetsuro
**Hagio, T.** See Miyazaki, Yuji
**Hagiopol, M.** See Puscasu, N.
**Hagiwara, Jun** See Narushima, Takayuki
**Hagle, Michael P.; Oliver, Reed R.**
Thermal barrier structure.—73-00891
**Hagston, W. E.; Harrison, P.; Goodwin, J.**
Stability of single free particles against spatial localization through magnetic polaron formation.—73-05489
**Hagston, W. E.; Harrison, P.; Hogg, J. H. C.; Jackson, S.;**
**Nicholls, J. E.; Stirner, T.**
Molecular beam epitaxy investigation of interface disorder effects in magnetic II-VI quantum wells.—73-11335
**Hagstrom, S. B.** See Olson, Darin S.; Tanaka, Yusuke
**Hague, Douglas C.** See Mayo, M. J.
**Hague, Douglas C.; Mayo, M. J.**
Controlling crystallinity during processing of nanocrystalline titania.—73-12957
**Hahm, Sung-Ho** See Cho, Gyu-Seog
**Hahm, Yeong-Min; Hong, Young-Ho; Chang, Yoon-Ho**
Surface charge density and acidic characteristics of $SO_4^{2-}/Al_2O_3$.—73-16607
**Hahn, Bong-Seok** See Lee, Hong-Lim
**Hahn, D.; Schlachetzki, A.**
Carrier-concentration dependence of velocity-field characteristics in $In_{0.53}Ga_{0.47}As$.—73-11090
**Hahn, Dieter** See Andersson, Kjell; Borger, Manfred
**Hahn, H. Thomas** See Chiou, Song
**Hahn, Horst** See Chang, W.; Cui, Zuo-Lin; Skandan, Ganesh
**Hahn, Horst**
Microstructure and properties of nanostructured oxides.—73-09484
**Hahn, Iris** See Bahr, Hans-Achim; Schneider, Gerold A.
**Hahn, R. S.**
Ceramic grinding with self-sharpening diamond wheels.—73-05699
**Hahn, R.; Lost, C.; Schulze, P.**
Ultrasonic shaping: an economical procedure to machine complex ceramic components.—73-04952
**Hahn, Soo-Kap** See Yang, Doo-Young
**Hahn, T.** See Qadri, S. B.
**Hahn, T.-S.** See Park, J.-H.
**Hahne, D. B.** See Hellmold, P.
**Hahnert, M.** See Unger, Brita
**Haier, P.** See Esser, N.
**Haig, Stephen; Wu, Bei-Li L.; Yamanis, Jean**
Fluxed lanthanum chromite for low-temperature air firing.—73-12367
**Haigh, Mike** See Irish, Sally; McCracken, Derek J.
**Haigis, John R.** See Morrison, Philip W.
**Haije, W. G.** See Cao, G. Z.
**Haines, William; McNeil, Michael**
Method of making a [ferrite] vertical recording head for contact and near contact magnetic recording.—73-15381
**Hainsworth, S. V.; Bartlett, T.; Page, Trevor F.**
Nanoindentation response of systems with thin hard carbon coatings.—73-12837
**Haire, R. G.** See Chen, G.
**Hajcak, P.** See Shahriari, Mahmoud R.
**Hajek, Bohumil** See Ondracek, Jan
**Hajek, Milan** See Balik, Karel
**Haji, Keizo**
Improvements in porcelain manufacturing.—73-04043
**Hakamatsuka, Yasuharu; Irie, Hiroyuki**
Drug-impregnated ceramic.—73-15941
**Hakansson, Ulf** See Hansen, Staffan
**Hakim, Edward B.** See Carpenter, Joseph A., Jr.
**Hakim, M. Obaidul** See Ambia, M. G.
**Hakimzadeh, Roshanak; Vargas-Aburto, Carlos; Bailey, Sheila G.; Williams, Wendell S.**
Effect of proton irradiation and annealing on the diffusion length in indium phosphide.—73-11161
**Hakkens, F.** See Coene, W.
**Hakkinen, Tarja**
Influence of slag content of the microstructure, permeability, and mechanical properties of concrete: I, Microstructural studies and basic mechanical properties.—73-03488; Influence of slag content on the microstructure, permeability, and mechanical properties of concrete: II, Technical properties and theoretical considerations.—73-06677
**Hakoshima, Junichiro** See Yamagishi, Chitake
**Hakotani, Yasuhiko** See Nakatani, Seiichi
**Halada, G. P.; Clayton, C. R.**
Comparison of Mo-N and W-N synergism during passivation of stainless steel through X-ray photoelectron spectroscopy and electrochemical analysis.—73-06759
**Halasz, I.; Jen, H.-W.; Brenner, A.; Shelef, M.; Simon, K. Y.; Ng, K. Y. S.**
Determination of the oxygen content in superconducting and related cuprates using temperature-programmed reduction.—73-01521
**Haldar, Pradeep; Hoehn, J. G.; Balachandran, Uthamalingam; Motowidlo, L. R.**
Processing and transport properties of high-$J_c$ silver-clad Bi-2223 tapes and coils.—73-11877
**Halder, J. C.** See De, S. S.
**Halder, N. C.; Echon, E. A.**
Field effect on the deep levels and DX centers in $Al_xGa_{1-x}As$/GaAs and $In_xGa_{1-x}As$/GaAs.—73-04343
**Halevi, P.** See Madrigal-Melchor, J.
**Halex, Gunter** See Bittner, Hans-Georg
**Haley, Michael R.** See Tummala, Rao R.
**Halford, Gary R.** See Lerch, Bradley A.
**Halgeri, Anand B.** See Das, Jagannath
**Halicioglu, T.** See Ungar, P. J.
**Halicioglu, T.**
Calculations for defects formed on diamond surfaces.—73-06140
**Halimaoui, A.** See Dumas, P.
**Halkias, G.** See Peiro, F.
**Hall, Anthony H. P.; Winstanley, Alistair W.**
Zeolite catalysts suitable for hydrocarbon conversion.—73-02075
**Hall, C.** See Bergstrom, T. B.; Richardson, I. G.
**Hall, D. B.** See Tsoukala, V. G.
**Hall, David R.** See Hall, H. Tracy, Jr.
**Hall, David R.**
Method for manufacturing a diamond thrust bearing.—73-05312
**Hall, Douglas W.** See Aitken, Bruce G.
**Hall, H. Tracy, Jr.; Hall, David R.**
Carbide/metal composite material and a process therefor.—73-10303
**Hall, Jacqueline**
Chihuly, the virtuoso of glass.—73-13665
**Hall, M. G.** See Ash, J. E.
**Hall, Simon R.** See Harrison, Martin R.
**Hall, T. J.** See Fish, D. A.; Jeffrey, P. M.
**Hallak, A. B.** See Hamdan, N. M.; Khawaja, E. E.
**Hallen, H. D.** See Chang, A. M.
**Hallen, J. M.** See Cerezo, E.
**Haller, E. E.** See Bliss, D. E.; Yu, Kin-Man
**Halliburton, L. E.** See Scripsick, M. P.
**Halliday, D. P.; Moss, D.; Charbonneau, S.; Aers, G. C.;**
**Landheer, D.; Chatenoud, F.**
Ultrafast electron tunneling in reverse-biased, high-efficiency quantum-well laser structure.—73-07849
**Halliday, J. D.** See Lucuta, P. G.
**Hallock, P. H.** See Korenstein, R.
**Halloran, John W.** See Baskaran, Suresh
**Halperin, A.; Sucov, E. W.**
Dose dependence of the thermoluminescence (TL) peak at 200 K in Al-Na-containing quartz crystals.—73-05541
**Halperin, W. P.** See Song, Y.-Q.
**Halpern, B. L.** See Golz, John W.; Zhang, J.-Z.
**Halsall, H. P.; Boyce, P. J.; Wolverson, D.; Davies, J. J.;**
**Ashenford, D. E.; Lunn, B.**
Resonant electron spin-flip Raman scattering in $Zn_{1-x}Mn_xTe$.—73-07770
**Halsall, M. P.; Wolverson, D.; Davies, J. J.; Ashenford, D. E.; Lunn, B.**
Spin-flip Raman scattering from electrons bound to donors in both wells and barriers of CdTe/$Cd_{0.3}Mn_{0.7}$Te heterostructures.—73-05485
**Haluska, Loren A.** See Chandra, Grish; Pernisz, Udo C.
**Haluska, Loren A.**
Coatings for microelectronic devices and substrates.—73-12354; Low-temperature ozonolysis of silicon and ceramic oxide precursor polymers to ceramic coatings.—73-15947
**Halvarsson, Mats; Vuorinen, Sakari; Norden, Hans**
Microstructural investigation of κ-modification layers in CVD α-$Al_2O_3$/κ-$Al_2O_3$ multilayer coatings.—73-03165
**Halverson, D. C.; Ewald, K. H.; Munir, Z. A.**
Influence of reactant characteristics on the microstructures of combustion-synthesized titanium carbide.—73-09176

**Halverson, Danny C.; Billings, Garth W.; Johnston, George M.**
High neutron absorbing refractory compositions of matter and methods for their manufacture.—73-03684
**Halvorsen, Grant T.**
Protecting rebar in concrete.—73-06709
**Ham, F. E.** See Donadson, K. M.
**Ham-Su, R.** See Bloyce, D. M.; Tuffe, S.
**Hama, Hiromu** See Ookouchi, Takahiko
**Hama, Yoshiki** See Sato, Mineo
**Hama, Yoshimasa** See Kitagawa, Manabu
**Hama, Yukio** See Kwon, Young-Jin
**Hamada, Hiroki; Hiroyama, Ryoji; Honda, Shoji; Shono, M.; Yodoshi, K.; Yamaguchi, T.**
AlGaInP strained multiple quantum well visible laser diodes ($\lambda_p \leq 630$-nm band) with a multiquantum barrier grown on misoriented substrates.—73-14767
**Hamada, Ikuhisa** See Yoshida, Naomi
**Hamada, Kazuyuki** See Wada, Takahiro
**Hamada, M. A.** See Youssef, A. M.
**Hamada, Noriaki**
Temperature dependence of Hall coefficient in high-$T_c$ oxides.—73-11932
**Hamada, Yukitoshi** See Matsushita, Isao
**Hamagaki, M.** See Aoyagi, Yoshinobu
**Hamagami, Junichi** See Oh, Yong-Su
**Hamaguchi, C.** See Mizuno, H.
**Hamaguchi, Hiro-O.** See Kim, Byung-Kook
**Hamaguchi, Yoshikazu** See Shimono, Isao
**Hamaji, Yukio** See Abe, Yoshio; Kajiyoshi, Koji; Nishiyama, Toshiki; Sano, Harunobu
**Hamakawa, Yoshihiro** See Kanashima, Takeshi; Okuyama, Masanori
**Hamaker, R. W.** See He, S. S.
**Hamal, K.** See Stankov, K. A.
**Hamamoto, Mitsuharu** See Tsubakino, Harushige
**Hamanaka, K.** See Kishimoto, T.
**Hamanaka, Toshiyuki; Harada, Takashi; Hattori, Fumio**
Ceramic port liners.—73-05204
**Hamann, D. R.** See Mattheiss, L. F.
**Hamann, R.; Gobin, P. F.; Fougeres, R.**
Effect of internal stresses on the first stages of the cyclic deformation of an $SiC_p$/Al-6061 composite.—73-13827
**Hamano, Kenya** See Hwang, Chii-Shyang; Miikeda, Osamu; Nakahara, Masae
**Hamano, Kenya; Hatano, Atushi; Okada, Shigeru**
High-mechanical-strength porcelain body prepared from Amakusa pottery stone containing soda feldspar.—73-14661
**Hamano, Kenya; Nakagawa, Zenbee; Hasegawa, Minori**
Improvement of mechanical strength of porcelain bodies by fine grinding of raw materials.—73-02859; Improvement of mechanical strength of porcelain bodies by fine grinding of raw materials.—73-10858
**Hamano, Kenya; Nakajima, Hiroaki; Okuda, Fumio; Konuma, Masayuki**
Preparation of mullite ceramics from kaolin and aluminous materials: I, Effects of grain size and grinding of raw materials.—73-16926
**Hamano, Kenya; Wu, Yueh-Hong; Nakagawa, Zenbee; Hasegawa, Minori**
Effect of coarse quartz grains on mechanical strength of porcelain body.—73-03263
**Hamano, Kenya; Wu, Yueh-Hong; Nakagawa, Zenbee**
Effect of grain size of quartz on mechanical strength of porcelain body.—73-03264
**Hamasaki, Katsuyoshi** See Ishiguro, Takashi
**Hamasaki, Tetsuya** See Yoneta, Minoru
**Hamasaki, Toyohiro** See Ishizaki, Kozo; Kurushima, Toyokazu
**Hamasaki, Toyohiro; Ishizaki, Kozo**
Qualitative and quantitative evaluation of silicon nitride grain-boundary phase by cryogenic specific heat measurements.—73-08436; Quantitative evaluation of grain-boundary phases by cryogenic specific heat measurements.—73-03189
**Hamashima, Kazuo; Sato, Kimihiko**
Injection sleeve for die casting and a method of casting an aluminum or an aluminum alloy part.—73-13917
**Hamatani, Toshiji** See Hayashi, Shigenori
**Hamawi, A.; Wallden, L.**
Monolayer coverage dependence for the surface photovoltage of Si(100)/Na.—73-07682
**Hamazaki, Shinichi** See Kojima, Seiji; Takashige, Masaaki
**Hamazaki, Yoshihisa** See Yamamura, Takashi
**Hamberger, P.** See Koppensteiner, E.
**Hamdan, N. M.; Ziq, K. A.; Hallak, A. B.; Ozkan, H.**
Anisotropic changes induced by ion irradiation on Bi-based high-$T_c$ superconductors.—73-15386
**Hamdan, N.** See Albiss, B. A.
**Hamdona, Samla K.** See Hamza, Salem M.
**Hamers, J. S.** See Ding, J.
**Hames, Robert** See Kelman, Josh
**Hamilton, A. R.** See Linfield, E. H.
**Hamilton, Doug; Colvard, C.**
Subnanometer microscopy the easy way: an under-utilized tool for reliability assurance.—73-05088
**Hamilton, R. A. H.** See Rees, P.
**Hamilton, W. J.; Johnson, S. M.; Ahlgren, W. L.**
Electron microscope investigation of surface features of (100)$Cd_{1-x}Zn_xTe$ grown by metallorganic chemical vapor deposition.—73-09448
**Hamilton, W. J.; Vigil, J. A.; Konkel, W. H.; Harper, V. B.; Johnson, S. M.**
Effect of substrate tilt on MOCVD growth of (100)CdTe on (100)GaAs.—73-11166
**Hamlin, Chris; Stewart, Gordon**
Philosophy, principles, and implementation of continuous improvement.—73-09738
**Hamling, Jerry W.; Kriner, Richard W.**
Evaluation of granulated blast-furnace slag as a cementitious admixture—a case study.—73-06652
**Hamlyn, M. G.** See Arai, M.
**Hamm, R. A.** See Ross, F. M.
**Hammad, A. M.** See Issa, M. A.
**Hammarlund, B.** See Ouacha, A.
**Hammel, P. C.** See Reyes, A. P.
**Hammel, P. C.; Reyes, A. P.; Cheong, S. W.; Fisk, Z.; Schirber, J. E.**
NMR study of local structure in metallic $La_2Cu_{4+\delta}$.—73-16230
**Hammer, H.** See Golder, Peter
**Hammer, J. M.** See Guille, J. L.
**Hammer, Josef**
Fundamentals of colorimetry.—73-02611
**Hammer, K.** See Stiegler, J.
**Hamminger, Rainer; Heinrich, Juergen**
Development of advanced silicon nitride valves for combustion engines and some practical experience on the road.—73-05264
**Hammond, Michael** See Breval, Else
**Hammond, R. H.** See Yamamoto, K.
**Hammonds, J. P.** See Soderholm, L.
**Hammons, B. E.; Fritz, I. J.; Brennan, T. M.; Howard, A. J.; Olsen, J. A.**
Strain-relaxed InGaAs buffer layers grown by molecular beam epitaxy for 1.3-μm Fabry-Perot optical modulators.—73-11455
**Hammou, A.** See El Horr, N.; Scotti, C.
**Hammouche, A.** See Iharada, T.
**Hamoudi, A.; Ligeon, E.; Cibert, J.; Dang, Le-Si; Taterenko, S.; Feuillet, G.**
Implantation-enhanced interdiffusion of CdTe-ZnTe heterostructures.—73-07574
**Hampden-Smith, Mark J.** See Chandler, Clive D.; Zeng, Dong-Shui
**Hampp, E.** See Vetrano, J. S.
**Hampshire, D. P.; Chan, Siu-Wai**
Critical current density in high fields in epitaxial thin films of $Y_1Ba_2Cu_3O_{7-\delta}$: flux pinning and pair breaking.—73-11710
**Hampshire, S.** See Lonergan, J.; O'Reilly, K. P. J.; Redington, M.
**Hampshire, S.**
Oxynitride glasses and glass-ceramics.—73-03862
**Hampton, George L.**
Retrofit of cement grinding circuit at Cementos Veracruz Plant, Mexico.—73-03532
**Hamrin, C. E., Jr.** See Kim, J. S.
**Hamyln, M. G.** See Pigram, A. J.
**Hamza, Salem M.; Hamdona, Samla K.**
Dissolution of calcium carbonate crystals: a constant-composition kinetics study.—73-16111
**Hamzaoui, B.** See Fayoulle, S.
**Han, Ai-Zhen** See Gao, Yuan-Kai
**Han, Bin; Neumayer, Deborah A.; Schulz, D. L.; Hinds, B. J.; Marks, T. J.**
Materials for superconducting electronics: in situ growth of $PrGaO_3$ thin films by metallorganic chemical vapor deposition.—73-07338
**Han, Chuan-Xi** See Hao, Shi-Ming
**Han, Chuan-Xi; Zhang, Qi-Hai; Qu, Xuan-Hui**
New trends of intermetallics development—summary report of the symposium held in Sendai, Japan.—73-10257
**Han, Chung-S.** See Jang, Se A.
**Han, Do-Suck; Jones, H.; Atkinson, H. V.**
Wettability of silicon carbide by liquid aluminum: the effect of free silicon in the carbide and of magnesium, silicon, and copper alloy additions to the aluminum.—73-06879
**Han, Dong-Bin; Jang, Cheol-Woo; Baik, Sung-Gi; Park, Byoung-Hark**
Toughening of Ni-bonded $Cr_3C_2$ by Mo particulates.—73-10291
**Han, Gu-Chang; Wang, Yu-Gui; Han, Han-Min; Wang, Z.-H.; Wang, S.-X.; Yuan, W.-F.**
Resistive transition of Bi(2223) silver-clamped thick film.—73-11892
**Han, Gu-Chang; Wang, Yu-Gui**
Effects of heat-treatment condition and Gd substitution on $Nd_{1.85}Ce_{0.15}CuO_{4-y}$ superconductivity.—73-08045
**Han, Han-Min** See Han, Gu-Chang; Wang, Yu-Gui
**Han, In-Sub; Yang, Joon-Hwan; Suhr, Dong-Soo**
Properties of reaction-bonded silicon carbide depending on graphite additions.—73-09660
**Han, J.** See Fan, Y.
**Han, J.; Stavrinides, T. S.; Kobayashi, M.; Gunshor, R. L.; Hagerott, M.; Nurmikko, A. V.**
Growth and characterization of ZnTe:Na: *p*-AlSb diodes.—73-04350
**Han, Jeon-G.** See Oh, Soo-G.
**Han, Jian-Guo** See Han, Yan-Xiang
**Han, K. J.; Abbate, A.; Bhat, Ishwara B.; Akram, Salman; Das, P.**
Role of ZnSe films on GaAs using acoustoelectric voltage spectroscopy.—73-07780
**Han, K.-H.; Lee, Sung-Ik; Salk, S. H. S.; Shin, H.-J.; Lee, S.-H.; Ku, J.-K.**
Enhancement of the noise spectral densities near the resistive transition of YBCO microbridges.—73-01544
**Han, Ki-Sung** See Cheong, H.-M.; Jeon, Yong-Hee; Rhee, Jhun
**Han, Kyoung-Ran; Choi, Doo-Jin; Park, Sun-Jin**
Preparation and analysis of the SOG films.—73-13580
**Han, Kyung-Sop** See Kim, Min-Soo
**Han, Li-Ying** See Wang, Jian-Cheng
**Han, Myoung-Seoup; Suhr, Dong-Soo**
Crystalline phase and superconductor characteristics of the plasma-sprayed $YBa_2Cu_xO_{7-y}$ high-$T_c$ superconductor thick film.—73-04692
**Han, P. D.** See Kalinichev, A. G.
**Han, Q. Y.; Heberlein, J.; Pfender, Emil**
Feasibility study of thermal plasma destruction of toxic wastes in a counterflow liquid injection plasma reactor.—73-13058
**Han, Qi-Mei**
Fabrication of electrofusion-cast zircon mullite brick.—73-10728
**Han, Ru-Shan; Gan, Zi-Zhao; Pan, Wei**
Covalence corrections on ionic model total energy for $YBa_2Cu_3O_7$.—73-11707
**Han, Ru-Shan; Wang, Sehng; Yin, D.-L.; Zheng, Q.-Q.; Pan, Wei**
Electronic structure of $Ti_8C_{12}$ cluster.—73-08611
**Han, S. D.** See Campet, G.
**Han, S.** See Pan, L. S.
**Han, S.-F.** See Deng, Min
**Han, S.-W.** See Park, Jong-Wan
**Han, Sang-Chul** See Jeon, Jae-Ho
**Han, Sang-Mok,** See Seo, Jeong-Min; Choi, Sung-Il; Kang, Sang-Kyu; Kim, Kyung-Nam; Shin, Dae-Yong
**Han, Sang-Moo; Kang, Suk-Joong L.**
Kinetics of β-$Si_3N_4$ grain growth in $Si_3N_4$ ceramics sintered under high nitrogen pressure—comment.—73-02884
**Han, Seok-Kil; Kim, Yong-Cheol; Jang, Min-Su**
Alignment ratio of magnetically aligned high-$T_c$ superconducting $Y_1Ba_2Cu_3O_{7-y}$ and $Y_{0.5}Dy_{0.35}Ba_2Cu_3O_{7-y}$ thick films.—73-15384
**Han, Shun-Hui; Andersson, Magnus; Hegedus, Zsolt**
Upper critical magnetic field $H_{c2}$ of $YBa_2Cu_3O_{7-\delta}$ compounds.—73-08272
**Han, T. P. J.** See Yamaga, M.
**Han, W.; Rybicki, E. F.; Shadley, J. R.**
Improved interpretation of thermal spray coating bond strength data from ASTM Standard C633-79.—73-09720
**Han, Won-Taek; Tomozawa, Minoru**
Fractographic analysis of hydrothermally treated silica glass.—73-14191
**Han, Xiao-Yi; Shinohara, Masayuki; Yoshikawa, Nobuyuki; Sugahara, Masanori**
Single-electron charging effect in BiSrCaCuO granular thin films.—73-11898
**Han, Xu-Long**
Design of positive-pressure moisture exclusion dryers using once setting and firing processes.—73-12213
**Han, Y.; Voiles, E. T.; Chumbley, L. S.; Akinc, Mufit**
Microstructural development in nanocrystalline zinc sulfide powders.—73-06250
**Han, Yan-Xiang; Han, Jian-Guo**
Development of silica–magnesia sagger using fine particle raw materials.—73-10721
**Han, Yang-Su** See Choy, Jin-Ho
**Han, Yun-Qin**
Metal corrosion caused by thermal insulating calcium silicate products and corrosion prevention measures.—73-10742
**Han, Z. L.** See Tonner, B. P.
**Han, Z. P.; Dupree, R.; Gencten, A.; Liu, R. S.; Edwards, P. P.**
NMR evidence for common magnetic behavior in double layered superconducting cuprates.—73-08146
**Han, Z.** See Selinder, T. I.
**Hanabusa, Mitsuga**
Photoexcited processes related to semiconductor technology.—73-11378
**Hanada, Takashi** See Hikita, Tokihisa
**Hanada, Teiichi** See Tanabe, S.
**Hanada, Teiichi; Furuya, H.; Tanabe, S.; Soga, Naohiro**
Elastic moduli of rf-sputtered $Al_2O_3$-$TiO_2$ amorphous films.—73-03279
**Hanada, Teiichi; Tanabe, S.; Ando, A.; Soga, Naohiro**
Network structure of rf-sputtered amorphous $AlPO_4$-MgO and $AlPO_4$-CaO films.—73-05439
**Hanafusa, H.; Taguchi, E.; Dan, T.; Yoneda, K.**
Fabrication of a lateral *p-i-n* photodiode in an Si/($Si_{0.5}Ge_{0.2}$/Si) superlattice/Si/sapphire structure.—73-11207
**Hanagiri, Seiji** See Hosokawa, Kiyoshiro
**Hanaki, Yoshikazu** See Nishida, Toshihiko
**Hanaoka, Hirokazu** See Watanabe, Koichi
**Hanay, C.** See Heide, Klaus
**Hanberg, J.** See Thirstrup, C.
**Hanbucken, M.; Rottger, B.; Kliese, R.; Vianey, I.; Neddermeyer, H.**
STM study of mechanochemically prepared Si(111) substrates: an extended set of vicinal surfaces.—73-09511
**Hance, B. K.** See Tsai, C.
**Hancock, R. G. V.** See Komorowski, P. G.
**Handle, F.**
Development of the brick and roofing tile industry.—73-10675
**Handoo, S. K.; Samuel, George; Goswami, R. K.**
Evaluation of radiation-synthesized clinker.—73-09953
**Handwerker, Carol A.** See Kim, Doh-Yeon
**Handwerker, Carol A.; Cannon, Rowland M., Jr.; French, Roger H.**
Robert L. Coble: a retrospective.—73-06592
**Hane, Akira** See Nishizaka, Tsuyoshi
**Haneda, H.** See Machida, M.
**Haneda, Hajime** See Akita, Chiyoshi; Izaki, Toru; Shibagaki, Shigeki; Watanabe, Akio
**Haneda, Hajime; Yamamoto, Joyce K.; Kitamura, Kenji; Kimura, Shigeyuki**
Diffusion of aluminum, scandium, and gallium ions into lithium niobate single crystals.—73-06152
**Haneda, K.** See Kamiyama, T.
**Hanehara, Shunsuke** See Uchida, Shunichiro; Uchikawa, Hiroshi
**Hanehara, Shunsuke; Sawaki, Daisuke; Niinuma, Tetsuro; Uchikawa, Hiroshi**
Relationship between hardened and pore structure of hardened blended cement mortar and its drying shrinkage.—73-10135
**Haneishi, Yukihiko** See Kimura, Yutaka
**Haneman, D.** See Crisp, R. S.; Wu, S.
**Hangas, J.** See Rimai, L.

**Hangehold, R. L.** See Elsaesser, David W.
**Hanigofsky, J. A.** See Lackey, W. J.
**Hanisch, John L.**
Time is now: planning for the Clean Air Act (CAA).—73-09752
**Hankey, Dana L.** See Muralidhar, S. K.; Stadnicar, Edward, Jr.
**Hanklewicz, Janusz** See Bensebaa, Farid
**Hankin, S.** See Bulat, E. S.
**Hanko, Klara** See Gobolos, Sandor
**Hanna, D. C.** See Lauder, R. D.; Milton, M. J. T.
**Hanna, D. C.; Jones, J. K.; Large, A. C.; Shepherd, D. P.; Tropper, A. C.; Chandler, P. J.**
Quasi-three-level 1.03-μm laser operation of a planar ion-implanted Yb:YAG waveguide.—73-07758
**Hanna, D. C.; Large, A. C.; Shepherd, D. P.; Tropper, A. C.; Chartier, I.; Ferrand, B.**
Side-pumped Nd:YAG epitaxial waveguide laser.—73-01314
**Hanna, J.**
Preparation of Si thin films by spontaneous oxidation reaction of silane with fluorine.—73-15115
**Hannay, C.; Cloots, R.; Ausloos, M.**
Terrace structures in $DyBa_2Cu_3O_{7-x}$ grown in a magnetic field.—73-03208
**Hanni, W.; Muller, C.; Bingyeli, M.; Hintermann, H. E.; Krebs, P.; Grisel, A.**
Selective area deposition of diamond on 4 in Si wafers.—73-13248
**Hannigan, C.** See Qian, Y.-T.
**Hannink, Richard H. J.** See Badwal, S. P. S.; Drennan, John
**Hannink, Richard H. J.; Howard, Christopher J.; Kisi, Erich H.; Swain, Michael V.**
Relationship between fracture toughness and phase assemblage in Mg-PSZ.—73-06510
**Hannon, A. C.** See Wright, Adrian C.
**Hannon, A. C.; Vessal, Behnam; Parker, J. M.**
Neutron diffraction study of the structure of alkali silicate glasses.—73-03743
**Hannoosh, James G.** See Corbin, N. D.
**Hannotiau, Michel** See Terneu, Robert
**Hannoyer, B.; Lenglet, M.; Durr, J.**
Spectroscopic evidence of octahedral iron(III) in soda-lime silicate glasses.—73-10401
**Hannula, S. P.** See Ronkainen, H.
**Hanratty, T. J.** See Binder, I. L.
**Hansel, S.** See Schnabel, Michael
**Hansen, Eric**
Burning of solid waste in cement kilns.—73-05102
**Hansen, H.**
Experience with moist screening of impure cement raw materials.—73-00086
**Hansen, Lars**
Dry scrubbing: controls kiln emissions.—73-15871
**Hansen, Staffan; Hakansson, Ulf; Landa-Canovas, Angel R.; Faith, L.**
Crystal chemistry of NaP zeolites.—73-08583
**Hansen, W.** See Wendel, M.
**Hansma, Paul K.** See Hoh, Jan H.; Prater, C. B.
**Hanson, A. W.** See Stockman, S. A.
**Hanson, B.** See Burkhard, D. J. M.
**Hanson, C. M.** See Clawson, S. R.
**Hanson, Michael E.** See Shackelford, James F.
**Hanson, W. B.; Fernie, J. A.**
Glass-ceramics—an overview.—73-14399
**Hansson, Carolyn M.** See Hansson, I. L. H.
**Hansson, G. V.** See Larsson, M. I.
**Hansson, H.-C.** See Maximov, I.
**Hansson, I. L. H.; Hansson, Carolyn M.**
Electrochemical extraction of chlorides from concrete: I, A qualitative model of the process.—73-13717
**Hansson, T.** See Ramamurty, U.
**Hanykyr, Vladimir; Beranek, Michal**
Aluminum titanate ceramics: I, Influence of $Al_2O_3$ on course of synthesis and on $Al_2TiO_5$ microstructure.—73-05689; Aluminum titanate ceramics: II, Influence of MgO and its method of introduction on stability and mechanical properties of $Al_2TiO_5$.—73-09542
**Hanzel, Darko; Meisel, W.; Griesbach, P.; Navinsek, B.; Panjan, P.; Gutlich, P.**
Conversion electron Mossbauer characterization of Fe-Ti and Fe-TiN interfaces in dependence on pretreatments and bias voltage in physical vapor deposition.—73-17119
**Hao, Biao; Gong, Chang-De**
Anomalous isotope effects due to linear energy-dependent electronic density of states in high-$T_c$ superconductors.—73-04673
**Hao, Jian-Hua; Li, Zai-Guang; Yi, Xin-Jian**
Frequency response of $YBa_2Cu_3O_{7-\delta}$ granular and epitaxial films under radiation.—73-04729
**Hao, Jian-Hua; Zhao, Xing-Rong; Zhou, Fang-Qiao**
Ion beam sputtering of in situ superconducting $YBa_2Cu_3O_{7-\delta}$ films.—73-08115
**Hao, Jian-Min; Wen, Yi-Li; Zhang, Shi-Min**
XRD study on heavy ion disorder in $YBa_2Cu_3O_{7-y}$ film.—73-15670
**Hao, Ming-Yin** See Maiti, Bikas
**Hao, Shi-Ming; Sun, Rong-Yao; Han, Chuan-Xi; Li, Ming-Qiang**
Thermal-fatigue properties of $Ti_3Al$-based intermetallics.—73-10288
**Hao, Su-Jun**
Measurement of polarization characteristics in 1.3-μm InGaAsP/InP ridge-waveguide laser diode.—73-11309
**Hao, Wei** See Cui, Si-Cong
**Hao, X.** See Moodera, J. S.
**Hao, Xiao-Chun** See Xu, Di-Chun
**Hao, Yu-Zhi** See Zheng, Lu-Bin
**Hapanowicz, R. P.** See Wang, X. W.
**Happich, Carl-Christoph** See Natorff, Mieczyslaw
**Haque, A.** See Huq, N.
**Hara, K.** See Ueno, Yoshiyasu
**Hara, Kazuhiro** See Kuboyama, Keiichi
**Hara, Makoto**
Fluorophosphate glass.—73-00732
**Hara, N.; Kamiyama, T.; Kamata, I.; Nakahara, I.; Hayakawa, H.; Akiba, E.**
Evidence for new phases in Ln-doped $La_{1.875}Ba_{0.125}CuO_4$ (Ln=Nd, Sm).—73-08620
**Hara, N.; Noma, H.; Honma, S.**
Suitability of rice husk ash obtained by fluidized-bed combustion for blended cement.—73-06724
**Hara, Osamu; Togo, Isao**
Ceramic databases on STN.—73-09702
**Hara, Shiro; Meguro, T.; Aoyagi, Y.; Kawai, M.; Misawa, S.; Sakuma, E.**
Microscopic mechanisms of accurate layer-by-layer growth of beta-SiC.—73-06246
**Hara, T.** See Aoyagi, Yoshinobu
**Hara, Tatsuo; Ota, Rikuo; Fukunaga, Jiro; Wakasugi, Takashi; Miyake, Akiko**
Gel formation and drying characteristics in the $Na_2O$-$ZrO_2$-$SiO_2$ system.—73-02839; Gel formation and drying characteristics in the $Na_2O$-$ZrO_2$-$SiO_2$ system.—73-10540; Gelation on solid surfaces in water-free $Na_2O$-$ZrO_2$-$SiO_2$ sols.—73-16802; Local repairing of lining glass layers by the alumina powder composite sol-gel method.—73-13863
**Hara, Tatsuo; Ota, Rikuo; Wakasugi, Takashi; Fukunaga, Jiro**
Local repairing of lining glass layers by the alumina powder composite sol-gel method.—73-13864
**Hara, Tomohiko** See Shibata, Kenichi
**Hara, Tsukushi** See Yoshida, Noriyuki
**Hara, Yoshiaki** See Koyano, Mikio
**Harabi, A.** See Emblem, H. G.
**Harada, Hideyuki; Sakuma, Taketo**
Densification behavior of high-purity $Al_2O_3$ and $Al_2O_3$-15 vol% $ZrO_2$.—73-02765
**Harada, Hiroshi** See Miyazaki, Yuji
**Harada, Hiroshi; Noguchi, Yasunari; Kamada, Ryusei**
Quick setting and hardening mechanism of $C_4A_3(SO_3)$.—73-10123
**Harada, Jun** See Torizuka, Shiro
**Harada, K.** See Sasada, I.
**Harada, K.; Matsuda, T.; Kasai, H.; Bonevich, J. E.; Yoshida, T.; Kawabe, U.**
Vortex configuration and dynamics in $Bi_2Sr_{1.8}CaCu_2O_x$ thin films by Lorentz microscopy.—73-11940
**Harada, Katsuki** See Imahashi, Taichi
**Harada, Keizo; Itozaki, Hideo; Higaki, Kenjiro; Yazu, Shuji**
Process for preparing superconductor of compound oxide of Bi-Sr-Ca-Cu system.—73-11993
**Harada, Keizo; Itozaki, Hideo**
Method for forming a Bi-containing superconducting oxide film on a substrate with a buffer layer of $Bi_2O_3$.—73-04844
**Harada, Koushi** See Awazu, Koichi
**Harada, Masahiro; Mizobe, Arito**
Computer application to the refractory firing process development.—73-14581
**Harada, Masayuki** See Ikeda, Yasuhisa
**Harada, Naoyuki** See Gao, Tie
**Harada, Ryusuke; Kurushima, Toyokazu; Ishida, Hideki; Ishizaki, Kozo**
Thermal shock resistance of fiber-dispersed $ZrO_2$ ceramics—influence of $Y_2O_3$ content of matrix.—73-16632
**Harada, Shigeru**
Semiconductor device having protective insulating film.—73-04231
**Harada, Takashi** See Hamanaka, Toshiyuki
**Harada, Tetsuji; Kuji, Toshiro**
Influence of milling atmosphere on the magnetic properties of Nd-Fe-B alloy powders produced by mechanical grinding.—73-04617
**Harada, Tomohiro** See Koyama, Koichiro
**Harada, Tsutomu** See Shikano, Hiroshi
**Harada, Y.** See Masuda, S.
**Harada, Yoshinao** See Katsuyama, Shigeru
**Harada, Yuushi** See Ikuma, Yasuro
**Haraguchi, Masanobu** See Hirao, Yuji
**Haraguchi, Masanobu; Fukui, Masuo; Muto, Shunichi**
Surface polaritons due to the folded optical phonons in GaAs/AlAs superlattices.—73-01336
**Harato, Takuo; Furubayashi, Toshiki; Ashitani, Toshio; Ogawa, Toru**
Process for preparation of alumina.—73-12396
**Harbach, John**
Fiber-based ceramic materials.—73-04002
**Harbison, Barry B.; Aggarwal, Ishwar D.**
Hot isostatic pressing of fluoride glasses.—73-07138
**Harbison, J. P.** See Chen, W.; Kamiya, Itaru; Kash, K.
**Harburn, G.** See Mercurio, D.
**Harburn, George** See Williams, Jonathan M.
**Harburn, George; Tilley, R. J. D.; Williams, Jonathan M.; Williams, R. P.**
Structure of an L-$Ta_2O_5$-type phase in the L-$Ta_2O_5$-$TiO_2$ system.—73-08759
**Harbury, Henry K.; Porod, Wolfgang; Goodnick, Stephen M.**
Lateral *p-n* junctions between quasi-two-dimensional electron and hole systems at corrugated GaAs/AlGaAs interfaces.—73-07634
**Harchand, K. S.** See Sharma, Meenu
**Hardcastle, Franklin D.; Wachs, Israel E.; Eckert, H.; Jefferson, D. A.**
Vanadium(V) environments in bismuth vanadates: a structural investigation using Raman spectroscopy and solid-state $^{51}V$ NMR.—73-02536
**Hardcastle, Franklin D.; Wachs, Israel E.**
Determination of niobium–oxygen bond distances and bond orders by Raman spectroscopy.—73-02233
**Hardee, Johnnie R., Jr.** See Sherwood, David E., Jr.
**Harding, David R.; Blanquet, Elisabeth; Eldridge, Jeffery I.; Bhatt, Ramakrishna T.**
Low-temperature deposition of silicon nitride coatings on fibers for CMC's.—73-16852
**Harding, J. H.** See Sayle, T. X. T.
**Harding, K. S.** See Wheat, H. G.
**Hardtdegen, H.** See Meyer, R.
**Hardy, P.**
Physics of the main soldering methods and analysis of their influence on the bond quality of the realized multilayer capacitors.—73-01010
**Hardy, R. H. S.** See Ma, C. L. F.
**Hardy, W. N.** See Bonn, D. A.; Homes, C. C.
**Hardy, W. N.; Bonn, D. A.; Morgan, D. C.; Liang, R. X.; Zhang, K.**
Precision measurements of the temperature dependence of λ in $YBa_2Cu_3O_{6.95}$: strong evidence for nodes in the gap function.—73-15585
**Harel, S.** See Senemaud, C.
**Harendranath, Chilkunda S.** See Ranjbar, Khalil
**Hares, George B.; Miller, Roger A.; Tietz, Lisa A.**
Lead-free fine crystal glassware.—73-03937
**Harf, C.; Meyer, S.; Thomas, C.**
Cleanability of work surfaces in contact with food.—73-10204
**Harford, M. Z.** See Qadri, S. B.
**Hargis, Billy M.**
Method for obtaining via patterns in ceramic sheets.—73-11031
**Hargreaves, Edward**
Glass melting.—73-05138
**Hari, Erzsebet** See Boksay, Zoltan
**Hari, Jozsefne** See Boksay, Zoltan
**Harich, H.** See Ulitzka, S.
**Harima, Hisatomo** See Kubo, Yasunori
**Hariya, Yu** See Yamagata, Shigeru
**Harjula, Risto; Dyer, Alan; Pearson, Sarah D.; Townsend, Rodney P.**
Ion exchange in zeolites: I, Prediction of $Ca^{2+}$-$Na^+$ equilibria in zeolites X and Y.—73-08647
**Harjula, Risto; Dyer, Alan; Townsend, Rodney P.**
Ion exchange in zeolites: III, Hydrolysis and trace $^{45}Ca^{2+}$ and $^{22}Na^+$ exchanges in zeolites X and Y.—73-12613
**Harjula, Risto; Lehto, Jukka; Pothuis, Janneco H.; Dyer, Alan; Townsend, Rodney P.**
Ion exchange in zeolites: II, Hydrolysis and dissolution of zeolites NaX and NaY.—73-12612
**Harker, Alan B.** See DeNatale, Jeffrey D.
**Harker, S.** See Franck, J. P.
**Harkins, Bruce D.** See Ward, Michael E.
**Harlow, R. L.** See Parise, John B.
**Harman, Theodore C.**
Controlled *p*-type Sb doping in LPE-grown $Hg_{1-x}Cd_xTe$ epilayers.—73-11121
**Harmand, Helene; Oudard, M. Jean-Francois; Bruneel, Dominique**
Laminated glass with an electroconductive layer.—73-14545
**Harmatz, M.** See Gerardi, G. J.
**Harmer, Mark A.; Parkinson, Bruce A.**
Etching of nanoscale structures on high-temperature superconductors.—73-11954
**Harmer, Martin P.** See Chou, Ye-T.; French, Jonathan D.
**Harmer, S.** See Eastwood, B.
**Harmon, David M.; Finefield, Mark A.; Harter, James A.**
Differences in fatigue and fracture behavior of woven-mat and acrylic binder SCS-6/Ti-15-3 composites.—73-13820
**Haroche, S.** See Collot, L.
**Harold, Michael P.** See Watson, Paul C.
**Harp, G. R.** See Tonner, B. P.
**Harp, G. R.; Saldin, D. K.; Tonner, B. P.**
Finite size effects and short-range crystalline order in Si and $SiO_2$ studied by X-ray absorption fine structure spectroscopy.—73-06917
**Harper, T. J.**
C-DC melter.—73-12210
**Harper, V. B.** See Hamilton, W. J.
**Harr, Klaus** See Schmidt, Michael
**Harrell, J. W.; Richards, David; Parker, Martin R.**
Delta-H plot evaluation of remanence behavior in barium ferrite tapes and disks.—73-04603
**Harris, B.** See Cooke, R. G.; Davies, C. M. A.; Habib, F. A.; Laurie, J.; Russell-Floyd, R. S.
**Harris, D. C.** See Wan, Y. M.
**Harris, E. A.** See Searle, T. M.; Stanley, A. T.
**Harris, G. S.** See Xu, X.-L.
**Harris, Georgia**
Ensuring accuracy and traceability of weighing instruments.—73-05045
**Harris, H. M.** See Hill, D. N.
**Harris, J. J.** See Nicholas, R. J.
**Harris, J. M.; Ong, N. P.; Yan, Y. F.**
Hall effect of vortices parallel to $CuO_2$ layers and the origin of the negative Hall anomaly in $YBa_2Cu_3O_{7-\delta}$.—73-15495
**Harris, James S., Jr.** See Eckstein, J. N.; Liu, William; Yamamoto, K.
**Harris, K. A.** See Gold, Jeffrey S.; Myers, T. H.; Yanka, R. W.
**Harris, K. A.; Yanka, R. W.; Mohnkern, L. M.; Reisinger, A. R.; Myers, T. H.; Yang, Z.**
Properties of (211)B HgCd-CdTe superlattices grown by photon-assisted molecular beam epitaxy.—73-07746
**Harris, Meckie T.** See Hart, D. W.
**Harris, Michael T.; Scott, Timothy C.; Byers, Charles H.**
Synthesis of metal hydrous oxide particles by multiphase electrodispersion.—73-13306
**Harris, Robert; Bergen, George J.; Studer, Phillip A.**
Dimensionally stable graphite-fiber/glass composite.—73-10517
**Harris, Robin K.** See Hauck, Daniela S. B.; Sjoberg, Jorgen
**Harris, S. J.; McColl, I. R.; Huang, Z. W.**
Influence of thermomechanical processing on the tensile and fatigue properties of an SiC-particle-reinforced aluminum alloy.—73-06809

**Harris, T. D.** See Feldman, R. D.
**Harris, Timothy**
Englishman's experiences with American glass.—73-13617
**Harrison, Carole C.; Harrison, Philip G.**
Nanoparticle tin(IV) oxide entrapped in amorphous matrices.—73-03860
**Harrison, Carole C.; Li, Xiao-Chun; Hopkinson, Ian; Stratford, S. E.; Orpen, A. G.**
Uv-visible–near-ir and EXAFS study of Co(II) coordination chemistry in postdoped silica sol-gel glasses.—73-12728
**Harrison, George C.**
Method for making lightweight ceramic particles.—73-05149
**Harrison, J. F.** See Mahanti, S. D.
**Harrison, Jeffrey B.**
Method of making porous alumina.—73-05231
**Harrison, Martin R.; Hall, Simon R.; Beales, Timothy P.**
Superconducting ceramic composition comprising (Pb,Cd)-Sr(Y,Q)-Cu-O, wherein Q is Ca or Sr.—73-15694
**Harrison, P. A.; Hayden, R. K.; Henini, M.; Valadares, E. C.; Hughes, O. H.; Eaves, L.**
Growth of *p*- and *n*-type GaAs/(AlGa)As double barrier resonant tunneling devices on (311)A and (111)B substrate orientations.—73-07551
**Harrison, P.** See Hagston, W. E.
**Harrison, Paul**
Ceramic wear materials—horses for courses.—73-05160
**Harrison, Philip G.** See Harrison, Carole C.
**Harrison, W. T. A.** See McManus, A. V. P.; Morris, R. E.
**Harrison, William A.** See Waldrop, J. R.
**Harrison, William T. A.** See Moran, Kelly L.; Nenoff, Tina M.
**Harrison, William T. A.; Gier, Thurman E.; Stucky, Galen**
Synthesis and structure of $Li_8(HPO_4)(BePO_4)_8{\cdot}H_2O$: a new zeolite LOS-type beryllophosphate molecular sieve.—73-08765
**Harshavardhan, K. S.** See Peters, C. H.
**Harshe, Girish** See Breval, E.
**Harshe, Girish; Agrawal, Dinesh K.; Limaye, Santosh**
High-temperature mechanical properties and chemical stability of $Ba_{1+x}Zr_4P_{6-2x}Si_{2x}O_{24}$ low-thermal-expansion ceramics.—73-13546
**Hart, D'Arcy** See Bourne, Orson L.
**Hart, D. W.; Hunt, Charles A.; Hunt, D. D.; Martin, Joel J.; Harris, Meckie T.; Larkin, John J.**
Low-temperature photochromic response of bismuth silicon oxide.—73-02628
**Hart, D. W.; Hunt, Charles A.; Martin, Joel J.**
Low-temperature photochromic response of gallium-doped bismuth germanium oxide.—73-02629
**Hart-Smith, L. J.**
Inherent fallacy in composite interaction failure curves.—73-09624
**Harter, James A.** See Harmon, David M.
**Hartford, E. H.** See Sobolewski, M. A.
**Hartge, J.** See Mandrus, D.
**Hartig, Klaus W.** See Lingle, Philip J.
**Hartinger, L.**
Waste water legislation in the Federal Republic of Germany. The goal: prevention–reduction–salvage.—73-03412
**Hartiti, Bouchaib** See Ventura, Laurent
**Hartl, M.** See Kotzler, J.
**Hartley, R. H.; Folkard, M. A.; Carr, D.; Orders, P. J.; Rees, D.; Varga, I. K.**
Real-time control of the molecular beam epitaxial growth of CdHgTe and CdTe/HgTe superlattices using ellipsometry.—73-07764
**Hartman, Dennis M.** See Hoguet, Robert G.
**Hartmann, A.; Russell, G. J.; Taylor, K. N. R.**
Energy loss and charge exchange studies of cleaved $YBa_2Cu_3O_{7-\delta}$ single-crystal surfaces.—73-15458
**Hartmann, P.** See Kozhukharov, V.
**Hartung, Rudiger**
Process for the preparation of an ion-conduction ceramic material.—73-01066
**Hartzell, E. Torbjorn; Akerman, Jan; Fischer, Udo K. R.**
Cemented carbide body used preferably for abrasive rock drilling and mineral cutting.—73-12449
**Haruna, Y.** See Komeya, Katsutoshi
**Harutunian, S. R.; Sahahian, S. R.**
Nonlinear *I-V* characteristics of $YBa_2Cu_3O_{7-x}$-In contacts.—73-08147
**Haruvy, Yair; Webber, Stephen E.**
Fast sol-gel preparation of glasses.—73-03917
**Haruyama, Shiro** See Momma, Akihiko
**Harvey, K. B.; Litke, C. D.; Larocque, C. A. B.**
Dissolution of a simple glass: IV, Behavior in saturating and saturated systems.—73-10364
**Harwood, P.** See Graupner, R. K.
**Harzt, Torsten** See Uhlig, D.
**Haschke, W.**
State of the art of fully automatic valve-bag filling technology.—73-12065; World's largest [cement] packing and loading plant at the Tabkwang plant of Siam City Cement Co.—layout and mechanical configuration.—73-13793
**Hascicek, Yusuf S.; Testardi, Louis R.**
Superconductive alloys having bifurcated critical current density and method of preparation.—73-12003
**Hascicek, Yusuh S.; Kleinhammes, A.; Dorin, V.; Testardi, Louis R.**
Transition to vanishing current superconductivity in $YBa_2Cu_3O_x$.—73-01697
**Hase, A.** See Rossow, U.
**Hase, M.; Terasaki, I.; Sasago, Y.; Uchinokura, K.; Obara, H.**
Effects of the substitution of Zn for Cu in the spin-Peierls cuprate $CuGeO_3$: the suppression of the spin-Peierls transition and the occurrence of a new spin-glass state.—73-12578
**Hase, Takashi** See Egi, Toshio
**Hase, Takashi; Morishita, Tadataka; Ohata, Katsumi; Izumi, Hirohiko**
Laser ablation method for forming oxide superconducting films.—73-11958
**Hasebe, Tsuginori** See Watanabe, Kazuo
**Hasegawa, Akihiro; Kameyama, Tetsuya; Motoe, Akihiro; Ueda, M.; Akashi, K.; Fukuda, K.**
Coating of hydroxyapatite on zirconia utilizing a radio-frequency thermal plasma process.—73-12946
**Hasegawa, Akihiro; Kameyama, Tetsuya; Motoe, Akihiro**
Coating of hydroxyapatite on zirconia utilizing a radio-frequency thermal plasma process.—73-05710
**Hasegawa, Akira** See Sato, Osamu
**Hasegawa, Akira; Fujitsu, Satoru; Koumoto, Kunihito**
Solubility of lanthanum oxide in barium titanate.—73-02435
**Hasegawa, H.** See Kodama, Satoshi; Sobiesierski, Z.
**Hasegawa, Haruhiro** See Nishino, Toshikazu; Saitoh, Shinichiroh
**Hasegawa, Haruhiro; Aida, Toshiyuki; Nishino, Toshikazu; Hatano, Mutsuko; Nakane, Hideaki; Fukazawa, Tokuumi**
Oxide superconducting device.—73-04860
**Hasegawa, Hideo** See Ozawa, Masakuni
**Hasegawa, Isao**
Silicate species formed by dissolution of (2-hydroxyethyl)trimethylammonium silicate in water and in methanol.—73-12681
**Hasegawa, M.** See Kanno, R.; Majima, Kazuhiko; Suzuki, Mineo
**Hasegawa, Masashi** See Takei, Humihiko
**Hasegawa, Minori** See Hamano, Kenya
**Hasegawa, Mitsuru; Hiraiwa, Tadashi; Hatanaka, Tetsuo**
Abrasive grain and manufacture for the same.—73-09769
**Hasegawa, S.; Amano, Y.; Inokuma, T.**
Relationship between the stress and bonding properties of amorphous $SiN_x$:H films.—73-12876
**Hasegawa, Shinji** See Majima, Kazuhiko
**Hasegawa, Tetsuya** See Kawasaki, Masashi
**Hasegawa, Y.** See Avouris, P.
**Hasehmi, Tooraj**
Ceramic [conductive] material and process for its production.—73-14742
**Hasenberg, T. C.**
Multiple quantum wells consisting of InAs/GaAs short-period strained-layer superlattice [SPSLS] wells for 1.3–1.55-μm photonic applications.—73-11340
**Hasenohri, Stanislav** See Huelt, Kari T.
**Hashemi, Amin H.; Kelly, Timothy L.**
Process for determining the quality of temper of a glass sheet using a laser beam.—73-05099
**Hashemi, M. M.; Li, Y.; Kiziloglu, K.; Wassermeier, M.; Petroff, P. M.; Mishra, U. K.**
Direct-current and radio-frequency characterization of submicron-striped channel field effect transistor structures using focused ion beam and electron-beam lithography.—73-14838
**Hashemi, T.** See Illingsworth, J.
**Hashi, Yoko; Senna, Mamoru**
Difference in the properties of mullite slurries and cast bodies with dispersant given during or after grinding.—73-16713
**Hashiba, M.; Sakurada, O.; Itho, M.; Takagi, T.; Hiramatsu, K.; Nurishi, Y.**
Effectiveness of a dispersant for the thickening of alumina slurries while retaining the fluidity.—73-09102
**Hashibe, Yoshio** See Shibuya, Takehiro
**Hashida, Toshiyuki** See Li, Victor C.; Takahashi, Hideaki
**Hashida, Toshiyuki; Li, Victor C.; Takahashi, Hideaki**
New development of the *J*-based fracture testing technique for ceramic matrix composites [CMC's].—73-12172
**Hashiguchi, Hideto; Kinugasa, Hisashi**
Electrical resistivity of α-SiC ceramics added with NiO.—73-14702
**Hashiguchi, Shoichi; Min, Eungi; Kikkawa, Shinichi**
Reactivity of a Y-Ba-Cu-O superconductor with electrooptic crystals.—73-11889
**Hashim, M.** See Shaari, A. H.
**Hashimoto, A.; Sato, Y.**
New cutting named "Goban-Wari" of glass plates with "elastic working."—73-14437
**Hashimoto, Akira; Hoshi, Susumu**
Heat-resistant expansion member.—73-02043
**Hashimoto, Chisato** See Machida, Katsuyuki
**Hashimoto, F.** See Shimura, H
**Hashimoto, Hatsujiro**
Role of electron microscopy on the research of materials and its future aspects.—73-05083
**Hashimoto, Junichi; Katsuyama, Tsukuru; Yoshida, Ichiro; Hayashi, H.**
Strain-induced effects on the performance of AlGaInP visible lasers.—73-11454
**Hashimoto, Kaoru** See Suzuki, Hitoshi
**Hashimoto, Kazuaki; Toda, Yoshitomo; Hashimoto, Koshiro**
Synthesis and property of copper(II) hydrogen phosphate.—73-10175
**Hashimoto, Kenji; Masuda, Takao; Sato, Atsushi; Yoshida, Shuichi**
Synthetic film of zeolite crystal body and method for manufacturing the zeolite film.—73-05246
**Hashimoto, Koshiro** See Hashimoto, Kazuaki
**Hashimoto, Masaaki** See Mitamura, Hisayoshi
**Hashimoto, Misao** See Takizawa, Takeo
**Hashimoto, N.** See Suzuki, K.
**Hashimoto, Noboru; Deki, Shigehito; Yato, Hisanari; Kanaji, Yukio**
Effect of polynuclear complex content on the synthesis of aluminum nitride from aluminum polynuclear complex.—73-13014
**Hashimoto, Noboru; Tanaka, Kyoji; Kajita, Susumu; Yoden, Hiroyoshi**
Process for producing an aluminum nitride sintered product.—73-16012
**Hashimoto, Noboru; Yoden, Hiroyoshi; Nomura, Kazuo; Deki, Shigehito**
Influence of carbon source on the synthesis of AlN powder from aluminum polynuclear complexes.—73-02867
**Hashimoto, S.** See Sutoh, K.
**Hashimoto, Seiichi** See Uchikawa, Hiroshi
**Hashimoto, Shigeaki** See Tashima, Shunzo
**Hashimoto, Shin; Yazaki, Eiki; Kodaira, Kohei**
Hydrothermal growth of quartz from ammonium fluoride solution.—73-16825; 73-16826
**Hashimoto, T.** See Omata, T.
**Hashimoto, Tadanori; Yoko, Toshinobu; Sakka, Sumio**
Third-order nonlinear optical susceptibility of α-$Fe_2O_3$ thin film prepared by the sol-gel method.—73-05679; Third-order nonlinear optical susceptibility of α-$Fe_2O_3$ thin film prepared by the sol-gel method.—73-12901
**Hashimoto, Takuya; Kawazoe, Hiroshi**
Effect of oxygen deficiency on the structure and conduction behavior of $BaPb_{0.75}Bi_{0.25}O_{3-\delta}$.—73-16120
**Hashimoto, Toshikuni** See Tsubone, Daisuke
**Hashiuchi, Hiroshi; Nagataki, Shigeyoshi; Otsuki, Nobuaki; Saitou, Takashi**
Influence of autogenous healing of cement mortar on chloride corrosion of embedded steel bars in mortar.—73-10003
**Hashizuka, Yutaka** See Kondo, Yoshihito; Kono, Yoshihito; Nakahara, Masae
**Hashizume, Genzo** See Ishihara, Mari
**Hashizume, Tomi** See Bai, Chun-Li
**Hashmi, M. S. J.** See Cameron, D. C.
**Haskell, Roger W.**
Method of making a gas turbine blade having a duplex coating.—73-03695
**Haslov, Peter; Jensen, Knud Bundgaard; Skovgaard, Niels H.**
Degradation of stressed optical fibers in water: new worst-case lifetime estimation model.—73-10428
**Hasnain, Ghulam** See Wiesenfeld, Jay M.
**Haspel, D. W.** See Flintham, T. J.
**Hassan, A. R.**
Biexciton formation by two-photon absorption in quantum wells.—73-07392
**Hassanali, M.** See Moukwa, M.
**Hassel, Robert**
Rheology: a versatile materials characterization technique.—73-12189
**Hasselman, D. P. H.** See Bhatt, H.; Thomas, J. R., Jr.
**Hasselman, D. P. H.; Donaldson, Kimberly Y.; Liu, Jeng; Gauckler, Ludwig J.; Ownby, P. Darrell**
Thermal conductivity of a particulate-diamond-reinforced cordierite matrix composite.—73-12890
**Hasselman, D. P. H.; Donaldson, Kimberly Y.; Venkateswaran, A.**
Role of cracks in the nonlinear deformation and fracture behavior of polycrystalline ceramics.—73-06513
**Hassen, A.; Bacquet, G.; Lauret, N.; Barrau, J.; Howard, L. K.; Dunstan, D. J.**
Spin orientation by optical pumping in strained $In_xGa_{1-x}As/GaAs$ quantum wells.—73-15174
**Hasslich, D.** See Clauss, Ulrich
**Hastert, James L.** See Roy, Donald W.
**Hastreiter, G.; Forsthofer, F.; Keller, J.**
Frequency shifts and linewidth changes of ir-active phonons in double-layered high-temperature superconductors.—73-11771
**Hasuo, Shinya** See Yoshida, Akira
**Hasz, W. C.; Whang, J.; Moynihan, C. T.**
Comparison of physical properties of $ZrF_4$- and $HfF_4$-based melts and glasses.—73-07004; Physical properties of $ZrF_4$- and $HfF_4$-based melts and glasses.—73-14252
**Hata, C.** See Hiraga, H.
**Hata, Fumiaki** See Watanabe, Kazuo
**Hata, Kazuo** See Osaka, Shigemi
**Hata, Kazuo; Ito, Shigeru; Motoyama, Atsushi; Tanaka, Masashi; Taniguchi, Yoichi; Terado, Sadahiro**
Water-repellent window glass and method for preparation thereof.—73-10670
**Hata, Susumu** See Kato, Kazutoshi
**Hata, T.** See Horita, Susumu
**Hata, William** See Kuo, Arthur T.
**Hatakeyama, Fumie; Maekawa, Takashi**
Structure of $Al_2O_3$-$SiO_2$ gels derived from aluminum nitrate and tetraethylorthosilicate.—73-05500; Structure of $Al_2O_3$-$SiO_2$ gels derived from aluminum nitrate and tetraethylorthosilicate.—73-12703
**Hatakoshi, G.** See Itaya, Kazuhiko; Rennie, John
**Hatalis, Miltiadis K.** See Kouvatsos, Dimitrios N.; Kung, Ji-Ho
**Hatanaka, Tatsuya** See Ozawa, Masakuni
**Hatanaka, Tetsuo** See Hasegawa, Mitsuru
**Hatano, Atushi** See Hamano, Kenya
**Hatano, Hironori** See Hayashi, Shinsuke
**Hatano, Mutsuko** See Hasegawa, Haruhiro
**Hatano, Takeshi** See Narita, Hideo
**Hatch, S. R.; Polizzotti, R. S.; Dougal, S.; Rabinowitz, P.**
In situ surface vibrational spectroscopy of the vapor/solid and liquid/solid interfaces of acetonitrile on $ZrO_2$.—73-09464
**Hatem, G.; Gaune-Escard, M.; Hoch, M.**
Experimental thermodynamics and phase equilibria estimation in Zr fluoride glasses.—73-06916
**Hatfield, William T.; Rohling, William W.; Daum, Wolfgang; Chalek, Carl L.**
Method of optimally operating a computer numerical control milling machine to mill optimal high density interconnect substrates.—73-04997
**Hatta, Akimitsu** See Mori, Yusuki
**Hatta, H.** See Kogo, Yutaka
**Hatta, Shinichiro** See Kasowski, Robert V.

**Hattangady, S. V.; Alley, R. G.; Fountain, G. G.; Markunas, R. J.; Lucovsky, G.; Temple, D.**
Effect of rf power on remote plasma-deposited $SiO_2$ films.—73-09094
**Hattangady, S. V.; Fountain, G. G.; Alley, R. G.; Rudder, R. A.; Markunas, R. J.**
Low-temperature (300°C) stacked oxide-nitride-oxide gate dielectrics with remote plasma-enhanced chemical vapor deposition.—73-00991
**Hatton, P. D.** See Crain, J.
**Hattori, A.** See Nishikawa, T.
**Hattori, Fumio** See Hamanaka, Toshiyuki
**Hattori, Hisao** See Nagaishi, Tatsuoki
**Hattori, Hisao; Higaki, Kenjiro; Itozaki, Hideo**
Process for preparing a thin film of Bi-type oxide superconductor.—73-01732
**Hattori, Makoto** See Ohashi, Masao
**Hattori, Masumi** See Fujii, Eiji
**Hattori, Mitsuru** See Yamada, Naohito
**Hattori, Takeo; Nishiyama, Shin; Fukuda, Muneyuki; Iwadate, Y.**
Preparation of garnet-type $Gd_3Al_5O_{12}$ powders by an amorphous citrate process.—73-13188
**Hattori, Takeo; Nishiyama, Shin; Fukuda, Muneyuki**
Preparation of garnet-type $Gd_3Al_5O_{12}$ powders by an amorphous citrate process.—73-05972
**Hattori, Takeo; Nishiyama, Shin; Kishi, Y.; Iwadate, Y.**
Characterization of perovskite-type $GdFeO_3$ powders prepared by amorphous citrate process.—73-08571
**Hattori, Takeo**
High-resolution X-ray photoemission spectroscopy studies of thin $SiO_2$ and $Si/SiO_2$ interfaces.—73-12595
**Hattori, Yasuhisa** See Katagiri, Naruhito
**Hatzopoulos, Z.** See Calamiotou, M.
**Hauck, Daniela S. B.; Harris, Robin K.; Apperley, David C.; Thompson, D. P.**
Structural investigation of YAM-type yttrium silicon oxynitride by $^{15}N$ magic angle spinning nuclear magnetic resonance.—73-12699
**Haug, R. J.** See Brawner, D. A.; Kukushkin, I. V.
**Haug, S. B.** See Dharani, L. R.
**Haugen, H. K.** See Shi, Yuan
**Haught, Debbie A.** See Talmy, Inna G.
**Haukka, S.; Lakomaa, E.-L.; Suntola, T.**
Analytical and chemical techniques in the study of surface species in atomic layer epitaxy.—73-05020
**Hauksson, I.** See Simpson, J.
**Haun, M. J.** See Chen, Ning-Wei; Krutyholowa, M. W.; Reed, C. T.
**Haun, Niels**
Sol-gel process of making gradient-index glass.—73-10665
**Haung, C.-J.; Chang, Chu-Yen; Tseng, Tseung-Yuen**
Bolometric response of superconducting $YBa_2Cu_3O_{7-x}$ microbridges.—73-11697
**Haung, X.** See Nicholson, Patrick S.
**Haupt, D. L.** See Breunig, T. M.
**Haupt, L.** See Von Helmolt, R.
**Haupt, Uwe**
Injection molding of powder materials.—73-01793
**Hauret, Georges** See Luspin, Yves; Vaills, Yahn
**Haus, J. W.; Chung-Yau, F.; Bowden, C. M.**
Nonlinear electromagnetic field response of high-$T_c$ superconducting microparticle composites.—73-08149
**Hause, Vern** See Chambers, Ben
**Hauser, J.** See Schops, W.
**Hausermann, D.** See Muhamad, M. N.
**Haushalter, R. C.** See Mundi, L. A.; Tsai, Men-Ting
**Hausler, K.** See Sayir, M. B.
**Hausner, H.** See Welker, M.
**Haussler, P.** See Maul, M.
**Hautojarvi, P.** See Makinen, J.; Saarinen, K.
**Hauzenberger, F.** See Faschinger, W.
**Hauzenberger, F.; Faschinger, W.; Juza, P.; Pesek, A.; Lischka, K.; Sitter, H.**
Growth and characterization of CdTe-ZnTe short-period superlattices.—73-04347
**Hava, S.** See Auslender, M.
**Haverlag, M.; Dehrlein, G. S.**
In situ ellipsometry and reflectometry during etching of patterned surfaces: experiments and simulations.—73-07580
**Haverlock, Tamara J.** See Bamberger, Carlos E.
**Haviar, Miroslav** See Fellner, Pavel
**Haviar, Miroslav; Herbertsson, H.**
Stability of yttrium α-SiAlON under high pressures.—73-16312
**Haviar, Miroslav**
Influence of oxygen content on formation of yttrium α-SiAlON ceramics.—73-16838
**Havlica, J.** See Gabrisove, A.; Sahu, S.
**Havlica, J.; Roztocka, D.; Sahu, S.**
Hydration kinetics of calcium aluminate phases in the presence of various ratios of $Ca^{2+}$ and $SO_4^{2-}$ ions in the liquid phase.—73-00102
**Havlica, J.; Sahu, S.**
Mechanism of ettringite and monosulfate formation.—73-10039
**Havrda, Jiri** See Kovac, Miroslav
**Havrda, Jiri**
Bioinert $Al_2O_3$ ceramics for medical purposes.—73-05157
**Hawbolt, E. B.** See Davies, C. H. J.
**Hawk, J. A.** See Anderson, R. M.; Maupin, H. E.
**Hawkins, Bruce L.** See Schwab, Stuart T.
**Hawkins, Peter**
Selection criteria for straight-line edgers.—73-12061
**Hawsey, Robert A.**
Team sport of technology transfer: spectators welcome.—73-15649
**Hay, David G.** See Trigg, Mark B.
**Hay, G. G.** See Burns, D.
**Hay, Jack C.** See White, Kenneth W.
**Hay, Jack C.; White, Kenneth W.**
Crack face bridging tractions in monolithic spinel.—73-06346
**Hay, Randall S.; Mah, Tai-Il; Cooke, C.**
Molybdenum palladium fiber matrix interlayers for ceramic composites.—73-13875
**Hay, Randall S.**
Kinetics and deformation during the reaction of yttrium-aluminum perovskite and alumina to yttrium-aluminum garnet.—73-13413
**Hayakawa, H.** See Hara, N.
**Hayakawa, Hiroshi; Akiba, Etsuo; Ono, Shuitiro; Ihara, Hideo; Izumi, Fujio; Asano, Hajime**
Refinement of the crystal structures of $Cu_6O_8InCl$ and $Cu_6O_8Cu_2Cl$ by neutron powder diffraction.—73-08721
**Hayakawa, Junji** See Fukumi, Kohei
**Hayakawa, Motozo** See Martinez Fernandez, Julian
**Hayakawa, Motozo; Onda, Y.; Oka, M.; Yoshimura, Masahiro; Yashima, Masatomo**
Electron microscopic observation of rapidly cooled $ZrO_2$-3 mol% $Sm_2O_3$ from the melt.—73-17130
**Hayakawa, Osamu; Tsubaki, Junichiro**
Multiclient study project comparison of the particle size analyzers and establishment of its techniques.—73-01918
**Hayami, W.** See Hwang, Y.; Souda, R.
**Hayami, Yumi** See Kubo, Yukio; Shimizu, Noriyuki
**Hayamizu, Kikuko** See Kikuchi, Naoto
**Hayano, Hitoshi** See Ezura, Eizi
**Hayasaka, K.** See Watanabe, W.
**Hayasaka, Toshiaki; Kimura, Takuma**
Exhaust gas purifying catalyst and an exhaust gas purifying method using the catalyst.—73-02036
**Hayase, Koichi**
Development and future aspects of ironmaking technology in Japan.—73-17473
**Hayase, Masahiro** See Nagahata, Tsutomu
**Hayashi, Akira** See Saito, Masao
**Hayashi, Chiharu** See Saito, Shinji
**Hayashi, Chikara** See Oda, Masaaki
**Hayashi, H.** See Hashimoto, Junichi
**Hayashi, Hidehiko** See Takahashi, Yasutaka
**Hayashi, Hidetaka; Izumi, Shinya; Tari, Isao**
Codeposition of α-alumina particles from acid copper sulfate bath.—73-07289
**Hayashi, Hiroaki; Suzuki, Hisao; Saito, Hajime**
Synthesis of $Y_2O_3$-doped $ZrO_2$ gel monoliths by polycondensation of metal alkoxide and their change on heating: I, Preparation of transparent gel monoliths of $Y_2O_3$-doped $ZrO_2$.—73-06099; Synthesis of $Y_2O_3$-doped $ZrO_2$ gel monoliths by polycondensation of metal alkoxide and their change on heating: I, Preparation of transparent gel monoliths of $Y_2O_3$-doped $ZrO_2$.—73-13315; Synthesis of $Y_2O_3$-doped $ZrO_2$ gel monoliths by polycondensation of metal alkoxide and their change on heating: II, Crystallization behavior of gel monoliths and synthesis of translucent $Y_2O_3$-doped $ZrO_2$ ceramics.—73-03059; Synthesis of $Y_2O_3$-doped $ZrO_2$ gel monoliths by polycondensation of metal alkoxide and their change on heating: II, Crystallization behavior of gel monoliths and synthesis of translucent $Y_2O_3$-doped $ZrO_2$ ceramics.—73-13316
**Hayashi, Hiromichi** See Onodera, Yoshio
**Hayashi, Hiromu** See Ookubu, Akira
**Hayashi, Hiroshi** See Soeda, Koichi; Tsuchiya, Kazuyoshi
**Hayashi, I.** See Suzuki, S.
**Hayashi, J.** See Takahashi, Minoru
**Hayashi, Kazuo** See Noda, Etsuo
**Hayashi, Koichi** See Chu, Judy; Takebe, Hiromichi
**Hayashi, Koichi; Morinaga, Kenji**
Inclusion removal in ceramic green body by acid treatment: zirconia ceramic capillary for optical-fiber connector as an example.—73-02862
**Hayashi, Koichi; Toyoda, Seiji; Takebe, Hiromochi; Morinaga, Kenji**
Phase transformations of alumina derived from ammonium aluminum carbonate hydroxide (AACH).—73-05454
**Hayashi, Koji** See Cho, Won-Seung
**Hayashi, Kunio; Gotoh, Kenichi; Nishikawa, Tomozo**
Grain size dependence of fracture toughness in polycrystalline alumina.—73-03305
**Hayashi, Kunio; Sugiyama, H.; Okamoto, Yasunori; Nishikawa, Tomozo**
Fabrication of porous glass-ceramics by densification and crystallization of glass compacts.—73-14377
**Hayashi, Kunio; Tsujimoto, Shinji; Okamoto, Yasunori**
Fracture toughness of single-crystal silicon at high temperatures.—73-13540
**Hayashi, Kunio; Yamada, Toshihiko; Okamoto, Yasunori; Nishikawa, Tomozo**
Mechanical properties of glass and polycrystalline ceramic with cordierite composition.—73-17384
**Hayashi, Masanori** See Inao, Takaaki
**Hayashi, Masaru** See Kanai, Hideyuki
**Hayashi, Mutsuo** See Yamagishi, Chitake
**Hayashi, Nariyuki; Ito, Toshimichi**
Method and apparatus for producing diamond thin films.—73-05307
**Hayashi, Nobuhiko** See Mitamura, Takashi
**Hayashi, Noriki** See Takahashi, Kenichi; Takano, Satoshi; Yoshida, Noriyuki
**Hayashi, Noriki; Takano, Satoshi**
Method of preparing 2223 phase (Bi,Pb)-Sr-Ca-Cu-O superconducting films.—73-15688
**Hayashi, Noriyuki** See Moriyama, Minoru
**Hayashi, Satoshi; Takahashi, Hirokuni; Watanabe, Akira; Osaka, Akiyoshi; Miura, Yoshinari**
Dependence of mechanical properties of MgO-C bricks on graphite content.—73-17273
**Hayashi, Satoshi; Takahashi, Hirokuni; Watanabe, Akira; Osaka, Akiyoshi; Miura, Yoshinari**
Influence of heat-treatment conditions on the properties of MgO-C bricks containing aluminum.—73-17359
**Hayashi, Satoshi; Takanaga, Shigeyuki; Takahashi, Hirokuni; Watanabe, Akira**
Behavior of boric compounds added in MgO-C bricks.—73-00779
**Hayashi, Seigo; Kittaka, Toshihiko; Ando, Akira**
Method of driving piezoelectric bimorph device and piezoelectric bimorph device.—73-01443
**Hayashi, Seiji** See Egi, Toshio
**Hayashi, Seijiro; Baba, H.; Suzuki, Akihiko**
Crack growth resistance of ceramic composite.—73-06350
**Hayashi, Seijiro; Suzuki, Akihiko**
Bending fracture strength of sintered silicon nitride disks with shoulder fillet at room temperature.—73-06330
**Hayashi, Shigenobu** See Kikuchi, Naoto
**Hayashi, Shigenori** See Kohiki, Shigemi
**Hayashi, Shigenori; Hamatani, Toshiji; Yamazaki, Shunpei**
Carbonaceous protective films and method of depositing the same.—73-02090
**Hayashi, Shigeo** See Ino, Juichi; Okada, Kiyoshi
**Hayashi, Shigeo; Okada, Kiyoshi; Otsuka, Nozomu; Yano, T.**
Preparation and characterization of diopside powder by several methods from solution.—73-02930
**Hayashi, Shigeo; Okada, Kiyoshi; Otsuka, Nozomu**
Preparation of $CaSiO_3$ powders by coprecipitation method and their sinterability.—73-02949
**Hayashi, Shigeo; Ueno, Akira; Okada, Kiyoshi; Otsuka, Nozomu**
Sintering of $SrSiO_3$ ceramic and its dielectric property.—73-03011
**Hayashi, Shinsuke** See Kotaka, Hiroaki
**Hayashi, Shinsuke; Fukaya, Kenji; Kajima, Hirokazu; Saito, Hajime**
Phase transition and thermal expansion of $LaCrO_3$ solid solutions.—73-16263
**Hayashi, Shinsuke; Fukaya, Kenji; Saito, Hajime**
Li-doped $LaCrO_3$ ceramics.—73-03100; Li-doped $LaCrO_3$ ceramics.—73-13117
**Hayashi, Shinsuke; Hatano, Hironori**
Ionic conduction of $Li_2Ti_3O_7$ and $Li_4Ti_5O_{12}$.—73-14712
**Hayashi, Shinsuke; Kobayashi, Yasuyoshi; Saito, Hajime**
$TiB_2$-$B_4C$ composites pressureless sintered [at 1600°C] using Ni and C as densification aids.—73-06119; $TiB_2$-$B_4C$ composites pressureless sintered using Ni and C as densification aids.—73-17060
**Hayashi, Shinsuke; Saito, Shinji; Saito, Hajime**
Mechanical and thermal properties of pressureless-sintered MgO-$Mg_4Ta_2O_9$ composites.—73-03324; Mechanical and thermal properties of pressureless-sintered MgO-$Mg_4Ta_2O_9$ composites.—73-13561
**Hayashi, Takao; Sato, Norihiro; Omotani, Chikara; Hosoi, Manabu; Kasahara, Nobuyoshi; Griebler, Wolf-Dieter**
Fibrous electrically conductive filler and process for producing the same.—73-04207
**Hayashi, Takashi** See Suzuki, Hisao
**Hayashi, Toshio** See Ide, Ichio; Kawakami, Makoto
**Hayashi, Toyoharu** See Sekikawa, Taro
**Hayashi, Tsunemasa; Ishiwara, Hiroshi**
Formation of oriented conductive $SrVO_{3-x}$ (SVO) films on Si(100) substrates by evaporation in low-pressure hydrogen.—73-04105
**Hayashi, Tsuyoshi** See Kawasaki, Hisato
**Hayashi, Yasuo; Matsumoto, Kiyoshi**
Determination of surface silanol group on silicate glasses using static SIMS.—73-00320; Determination of surface silanol on silicate glasses using static SIMS.—73-10361
**Hayashi, Yasuo; Yoneda, Takashige; Matsumoto, Kiyoshi**
Mechanical durability of water-repellent film on glass.—73-14224
**Hayashi, Yasushige** See Kasai, Norifumi
**Hayashi, Yoshishige** See Nakamura, Shizuo
**Hayashi, Yuji** See Nakajima, Toshio
**Hayashi, Yuki** See Imamura, Seiichiro
**Hayashida, Akira** See Takeda, Yoshihumi
**Hayasi, Hisaaki** See Furusawa, Shinichi
**Hayat, Majeed M.; Sargeant, Winslow L.; Saleh, Bahaa E. A.**
Effect of dead space in gain and noise in Si and GaAs avalanche photodiodes.—73-01133
**Hayata, Youichi** See Ryoke, Katsumi
**Hayati, Igan; Simon, John M.; Taylor, Kenneth W.**
Preparing granular borates.—73-05003
**Hayatsu, Toshihide** See Shimoo, Toshio
**Haybat, H.** See Arman, M. B.
**Hayden, J. S.; Marker, A. J., III**
Engineering of glass for optimized optical and physical properties.—73-14373
**Hayden, L. M.** See McGowan, P. C.
**Hayden, R. K.** See Harrison, P. A.
**Hayden, S. M.** See Mason, T. E.
**Hayden, S. M.; Lander, G. H.; Zarestky, J.; Brown, P. J.; Stassis, C.; Metcalf, P.**
Incommensurate magnetic correlations in $La_{1.8}Sr_{0.2}NiO_4$.—73-07939
**Hayduk, Edward A., Jr.** See Zurecki, Zbigniew
**Hayer, Milos** See Matejec, Vlastimil
**Hayes, J. P.** See Jankowski, A. F.
**Hayes, Kevin G.** See Roberts, Peter A.
**Hayes, Kevin G.; Roberts, Peter A.**
Ceramic filter process.—73-12346; Ceramic process.—73-12073
**Haynes, T. E.** See Shigesato, Yuzo
**Hays, Irene D.**
Intensive teacher training.—73-06577
**Hays, J. M.** See Shan, W.
**Hazell, S. J.** See Pradhan, A. K.
**Hazelton, D. W.** See Chen, Ling
**Hazen, Brian J.** See Smith, Sandra L.
**Hazenkamp, Menne F.; Van der Veen, Adriaan M. H.; Blasse, G.**
Hydrated rare-earth metal-ion-exchanged zeolite A: characterization by luminescence spectroscopy: I, The $Gd^{3+}$ ion.—73-12596

**Hazeyama, I.** See Ichinose, N.
**Hazm, J.** See Caullet, P.
**Hazra, A. K.** See De, S. S.
**Hdach, H.** See Woignier, T.
**He, Bing-Fang; Ma, Jun-Rong**
Heat-generating ceramic materials of $(Ba_{0.65}Pb_{0.35})TiO_3$ semiconductors.—73-11239
**He, C.; Wang, Y.-S.; Wallace, J. S.; Hsu, S. M.**
Effect of microstructure on the wear transition of zirconia-toughened alumina.—73-06386
**He, Chuan** See Wang, Ling
**He, Chuan; Wang, Ling; Wu, Jian-Guang**
Oxidation of sintered silicon nitride: II, Mechanical properties.—73-13577
**He, Dai-Ying** See Li, Ying
**He, Dai-Ying; Yu, Li-Da; Li, Ying**
Synthesis and study of $CeO_2$-$V_2O_5$ ceramic pigment.—73-10900
**He, Guang-S.; Cui, Yi-Ping; Xu, Gen-C.; Prasad, Raras N.**
Multiple mode-locking of the *Q*-switched Nd:YAG laser with a coupled resonant cavity.—73-07684
**He, Guo-Ping; Xu, Shu-Hui; Huang, Wen-Hai**
Nucleation and crystallization behavior of a glass-ceramic as a dental veneer in the CaO-$SiO_2$-$P_2O_5$ system.—73-14058
**He, Guo-Rui** See Zhu, Zhen-Feng
**He, Guo-Xin; Du, Hai-Qin**
Effect of aluminum source on synthesis process and properties of AlN powder prepared via carbothermal reduction and nitridation.—73-09076
**He, Hui-Juan** See Xiao, Gang-Yao
**He, Hui-Juan; Zhao, Qing-Chun; Guo, Jing-Hua; Lu, Y.-T.; Liu, Y.-G.; Wang, J.-Y.**
Picosecond optical parametric generation in flux grown by KTP.—73-02669
**He, L.** See Fan, Y.
**He, L.; Anderson, W. A.**
Characteristics of oxygen-implanted indium phosphide.—73-07404; Comparative characteristics of plasma-etched GaAs and InP.—73-07418; Effect of boron, oxygen, and fluorine in ion-implanted GaAs.—73-04287; Electrical properties of oxygen-ion-implanted InP.—73-11181
**He, M.-Q.** See Zhu, Yi-Hua
**He, Ming-Yuan** See Chan, K. S.; Heredia, Fernando E.; Shu, Xing-Tian
**He, Ming-Yuan; Evans, Anthony G.; Curtin, William A.**
Ultimate tensile strength of metal and ceramic matrix composites.—73-06547
**He, Ming-Yuan; Heredia, Fernando E.; Wissuchek, D. J.; Shaw, M. C.; Evans, Anthony G.**
Mechanics of crack growth in layered materials.—73-06486
**He, Ming-Yuan; Shih, C. F.; Evans, Anthony G.**
Geometry effects for stress intensity factor of sandwich specimen for measuring interfacial fracture toughness.—73-05050
**He, Ping** See Orloff, Glennis J.
**He, Qing** See Ren, Hong-Tao
**He, S. S.** See Lucovsky, G.; Stephens, D. J.
**He, S. S.; Stephens, D. J.; Lucovsky, G.; Hamaker, R. W.**
High-channel-mobility a-Si:H thin-film transistors [TFT's] with oxide/nitride dielectrics.—73-04109
**He, Wen-Ji**
Trial manufacture of giant Jun porcelain products.—73-10903
**He, X. H.** See Zhang, H. Y.
**He, Xian-Li** See Zhou, Ya-Dong
**He, Xiao-Ming; Li, Wen-Zhi; Li, Heng-De**
Structure and tribology of hard carbon films synthesized by ion beam deposition.—73-17013
**He, Y.** See Chang, T. Y.
**He, Y.; Ramdani, J.; El Masry, N. A.; Look, D. C.; Bedair, Salah M.**
High-resistivity [low-temperature] LT $In_{0.47}Ga_{0.53}P$ grown by gas source molecular beam epitaxy.—73-14960
**He, Yu-Sheng** See Cao, Shi-Xun
**He, Zong-Wu**
Formulas for calculating sintering temperature of body of porcelain and melting temperature of glaze.—73-10849
**Headinger, M. H.** See Klacka, R. W.
**Headinger, M. H.; Klacka, R. W.; Bors, S. L.; Moschelle, W. H.**
Effects of density and fiber volume on the mechanical properties of SiC matrix composites reinforced with T-300 fibers.—73-12427
**Heakal, F. El-Taib** See Mogoda, A. S.
**Healy, Thomas W.** See Leong, Y. K.; Scales, Peter J.
**Heaney, Joseph A., III**
Coated ceramic fiber system.—73-05205
**Heaps, R. J.** See Rabin, B. H.
**Hearsum, A.**
Training for the 21st century.—73-10612
**Heathcock, Christopher J.** See Smith, Thomas K.
**Heavens, O. S.** See Yuan, Y. F.
**Hebboul, S. E.** See Wan, Y. M.
**Heben, Michael J.** See Pugh, J. Richard
**Heberard, X.** See Charnay, R.
**Heberlein, J.** See Han, Q. Y.; Malmberg, S.; Russ, S.; Tsai, Chung-Hsien
**Hecht, Ralph J.** See Maloney, Michael J.
**Hecht, Ralph J.; Maloney, Michael J.**
Molybdenum disilicide matrix composites reinforced with continuous ceramic fibers.—73-12499; Molybdenum disilicide matrix composites reinforced with refractory metal fibers.—73-12500
**Heckroodt, R. O.** See Van Zyl, A.
**Hecq, A.** See Poels, J. P.
**Hector, A.** See Parkin, I. P.
**Hector, J.** See Gaucher, Philippe
**Hed, Aharon Z.**
High critical temperature superconducting wire with radially grown crystallites.—73-04836; Nonspecular reflector with diffusely reflecting superconductor and protection coating.—73-11982
**Hedenqvist, Per** See Roos, Arne
**Heeb, B.; Gauckler, Ludwig J.; Heinrich, H.; Kostorz, G.**
Microstructure and properties of melt-processed Bi-2212 ($Bi_2Sr_2CaCu_2O_x$).—73-11835
**Heeck, K.** See Van Eenige, E. N.
**Hegarty, J.** See Asatsuma, T.; Doran, J. P.
**Hegazi, Gamal M.; Pande, Krishna P.; Ezzeddine, Amin; Sorbello, Robert; Geller, Bernard**
Monolithic gallium arsenide phased array using integrated gold post interconnects.—73-04527
**Hegde, M. S.** See Narashimha Rao, K.
**Hegde, Rama I.; Fiordalice, Robert W.; Travis, Edward O.; Tobin, P. J.**
Nucleation and growth of chemical vapor deposition TiN films on Si(100) as studied by total reflection X-ray fluorescence, atomic force microscopy, and Auger electron spectroscopy.—73-09496;
Thin-film properties of low-pressure chemical vapor deposition TiN barrier for ultra-large-scale integration applications.—73-12900
**Hegedus, Zsolt** See Han, Shun-Hui
**Heger, Armin** See Bruckner-Foit, Angelika
**Heger, D.** See Ullmann, J.
**Heger, G.** See Schiebel, P.
**Heide, K.** See Muller, E.
**Heide, Klaus** See Stelzner, Thomas
**Heide, Klaus; Volksch, G.; Hanay, C.**
Characterization of crystallization in cordierite glasses by means of optical and electron microscopy.—73-13936
**Heidemann, D.** See Rassem, R.
**Heiden, C.**
High-temperature superconducting thin-film-based devices.—73-04735
**Heidenbluth, Hans-Dieter**
Pretreatment prior to porcelain enameling from an economical and ecological viewpoint.—73-10265
**Heidenreich, E.** See Carl, M.
**Heidinger, R.** See Molla, J.
**Heikkila, L.** See Rogacki, K.
**Heiman, D.** See Bindilatti, V.; Pinczuk, A.; Twardowski, A.
**Heimann, P.** See Hurwitz, F. I.
**Heimann, Robert B.**
Canadian advanced ceramic developments.—73-06559
**Hein, S.** See Pan, N.
**Heine, V.** See Padlewski, S.
**Heinrich, A.** See Bruckner, W.
**Heinrich, A.; Schumann, J.; Vinzelberg, H.; Brustel, U.; Gladun, C.**
Nanodisperse CrSi(O, N) thin films—conductivity, thermopower, and applications.—73-02646
**Heinrich, H.** See Heeb, B.
**Heinrich, Juergen** See Hamminger, Rainer
**Heinrich, Jurgen**
Production of ceramic port liners for piston engines by slip casting.—73-12181
**Heinrich, T.; Raether, F.**
Structural characterization and phase developed of sol-gel-derived mullite and its precursors.—73-10403
**Heinrichsdorff, F.** See Bimberg, D.
**Heinsbergen, Janice Filion** See Sur, Sandip K.
**Heintz, Jean-Marc; Sudre, Olivier; Lange, Fred F.**
Instability of polycrystalline bridges that span cracks in powder films densified on a substrate.—73-06235
**Heinz, E.; Klug, J.; Seidel, P.**
Tunneling measurements of BSCCO single crystals.—73-08267
**Heinz, J.** See Lu, Z.; Spallek, Michael
**Heinz, J.; Pannhorst, Wolfgang; Frischat, G. H.**
Formation of platinum particles during the production of optical glasses.—73-14385
**Heinz, P.; Reuther, A.; Laubereau, A.**
Additive-pulse mode locking of non-cw Nd lasers.—73-08802
**Heinze, D.** See Hubert, T.
**Heinzel, A.** See Gombert, A.
**Heise, G.** See Cremer, C.
**Heise, Rainer; Courths, Ralf; Witzel, S.**
Valence band densities-of-states of $TiO_2$(110) from resonant photoemission and photoelectron diffraction.—73-02720
**Heitink, G. H.** See Van Wijck, J. H.
**Heitmann, D.** See Cingolani, R.
**Heitor, M. V.** See Farmer, D.
**Helali, D.; Bouzouita, K.; LeCompte, J. P.; Jarrige, Jean**
Sintering and thermal characterization of cordierite–aluminum nitride composites.—73-13261
**Helbing, Clarence H.**
Method for producing fiber product.—73-14548
**Helebrant, A.** See Matousek, Josef
**Helebrant, A.; Buerhop, Claudia; Weissmann, Rudolf**
Mathematical modeling of temperature distribution during $CO_2$ laser irradiation of glass.—73-10563
**Helebrant, A.; Maryska, Martin; Matousek, Josef; Tosnerova, B.**
Maximum rate of aqueous corrosion of glass.—73-14222
**Helgeson, Harold C.** See Ransom, Barbara
**Heller, E. J.; Zhang, Z. Y.; Lagally, M. G.**
Step and kink energetics on GaAs(001).—73-15178
**Hellman, E. S.** See Sobolewski, M. A.
**Hellman, Olof C.** See Herbots, Nicole
**Hellmann, John R.** See Chou, Yeong-Shyung; Koss, Donald A.; Trumbauer, Eric R.
**Hellmann, R.** See Koch, M.
**Hellmann, R.; Pohlmann, A.; Gobel, E. O.; Yakovlev, D. R.; Waag, A.; Bicknell-Tassius, R. N.**
Time-resolved photoluminescence studies of perpendicular transport in CdTe/$Cd_{1-x}Mn_xTe$ short-period superlattices.—73-11484
**Hellmold, P.; Misselwitz, F. M.; Hahne, D. B.**
Mechanical strength and chemical resistance of zirconium-oxide-based porcelain enamel.—73-10250
**Hellmold, P.; Schulz, G.; Stuchlik, U.**
Influence of $TiO_2$ crystallization and transformation on the opacification of holloware.—73-00242
**Hellstrom, E. E.** See Park, S. M.
**Hellwarth, R. W.** See Naylor, D. L.
**Helmersson, U.** See Selinder, T. I.
**Helmholdt, R. B.** See Willems, H. X.
**Helmich, Michael; Rauch, F.**
Mechanism of diffusion of water in silica glass.—73-06937
**Helms, C. R.** See Kniffen, Margaret L.; Melendez, Jose L.
**Helms, C. R.; Krishnamurthy, Vikram**
Thermodynamic description of metal Hg(Cd)Te systems.—73-08778
**Helmy, I. M.; Amer, A. A.; El-Didamony, H.; Amin, A. M.**
Chemical attack on hardened cement pastes of blended cements: I, Attack of chloride solutions.—73-00036
**Helt, J. E.** See Krause, T. R.
**Hemann, John H.** See Ye, Pei
**Hembree, D. M., Jr.** See Hurwitz, F. I.
**Hemley, Russell J.** See Kingma, Kathleen J.; Meade, Charles
**Hemp, Doreen** See Cruise, Wilma
**Hempel, R.** See Siedel, H.
**Hempel, S.** See Siedel, H.
**Hempelmann, U.; Bersiner, L.**
Wave propagation in integrated acoustooptical anisotropic waveguides.—73-16648
**Hempstead, Martin**
Diffusion profiles of neodymium in lithium niobate [determined] by means of spatially resolved fluorescence measurements.—73-13347
**Hemstreet, L. A.; Fong, C. Y.; Nelson, J. S.**
Effect of interfacial bond type on the electronic and structural properties of GaSb/InAs superlattices.—73-11158
**Henager, Charles H., Jr.; Jones, Russell H.**
High-temperature plasticity effects in bridged cracks and subcritical crack growth in ceramic composites.—73-09611; Subcritical crack growth in continuous-fiber-reinforced ceramic composites.—73-09679
**Henager, Charles H., Jr.; Jones, Russell H.**
Subcritical crack growth in CVI silicon carbide reinforced with Nicalon fibers: experiment and model.—73-17438
**Hench, Larry L.** See La Torre, Guy; Wallace, Stephen; Zhu, B. F.
**Henck, Steven A.; Duncan, Walter M.; Lowenstein, Lee M.; Butler, S. W.**
In situ spectral ellipsometry for real-time thickness measurement: etching multilayer stacks.—73-07583
**Henda, R.** See Scheid, E.
**Hendershot, D. G.** See Justus, Brian L.
**Henderson, B.** See Yamaga, M.; Yang, Fang
**Henderson, D. O.** See Burshtein, Z.; Magruder, R. H., III
**Henderson, E.; Bailey, J. E.**
Compositional and molecular character of the calcium silicate hydrates formed in the paste hydration of $3CaO{\cdot}SiO_2$.—73-06639
**Henderson, John**
Coloring and refining of heat-resisting glasses.—73-10509
**Hendriks, H. T.** See Hoke, W. E.
**Hendrix, W.; Kuypers, S.; Van Grunderbeek, J.; Luyten, J.; Van der Meulen, W.**
Superplasticity of Cu-doped $ZrO_2$ ($Y_2O_3$).—73-13598
**Hendry, R. C.** See Rudder, R. A.
**Heng, N.** See Schneider, T.
**Hengehold, Robert L.** See Colon, Jose E.
**Henige, J. A.** See Brown, A. S.; Metzger, R. A.
**Henini, M.** See Harrison, P. A.
**Henini, M.; Sakai, J. W.; Beton, P. H.; Eaves, L.; Main, P. C.; Hill, G.**
Effect of Si delta doping and growth temperature on the *I*(*V*) characteristics of molecular beam epitaxially grown GaAs/(AlGa)As resonant tunneling devices.—73-11162
**Henley, John P.** See Weimer, Alan W.
**Henmi, Hiroshi** See Otsu, Masato
**Hennecke, H.-P.**
Nonmetallic mineral industries in Europe, with particular reference to the lime industry.—73-15910
**Hennicke, Hans-Walter** See Gotze, S.; Hesse, Andreas; Illenseer, Thomas; Kim, Il-Soo; Klischat, Hans-Jurgen; Martens, Thomas; Muller, Bernd; Schmalzried, Clemens; Spang, Michael D.
**Hennicke, Hans-Walter; Padel, A.**
Enamels with crystalline inclusions for use at high temperatures (high-temperature enamels).—73-00229
**Hennicke, Hans-Walter**
New routes for fabricating ceramic materials.—73-13150; Refractories: traditional or advanced ceramics.—73-10763; Refractory materials between traditional ceramics and advanced ceramics.—73-10766
**Hennicke, J.** See Lindner, H. A.
**Hennig, Hans-Peter** See Steinike, Ursula
**Henning, Otto** See Rauschenbach, F.
**Hennion, B.** See Berret, J.-F.
**Hennion, M.** See Mirebeau, I.
**Henoc, P.** See Djemel, A.; Santa-Cruz, P.
**Henrich, Victor E.** See Li, Xiao-Mei
**Henrichs, Beate** See Bonnet, Dieter
**Henrickson, Robert C.**
Politics, economics, and ceramic continuity at Gordion in the late second and first millennia B.C.—73-00013
**Henriksen, Hans J.** See Primdahl Iversen, Ivar
**Henriksen, P. N.** See Wang, Hong
**Henry, J. Y.** See Marin, C.; Pyka, N.
**Henshall, J. L.** See Guillou, M. O.
**Henz, P.; Chaumont, C.; Bernier, J. C.**
Ferrite powders obtained by retreatment of metallurgic wastes.—73-01461
**Henzler, M.** See Heun, S.; Schad, R.
**Heo, Jong** See Kim, Choon-Gon
**Heo, Jong; Kim, Choon-Gon; Kim, You-Song**
Structural investigation of infrared-transmitting PbO-$Bi_2O_3$-$Ga_2O_3$ glasses by X-ray photoelectron spectroscopy.—73-14093

**Heo, Nam-Ho; Seff, Karl**
Reactions of cesium with dehydrated calcium zeolite A: crystal structures of $Cs_6Ca_3$-A, $Cs_{11}Ca_{0.5}$-A·0.5$Cs_2$, and $Cs_{12}$-A·0.5$Cs_2$.—73-12672
**Herald, S. E.** See Weyers, Richard E.
**Herb, John A.; Pinneo, John M.; Gardinier, Clayton F.**
Article comprising regions of high-thermal-conductivity diamond on substrates.—73-05285; Diamond materials with enhanced heat conductivity.—73-12462; High-thermal-conductivity diamond-coated fiber articles.—73-12473; High-thermal-conductivity diamond/nondiamond composite materials.—73-05303; High-thermal-conductivity diamond/nondiamond composite materials.—73-12474; Method for consolidating diamond particles to form high-thermal-conductivity article.—73-05309; Microwave plasma CVD method for coating a substrate with high-thermal-conductivity diamond material.—73-05319
**Herbell, T. P.** See Eckel, A. J.
**Herbert, P. K.** See Schweizer, A.
**Herbertsson, H.** See Haviar, Miroslav
**Herbots, Nicole** See Vancauwenberghe, N.
**Herbots, Nicole; Hellman, Olof C.; Vancauwenberghe, Olivier P. J.**
Oxides and nitrides of metastable group IV alloys and nitrides of group IV elements and semiconductor devices formed thereof.—73-01381
**Herchenbach, Horst; Koeberer, Gunther**
Grate cooler performance optimization at Eiberg Zement.—73-09975
**Herd, Kenneth G.; Laskaris, Evangelos T.**
High-$T_c$ superconducting lead assembly in a cryostat dual penetration for refrigerated superconductive magnets.—73-04837
**Heredia, Fernando E.** See Brondsted, Paul; He, Ming-Yuan
**Heredia, Fernando E.; Spearing, S. Mark; Mackin, T. J.; He, Ming-Yuan; Evans, Anthony G.; Mosher, Paul**
Notch effects in carbon matrix composites.—73-17406
**Heremans, J.; Partin, D. L.; Morelli, D. T.; Thrush, C. M.; Karczewski, G.; Furdyna, J. K.**
Magnetotransport and magnetooptical properties of δ-doped InSb.—73-08911
**Heremans, Joseph P.; Doll, Gary L.; Sell, Jeffrey A.**
Method of fabricating a transistor having a cubic boron nitride layer.—73-01376
**Herlin, Nathalie** See Cauchetier, Michel
**Herman, H.** See Chen, Z. J.; Ilarsky, J.; Tiwari, R.; Varacalle, D. J., Jr.
**Herman, Irving P.** See Tuchman, Judah A.
**Herman, J. S.** See Sherwin, M. E.
**Herman, J. S.; Terry, F. L., Jr.**
Plasma passivation of gallium arsenide.—73-07737
**Herman, M. H.** See Kopf, R. F.
**Hermann, Allen M.** See Naziripour, Ali; Paranthaman, M.; Sheng, Zheng-Zhi
**Hermann, W.** See Clasen, Rolf
**Hermans, J.; Wagner, V.; Geurts, J.; Woitok, J.; Sollner, J.; Heuken, M.**
Optical analysis of metallorganic vapor phase epitaxy grown ZnS/ZnSe/GaAs(100) heterostructures: carrier diffusion and interface sharpness.—73-07703
**Hermanson, J. C.** See Bowler, Ann M.
**Hermansson, Leif; Forberg, Sevald; Li, Jian-Gou**
Composite ceramic material and method to manufacture the material.—73-12355
**Hermansson, M.** See Stenstrom, S.
**Hermel, W.** See Herrmann, M.
**Herminghaus, S.** See Bechinger, C.; Leiderer, P.
**Herms, A.** See Peiro, F.
**Herms, M.** See Irmer, G.
**Hernan, L.; Macias, M.; Morales, J.; Sanchez, L.; Tirado, J. L.**
Ion exchange of potassium hexatungstate ($K_{0.3}WO_{3.15}$) by protons.—73-05425; Lithium insertion into pyrochlore $WO_3$.—73-02319
**Hernandez-Rojas, J. L.; Lucia, M. L.; Santamaria, J.; Gonzalez-Diaz, G.; Martil, I.; Sanchez-Quesada, F.**
Emission line intensities in an rf sputtering glow discharge system.—73-05788
**Herner, S. B.; Selmi, F. A.; Varadan, V. V.; Varadan, V. K.**
Effect of various dopants on the dielectric properties of barium strontium titanate.—73-04081
**Heron, Vince**
Inland Cement alternative fuel program.—73-05119
**Herren, G.; Walsoe de Reca, N. E.**
Intercalation of lithium in InSb.—73-06163
**Herrera F., Carlos; Noboa, Gabriel**
Oxy-fuel firing for emissions control on a container melter.—73-08481
**Herrera-Gomez, A.** See Green, A. M.; Kendelewicz, T.; Wolcik, J. C.
**Herrera-Gomez, A.; Kendelewicz, T.; Wolcik, J. C.; Miyano, K. E.; Pianetta, P.; Southworth, S.**
Determination of the geometrical configuration of Bi on GaAs(110) by X-ray standing wave triangulation.—73-07441
**Herrera-Perez, J. L.** See Morosini, M. B. Z.
**Herrero, P.** See Rojas, R. M.
**Herrick, C.** See Bulat, E. S.
**Herrington, Tommy L.; Le, Kim-Chi T.; Akhtar, Masyood; Smith, Charles H.**
Silver-glass die attach paste.—73-00763
**Herrmann, C.; Hug, W. K.; Sahm, P. R.**
Heat flow simulation—the innovative potential of mathematical simulation of heat balances for electronic parts.—73-02615
**Herrmann, Hans-Jurgen**
Crack patterns: generalized Laplacian structures.—73-06352
**Herrmann, J.** See Petrov, V.; Voigt, Manfred
**Herrmann, M.** See Wagner, R.
**Herrmann, M.; Boberski, C.; Michael, G.; Putzky, G.; Hermel, W.**
Redistribution of the liquid phase during sintering of silicon nitride.—73-16973
**Herrmann, M.; Putzky, G.; Siegel, S.**
Effects of decomposition reactions on the densification of $Si_3N_4$.—73-13029
**Herrmann, Rudiger** See Schelter, Heinrich
**Herrmann, W.** See Nofz, M.
**Herron, Michael M.** See Matteson, Abigail
**Herron, Norman** See Blanchet-Fincher, Graciela B.
**Hersee, S. D.** See Guel, G.
**Hershkowitz, N.** See Ding, J.
**Hershkowitz, N.; Maynard, H. L.**
Plasma characterization and process control diagnostics.—73-09240
**Hertel, Gunter** See Bautsch, H.-J.
**Hertzenberg, Elliot P.** See Cooper, David A.
**Herve, D.; Leray, J. L.; Devine, R. A. B.**
Comparative study of radiation-induced electrical and spin active defects in buried $SiO_2$ layers.—73-13341
**Herve, D.; Paillet, P.; Leray, J. L.**
Thermal annealing of radiation-induced trapped charge in SIMOX and thermal oxide thin films.—73-04177
**Herve, G.** See Machal, C.
**Hervieu, M.** See Caignaert, V.; Domenges, B.; Huve, M.; Michel, C.
**Herzner, Peter; Heumann, Klaus G.**
Trace determination of uranium, thorium, calcium, and other heavy metals in high-purity refractory metal silicides, niobium, and silicon dioxide with isotope dilution mass spectrometry.—73-15857
**Herzog, Josef; Settimo, Randy J.**
Energy-saving cullet preheater.—73-10526
**Heskett, D.; McIlroy, D.; Swanston, D. M.; McLean, A. B.; DiNardo, N. J.; Munekata, H.**
Strain and the two-dimensional electronic structure of monolayers of Bi/InAs(110) and Bi/GaAs(110).—73-07813
**Heslin, M. R.; Shelby, J. E.**
DSC study of the effect of water on the nucleation of $Li_2O·2SiO_2$ glass.—73-13963
**Hesp, S. A. M.** See Petroff, T. E.
**Hess, H. F.** See Chang, A. M.
**Hess, H. F.; Murray, C. A.; Waszczak, J. V.**
STM study of distortion and instability of inclined flux-line-lattice structures in the anisotropic superconductor 2H-$NbSe_2$.—73-08743
**Hess, Martin**
How increased cullet levels affect energy usage.—73-03849
**Hess, Nancy J.** See Exarhos, Gregory J.
**Hess, Thomas R.** See Yousuf, A.
**Hesse, Andreas; Hennicke, Hans-Walter**
Principles of joining, operations and applications to SiC.—73-12440
**Hesse, D.** See Haefke, H.
**Hesse, H.** See Buse, E.; Van Olfen, U.
**Hesse, Kenneth** See Kinsman, Karin M.
**Hessen, B.** See Cava, R. J.
**Hessen, B.; Sunshine, S. A.; Siegrist, T.**
New reduced ternary titanates from borate fluxes.—73-02353
**Hessenkemper, H.** See Bruckner, Rolf; Deubener, J.
**Hesto, P.** See Dollfus, P.
**Hetherington, C. J. D.** See Senaris-Rodriguez, M. A.
**Hetherington, C. J. D.; Ponce, F. A.**
GaAs island morphology and defect structure [observed] on the Berkeley atomic resolution microscope [ARM].—73-06219
**Hettes, Frank**
Brush with success.—73-03414
**Hettiarachchi, Samson; Song, Her-King; Macdonald, Digby D.**
Reference electrode assembly and process for constructing.—73-01067
**Hettich, B.** See Majewski, Peter
**Hettich, B.; Majewski, Peter; Schulze, Klaus; Petzow, Gunter**
Bismuth-containing superconducting material and process for producing it.—73-04831
**Hettinger, William P.** See Summer, Michael B.
**Heuer, Arthur H.** See Agarwal, M.; Chaim, Rachman; Dickerson, Robert M.; Dransmann, Gerhard W.; Holmes, D.; Kaliszewski, Mary S.; Lagerlof, K. Peter D.; Martinez Fernandez, Julian; Powell-Dogan, Cynthia A.; Unal, Ozer
**Heughebaert, M.** See Bernache-Assollant, D.
**Heuken, M.** See Hermans, J.; Schneider, A.
**Heuken, M.; Scholl, M.; Schneider, A.; Sollner, J.; Woitok, J.**
Correlation of room temperature photoluminescence to structural properties of ZnSSe/ZnSe superlattices grown by metallorganic vapor phase epitaxy.—73-11123
**Heumann, Klaus G.** See Herzner, Peter
**Heun, S.; Falta, J.; Henzler, M.**
Initial stages of epitaxial growth of silicon on Si(100)-2×1.—73-01214
**Hewak, D. W.** See Deol, R. S.
**Hewat, A. W.** See Bonneau, P.; Kramer, K.
**Heyd, A. R.; An, Il-Sin; Collins, R. W.; Cong, Yue; Vedam, K.; Bose, S. S.**
Ion beam etching of GaAs and GaAs/AlGaAs heterostructure probed in real time by spectroscopic ellipsometry.—73-01222
**Heydari, Ezat; Moore, Clyde H.**
Zonation and geochemical patterns of buried calcite cements: Upper Smackover Formation, Clarke County, Mississippi.—73-15917
**Heyen, E. T.** See Ruf, T.
**Heyer, W.** See Foltynowicz, Z. A.
**Hezel, R.** See Meixner, J.
**Hibi, Masayoshi** See Gao, Tie
**Hibi, Yuko**
Lubrication of ceramics.—73-17153
**Hibino, M.** See Nagai, Masayuki
**Hibino, Takeshi; Tsuyuki, Naomitsu; Ishida, Hideki**
Effect of treatment of reactive aggregate by $H_2O_2$ on the alkali-silica reaction [ASR].—73-12134
**Hibino, Yukinobu** See Matsumoto, Seiichiro
**Hibiya, Taketoshi** See Kakimoto, Koichi
**Hickel, R.** See Kunzelmann, K. H.
**Hickey, Gregory S.** See Willis, Paul B.
**Hickman, David L.**
Batch compositions for cordierite ceramics.—73-15934; High-temperature-stabilized mullite-aluminum titanate.—73-12371
**Hicks, R. F.** See Liu, B.
**Hida, M.** See Lim, W.-Y.
**Hida, Masaharu** See Aoki, Shigenori
**Hida, Toshiharu** See Soeda, Koichi
**Hidaka, H.** See Zhao, Jin-Cai
**Hidaka, Y.** See Arai, M.; Lunkenheimer, P.; Matsuda, Masaaki
**Hidber, P.; Graule, T.; Gauckler, Ludwig J.**
Carboxylic acids as dispersants for alumina slurries.—73-09029
**Hieronymi, Frank** See Bottcher, E. Holger
**Hiesgen, Renate** See Pezzotti, Giuseppe
**Hietala, V. M.** See Martens, J. S.
**Hiew, Siew** See Gadepally, Kamesh
**Higa, K. T.** See Irvine, S. J. C.; Korenstein, R.
**Higaki, Kenjiro** See Harada, Keizo; Hattori, Hisao; Tanaka, Saburo
**Higaki, T.** See Nakatsu, K.
**Higashi, K.** See Mabuchi, Mamoru
**Higashi, Y.** See Maruo, T.
**Higashida, Yutaka** See Kubo, Yukio; Shimizu, Noriyuki; Tsunooka, Tsutomu
**Higashiyama, Kazutoshi** See Ushida, Takahisa
**Higby, Paige L.** See Jewell, John M.
**Higby, Paige L.; Aggarwal, Ishwar D.**
Properties of barium gallium germanate glasses.—73-14259
**Higdon, Ray** See Tuson, G. B.
**Higgins, J. A.** See McDermott, B. T.
**Higgins, Richard J.; Rhine, Wendell E.; Cima, Michael J.; Bowen, H. Kent; Farneth, William E.**
Ceramic surface reactions and carbon retention during nonoxidative binder removal: $Al_2O_3$/poly(methyl methacrylate) at 20–700°C.—73-16666
**High, J. W.** See Namboodri, Shannon L.
**Hight, Susan C.**
Regulatory and research methods used by the U.S. FDA for determination of lead in ceramic foodware.—73-07270
**Higman, T. K.; Fayfield, R. T.; Hagedorn, M. S.; Lee, K. H.; Campbell, S. A.; Baillargeon, J. N.**
Low-temperature nitridation of silicon by direct ammonia nitridation in a molecular beam epitaxy reactor.—73-11299
**Higuchi, Hitoshi** See Shimizu, Hideki
**Higuchi, K.** See Kajioka, H.
**Higuchi, Masatoshi; Uekusa, Shinichiro; Nakano, Ryotaro; Yokogawa, Kazuhiko**
Micrograin structure influence on electrical characteristics of sputtered indium tin oxide films.—73-13415
**Higuchi, Matsuo** See Komura, Osamu; Nishioka, Takao
**Higuchi, Mikio; Aizawa, K.; Yamaya, K.; Kodaira, Kohei**
Electrical properties of $Sr_{1-x}La_xTiO_3$ ($0 \le x \le 0.1$) single crystals grown by the floating zone method.—73-02603
**Higuchi, Mikio; Ando, Kazuto; Takahashi, Junichi; Kodaira, Kohei**
Growth of $MgTa_2O_6$ single crystals by floating zone method and their optical properties.—73-05574
**Hihara, Fumiaki** See Nagahata, Tsutomu
**Hihara, Hiroshi; Oku, Masato; Yagi, Takeshi; Enomoto, Noritsugu; Sato, Tsuguo; Yoshida, Kazuaki**
Method of manufacturing a silica glass preform.—73-00746
**Hihara, L. H.; Kondepudi, P. K.**
Corrosion of magnesium matrix composites.—73-03571
**Hihara, Mamoru** See Suehiro, Masayuki
**Hijikata, M.** See Nakatani, Isao
**Hikami, Shinobu**
Y-Ba-Cu-O superconductive substance.—73-01744
**Hikata, Takeshi** See Sato, Kenichi
**Hikata, Takeshi; Sato, Kenichi**
Method of preparing bismuth oxide superconductor comprising heating under a reduced pressure.—73-01721; Method of preparing oxide superconducting wire.—73-01722
**Hikida, K.** See Fujiyasu, H.
**Hikita, Kazuyasu; Miyayama, Masaru; Yanagida, Hiroaki**
New gas-sensing method for detecting carbon monoxide by use of the complex impedance of a CuO/ZnO heterocontact under a dc bias voltage.—73-11348
**Hikita, Tokihisa** See Watanabe, Shunji
**Hikita, Tokihisa; Hanada, Takashi; Kudo, M.; Kawai, Maki**
Surface structure of $SrTiO_3$(001) with various surface treatments.—73-16348
**Hikita, Tomoyuki; Ogasawara, Masayuki**
Hydrostatic pressure effects on superconductive phase transitions in $Y_{1-x}Ca_xBa_2Cu_3O_{7-\delta}$ [$0 \le x \le 0.2$] and $Y(Ba_{1-y}La_y)_2Cu_3O_{7-\delta}$ [$0 \le y \le 0.15$].—73-10957
**Hilbig, M.**
POLAB laboratory automation system.—73-03518
**Hilczer, W.; Hoffmann, S. K.; Goslar, J.; Trittgoc, J.; Augustyniak, M.**
Electron spin echo studies of spin-lattice and spin-spin relaxation of $SeO_3$ radicals in $(NH_4)_3H(SeO_4)_2$ crystal.—73-08610
**Hild, Francois; Marquis, Didier**
Monotonic and cyclic rupture of a silicon nitride ceramic.—73-17403
**Hileman, Kenneth R.; Limbaugh, Nile**
Rotary glass-molding press with cushioned, trunnion-mounted hydraulic drive.—73-12096
**Hilgenkamp, J. W. M.** See Flokstra, J.
**Hilgraf, P.**
Pneumatic conveying—a review: I.—73-15743

**Hill, A. E.** See El-Fallal, I.
**Hill, D. N.** See Ohlinger, W. L.
**Hill, D. N.; Ohlinger, W. L.; Cochran, Joe K.; Feeney, R. K.; Carter, W. B.; Harris, H. M.**
Low-voltage field emitter array cathode for high-frequency applications.—73-10970
**Hill, Eugene D.; Frohnsdorff, Geoffrey**
Portland cement specifications: performance, prescription, and prediction.—73-10087
**Hill, G.** See Henini, M.
**Hill, M. J. C.** See Donald, I. W.
**Hill, M. R.** See Dickenson, R. P.
**Hill, Michael D.** See Rawn, Claudia J.; Wong-Ng, Winnie
**Hill, P. G.; Foot, P. J. S.; Davis, R.**
Preparation of amorphous $NiPS_3$ by a sol-gel-type method.—73-03869
**Hill, Russell; Daugherty, Kenneth E.**
Binder-enhanced refuse-derived fuel ash: a study of hydrolysis.—73-13682
**Hill, S. E.; Catlow, C. Richard A.**
Hartree-Fock periodic study of bulk ceria.—73-05413
**Hill, W. F.; Sharpe, M. H.; Lester, C. N.; Echols, Sherman; Simpson, G.; Lambert, J. D.**
Improved sprayable insulation.—73-07216
**Hillel, R.** See Maline, M.
**Hillel, R.; Maline, M.; Gourbilleau, F.; Nouet, G.; Carles, R.; Mlayah, A.**
Microstructure of chemically vapor codeposited SiC-TiC-C nanocomposites.—73-13430
**Hiller, Christoph** See Dornen, Achim
**Hillert, Lars H.** See Waldenstrom, Mats G.
**Hillig, William B.** See Adjerid, S.; Patibandla, N.
**Hillig, William B.**
Making ceramic composites by melt infiltration.—73-09195; Melt infiltration: a generic process for making ceramic matrix composites.—73-09206
**Hillman, Arthur E.** See Gheorghiu, Tudor C.
**Hills, C. D.; Sollars, C. J.; Perry, R.**
Ordinary-portland-cement-based solidification of toxic wastes: the role of OPC reviewed.—73-03512
**Hills, C. R.** See Panitz, Janda K. G.
**Hills, Marian E.** See Gruber, John B.; Seltzer, Michael D.
**Hilmas, G. E.; Holmes, John W.; Bhatt, Ramakrishna T.; DiCarlo, J. A.**
Tensile creep behavior and damage accumulation in an SiC fiber/RBSN matrix composite.—73-09685
**Hilpert, Klaus** See Boike, Martin
**Hilton, M.**
Structure of manufacturing systems for the automation of a glass container Ine.—73-14505
**Himeno, Toshihiko** See Kinoshita, Kazuhisa
**Himmel, B.** See Bender, A.; Gerber, T.
**Himmel, B.; Claudius, J.; Gerber, T.; Reinhold, C.**
Analysis of dc-sputtered $Si_3N_4$ films using X-ray diffraction and computer simulation.—73-08548
**Himmel, B.; Gerber, T.; Nofz, M.; Meissner, E.**
Structural characterization of vitreous $SiO_2$ polymorphs using WAXS [wide-angle X-ray scattering] and computer simulation.—73-14091
**Himpel, Gert; Haase, Ingrid**
Developing AlN ceramics with high thermal conductivity.—73-12979
**Himpsel, Franz J.**
Epitaxy of high-$T_c$ superconducting films on (001)silicon surface.—73-11953
**Hinarejos, J. J.** See Alvarez, J.
**Hinatsu, Yukio**
Magnetic studies on $(U,La)O_{2+x}$ solid solutions: II, Magnetic susceptibilities of solid solutions with high lanthanum and oxygen concentrations.—73-01750; Magnetic susceptibilities of $Mg_yU_{1-y}O_{2+x}$ solid solutions.—73-01751; Magnetic susceptibilities of $Y_yU_{1-y}O_{2+x}$ solid solutions.—73-01752
**Hindman, Gregory; Berg, Jack; Manos, Peter N., II**
Ti/TiN/Ti contact metallization.—73-01388
**Hinds, B. J.** See Han, Bin
**Hine, P. J.; Duckett, R. A.; Davidson, N.; Clarke, A. R.**
Modeling of the elastic properties of fiber-reinforced composites: I, Orientation measurement.—73-08919
**Hing, P.; Adotey, A.**
Sinterability and electrical conductivity of some $TiSi_2$/glass systems.—73-16989
**Hingorani, S.; Pillai, V.; Kumar, P.; Multani, M. S.; Shah, D. O.**
Microemulsion mediated synthesis of zinc-oxide nanoparticles for varistor studies.—73-15041
**Hinkle, Robert; Lowry, Jeffry T.; Tock, Larry**
Pelletizing and recycling of dust from and to a lead glass furnace.—73-07160
**Hinks, D. G.** See Pei, S.
**Hinnen, C.** See Van Huong, C. Nguyen
**Hino, Hiroyuki** See Kubo, Fuminobu
**Hino, Masao** See Okutani, Takeshi
**Hino, Ryoji** See Moriya, Yoshihiro
**Hino, T.** See Hirohata, Y.
**Hinode, H.** See Sharma, R.
**Hinomaz, P.; Smid, V.; Kristofik, J.**
Interpretation of deep levels in Si-GaAs crystals observed by photoinduced current transient spectroscopy.—73-04375
**Hintermann, H. E.** See Chattopadhyay, A. K.; Hanni, W.
**Hinz, Paul** See Dislich, Helmut
**Hinz, Paul; Dislich, Helmut; Scheidler, Herwig; Weber, Gerhard**
Glass-ceramic article decorated with ceramic color and process for its production.—73-03926
**Hioki, Y.** See King, P. J.; Kirk, A.
**Hipps, K. W.** See Wang, Xiao-Dong
**Hirabayashi, Hiroshi** See Kani, Akira
**Hirabayashi, Izumi** See Koike, Shuichi; Sakai, Takenobu; Ushida, Takahisa
**Hirabayashi, Kazuto** See Koguchi, Makoto
**Hirabayashi, Masayuki** See Ihara, Hideo
**Hirabayashi, Masayuki; Tokiwa, Kazuyasu; Tokumoto, Madoka; Ihara, Hideo**
High-pressure synthesis of $HgBa_2Ca_2Cu_3O_{8-x}$ superconductor with $T_c$>130 K.—73-15502
**Hiraga, H.; Hata, C.; Uchida, K.; Omi, S.; Asahara, Y.; Ikushima, A. J.**
Laser-induced change in the optical properties of CdTe-doped glasses.—73-15008
**Hiraga, Kenji** See Pezzotti, Giuseppe; Sasaki, Gen; Yamane, Hisanori
**Hiragushi, Keisuke** See Ikesue, Akio
**Hirahara, K.** See Shigenaka, K.
**Hirahara, Seiichiro** See Koyasu, Shigeji
**Hirai, Hisako** See Kondo, Kenichi
**Hirai, Hisako; Kondo, Kenichi**
Shock-compacted $Si_3N_4$ nanocrystalline ceramics: mechanisms of consolidation and of transition from α- to ß-form.—73-06037
**Hirai, Kouichi** See Tatsumisago, Masahiro
**Hirai, T.** See Jiang, C.-C.; Mizoguchi, Y.; Mumtaz, K.; Ohzuku, Tsutomo
**Hirai, Takami** See Yano, Shinsuke
**Hirai, Takayuki; Sato, Hiroshi; Komasawa, Isa**
Mechanism of formation of titanium dioxide ultrafine particles in reverse micelles by hydrolysis of titanium tetrabutoxide.—73-16861
**Hirai, Toshio** See Aizawa, Masanobu; Chen, Li-Dong; Masumoto, Hiroshi; Nakazawa, Hidenobu; Narushima, Takayuki; Sasaki, Makoto; Someno, Yoshihiro; Yamane, Hisanori; Young, Byung-Chun
**Hirai, Yukio** See Nakamura, Mamoru; Shigematsu, Ichinori
**Hiraide, Tsuneo**
Ceramics for adsorption and separation of virus and cells.—73-05161
**Hiraishi, Shinya; Mizutani, Yosifumi; Kawamura, Masashi; Kasai, Yoshio**
Experimental tests of soil-cement concrete with various water-reducing agents on heat of hydration, setting time, and strength.—73-09961
**Hiraiwa, Tadashi** See Hasegawa, Mitsuru
**Hiraka, Masahiro** See Ikeda, Masaki
**Hiraka, Masahiro; Watanabe, Yoshihiro; Ikeda, Masaki; Nishino, Atsushi**
Relationship between crystallization and surface characteristics in $MgO-BaO-SiO_2-B_2O_3$ glass.—73-00395; 73-10479
**Hiraki, Akio** See Moon, Jong; Takahashi, Katsumasa
**Hiramatsu, K.** See Hashiba, M.
**Hirano, K.** See Nagai, H.
**Hirano, M.; Kato, K.; Isobe, T.; Hirano, T.**
Sintering and characterization of fully dense aluminum nitride ceramics.—73-09323
**Hirano, M.; Yamauchi, N.**
Development of as-fired aluminum nitride substrates with smooth surface and high thermal conductivity.—73-14687
**Hirano, Masanori; Inada, Hiroshi**
Fabrication and properties of (Y,Ce)-TZP/$Al_2O_3$ and Y-TZP/$Al_2O_3$ composites from fine powders prepared by a hydrolysis technique.—73-02821; Fabrication and properties of (Y,Ce)-TZP/$Al_2O_3$ substrates.—73-04099
**Hirano, Masanori; Matsuyama, Tatsuo; Inada, Hiroshi; Suzuki, K.; Yoshida, H.; Machida, M.**
Stability under hydrothermal conditions and fracture strength of yttria- and ceria-doped tetragonal zirconia/alumina composites fabricated by HIPing.—73-03353
**Hirano, Shinichi** See Levinson, Lionel M.; Miura, Masashi; Oishi, Shuji; Suzuki, Hiroshi
**Hirano, Shinichi; Yogo, Toshinobu; Kikuta, Koichi; Isobe, Y.; Ono, S.**
Crystallization of $LiNbO_3$ films from metal alkoxides.—73-07876
**Hirano, Shinichi; Yogo, Toshinobu; Kikuta, Koichi; Yamamoto, Hiroshi**
Dependence of magnetic properties of $(Co,Fe)_3O_4$ film on microstructure control through phase separation.—73-11650
**Hirano, Shinichi; Yogo, Toshinobu; Kikuta, Koichi; Yoneta, Yasuhito**
Hydrothermal growth of calcite single crystals in nitrate solutions.—73-05850
**Hirano, Shinichi; Yogo, Toshinobu; Kikuta, Koichi**
Processing of functional ceramics by metallorganic route.—73-02979; Sol-gel preparation of ferroelectric films through metal alkoxides.—73-15287
**Hirano, T.** See Hirano, M.
**Hirano, Takeshi** See Niihara, Koichi
**Hirano, Tohru** See Kawai, Chihiro
**Hirano, Yasuhisa** See Morioka, Toshimichi
**Hirano, Yoshinobu** See Tsurumi, Takaaki; Daimon, Masaki
**Hirao, H.** See Kawamoto, Y.
**Hirao, Hiroshi** See Shirasaka, Tokuhiko
**Hirao, K.** See Nagaoka, Takaaki
**Hirao, Kazuyuki** See Benino, Y.; Matsuoka, Jun; Takahashi, M.; Tanaka, Katsuhisa; Todoroki, Shinichi; Umesaki, N.
**Hirao, Kazuyuki; Kawano, Takashi; Tanaka, Katsuhisa; Soga, Naohiro**
Elastic anomaly and structure of F-doped silica glass.—73-01894
**Hirao, Kazuyuki; Tamai, K.; Tanabe, S.; Soga, Naohiro**
Frequency upconversion and its new mechanism in $Tm^{3+}$-doped fluoroaluminate glasses.—73-07029
**Hirao, Kazuyuki; Todoroki, Shinichi; Soga, Naohiro**
Upconversion laser glasses and their molecular design simulations for fluorozirconate glass.—73-14304
**Hirao, Kiyoshi** See Nagaoka, Takaaki; Nakamura, Kazuo; Ohashi, Masayoshi; Proverbio, Edoardo; Yasuoka, Masaki
**Hirao, Kiyoshi; Nagaoka, Takaaki; Brito, Manuel E.; Kanzaki, Shuzo**
Microstructure control of silicon nitride by seeding with rodlike ß-silicon nitride particles.—73-13428
**Hirao, Kiyoshi; Tsuge, Akira; Brito, Manuel E.; Kanzaki, Shuzo**
Preparation of rodlike ß-$Si_3N_4$ single-crystal particles.—73-16931
**Hirao, T.** See Izumi, T.
**Hirao, Takashi** See Kitabatake, Makoto; Nishitani, Mikihiko
**Hirao, Yuji; Haraguchi, Masanobu; Fukui, Masuo; Guo, Gi-Xin; Yoshida, Akira**
Degradation mechanism of Au/$AlO_x$/Al tunnel junction.—73-07292
**Hiraoka, Kazunori**
Effect of temperature on stress-induced open failure in aluminum interconnects of LSI's.—73-10223
**Hiraoka, Makoto** See Sato, Ryuji
**Hiraoka, Susumu** See Ono, Tetsuo
**Hiraoka, Yasunori** See Watanabe, Osamu
**Hirasaka, Masao; Sekiya, Masahiko; Miki, Tetsurou**
Characterization of Tb at the interface of SiN/TbFeCo film by Auger electron spectroscopy.—73-03567
**Hirashima, Hiroshi** See Sudoh, Kazumi
**Hirashima, Hiroshi; Sudoh, Kazumi**
Structure and physical properties of $V_2O_5$ aerogels and xerogels.—73-14285
**Hirashima, Hiroshi; Tamura, E.**
Structure and electrical properties of vanadium tellurite glasses.—73-14284
**Hirashima, T.** See Kodama, M.
**Hirata, Kazuto** See Takada, Toshio
**Hirata, Shigeru; Matsumoto, Kanji; Ohya, Haruhiko**
Ceramic filter: synthesis and applications for bioseparation.—73-12319
**Hirata, Shoji** See Narui, Hironobu
**Hirata, T.** See Zhou, Hai-Yan; Zhu, Hai-Yan
**Hirata, Takaaki** See Suehiro, Masayuki
**Hirata, Y.** See Itoh, K.
**Hirata, Yoshihiro** See Katsuki, Hiroaki
**Hirata, Yoshihiro; Izaiku, Takeshi**
Fabrication of dense ß, ß''-alumina ceramics by reaction sintering.—73-05802; Fabrication of dense ß, ß''-alumina ceramics by reaction sintering.—73-16773
**Hirata, Yoshihiro; Kamikakimoto, Junko; Nishimoto, Akihiko; Ishihara, Yoshimi**
Interaction between α-alumina surface and polyacrylic acid.—73-02880; Interaction between α-alumina surface and polyacrylic acid.—73-12820
**Hirata, Yoshihiro; Kodama, Tadashi; Shimada, Kinji; Ishihara, Yoshimi**
Characterization of ZSM-5 zeolite synthesized from silica stone (Ioh Island, Kagoshima pefecture).—73-02162; Synthesis of ZSM-5 zeolite from silica stone occurred in Ioh Island, Kagoshima Prefecture, Japan.—73-03061
**Hirata, Yoshihiro; Lee, Shinn-Yih; Shimada, Kinji; Ishihara, Yoshimi**
Electrical properties of MgO-doped ß-alumina ceramics prepared from the metal alkoxides.—73-00958; Electrical properties of MgO-doped ß-alumina ceramics prepared from the metal alkoxides.—73-12790
**Hirata, Yoshihiro; Matsuda, Manabu**
Composite dependence of electromotive force of silica-alumina ceramics as oxygen solid electrolyte.—73-14684; Electromotive force measurement of mullite ceramics as oxygen solid electrolyte.—73-04095; Electromotive force measurement of mullite ceramics as oxygen solid electrolyte.—73-14704
**Hirata, Yoshihiro; Nishimoto, Akihiko; Ishihara, Yoshimi**
Effects of addition of polyacrylic ammonium [PAN] on colloidal processing of α-alumina.—73-02802; Forming of alumina powder by electrophoretic deposition.—73-02835
**Hirata, Yoshihiro; Takeshima, Kumiko; Ishihara, Yoshimi**
Synthesis of whisker-reinforced mullite matrix composites using colloidal processing.—73-06098; Synthesis of whisker-reinforced mullite matrix composites using colloidal processing.—73-13314
**Hiratani, M.** See Kabasawa, U.
**Hiratani, Masahiko** See Saitoh, Shinichiroh
**Hiratsuka, Nobuyuki** See Kakizaki, Koichi; Kobayashi, Hidehiko
**Hiratsuka, Renato Satoshi** See Ribeiro, S. J. L.
**Hiratsuka, Renato Satoshi; Santilli, C. V.; Silva, Dileize Valeriano**
Effect of electrolyte on the gelation and aggregation of $SnO_2$ colloidal suspensions.—73-13004
**Hiratuka, Tooru** See Yamamura, Takemi
**Hirayama, Hideki** See Miyake, Yasunari
**Hirayama, Shigekazu** See Aruga, Atsushi; Nakamura, Yoshikazu; Suefuji, Yoshihito; Tamaki, Kazunori
**Hirayama, Toru** See Amano, Masatake; Natsume, Y.; Sakata, Hironobu
**Hiritani, Y.** See Namegaya, Takeshi
**Hirohashi, H.** See Masuda, S.
**Hirohashi, Masatoshi** See Watanabe, Koichi
**Hirohata, Y.; Nemoto, Y.; Hino, T.; Yamashina, T.**
Influence of preparation conditions on the surface roughness of SiC thin films coated on 304 stainless steel.—73-13848
**Hiroi, Zenji** See Azuma, Masaki
**Hiroi, Zenji; Azuma, Masaki; Takano, M.; Bando, Yoshichika**
New homologous series $Sr_{n-1}Cu_{n+1}O_{2n}$ [$n$=3,5...] found in the SrO-CuO system treated under high pressure [6 GPa at 1373–1573 K].—73-02351
**Hirokawa, Yuichi; Takamura, Yuzuru; Komaki, Hisashi**
Control of the preferred orientation of $Y_1Ba_2Cu_3O_{7-\delta}$ films by the plasma flash evaporation method.—73-11706
**Hiroki, Nobuyoshi** See Sato, Yasushi
**Hiroki, Nobuyoshi; Yamanishi, Itsuo; Koike, Atsunori; Tanizawa, Yasunori; Koba, Masaaki**
Extending the campaign life of the Kashima No. 3 blast furnace [Ibaraki, Japan]—73-14591
**Hirooka, Hagato** See Muranaka, Shigetoshi
**Hirooka, Jun** See Ueno, Kazuo
**Hirosaki, Naoto** See Akimune, Yoshio; Ogasawara, Toshio; Umesaki, N.

**Hirosaki, Naoto; Akimune, Yoshio; Mitomo, Mamoru**
Microstructural design by selective grain growth of ß-$Si_3N_4$.—73-06249; Microstructure characterization of gas-pressure-sintered ß-silicon nitride containing large ß-silicon nitride seeds.—73-09488; Quantitative analysis of microstructure of self-reinforced silicon nitride ceramics.—73-17186
**Hirosaki, Naoto; Ando, Motohide; Akimune, Yoshio; Mitomo, Mamoru**
Gas-pressure sintering of ß-silicon nitride containing $Y_2O_3$ and $Nd_2O_3$.—73-02838; Gas-pressure sintering of ß-silicon nitride containing $Y_2O_3$ and $Nd_2O_3$.—73-13072; Gas-pressure sintering of low-purity ß-silicon nitride powder.—73-13073
**Hirosaki, Naoto; Ando, Motohide; Akimune, Yoshio**
Gas-pressure sintering of low-purity ß-silicon nitride powder.—73-05823
**Hirosaki, Naoto; Inoue, Yasuhide; Akimune, Yoshio**
TEM analysis of grain boundary in $Y_2O_3$-$Nd_2O_3$-doped silicon nitride.—73-03204; TEM analysis of grain boundary in $Y_2O_3$-$Nd_2O_3$-doped silicon nitride.—73-13458
**Hirosawa, Satoshi**
Science and technology in composite materials—grain-boundary microstructure and magnetic properties of hard magnetic materials.—73-07975
**Hirose, Haruo** See Hotta, Katsuyoshi
**Hirose, M.** See Muranoi, T.
**Hirose, Motohisa** See Ogawa, Takeshi
**Hirose, Seji** See Takahashi, Sadayuki
**Hirose, Toshikazu** See Obara, Kozo
**Hirose, Toshikazu; Kawaminami, Masaru; Obara, Kozo; Arakawa, Masanori; Takeuchi, Hideo**
Thermal anomalies in $Bi_2WO_6$ and EPR of doped $Gd^{3+}$ ions.—73-08984
**Hirose, Yoichi** See Hirose, Yoichi; Murakawa, Masao
**Hirose, Yoichi; Komaki, Kunio; Fujimaki, Takashi; Yanagisawa, Masaaki; Hirose, Yoichi**
Composite diamond grain and method for production thereof.—73-05295
**Hirose, Yoko** See Sugihara, Sunao
**Hirose, Yusuke** See Matsubara, Shigeo
**Hirota, Ken** See Inamura, Suguru; Ishida, Koji; Kimoto, Shinya; Matsumoto, Yousuke; Saiki, J.; Shimazaki, M.; Yamakata, Koji
**Hirota, Ken; Yamaguchi, Osamu; Inamura, Suguru; Miyamoto, Hiroki**
Formation of alkoxy-derived yttrium aluminates in the $Al_2O_3$-rich region.—73-09138
**Hirota, N.** See Ikuta, H.
**Hirotsu, Yoshihiko** See Suzuki, Hajime
**Hiroyama, Ryoji** See Hamada, Hiroki
**Hirozawa, Toru** See Sato, Takashi
**Hirsch, P. B.** See Booth, Andrew S.
**Hirschfeld, Deidre A.** See Brown, Jesse J.
**Hirt, G.; Wolf, D.; Muller, G.**
Quantitative study of the contribution of deep and shallow levels to the compensation mechanisms in annealed InP.—73-11409
**Hirtz, J. P.** See Landesman, J. P.
**Hirvonen, J.-P.** See Maklpaa, M.
**Hirvonen, J.-P.; Kauppinen, P.; Andersson, P.; Lappalainen, R.; Johansson, L.-S.**
Elastic and dry sliding characteristics of [high-velocity oxyfuel] HVOF-sprayed $Al_2O_3$ and $Al_2O_3$-$TiO_2$ coatings.—73-09588
**Hirvonen, J.-P.; Lappalainen, R.; Kattelus, H.; Likonen, J.; Suni, Ilkka; Kung, H.**
Structure, mechanical properties, and oxidation behavior of nanolayered $MoSi_2$/SiC coatings.—73-06534
**Hisada, Makoto** See Matsuura, Toshiyuki
**Hisamoto, Takenao** See Asano, Sadame
**Hishinuma, Akihiro** See Goda, Takuji; Sakai, Yasuto
**Hishita, Shunichi** See Shibagaki, Shigeki
**Hitchcock, A. P.** See Aebi, P.; Denes, G.
**Hitchens, William R.; Krusell, Wilbur C.; Dobkin, Daniel M.**
Physical and electrical properties of tantalum oxide thin films deposited by low-pressure chemical vapor deposition.—73-04148
**Hitomi, Atsushi** See Horino, Kenji; Nomura, Takeshi
**Hitotsuya, Koretoshi** See Tanaka, Isao
**Hiuga, T.** See Ikuma, Yasuro
**Hixon, Larry M.**
Selecting an effective size-reduction system.—73-01830
**Hlavac, Jan** See Rohanova, Dana; Skrovankova, Dana
**Hlavac, Jan; Krejci, Jiri**
Volatilization of type E borosilicate glass.—73-00426
**Hlavac, Jan**
Research and education in Glass and Ceramics Institute in the Institute of Chemical Technology, Prague [Czech Republic].—73-06590
**Hlinak, A.** See Chawla, K. K.
**Hnat, J. G.; Mathur, A.; Zientek, M. J.; Myles, P. T.**
Advanced technology for the vitrification of contaminated soils.—73-09699
**Ho, Chi-Ting** See Chuang, Shih-Cheng
**Ho, E.; Coronado, C. A.; Kolodziejski, L. A.**
Elimination of surface site blockage due to ethyl species in MOMBE of ZnSe.—73-04317
**Ho, H.** See Hsu, C.-C.
**Ho, Herbert L.** See Nguyen, Tai D.
**Ho, Huei-Min**
Method for forming a titanium nitride barrier layer.—73-02108
**Ho, In-Chyuan; Hsieh, Huey-Lin**
Cofiring of semiconducting (Ba,Sr)$TiO_3$ and (Ba,Pb)$TiO_3$ ceramics.—73-14809
**Ho, In-Chyuan**
Semiconducting barium titanate ceramics prepared by boron-containing liquid-phase sintering.—73-04477
**Ho, J. C.** See Lin, J. G.
**Ho, J. C.; Wu, C. Y.; Tian, Y. X.; Tang, Y. J.; Chen, X. L.; Cao, X. W.**
Pr substitution effect on $T_c$ of $YBa_2Cu_3O_{7-\delta}$.—73-08170
**Ho, J. S.** See Liu, R. S.
**Ho, K. K.** See Jia, Q. X.
**Ho, P. T.** See Joneckis, Lance G.
**Ho, P.** See Ballingall, J. M.
**Ho, Pin; Martin, Paul A.; Yu, Larry S.; Wang, Y. H.; Li, S. S.**
Growth of AlGaAs and AlGaAs/GaAs heterostructures on misoriented (110)GaAs and a normal-incidence type-II AlAs/AlGaAs quantum well infrared photodetector.—73-11232
**Ho, S.; Suo, Z.**
Microcrack tunneling in brittle matrix composites driven by thermal expansion mismatch.—73-17397
**Ho, W. J.** See Sullivan, G. J.
**Ho, Y.-H.** See Hur, Nam-H.
**Ho, Yan** See Fang, Chang-Ming
**Hoang, Truc G. N.; Morris, Douglas; Balinski, Daniel H.**
Silver paste sintering method for bonding ceramic surfaces.—73-10349
**Hoashi, Kelichiro** See Inoue, Takanori
**Hobart, K. D.** See Thompson, Philip E.
**Hobbs, L. W.** See Qin, L. C.
**Hobson, Richard J.** See Drew, Michael G. B.
**Hobson, W. S.** See Chakrabarti, U. K.; Lothian, J. R.; Pearton, S. J.; Ren, F.; Yoon, Eui-Joos; Zussman, A.
**Hobson, W. S.; Pearton, S. J.; Lopata, J. L.**
Selective regrowth of III-V epitaxial layers by low-pressure organometallic vapor phase epitaxy [OMVPE] using $CCl_4$.—73-07791
**Hocevar, Stanko** See Rajic, Nevenka
**Hoch, M.** See Hatem, G.
**Hoche, Thomas** See Bruley, John
**Hoche, Thomas; Kenway, Philip R.; Kleebe, Hans-Joachim; Ruhle, Manfred**
High-resolution transmission electron microscopy studies of a near Σ11 grain boundary in α-alumina.—73-06226
**Hochst, Hartmut** See Nelson, Arthur J.; Niles, David W.; Rioux, Dennis
**Hockey, Bernard J.** See Gallas, Marcia R.; Kim, Doh-Yeon; Luecke, William
**Hocmanova, Irena** See Stevulova, Nadezda
**Hodby, J. W.** See Dutta, P. K.; Pradhan, A. K.
**Hodeau, J. L.** See Fanchon, E.
**Hodel, W.** See Bi, J. Q.; Onishchukov, G.
**Hodes, Gary** See Golan, Y.
**Hodge, J. D.** See Brzezinska, K.
**Hodges, J. A.** See Imbert, P.
**Hodges, Robert L.; Bryant, Frank R.; Chen, Fusen E.; Wei, Che-Chia**
Method of forming isolated regions of oxide.—73-05229
**Hodgetts, K.** See Stanley, David R.
**Hodgson, Harry**
Advanced ceramic application in the ceramic industry.—73-05152
**Hoding, Thomas** See Kenj, H.
**Hodorowicz, E.** See Hodorowicz, S. A.
**Hodorowicz, S. A.; Chodorowicz-Bak, A.; Czerwonka, J.; Hodorowicz, E.; Lasocha, W.; Elck, H. A.**
Gd-Ba-Cu-O system: phase relationships at ≈950°C in air.—73-02278
**Hodoszek, M.** See Vagin, S. V.
**Hodul, D.** See Felch, S. B.; Tsai, W.
**Hofler, H. J.,** See Averback, R. S.
**Hoehn, J. G.** See Haldar, Pradeep
**Hoeke, Jan Laurens**
Review of 2-coat, single-fire porcelain enameling systems.—73-10273
**Hoel, R. H.** See Vuorinen, Sakari
**Hofer, W. W.** See Joshi, R. P.
**Hoff, H. A.** See Richards, L. E.
**Hoff, H. A.; Toth, Louis E.; Filipkowski, M. E.; Vold, C.; Lawrence, S. H.; Masumura, R. A.**
Model for the oxygenation of the $YBa_2Cu_3O_{7-x}$ 90-K superconductor.—73-11838
**Hoffels, O.** See Buchner, B.
**Hoffl, K.; Folgner, T.**
Granulometric online evaluation of loose particulate materials using the radiometric transmission principle of measurement: II, Laboratory investigations and operational experience.—73-09974
**Hoffman, A.; Evans, P. J.; Cohen, D. D.**
Compaction, distribution, and chemical bonding of tungsten-implanted glassy carbon.—73-12553
**Hoffman, Alon** See McCulloch, D.; Prawer, Steven; Weiser, Paul S.
**Hoffman, C. A.** See Eddy, C. R., Jr.; Meyer, J. R.
**Hoffman, C. A.; Meyer, J. R.; Bartoli, F. J.; Lansari, Y.; Cook, J. W.; Schetzina, J. F.**
Quantum Hall effect and setback modulation doping in HgTe-CdTe heterostructures.—73-07754
**Hoffman, Daniel J.; Kimrey, Harold D., Jr.**
Method and apparatus for radio-frequency ceramic sintering.—73-04983
**Hoffman, James F.** See Dishman, Karla L.
**Hoffman, R. W.** See Chen, Liang-Yu; Krus, D., Jr.; Mearini, G. T.; Wang, Ya-Xin
**Hoffmann, A.; Christen, J.; Gutowski, J.**
Cathodoluminescence wavelength imaging for spatial mapping of excitons bound to dislocations and structure defects in CdS.—73-09436
**Hoffmann, Dieter**
Corrosive effect of nitrate solutions on portland cement mortars.—73-00053
**Hoffmann, H. J.; Jochs, W. W.; Przybilla, G.; Westenberger, G.**
Stress-optical coefficient and its dispersion in oxide glasses.—73-14282
**Hoffmann, Hans**
Possibilities and limits of porcelain enameling processes—economics and environmental compatibility.—73-10262
**Hoffmann, K.** See Skvor, Z.
**Hoffmann, L.** See Bauer, J. C.
**Hoffmann, L.; Manuel, A. A.; Peter, M.; Walker, E.; Gauthier, M.; Shukla, A.**
Chain-related Fermi surface in (R)$Ba_2Cu_3O_{7-\delta}$.—73-11700
**Hoffmann, M. J.** See Becher, Paul F.; Kramer, Martin; Ohya, Y.; Vetrano, J. S.
**Hoffmann, M. J.; Petzow, Gunter**
Microstructural design of $Si_3N_4$-based ceramics.—73-05914
**Hoffmann, M. J.; Schneider, Gerold A.; Petzow, Gunter**
Potential of $Si_3N_4$ for thermal shock applications.—73-05271
**Hoffmann, N.** See Schafer, P.
**Hoffmann, O.**
Evaluation of the alkali resistance of glass fibers and durability of glass-reinforced cement.—73-13983
**Hoffmann, R.** See Alemany, Pere; Meyer, H.-J.
**Hoffmann, S. K.** See Hilczer, W.
**Hoffner, F. Marcucilli; Delmotte, L.; Kessler, H.**
$^{19}F/^{29}Si$ CP MAS NMR study of microporous solids synthesized in fluoride medium.—73-08400
**Hoffner, Frederique** See Faust, Anne C.
**Hofler, G. E.** See Stockman, S. A.
**Hofler, H. J.** See Averback, R. S.
**Hofler, H. J.; Averback, R. S.**
Sinter forging of nanocrystalline $TiO_2$.—73-06048
**Hofman, Miroslav**
Powder glasses.—73-14464
**Hofmann, Heinrich; Vogt, U.; Kerber, A.; Van Dijen, Franciscus**
Silicon nitride powder from carbothermal reaction.—73-06045
**Hofmann, Otto R.; Lutzner, Wolfram**
Energy reduction by z-type checker blocks in regenerators.—73-00813
**Hofmann, Otto R.; Philipp, Gerd**
Importance of the Lorentz force in electrically heated glass melts.—73-12225
**Hofmann, Peter** See Knozinger, Eric
**Hofmann, S.** See Zalar, A.
**Hofmann, T.** See Russel, Christian
**Hofstra, P. G.; Thompson, D. A.; Robinson, B. J.; Streater, R. W.**
Application of an in situ hydrogen plasma to the epitaxial regrowth of InP grown by molecular beam epitaxy.—73-11071
**Hogarth, C. A.** See Steele, C. B.
**Hoge, Douglas L.; Mason, Walter R.**
Automatic plaster mixing for molds for ceramics—an update.—73-08320
**Hogerl, K.; Frischat, G. H.**
Homogenization of glass melts by bubbling.—73-14405
**Hogg, J. H. C.** See Hagston, W. E.
**Hogler, W.; Klapka, A.; Knorr, E.**
Refractory beam for tundish purging.—73-10764
**Hogmark, S.** See Erickson, L. C.
**Hoguet, Robert G.; Hartman, Dennis M.**
Gage R&R for ceramics.—73-12143; Use of gage R&R [repeatability and reproducibility] studies and their relationship to the testing of ceramic materials.—73-08455
**Hoguet, Robert G.**
Simplified gage method for test reliability.—73-15846
**Hoh, Jan H.; Revel, Jean-Paul; Hansma, Paul K.**
Tip-sample interactions in atomic force microscopy: I, Modulating adhesion between silicon nitride and glass.—73-05091
**Hohenstein, Matthias** See Ilg, Matthias; Tournie, Eric
**Hohlwein, Dietmar** See Zeiske, Thomas
**Hohn, N.** See Rybalchenko, L. F.
**Hohn, N.; Wohlleben, D.; Schmidt, H.**
Temperature-dependent point-contact characteristics of some granular high-$T_c$ superconductors.—73-08249
**Hohr, A.** See Lopez, M. F.
**Hoinkis, M.; Crowder, M. S.; Nguyen, B. C.; Galiano, M. L.**
Methyl- and dimethyl-associated paramagnetic centers in $SiO_2$ thin films.—73-12834
**Hoj, J. W.; Engell, J.**
Ion conductivity of Nasicon ceramics: effects of texture and doping with $B_2O_3$ and $Al_2O_3$.—73-07329
**Hojaji, Hamid; Barkatt, Aaron**
Method for the formation of high-temperature superconductors.—73-04848
**Hojaji, Hamid**
Dense melt-based ceramic superconductors.—73-11951
**Hojjaji, A.** See Menetrier, M.
**Hojo, Junichi** See Emoto, Hideyuki
**Hojo, Junichi; Emoto, Hideyuki**
Microstructure and properties of $BaTiO_3$-Ni composite dielectrics.—73-07342
**Hojo, Junichi; Hongo, Fumio; Kuga, Tatsuhiko**
Metal and carbide coatings of ceramic particles using chemical plating techniques.—73-13870
**Hojo, Junichi; Ishizaka, Yasunori**
Preparation of molybdenum silicide powders by solid-state reactions.—73-16925
**Hokamoto, K.** See Shang, S.-S.
**Hokazono, Hideki** See Kubota, Yoshitaka
**Hoke, D.** See Meyers, M. A.
**Hoke, W. E.; Lemonias, P. J.; Weir, D. G.; Hendriks, H. T.**
Molecular beam epitaxial growth of boron-doped GaAs films.—73-11328
**Hoke, W. E.; Lyman, P. S.; Brierly, S. K.; Hendriks, H. T.; Pan, N.; Carter, J. R.**
Molecular beam epitaxial growth and characterization of inverted, pulse-doped AlGaAs/InGaAs/GaAs transistor structures.—73-11322

**Hoke, W. E.; Lyman, P. S.; Labossier, W. H.; Brierly, S. K.; Hendriks, H. T.; Shanfield, S. R.**
High-performance double pulse doped pseudomorphic AlGaAs/InGaAs transistors grown by molecular beam epitaxy.—73-07563
**Hoke, W. E.; Weir, D. G.; Lemonias, P. J.**
Enhanced radiative adsorption of thin, heavily beryllium-doped GaAs films.—73-04319
**Hokii, Toshiyuki** See Tsuchinari, Akihiro
**Holand, Wolfram** See Jana, Carsten
**Holand, Wolfram; Wange, P.; Carl, G.; Jana, Carsten; Gotz, W.; Vogel, W.**
Fundamentals of controlled formation of glass-ceramics.—73-00634
**Holber, W. M.** See Lu, Z.
**Holc, J.** See Hrovat, M.
**Holcombe, Cressie E.** See Chapman, Lloyd R.; Gorin, Andrew H.; Kiggans, J. O.; Kimrey, Harold D., Jr.; Tiegs, Terry N.
**Holcombe, Cressie E.; Morrow, Marvin S.**
Composite of refractory material.—73-14638; Process for microwave sintering boron carbide.—73-05328
**Holding, S.** See Shaw, H. M.
**Hole, D. E.** See Nistor, L. C.; Wood, R. A.
**Holesinger, T. G.** See Kramer, M. J.; Miller, D. J.
**Holgado, J. P.** See Gonzalez-Elipe, A. R.
**Holiday, P.; Debbi-Alaoui, A.; Matthews, A.**
Comparison of techniques for producing diamondlike carbon coatings.—73-12952
**Holkeboer, D. H.** See Basford, James A.
**Holland, C. E.** See Spindt, C. A.
**Holland, D.** See Burrows, S.; Du, Y.-J.; Lockyer, M. W. G.
**Holland, D.; Abd Karim, M. M.**
Structure of tin silicate glasses.—73-03766
**Holland, D.; Du, Y.-J.**
Barium aluminosilicate glass-ceramics by a sol-gel route.—73-14329
**Holland, D.; Dupree, R.; Kohn, S. C.; Lockyer, M. W. G.; Mortuza, M. G.**
Influence of glass manufacturing process on glass structure.—73-00646
**Holland, D.; Dupree, R.; Kohn, S. C.; Lockyer, M. W. G.; Mortuza, M. G.; Taylor, A.**
NMR studies of thermal effects on glass structure.—73-14053
**Holland, D.; Logan, E. A.**
Thermal expansion control in metal-cored glass-ceramic substrates.—73-14295
**Holland, J. P.** See Carter, J. B.
**Holland, O. W.** See Martin, Jaime M.
**Holland, W.** See Wange, P.
**Hollar, W. E.** See Allard, L. F.
**Hollars, D.** See Lee, H. J.
**Holldack, K.** See Paloura, E. C.
**Hollering, R. W. J.**
Bulk and surface second harmonic generation in noncentrosymmetric semiconductors.—73-01497
**Hollinger, G.** See Gallet, D.; Gendry, M.; Saoudre, R.
**Hollis, David** See McDougall, James
**Hollis, K. J.** See Neiser, R. A.
**Hollman, E. K.; Zaitsev, A. G.; Loginov, V. E.; Likholetov, Y. V.**
$CeO_2$ films deposited by dc reactive magnetron sputtering.—73-02736
**Hollmann, B.**
New mixing plant for cementitious materials at Rohrbach Zement [Dotternhausen, Germany].—73-00150
**Holloway, Paul H.** See Deneuville, A.; Li, Bao-Qi
**Holloway, Paul H.; Mueller, Carl H.**
Chemical reactions at metal/compound semiconductor interfaces: Au and GaAs.—73-11109
**Hollstein, T.** See Pfeiffer, W.
**Holm, R. T.** See Cukauskas, E. J.
**Holme, David; Woodthorpe, John**
Injection molding of silicon carbide seal rings.—73-04925
**Holme, J. D.** See Murden, D. G.
**Holmes, D.; Heuer, Arthur H.; Pirouz, P.**
Dislocation structures around Vickers indents in 9.4 mol% $Y_2O_3$-stabilized cubic $ZrO_2$ single crystals.—73-03131
**Holmes, John W.** See Butkus, Lawrence M.; Cho, Chong-Du; Hilmas, G. E.; Park, Y. H.
**Holmes, R.** See McKechnie, T. N.
**Holmgren, Jennifer S.**
Fluoride beidellite clay and process for preparing the clay.—73-12310
**Holmquist, T.** See Bassett, W. A.
**Holonyak, N.** See Kish, F. A.
**Holowczak, John E.** See Strobel, Tina M.
**Holroyd, Bill; Solheim, Svein**
Olivine.—73-12290
**Holstein, W. L.; Wilker, C.; Laubacher, D. B.; Face, D. W.; Pang, P.; Warrington, M. S.**
Critical current density and resistivity measurements for long patterned lines in $Tl_2Ba_2CaCu_2O_8$ thin films.—73-08011
**Holstein, W. L.**
Statistical theory of X-ray diffraction by one-dimensional randomly disordered $TlBa_2Ca_2Cu_3O_9$/$TlBa_2Ca_2Cu_3O_{10}$ superconducting thin films.—73-11905
**Holt, R. T.** See Berriche, R.
**Holt, R. T.; Corrigan, D.; Saxena, P.; Sood, R. R.**
Tensile properties of 2080/SiC/10–12w aluminum matrix composites.—73-06862
**Holterhoff, Adam G.**
Calcium aluminate cements.—73-12263
**Holtz, P. O.** See Lundstrom, T.
**Holtzberg, F.** See Krusin-Elbaum, L.
**Holysz, Lucyna; Chibowski, Emil**
Surface-free energy components of α-alumina from thin-layer wicking.—73-16609
**Holz, Dietmar; Roger, M.; Janssen, Rolf; Claussen, Nils**
Mechanical properties of reaction-bonded $Al_2O_3$/$ZrO_2$ composites.—73-17390
**Holz, Dietmar; Wu, Su-Xing; Scheppokat, Sven; Claussen, Nils**
Effect of processing parameters on phase and microstructure evolution in RBAO ceramics.—73-16737
**Holz, K.; Obst, F.; Mattes, R.**
Compounds containing layers of composition $[(Sb^{III}F)PO_4]$, $[(Sb^{III}F)As_4]$—crystal structures of $Na(SbF)PO_4{\cdot}1.5H_2O$, $Na(SbF)AsO_4$, $NH_4(SbF)PO_4{\cdot}H_2O$, and $NH_4(SbF)AsO_4{\cdot}3H_2O$.—73-02171
**Holzapfel, B.** See Von Helmolt, T.
**Holzem, Johannes** See Preisler, Eberhard
**Holzer, J. C.** See Eckert, J.
**Holzl, Robert A.** See Benander, Robert E.
**Holzl, Robert A.; DeKay, Yvonne R.; Tressler, Richard E.; Magnotta, Vincent L.; Dyer, Paul N.**
Structural articles.—73-05344
**Hombo, J.** See Matsumoto, Y.; Sasaki, T.
**Homer, G. S.** See Alonso, R. G.
**Homerlage, B.** See Netiksis, V.
**Homes, C. C.; Timusk, T.; Liang, R.; Bonn, D. A.; Hardy, W. N.**
Optical conductivity of *c*-axis-oriented $YBa_2Cu_3O_{6.7}$: evidence for a pseudogap.—73-15572
**Homewood, K. P.** See Gillin, W. P.
**Homma, H.; Kentjana, M.; Alp, E. E.**
$SnO_2$ grazing-incidence antireflection films for monochromatization of synchrotron radiation: design, preparation, and characterization.—73-12879
**Homma, M.** See Okada, M.
**Homma, T.** See Osaka, Tetsuya
**Homma, Y.** See Maruo, T.
**Hommel, Richard O.** See Franke, Ralph
**Hommerich, U.** See Eilers, H.
**Hon, K.-M.** See Wang, M.-C.
**Hon, Min-Hsiung** See Chu, Chun-Hsun; Lu, Yang-Ming; Wang, M.-C.; Wu, Shih-Ching
**Hon, Yung-Shon** See Shen, Pou-Yan
**Honda, Hirotaka** See Sadahirok, Yoshikazu
**Honda, K.** See Miyake, S.
**Honda, Kinya; Uechi, Yasushi; Morooka, Hitoshi; Yasunaga, Toru**
Strength development of high-strength mortar using ground granulated blast-furnace slag of different finenesses.—73-10166
**Honda, Masaaki** See Nishioka, Takao
**Honda, Masaru; Shizawa, Mitsuaki**
Influence of carbonation on the mechanical properties and texture of hardened mortar.—73-10006
**Honda, Masaru**
Separation and determination of gypsum and hemihydrate in [portland] cement using DSC.—73-10148
**Honda, Shoji** See Hamada, Hiroki
**Honda, Takeshi** See Ashizuka, Masahiro
**Honda, Tokuyuki; Matsumoto, Hirokazu**
Improvement of response speed of a $BaTiO_3$ self-pumped phase-conjugate mirror by crystal heating and beam focusing.—73-02618
**Honda, Toshihiko** See Ushikoshi, Ryusuke
**Honecy, Frank S.** See Della Corte, Christopher; Faur, Mircea; Miyoshi, Kazuhisa
**Honerkamp, J.** See Eiche, C.
**Honerlage, B.** See Pelant, I.
**Hong, B.-S.** See Cooper, E. A.
**Hong, C. S.** See Derry, P. L.
**Hong, Chan-Hee** See Ahn, Byung-Chul
**Hong, Gye-Won** See Lee, Hee-Gyoun
**Hong, J.-H.** See Jeong, J.-I.
**Hong, Kug-Sun** See Ahn, Jeong-Hwan; Je, Hae-June; Park, Seung-Eek
**Hong, L.** See Collins, S. M.
**Hong, M.** See Wang, Y.-H.
**Hong, Nguen-Minh; Minh, Phan-Ngoc; Thuy, Nguen-Phui**
Magnetic properties of $Y_{1-x}Gd_xCo_4B$ compounds.—73-07956
**Hong, P.** See Zhang, X. X.
**Hong, Seok-Won** See Lee, Sung-Ho
**Hong, Seong-Hyeon** See Je, Hae-June
**Hong, Shen-Rong; Li, You-Nan**
Know-how of firing of red floor tile.—73-10683
**Hong, Shi-Ming; Wakatsuki, M.**
Diamond formation from the SiC-Co system under high pressure and high temperature.—73-02236
**Hong, Soon-Ku; Lee, Jeong-Yong; Park, Hyo-Hoon**
Coherent precipitation of $Zn_3P_2$ during Zn diffusion in a GaInAsP/InP heterostructure.—73-07417
**Hong, T.; Smith, J. R.; Srolovitz, David J.**
First-principles study of interfacial adhesion: the Mo/$MoSi_2$ interface with and without impurities.—73-00233
**Hong, Tsao-Ming** See Chen, Chia-Fu
**Hong, W.; Dharani, L. R.**
Pressureless densification of ceramic matrix composites: analytical model.—73-05990
**Hong, William S.; Sater, Janet M.; Rigdon, Michael A.; Jenkins, Michael G.; Ferber, Mattison K.**
Effects of exposure time and strain rate on the elevated temperature tensile strength of SiC monofilaments.—73-06394
**Hong, Y.; Dillingham, T. R.**
$CaF_2$/Si interface using X-ray photoelectron spectroscopy.—73-09434
**Hong, Young-Ho** See Hahm, Yeong-Min
**Hong, Young-Sik; Park, Hyu-Bum; Kim, Jeong; Kim, Keon; Kim, Si-Joong**
Structural and dielectric properties of $(1-x)Pb(Fe_{1/2}Nb_{1/2})O3-xPbTiO_3$ prepared by precalcination method.—73-16602
**Hong, Zhang-Lian** See Wang, Min-Quan
**Hongo, Fumio** See Hojo, Junichi
**Honig, J. M.** See Bhat, V.
**Honjo, Kuniaki** See Inagaki, Hideya
**Honkanen, S.** See Wang, W. J.
**Honkawa, Satoru** See Yamamoto, Yoshiharu
**Honma, Itaru** See Kundu, Debtosh
**Honma, S.** See Hara, N.
**Hood, Christopher; Clifford, John F.; Beales, Timothy P.; Bultitude, John**
Sintering aid.—73-05013
**Hood, Michael** See Lin, Tze-Pin
**Hood, Patrick J.** See DeNatale, Jeffrey D.
**Hook, Bruce D.** See Weimer, Alan W.
**Hooker, Matthew W.** See Namboodri, Shannon L.; Wise, Stephanie A.
**Hooper, R. M.** See Guillou, M. O.
**Hooper, S. E.; Wilks, S. P.; Elliot, M.; Westwood, D. I.; Woolf, D. A.; Williams, R. H.**
Evaluation of ohmic contacts to GaAs(100) and (111)B using InAs/GaAs short-period superlattice [SPS] and InGaAs intermediate layers.—73-11199
**Hoorelbeke, J. M.** See Atabek, R.
**Hooton, R. D.** See Xu, Zhong-Zi
**Hooton, R. D.**
Influence of silica fume replacement of cement on physical properties and resistance to sulfate attack, freezing and thawing, and alkali-silica reactivity.—73-00123
**Hopfe, Jurgen** See Gleditzsch, Siegfried
**Hopfner, C.; Ennaoui, A.; Ellmer, K.; Fiechter, S.**
Influence of precursors on the preparation of thin pyrite films by metallorganic chemical vapor deposition.—73-05872
**Hopke, Philip** See Riley, Thomas J.
**Hopkins, D. A.** See Murthy, P. L. N.
**Hopkins, David A.**
Dolomite.—73-12269
**Hopkinson, Ian** See Harrison, Carole C.
**Hopkinson, M.** See Ehrlich, J. E.
**Hopp, Werner**
Quantitative analysis of alkali silicate solutions by ICP AES.—73-06959
**Hopper, Robert W.**
Coalescence of two viscous cylinders by capillarity: I, Theory.—73-02561; Coalescence of two viscous cylinders by capillarity: II, Shape evolution.—73-02562
**Hopple, G. B.; Keem, J. E.; Loewenthal, S. H.**
Development of fracture-resistant, multilayer films for precision ball bearings.—73-06768
**Hor, P. H.** See Bud'ko, S. L.; Tao, Y. K.
**Horai, K.** See Nishida, A.
**Horak, J.** See Vlcek, M.
**Horak, J.; Stary, Z.; Matyas, M.**
$A_x^{III}B_{2-x}^{V}C_3^{VI}$ crystals of tetradymite structure.—73-03074
**Horchos, Leonard A.** See Colon, Jose L.
**Horhager, Sylvia** See Schmid, Wolfgang
**Hori, Kouichi** See Takaki, Yoshito
**Hori, Makoto** See Mizushima, Yasuyuki
**Hori, N.** See El-Ghazzawi, M. E.
**Horiba, Ryuichirou** See Sato, Masayuki
**Horibe, S.** See Takakura, E.
**Horibe, Susumu** See Choi, Guen
**Horie, Katsuyuki** See Chazono, Hirokazu
**Horie, Kazuyuki**
Photochemical hole burning in optical materials.—73-02919
**Horie, Y.** See Fukami, T.; Paisley, M. J.
**Horiguchi, Akihiro** See Kasori, Mitsuo
**Horiguchi, Koji; Chosokabe, Tohru; Ikabata, Tatsuo; Suzuki, Yasunori**
Characteristics of carbonation of concrete used with ternary cement.—73-09845
**Horiguchi, Masaharu** See Shibata, Shuichi
**Horiikie, Y.** See Sakaue, H.
**Horikawa, Junichi; Suzuki, Isao**
Glassy media (glass and glass-ceramics) for high-density magnetic recording.—73-15328
**Horikawa, Kenichi** See Saito, Tadashi
**Horikawa, T.** See Makita, T.
**Horikawa, Takeshi; Urabe, Kazuyori; Nakamura, Hiroshi**
Surface property and strength of ground alumina ceramics.—73-09682
**Horiki, Kiminori** See Nozaki, Shunkichi
**Horikoshi, Yoshiji** See Sasaki, S.; Sudersena Rao, T.; Yamaguchi, Hiroshi; Nozawa, Kashuhiko
**Horino, Kenji; Koseki, Kenji; Yamamatsu, Junko; Hitomi, Atsushi; Nomura, Takeshi**
Reaction kinetics and grain growth behavior in $BaTiO_3$-$SrTiO_3$-$CaTiO_3$ ceramics.—73-17189
**Horio, Kenichiro; Kasai, Toshio**
Comparison of some instruments for measuring mirrorlike surfaces.—73-05030
**Horita, Masayoshi; Suzuki, M.; Matsushima, Y.; Utaka, Katsuyuki**
Impurity doping in InP layer grown by metallorganic vapor phase epitaxy using tertiarybutylphosphine and organic doping sources.—73-11261
**Horita, Masayoshi; Tsurusawa, Munefumi; Utaka, Katsuyuki; Matsushima, Y.**
Wavelength-tunable InGaAsP-InP multiple-λ/4-shifted distributed feedback laser.—73-15226
**Horita, Susumu; Tajima, Toshiyuki; Murakawa, Masakazu; Fujiyama, T.; Hata, T.**
Improvement of the crystalline quality of a yttria-stabilized zirconia film on silicon by a new deposition process in reactive sputtering.—73-09168
**Horita, Susumu; Tujikawa, Tetuya; Akahori, Hiroshi; Kobayashi, M.; Hata, T.**
Material properties of a $ZrN_x$ film on silicon prepared by ion-assisted deposition method.—73-16535
**Horiuchi, Michio** See Mizushima, Kihou
**Horiuchi, Shigeo** See Lee, Soo-Young
**Horiuchi, Tatsuro** See Mori, Toshiaki

**Horizono, Hideki** See Kimura, Shiushichi
**Horn, Allen F., III** See Arthur, David J.
**Horn, Gerhard; Frohning, Carl D.**
Copper/zinc oxide/aluminum oxide-containing catalysts.—73-12357
**Horn, K.** See Alonso, M.; Chasse, T.; Evans, D. A.; Rossow, U.; Schulle, Wolfgang
**Horn, Roger G.; Grabbe, Alexis**
Interface conditions and interparticle forces.—73-09186
**Horner, G. S.** See Alonso, R. G.
**Horng, H.-E.** See Wang, L.-M.
**Horng, J.-L.** See Chiao, Y.-S.
**Horng, L.** See Chen, K.
**Hornyak, Gabor L.** See Foss, Colby A., Jr.
**Horowitz, Harold S.**
Process for making superconductor powder.—73-11989
**Horrigan, J. A.** See Davis, A.
**Horst, J.** See Hulsenberg, D.; Speer, Dietrich
**Horst, Werner** See Preisler, Eberhard
**Horton, C.** See Strozier, J.
**Horton, Mitchell; Wolowicz, T. J.**
Latest in porcelain enamel powder—a panel session.—73-13862
**Horton, S.** See Hadfield, M.
**Horvath, Ivan** See Krajcovic, Jozef
**Horvath, Steven J.**
Apparatus for applying antilacerative film to glass.—73-04955
**Horvatic, V.** See Gladic, J.
**Horwitz, C. M.** See Gross, M.
**Horwitz, J. S.** See Blackstead, H. A.; Leuchtner, R. E.
**Hosaka, Masahiro; Miyata, Takeshi**
Hydrothermal growth of α-quartz using high-purity α-cristobalite as feed material.—73-16824
**Hosaka, Minoru**
Fuel cells of molten carbonate type.—73-14707
**Hose, H.** See Beese, W.
**Hoser, A.** See Schiebel, P.
**Hoshi, Susumu** See Hashimoto, Akira
**Hoshi, Youichi** See Sin, Kyusik
**Hoshi, Yuzi** See Kaga, Takao
**Hoshii, Shinsuke** See Kojima, Akira
**Hoshino, H.** See Imamura, Seiichiro
**Hoshino, Hirokuni** See Mori, Toshiyuki
**Hoshino, Hirokuni; Mori, Toshiyuki; Yamamura, Hiroshi; Kosugi, Naoki**
Method for preparing zircon powder.—73-05223
**Hoshino, Hisakiyo** See Nishi, Tokumitsu
**Hoshino, Kazutomo** See Nishizaka, Tsuyoshi
**Hoshino, Koichi** See Natsuoka, Morita
**Hoshino, Kouichi** See Suzuki, Yasutoshi
**Hoshino, Sadao**
Structure and dynamics of solid-state ionics.—73-04174
**Hoshino, Sumio** See Kanamori, Hiroo
**Hoshizaki, Hiroki** See Enami, Hiroyoshi
**Hoshizaki, Hiroki; Shinohara, Toshiyuki; Suzuki, Masanobu; Enami, Hiroyoshi; Kawahara, Nobuaki; Imura, Toru**
Direct observation of crystallization process from amorphous Y-Ba-Cu-O film by means of optical microscopy.—73-15420
**Hosoda, Masahiro** See Kinomura, Nobukazu
**Hosoi, Manabu** See Hayashi, Takao
**Hosokawa, Kiyoshiro; Nishiwaki, Hitoshi; Nishi, Kouichi; Hanagiri, Seiji; Sukenari, Shiro; Nakamichi, Takenori**
Refractories for casting process.—73-10786
**Hosomatsu, H.** See Suchiro, Masayuki
**Hosono, Hideo; Ima, Kazunari; Abe, Yoshihiro**
Cation exchange properties of $LiTi_2(PO_4)_3$ and synthesis of its microporous materials via glass.—73-04060
**Hosono, Hideo** See Abe, Yoshihiro; Lee, Won-Hyuk; Yanagisawa, Masaaki; Zhang, Zhi-Bo
**Hosono, Hideo; Abe, Yoshihiro; Imagawa, Hiroshi**
Chemical interaction and structural defects in ion-implanted $SiO_2$ glass.—73-13940
**Hosono, Hideo; Abe, Yoshihiro**
Fast lithium-conducting glass-ceramics in the $Li_2O$-CaO-$TiO_2$-$Al_2O_3$-$P_2O_5$ system.—73-00970
**Hosono, Hideo; Sato, Hisashi; Abe, Yoshihiro**
Improvement of chemical and mechanical properties of unidirectionally crystallized calcium phosphate glass-ceramics by reaction with ammonia gas.—73-14204
**Hosono, Hideo**
Ion implantation into glasses.—73-03739
**Hosotani, Katsunori** See Egi, Toshio; Takada, Jun
**Hosoya, Toshio** See Tomosawa, Fuminori
**Hosoyama, Kenji** See Ezura, Eizi
**Hosseini Teherani, Ferechteh; Tanabe, Keiichi; Suzuki, Minoru**
Surface morphology and crystal quality of in situ grown epitaxial $La_{2-x}Sr_xCuO_4$ thin films.—73-15642
**Hoste, Serge** See Tanaka, Masahiro
**Hotta, A.** See Kimura, S.
**Hotta, Katsuyoshi; Suzuki, Toshimasa; Hirose, Haruo; Funato, Kenichi**
Characteristics of the bulk made of the Ag-coated powders of Bi systems.—73-01500
**Hotta, Tadashi** See Kamiya, Hidehiro; Tsubaki, Junichiro; Yanagisawa, Masaaki
**Hotta, Takashi**
Impurity effects in cuprate superconductors.—73-01572
**Hou, Bi-Hui** See Yang, Hong-Shun
**Hou, H. Q.; Tu, C. W.; Shan, W.; Hwang, S. J.; Song, J. J.; Chu, S. N. G.**
Characterization of GaAs/GaAsP strained multiple quantum wells grown by gas source molecular beam epitaxy.—73-11101
**Hou, Hao-Bo** See Gao, Qiong-Ying
**Hou, Hao-Bo**
New type of pressed fly ash products.—73-10068
**Hou, Hui-Qui** See Su, Chao-Chin
**Hou, Tien-I; Kriven, Waltraud M.**
Mechanical properties and microstructure of $Ca_2SiO_4$-$CaZrO_3$ composites.—73-06244
**Hou, X.** See Taylor, P. R.
**Hou, X.-Y.** See Li, Z.-S.
**Hou, Xu** See Wang, Li-Ming
**Houben, Heinz; Muller, Horst W.**
Glassware takeout mechanism with parallel linkage.—73-04976
**Houde-Walter, S. N.; Inman, J. M.; Dent, A. J.; Greaves, G. N.**
Sodium and silver environments and ion-exchange processes in silicate and aluminosilicate glasses.—73-06970
**Houdre, R.** See Berz, Martin W.; Pavesi, L.
**Houenou, P.** See Akinocho, G.
**Houghton, D. C.** See Noel, J.-P.
**Houghton, D. C.; Noel, J.-P.; Rowell, N. L.; Perovic, D. D.**
Si-Ge strained layer heterostructures: device possibilities and process limitations.—73-04479
**Houng, Mau-Phon** See Chen, Jiann-Ruey; Wang, Y.-H.
**Houng, Yu-Min; Lester, S. D.; Mars, D. E.; Miller, J. N.**
Growth of high-quality *p*-type GaAs epitaxial layers using carbon tetrabromide by gas-source molecular beam epitaxy [GSMBE] and molecular beam epitaxy.—73-11236
**Houpert, C.** See Studer, F.
**Houssain, S. D.** See Beck, R. B.
**Houwelingen, J. V.** See Maltha, J. C.
**Hovelborn, W.** See Schneider, H.
**Hover, Kenneth C.** See Cook, Raymond A.; Farrell, Charles W.; Natesaiyer, Kumar C.
**Hovis, F. E.; Stuff, M.; Kennedy, C. J.; Vivian, B.**
Lower level relaxation of Nd:YAG.—73-07647
**Hovorka, Susan D.**
Halite pseudomorphs after gypsum in bedded anhydrite—clue to gypsum-anhydrite relationships.—73-15905
**How, Hoton** See Jiang, H.
**How, Hoton; Vittoria, Carmine**
Ferrite microstrip antenna.—73-15378
**Howard, A. J.** See Hammons, B. E.
**Howard, B. J.** See Dulak, J.
**Howard, Christopher J.** See Hannink, Richard H. J.
**Howard, Edward G., Jr.; Tietz, Raymond F.**
Ceramic/distillable binder compositions.—73-12350
**Howard, J. K.** See Hylton, T. L.
**Howard, Kevin E.** See Doktycz, Stephen J.
**Howard, Kevin E.**
Method for aqueous processing of AlN and compositions therefrom.—73-02107; Method of making moisture-resistant aluminum nitride powder and powder produced thereby.—73-02114
**Howard, L. K.** See Hassen, A.
**Howard, P. J.; Partridge, G.**
Influence of composition and processing on the properties of cordierite glass-ceramics.—73-00645
**Howard, Ron**
Larger, faster, press machines for TV glass production.—73-12041
**Howard, S. J.; Phillips, A. J.; Clyne, T. W.**
Interpretation of data from the four-point bending delamination test to measure interfacial fracture toughness.—73-03320
**Howard, W.** See Cline, B.
**Howarth, O.** See Burrows, S.
**Howe, D.** See Pan, N.
**Howe, James M.**
Bonding, structure, and properties of metal/ceramic interfaces.—73-00211
**Howe, Roger T.** See Monk, David J.
**Howell, David** See Fletcher, Joseph P.
**Howell, F. Scott** See Itatani, Kiyoshi; Kishioka, Akira; Murata, Tsuyoshi
**Howell, Kerri M.**
Corrosion investigation of a reinforced concrete tunnel.—73-06644
**Howell, P. R.** See Tang, X.
**Howell, Vincent W.**
ISO 9000: insight into the certification process.—73-09725
**Howes, Gerard W.**
Control of silicon carbide heating elements using SCR's.—73-04069
**Howie, R. Alan** See Suckut, Claudia
**Howitt, D. G.** See Chen, S. J.
**Howland, B.** See Ghodssi, R.
**Howlett, Stephen**
Applications for ceramic coatings.—73-05155
**Howson, M. A.** See Lowe, A. J.; Yang, Y. X.
**Howson, R. P.**
Synthesis of optical thin films: fundamentals and applications.—73-06093
**Hoyer, J. L.; Bennett, J. P.; Clark, J. A.**
Characterization of electroconductive TiN/Al-O-N composites.—73-10921; Mechanical properties of TiN/AlON composites.—73-09643
**Hoyle, Robert** See Baird, Thomas
**Hoyt, J. L.** See Kamins, T. I.
**Hozer, Leszek**
Semiconductor Ceramics: Grain Boundary Effects.—73-17537
**Hrabe, Zdenek** See Pach, Ladislav
**Hradecka, Helena** See Rybarikova, Ludmila
**Hradil, Klaudia** See Schmidt, Harald
**Hrazdira, Jaroslav**
Effect of mica particles on the properties of composites with a matrix of gypsum-free portland cement: I.—73-09911; Properties of gypsum-free portland cements with an admixture of ABESON-TEA grinding aid.—73-10111
**Hrdina, Kenneth** See Zhen, Yong-S.
**Hreglich, S.** See Barbon, F.; Passamonti, M. R.; Verita, M.
**Hribek, Petr** See Ross, Graeme W.
**Hriljac, J. A.** See Lightfoot, P.
**Hriljac, J.** See Sullivan, J. D.
**Hrma, Pavel** See Anderson, L. D.; Kim, Dong-Sang
**Hrma, Pavel; Piepel, G. F.; Smith, Donald E.; Redgate, P. E.; Schweiger, Michael J.**
Effect of composition and temperature on viscosity and electrical conductivity of borosilicate glasses for Hanford nuclear waste immobilization.—73-08294
**Hrma, Pavel; Robertus, Robert**
Waste glass design based on property composition functions.—73-08315
**Hrovat, M.; Bernik, S.; Kolar, D.**
Phase equilibria in the $RuO_2$-PbO-$Al_2O_3$ and $RuO_2$-PbO-CuO systems.—73-16250
**Hrovat, M.; Hoic, J.; Kolar, D.**
Phase equilibria in $RuO_2$-$TiO_2$-$Al_2O_3$ and $RuO_2$-$TiO_2$-$Bi_2O_3$ systems.—73-16249
**Hruska, Carl K.**
Conflicting values of the third-order nonlinear permittivity of α-quartz.—73-11705
**Hsi, Chi-Shiung; Haertling, Gene H.; Verbelyi, Darren**
Environmental test program for superconductor [$YBa_2Cu_3O_{7-x}$] grounding links.—73-08061
**Hsia, Wei-Jen** See Mallon, Thomas G.
**Hsia, Yuan-Fu** See Gao, Xing-Tao; Huang, Run-Sheng
**Hsieh, Huey-Lin** See Ho, In-Chyuan
**Hsieh, J. H.** See Ajayi, O. O.
**Hsieh, K. C.** See Chen, A. C.; Kish, F. A.; Ma, Z.; Stockman, S. A.; White, L. R.
**Hsieh, Peter Y.; Gangadhatan, R.; Tao, Y. K.; Liu, J. R.; Chu, W. K.**
Dc sputtering deposition of *a*-axis on *c*-axis double-layer Y-Ba-Cu-O films.—73-11720
**Hsieh, S.-L.** See Hwang, C.-L.
**Hsieh, S.-W.; Chang, Chu-Yen; Hsu, S.-C.**
Characteristics of low-temperature and low-energy plasma-enhanced chemical-vapor-deposited $SiO_2$.—73-09035
**Hsieh, Shu-Ta** See Chiou, Bi-Shiou
**Hsieh, T. J.** See Smilgys, Russell V.
**Hsieh, Wen-Feng** See Chang, De-An
**Hsu, C.-C.** See Zwinge, G.
**Hsu, C.-C.; Ho, H.; Qian, J.-J.; Wang, Y.-T.**
Cerium silicide formation in thin Ce-Si multilayer films.—73-02738
**Hsu, Chin-Tsar; Lin, Ying-Jen; Su, Y.-K.**
Crystallinity of ZnS:Tb,F thin films and characteristics of green-color thin-film electroluminescent devices prepared by rf magnetron sputtering.—73-12963
**Hsu, Jen-Yan** See Lin, Wen-Yi; Sundaram, S. Kamakshi
**Hsu, Jen-Yan; Ko, Wen-Song; Sung, Hsiao-Min; Suen, Meei-Lin; Chen, Chi-Jen**
Low-temperature-sintered ferrite for multilayer chip components.—73-11658
**Hsu, Jer-Wan** See Soroushian, Parviz
**Hsu, K.** See Yeh, T. S.
**Hsu, K.-C.; Juang, Y.-T.**
Preparations and characteristics of chemically bonded ceramics.—73-05988
**Hsu, N. J.** See Singh, R.
**Hsu, N. N.** See Slotwinski, J. A.
**Hsu, S. M.** See He, C.
**Hsu, S.-C.** See Hsieh, S.-W.
**Hsu, S.-E.** See Yeh, T. S.; Yu, Chang-Feng
**Hsu, Shu-En** See Wu, Tsung-Ming
**Hsu, T.** See Qian, R.
**Hsu, W. Y.; Kasowski, Robert V.**
Electronic structures of $BaB_2O_4$ and $LiB_3O_5$.—73-02609
**Hsu, W.-T.** See Shih, H.-C.
**Hsu, Wan Peter; Yu, Rong-Chi; Matijevic, Egon**
Paper whiteners: I, Titania-coated silica.—73-01991
**Hsu, Wen-L.**
Gas-phase kinetics during microwave plasma-assisted diamond deposition: is the hydrocarbon product distribution dictated by neutral-neutral interactions.—73-13070
**Hsu, William Y.** See Kasowski, Robert V.
**Hsu, Y.** See Li, L. K.
**Hsueh, Chun-Hway; Ferber, Mattison K.**
Evaluations of residual axial stresses and interfacial friction in Nicalon fiber-reinforced macrodefect-free cement composites.—73-00085
**Hsueh, Chun-Hway**
Embedded-end debonding during fiber pullout.—73-09589; Evaluation of interfacial properties of fiber-reinforced ceramic composites using a mechanical properties microprobe.—73-03284; Evaluation of interfacial properties of fiber-reinforced ceramic composites using fiber push-in tests.—73-09593; Interfacial debonding and fiber pullout stresses of fiber-reinforced composites: IX, A simple treatment of Poisson's effect for frictional interfaces.—73-09625; Interfacial debonding and fiber pullout stresses of fiber-reinforced composites: IX, A simple treatment of Poisson's effect for frictional interfaces.—73-09626
**Hu, An-Ming** See Sun, Yu-Ping
**Hu, B.-Y.** See Ren, D.-M.
**Hu, B.; Yin, A.; Karczewski, G.; Short, S. W.; Samarth, N.; Dobrowolska, M.**
Optical method for evaluation of the net acceptor concentration in *p*-type ZnSe.—73-07704
**Hu, C.-T.** See Tsai, T.-D.
**Hu, Chen-Ti** See Lee, Cheng-Kuo
**Hu, Ching-Li; Rahaman, M. N.**
Dense $Al_2O_3$/$ZrO_2$ particulate composites by free sintering of coated powders.—73-05730
**Hu, Ching-Li; Rahaman, M. N.**
Factors controlling the sintering of ceramic particulate composites: II, Coated inclusion particles.—73-13057
**Hu, Da-Li**
Formation mechanism of glaze cracking and its influencing factors.—73-10848
**Hu, E. L.** See Babic, D. I.; Chang, Ying-Lan; Nguyen, Chanh; Prater, C. B.; Tan, I.-H.
**Hu, H.** See Saniger, Jose M.; Trolier-McKinstry, S.

**Hu, H.; Krupanidhi, S. B.**
Enhanced electrical properties of ferroelectric $Pb(Zr_{0.5}Ti_{0.5})O_3$ thin films grown with low-energy oxygen ion assistance.—73-07887
**Hu, H.; Peng, C. J.; Krupanidhi, S. B.**
Effect of heating rate on the crystallization behavior of amorphous PZT thin films.—73-02785
**Hu, Hai-Quan; Zhang, Fu-Ping; Wu, Da-Xuan**
High-temperature color glaze fired in tunnel kiln.—73-07259
**Hu, He-Fang** See Zhao, Zhi-Hong
**Hu, Ji-Tong** See Wang, Tao
**Hu, Jia-Shan; Agrawal, Dinesh K.; Fang, Yi; Roy, Rustum**
Synthesis of hydroxyapatite using phosphate-rich glasses in the system $CaO-P_2O_5-H_2O$ and acoustic waves.—73-13305
**Hu, Jian-Hua; Gordon, Roy G.**
Atmospheric pressure chemical vapor deposition of gallium-doped zinc oxide thin films from diethyl zinc, water, and triethyl gallium.—73-12923
**Hu, K.-Y.** See Ning, X.-G.
**Hu, Ke-Zhong** See Kaviani, Kian
**Hu, L. J.** See Yeh, T. S.
**Hu, L. J.; Chang, Y. H.; Hu, M. L.; Chang, M. W.; Tse, W.-S.**
Effect of doping on the Raman modes in MgO-doped lithium niobate crystals.—73-02243
**Hu, Li-Li; Yoko, Toshinobu; Kozuka, Hiromitsu; Sakka, Sumio**
Effects of solvent on properties of sol-gel-derived $TiO_2$ coating films.—73-13034
**Hu, Lian-Xi** See Jiang, Peng
**Hu, M. L.** See Hu, L. J.
**Hu, Patrick C.; Staton, James S.; Wiegand, Karl E.**
Zeolite compositions.—73-05253
**Hu, Patrick C.**
Biocidal zeolite particles.—73-05191
**Hu, Qing-Feng**
Application test of spodumene in glazes.—73-10796
**Hu, Rong-Long**
Unfired bricks from colliery spoil.—73-06729
**Hu, S. F.** See Liu, R. S.
**Hu, S.** See El-Sherif, M. A.
**Hu, Shan-Rong** See Sun, Yue
**Hu, Shu-Guang**
Rapid burning temperature, time, and raw meal modulus range in portland cement.—73-10125
**Hu, Song-Tao** See Li, Li-Neng
**Hu, Su-Hui** See Wei, Wang-Shui; Zhang, Hong
**Hu, Tian-Dou** See Wang, Wen-Cai
**Hu, X. Z.; Wittmann, Folker H.**
Analytical method to determine the bridging stress transferred within the fracture process zone: II, Application to mortar.—73-09815
**Hu, Xiao-Bing**
Development of high-temperature raw zirconia opalescent glaze.—73-10819
**Hu, Xiao-Li** See Yin, Hong
**Hu, Xiao-Zhi** See Mai, Yiu-Wing
**Hu, Y. Z.** See Li, M.; Wang, Hai-Lin
**Hu, Y. Z.; Li, M.; Conrad, K.; Andrews, J. W.; Irene, E. A.; Denker, M.**
In situ spectroscopic ellipsometry studies of hydrogen ion bombardment of crystalline silicon.—73-07584
**Hu, Y. Z.; Wang, Y. Q.; Li, M.; Joseph, J.; Irene, E. A.**
In situ investigation of temperature- and bias-dependent effects on the oxide growth of Si and Ge in electron cyclotron resonance.—73-05856
**Hu, Y. Z; Joseph, J.; Irene, E. A.**
Applications of in situ ellipsometry to microwave electron cyclotron resonance plasma processes.—73-07382
**Hu, Y.** See Pradhan, A. K.
**Hu, Y.-L.** See Deng, Min
**Hu, Yao-He** See Yin, Sheng
**Hu, Ying-Hua** See Yin, Bing
**Hu, Yun-Xiang** See Zheng, Jia-Fan
**Hu, Z.-W.; Huang, P.-Q.; Jiang, S.-S.; Wang, J.-Y.; Jiang, J.-H.; Zhao, J.-Y.**
Synchrotron X-ray topography study of Er-doped $LaP_5O_{14}$ crystal.—73-11624
**Hu, Zhi-Qiang; Ma, Tie-Cheng; Tang, Nai-Ling**
Development of glazed tiles using inferior diopside.—73-14650
**Hu, Zhi-Xin; Zhang, Li-Qing; Lai, Zuo-Mou**
Imitation granite floor tile.—73-10790
**Hu, Zhuang-Qi** See Li, Ya-Li; Liu, X. D.
**Hua, Cheng** See Tang, Jiu-Yao
**Hua, Duen-Wu** See Deshpande, Ravindra
**Hua, G.-C.** See Grillo, D. C.
**Hua, Susan Z.; Salamanca-Riba, L.; Wuttig, M.; Soltani, P. K.**
Effects of microstructure on photoluminescence of SrS:$Eu^{2+}$,$Sm^{3+}$ thin films.—73-04293
**Hua, Yi-Min; Li, Qu; Chen, Ying-Li; Chen, Y.-X.**
Frequency upconversion in $Er^{3+}$- and $Yb^{3+}$/$Er^{3+}$-doped silica fibers.—73-00488; Several nonlinear phenomena in $Er^{3+}$-doped silica optical fibers.—73-14276
**Hua, Yi-Min; Li, Qu; Chen, Ying-Li**
Frequency upconversion in $Er^{3+}$-doped silica fibers.—73-10443
**Hua, You-Nian** See Huang, Fang
**Hua, Z.-Y.** See Zeng, You-Yi
**Huan, G. H.; Johnson, Jack W.; Jacobson, A. J.; Corcoran, E. W.; Goshorn, D. P.**
Synthesis and crystal structures of two thallium vanadium phosphates: $TlVO_2(HPO_4)$ and $Tl_2V_2O_3(VO)(PO_4)_2(HPO_4)$.—73-02485
**Huang, Bai-Yu** See Yao, Jia-Liang
**Huang, C. H.; Shang, Jian-Ku; Stabbins, J. F.**
Grain size effect on high-temperature fatigue crack growth in polycrystalline $Al_2O_3$.—73-17340
**Huang, C.** See Wang, X.-S.
**Huang, C.-O.** See Ji, Yang-Yang
**Huang, Chao-M.** See Xu, You-Ren
**Huang, Chao-M.; Kuo, Dong-H.; Kim, Youn-J.; Kriven, Waltraud M.**
Phase stability of chemically derived enstatite ($MgSiO_3$) powders.—73-16261
**Huang, Chao-M.; Xu, You-Ren; Zangvil, Avigdor; Kriven, Waltraud M.; Coon, Dennis N.**
Processing and microstructure of a Ce-doped in situ O′+B′-SiAlON composite.—73-16950
**Huang, Chao-M.; Xu, You-Ren; Zhu, Dong; Kriven, Waltraud M.**
SiC/combustion-synthesized B′-SiAlON composite.—73-16984
**Huang, Cheng-Liang** See Maung, Win-Naing
**Huang, Chi-Yuen** See Lu, Shy-Wen
**Huang, D.-P.** See Chen, Chen-Jia
**Huang, Dong-Sheng** See Weng, Lu-Qian
**Huang, Fang; Yin, Bao-Lu; Hua, You-Nian**
Blue-violet tunable $LiB_3O_5$ single-pulse ps laser.—73-11556
**Huang, H.-C.** See Lo, T.-C.
**Huang, H.-H.; Ishigame, M.; Shin, S.**
Protonic conduction in the single crystals of Y-doped $SrZrO_3$.—73-04157
**Huang, Hui-Ning; Jiang, Bo-Chang**
Application of tremolite to glazed tile fired quickly at low temperature.—73-07234
**Huang, Hui-Ning**
Fabrication of low-temperature and -expansion opacified glaze using diopside.—73-14655; Particle size measurement of ceramic raw materials.—73-08430
**Huang, J. G.** See Kouvatsos, Dimitrios N.
**Huang, J. G.; Jaccodine, Ralph J.**
Fast growth of thin gate dielectrics by thermal oxidation of Si in $N_2O$ gas ambient with low concentration of $NF_3$ addition.—73-07324
**Huang, J.** See Ding, M.-Q.; Gupta, Prabhat K.; Thompson, P. D.
**Huang, J.; Gupta, Prabhat K.**
Enthalpy relaxation in thin glass fibers.—73-10438
**Huang, Jie-Ping** See Zhang, Zhong-Xian
**Huang, Jin-Chang** See Yang, Shen-Yan
**Huang, Jin-Lin** See Li, Yong-Hong
**Huang, Jow-Lay** See Shew, Bor-Yaun
**Huang, Jow-Lay; Chiu, Hung-Liang; Lee, Ming-Tung**
Microstructure and chemical reaction in an $Si_3N_4$-TiC composite.—73-06252
**Huang, Jow-Lay; Chiu, Hung-Liang**
Chemical reaction and fracture behavior of hot-pressed $Si_3N_4$-TiC composites.—73-09549
**Huang, Jow-Lay**
Production of a sintered reaction-bonded silicon nitride insulator.—73-11048
**Huang, L. J.; Kwok, R. W. M.; Lau, W. M.; Tang, H. T.; Lennard, W. N.; Mitchell, I. V.**
Properties of ultrathin amorphous silicon nitride films on III-V semiconductors.—73-04153
**Huang, Li-Ping** See Tong, Yi-Dong
**Huang, Lily** See Desikan, Anatha N.
**Huang, M.; Yao, J.; Xu, S.; Meng, C.**
EPR evidence of the unusual coordinational environment for $Mo^{5+}$ in SAPO-5 molecular sieves.—73-12580
**Huang, Min-Ning; Adnot, Alain; Kaliaguine, S.**
Cation-framework interaction in alkali-cation-exchanged zeolites: an XPS study.—73-16046; Silylation of H-ZSM-5: an X-ray photoelectron and ir spectroscopy study.—73-12682
**Huang, N.-K.; Feng, Z.-R.; Wang, D.-Z.**
Microanalysis of $Ar^+$-bombarded zirconia–yttria films on silicon substrates.—73-12629
**Huang, P.-Q.** See Hu, Z.-W.
**Huang, Qi-Xiu** See Su, Da-Gen
**Huang, Qi-Zhong** See Xiao, Han-Ning
**Huang, R. S.** See Xu, Y. P.
**Huang, R. T.** See Cheng, Wood-Hi
**Huang, Ron; Kitai, Adrian H.**
Preparation and characterization of thin films of MgO, $Al_2O_3$, and $MgAl_2O_4$ by atomic layer deposition [ALD].—73-05959; Surface morphology of atomic layer deposited magnesia.—73-13455
**Huang, Rui-Fu** See Shen, Ding-Kun
**Huang, Rui-Hui**
Once firing of wet green bricks in annular kilns.—73-07193
**Huang, Run-Sheng; Xiong, Hong-Qi; Li, Qing-You; Hsia, Yuan-Fu; Liu, Rong-Chuan; Ji, Rong-Fu**
Oxide surface layer on fine iron particles.—73-08687
**Huang, Shao-Hua; Min, Wei-Min; Yu, Jia-Hua**
Substitution of wet fly ash for sand in mortars or concretes.—73-10170
**Huang, Shyh-Chin**
Manganese- and tantalum-modified titanium alumina alloys.—73-03688
**Huang, T. C.** See Lacorre, P.
**Huang, T. C.; Gilles, R.; Will, G.**
Thin-film thickness and density determination from X-ray reflectivity data using a conventional power diffractometer.—73-08998
**Huang, T.-S.; Peng, J.-G.; Lin, C.-C.**
Thermal stability of Mo-Al Schottky metallizations on *n*-GaAs.—73-10286
**Huang, W. C.; Jain, H.; Kamitsos, E. I.; Patsis, A. P.**
Anomalous expansion of sodium triborate melt and its effect on glass properties.—73-06996
**Huang, W.-K.** See Wang, Y.-G.
**Huang, Wei-Yun**
Fabrication of imitation silver gloss glazes.—73-10841
**Huang, Wen-Hai** See He, Guo-Ping
**Huang, Wen-Hai; Ray, Chandra S.; Day, Delbert E.**
Color and selected properties of $PbO-BiO_{1.5}-GaO_{1.5}$ glasses.—73-07002
**Huang, Wen-Xi** See Lu, Zhong-Yuan; Wang, Yu-Ping; Xia, You-Ming; Xu, Guang-Liang; Yang, Yu-Rong
**Huang, Wen-Xi; Lu, Zhong-Yuan; Xu, Guang-Liang**
Formation of portland cement clinker in low temperature and a rapid heating-up burning process.—73-09970; New energy-saving cement—iron-rich fluoroaluminate cement.—73-13756; Effect of calcium fluorosulfosilicate on formation of calcium silicate.—73-09899; Research on $C_2A_xF_{1-x}$ in iron-rich fluoroaluminate cement.—73-06711
**Huang, Xiao-Xian** See Xu, Yue-Ping
**Huang, Xin-Fan** See Chen, Kun-Ji
**Huang, Xu-Guang** See Wu, Qi
**Huang, Xue** See Sarkar, Partho
**Huang, Xue-Jun** See Wiedemeier, Heribert
**Huang, Y. T.** See Liu, R. S.
**Huang, Y.-H.** See Gao, Xian-Cheng
**Huang, Y.; Lin, Y.-F.; Wang, M.-J.; Wu, Maw-Kuen; Ma, K.-J.**
Growth of $YBa_2Cu_3O_x$ single crystals from a mixture of $YBa_2Cu_3O_x$ and $Ag_2O$.—73-01566
**Huang, Yao-T.** See Chiang, Cyril; Hurng, Weir M.
**Huang, Yi-Bin** See Ding, Zhen-Ya
**Huang, Yi-Dong; Luo, Zun-Du; Wang, Guo-Fu**
Optical transition probabilities for $Er^{3+}$ in $KY(WO_4)_2$ crystals.—73-02657
**Huang, Yi-Dong; Tu, Chao-Yang; Luo, Zun-Du; Guang, C.**
Spectra and intensity parameters of $Li_6Y(BO_3)_3$:$Nd^{3+}$ laser crystal.—73-02689
**Huang, Yi-Hao** See Cao, Xian-Cheng; Zhuang, Jian
**Huang, Yong** See Su, Qing-Ping; Zhang, Zong-Tao
**Huang, Yong-Qian** See Chen, Da-Qiang
**Huang, Yong-Xin; Wu, Zheng-Hong**
Influence of tunnel dryer system on drying homogeneity.—73-12226
**Huang, Yong-Xin**
Improving structure of annular kilns.—73-08473
**Huang, Yong; Le, Hui-Rong; Li, Jian-Bao; Zheng, Long-Lie; Wu, Jian-Guang**
Mechanical properties of silicon carbide whisker-reinforced silicon nitride matrix composites.—73-06483
**Huang, You-Rong; Zhou, Ao; Wang, Xiao-Guang; Wang, Hui-Juan**
Enhancing antioxidizing ability of SiC fiber-reinforced LAS glass-ceramic via sol-gel coating technique.—73-14374
**Huang, Yu-Ling**
Opaque glazed mosaic tiles.—73-10874
**Huang, Z. W.** See Harris, S. J.
**Huang, Z.-Y.** See Gao, Q.-J.
**Huang, Ze-Hui** See Liu, Shen-Sheng
**Huang, Zhen-Kun; Tien, Tseng-Ying**
Solid-liquid reaction in the system $Si_3N_4$-$Y_3Al_5O_{12}$-$Y_2Si_2O_7$ under 1 MPa of nitrogen.—73-16307
**Hubacek, M.; Brozek, V.; Rehak, B.**
Kinetics of deoxidizing of hexagonal boron nitride preparations.—73-09415
**Hubbard, Camden R.** See Kim, Dae-Joon; Lara-Curzio, Edgar; Wang, Xun-Li
**Huber, C. A.** See Yang, W.-H.
**Huber, G.** See Koetke, J.
**Huber, H. L.** See Lochel, B.
**Huber, R.; Schroer, A.; Ensinger, W.; Wolf, G.; Stedile, F. C.; Schreiner, W. H.**
Corrosion behavior of steel coated with thin-film TiN/Ti composites.—73-03570
**Huber, Robert** See Futterknecht, Fritz
**Huber, T. E.** See Yang, W.-H.
**Hubert, T.** See Mosel, G.
**Hubert, T.; Banach, U.; Heinze, D.**
Application of glass-ceramics for sensor technologies.—73-14132
**Hubik, P.; Smid, V.; Kristofik, J.; Stepanek, B.; Sestakova, V.**
DX-like center in bulk GaSb:S.—73-04285
**Hubscher, Martin**
Development of thermometer production in a precision glass process at about the turn of the century.—73-01893
**Huckabee, M. L.; Paisley, M. J.; Russell, R. L.; Palmour, Hayne, III**
RCS [rate-controlled sintering]—taking the mystery out of densification profiles.—73-15837
**Hucke, Hans-Dieter; Lehmann, Joachim; Dunken, Helga**
IRSS investigations of chemical resistance of sealing glasses.—73-00361
**Huclin, Jean Christophe** See Le Dez, Vital
**Hudner, J.; Ostling, M.; Ohlsen, H.; Stolt, L.; Nordblad, P.; Ottosson, M.**
Preparation of $YBa_2Cu_3O_{7-x}$ films and $YBa_2Cu_3O_{7-x}$/$Y_2O_3$ multilayers using coevaporation and atomic oxygen.—73-01639
**Hudner, J.; Thomas, Olivier; Mossang, E.; Chaudouet, P.; Weiss, F.; Boursier, D.**
Thin-film growth and compositional effects in $YBa_2Cu_3O_{7-x}$ layers prepared by metallorganic chemical vapor deposition.—73-11937
**Hudson, G. C.** See Rudder, R. A.
**Hudson, J.** See Adjerid, S.
**Huebner, Wayne** See Stevenson, Jeffry W.
**Huelt, Kari T.; Sopanen, Markku A.; Lipsanen, Harri K.; Tuomi, Turkka O.; Hasenohrl, Stanislav**
Praseodymium dioxide doping of $In_{1-x}Ga_xAs_yP_{1-y}$ epilayer grown with liquid phase epitaxy.—73-04447
**Huet, F.** See Debauche, C.
**Huett, T.** See Creighton, J. Randall
**Huffman, Maria; Kalkur, T. S.; Kammerdiner, L.; Kwor, R.; Levenson, L. L.; Reeder, M.**
Properties of ferroelectric $PbTiO_3$ films grown in an ionized cluster beam system.—73-07912
**Hug, P.** See Bensch, W.
**Hug, W. K.** See Herrmann, C.
**Huger, Marc; Fargeot, Dominique; Gault, Christian**
Ultrasonic characterization of oxidation mechanisms in Nicalon/C/SiC composites.—73-17236
**Huger, Marc; Souchard, S.; Gault, Christian**
Oxidation of Nicalon SiC fibers.—73-09533

**Huggins, Robert A.,** See Liaw, Bor Yann; Ahn, Byung-Tae
**Hughes, A. E.; Badwal, S. P. S.**
Impurity and yttrium segregation in yttria-tetragonal zirconia.—73-06229
**Hughes, A.** See Jenkins, L. C.
**Hughes, Christopher** See Plucknett, Kevin P.
**Hughes, G.** See Moriarty, P.; Roberts, L.
**Hughes, H. G.** See Ristic, L.
**Hughes, H. L.** See Revesz, A. G.
**Hughes, Neal N.** See Moyer, John R.
**Hughes, O. H.** See Harrison, P. A.
**Hughes, S. D.** See Mackenzie, A. P.
**Hughes, W. C.; Swanson, M. L.; Austin, J. C.**
Indium-vacancy and indium-hydrogen interactions in $Hg_{1-x}Cd_xTe$ [MCT].—73-13353
**Hugon, M. C.** See Agius, B.
**Hugonnard-Bruyere, S.; Frey, R.; Flytzanis, C.**
Photoinduced thermal Faraday rotation in semimagnetic semiconductors.—73-01277; Photoinduced thermal Faraday rotation in semimagnetic semiconductors.—73-07722
**Huh, Jeung-Soo; Patnaik, Sanjay; Jensen, Klavs F.**
Low-pressure OMVPE of ZnSe with hydrogen selenide and dimethylzinc-triethylamine.—73-04386
**Huh, Kang-Il; Kim, Jeong-Joo; Cho, Sang-Hee**
Variation of dielectric constant with grain size of pyrochlore phase in the PMN-pyrochlore diphasic mixtures.—73-12905
**Huh, Kang-Il; Kim, Jeong-Joo; Kim, Nam-Kyung; Kim, Jin-Ho; Cho, Sang-Hee**
Variation of dielectric constant with the volume fraction of pyrochlore phase in the PMN-polychlore diphasic system: application of general effective media equation.—73-09006
**Huh, Yong-Hak** See Cho, Seong-Jai
**Hui, D.; Kato, H.; Backhouse, C.; Young, L.**
Effects of electrode geometry and polarity on the occurrence of negative peaks in optical transient current spectroscopy applied to semiinsulating gallium arsenide.—73-11171
**Huignard, J.-P.; Rajbenbach, H.**
Noise reduction in photorefractive image amplifiers and applications.—73-07902
**Hulbert, S. F.; Cook, S. D.**
Evolution of total hip prostheses.—73-09715
**Hulicius, E.** See Bresler, M. S.
**Hulin, D.** See Foing, J.-P.
**Huling, Jeffrey C.** See Ackerman, William C.
**Huling, Jeffrey C.; Brinker, C. Jeffrey; Ackerman, William C.; Smith, Douglas M.; Bailey, Joseph K.; Farkas, Janos**
Synthetic imogolite paracrystals.—73-06105
**Huling, Jeffrey C.; Messing, Gary L.**
Chemistry–crystallization relations in molecular mullite gels.—73-10358
**Hulinova, Hana** See Liska, Marek; Mazur, Milan; Plsko, Alfonz
**Hulinova, Hana; Liska, Marek; Pelikan, Peter; Mazur, Milan**
Heat treatment of $SiO_2$ xerogels [investigated] by EPR and ir spectroscopy.—73-03732
**Hulinova, Hana; Mazur, Milan; Pelikan, Peter; Liska, Marek; Valko, Marian**
EPR investigation of sol-gel processes: I, $Mn^{2+}$ spin label–a simple structural relaxation model.—73-10371
**Hulinsky, Vaclav** See Bartuska, Miloslav
**Hull, James D.**
Alternative regenerator systems for the 90's.—73-03990
**Hull, Kenneth L.** See Artuso, Joseph F.
**Hull, R.** See Ross, F. M.
**Hull, S.; Keen, D. A.**
Structural modification with copper(I) iodide at pressures up to 27 kbar.—73-08751
**Hulman, Sheryl L.** See Danielson, Paul S.
**Hulsenberg, D.; Horst, J.; Schmidt, K.; Straube, B.**
Structurability of special glasses by means of microtechnique.—73-14087
**Hulsenberg, D.; Knauf, O.**
Synthesis of barium hexaferrite superfine powder by mcans of the glass crystallization technique.—73-03042
**Hultman, L.** See Choi, C.-H.; Kazansky, P. R.; Ljungcrantz, H.; Petrov, I.; Wahlstrom, U.
**Hultman, L.; Benhenda, S.; Radnoczi, G.; Sundgren, J. E.; Greene, J. E.; Petrov, I.**
Interfacial reactions in single-crystal TiN(100)/Al/polycrystalline TiN multilayer thin films.—73-10243
**Hultman, L.; Munz, W.-D.; Musil, J.; Kadlek, S.; Petrov, I.; Greene, J. E.**
Low-energy (–100 eV) ion irradiation during growth of TiN deposited by reactive magnetron sputtering: effects of ion flux on film microstructure.—73-03160
**Hultman, Sheryl L.** See Elmer, Thomas H.
**Hults, William L.** See Fowler, C. M.; Takigawa, M.
**Hults, William L.; Kubat-Martin, Kimberly A.; Salazar, Kenneth V.; Phillips, David S.; Peterson, Dean E.**
Synthesis of BiPbSrCaCuO superconductor.—73-12006
**Humbert, P.** See Werckmann, J.
**Humlicek, J.; Kamaras, K.; Kircher, J.; Habermeier, H.-U.; Cardona, M.; Roseler, A.**
Mid- and near-ir ellipsometry of $Y_{1-x}Pr_xBa_2Cu_3O_7$ {x=0–1} epitaxial films.—73-11837
**Humlicek, J.; Roseler, A.**
Ir ellipsometry of the highly anisotropic materials α-$SiO_2$ and α-$Al_2O_3$.—73-12615
**Hundebol, S.** See Thomsen, K.
**Hunderi, O.** See Bichri, A.; Ozanyan, K. B.; Wold, E.
**Hung, Cheng-Hung** See Katz, Joseph L.
**Hung, K.-M.** See Lin, Y.-S.
**Hung, L. S.; Mason, G. M.; Paz-Pujalt, Gustavo R.; Agostinelli, J. A.; Mir, Jose M.; Lee, S. T.**
Epitaxial growth of oxides on semiconductors using fluorides as a buffer layer.—73-07507
**Hung, Y.-H.; Ko, Y.-C.**
Influence of oxygen partial pressure on the shape of the *B-H* curve for Mn-Zn ferrites.—73-15330
**Hunge, J.-L.** See Su, Y.-L.
**Hunklinger, S.** See Lasjaunias, J. C.
**Hunlich, T.; Jeschar, R.; Scholz, R.**
Sorption kinetics of $SO_2$ from combustion flue gases at low temperatures.—73-00191
**Hunnikin, B. J.** See Lane, D. W.
**Hunsche, S.** See Bakker, H. J.
**Hunt, A.**
Dielectric and mechanical relaxation in liquids and glasses: transition from effective medium to percolation treatments.—73-04075; Dielectric relaxation in dipole glasses, and thermal relaxation and the glass transition in systems with a maximum relaxation time.—73-07010; Non-Debye relaxation and the glass transition.—73-07055
**Hunt, Brian D.** See Vasquez, Richard P.
**Hunt, Brian D.**
Edge-geometry SNS devices made of Y/Ba/Cu/O.—73-15423
**Hunt, Charles A.** See Foldvari, Istvan; Hart, D. W.
**Hunt, Charles E.** See Trujillo, Johann T.
**Hunt, D. D.** See Hart, D. W.
**Hunt, Margaret**
Star war materials launch commercial products.—73-06595
**Hunt, Michael**
Metals and ceramics boost auto performance.—73-06578
**Hunt, N. E. J.** See Vredenberg, A. M.
**Hunt, Warren H., Jr.; Osman, Todd M.; Lewandowski, John J.**
Micro- and macrostructural factors in DRA [discontinuously reinforced alumina] fracture resistance.—73-06827
**Huntelaar, M. E.** See Blasse, G.
**Hunter, Brian D.** See Foote, Marc C.
**Hunter, D. L.** See Bowen, Chris
**Hunter, Robert J.; James, Michael**
Charge reversal of kaolinite by hydrolyzable metal ions: an electroacoustic study.—73-12754
**Huntz, A. M.** See Loudjani, M. K.
**Huo, D. T. C.; Yan, M. F.; Foo, P. D.**
$SiO_2$ films by low-pressure chemical vapor deposition using diethylsilane—processing and characterization.—73-03015
**Huo, Wen-Can** See Jiang, Peng
**Huo, Yan** See Fang, Chang-Ming
**Huo, Yu-Jing** See Ji, Yang-Yang
**Hupa, L.; Graeffe, M.; Karlsson, K. H.**
Influence of glass compostion on refining.—73-14410
**Huppauff, Martin; Bange, Klaus; Lengeler, Bruno**
Density, thickness, and interface roughness of $SiO_2$, $TiO_2$, and $Ta_2O_5$ films on BK-7 glasses analyzed by X-ray reflection.—73-07008
**Huq, N.; Haque, A.; Jeelani, Shaik**
Fracture toughness measurements on $SiC/Al_2O_3$ composite.—73-03301
**Hur, Katerina Y.; Compton, Richard C.**
Fabrication of overpass microstructure in GaAs using isotropic reactive ion etching.—73-07524
**Hur, Nam-H.; Park, Yong-K.; Park, Jong-C.; Ho, Y.-H.; Lee, H.-C.**
Synthesis and $^{17}O$ NMR characterization of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O superconductor.—73-11922
**Hur, Soo-Hyung** See Kim, Myung-Chul
**Hur, W. D.** See Lee, Kyung-Hee
**Hurd, A. J.** See Brinker, C. Jeffrey
**Hurem, Z.; Vucelic, D.; Markovic, V.**
Synthesis of mordenite with different $SiO_2/Al_2O_3$ ratios.—73-09361
**Hurkmans, T.** See Munz, W.-D.
**Hurley, John P.** See Strobel, Tina M.
**Hurng, Weir M.; Wu, Sheng F.; Shei, C.-Y.; Huang, Yao-T.**
Process for preparing superconductors and compositions useful therein.—73-04868
**Hurtado, Antonio M.; Alkan, Zeynel; Mein, P.**
Sintering behavior of polycarbosilanes as polymer base for SiC materials.—73-09325
**Hurtado, Antonio M.; Dose, Hans R.; Alkan, Zeynel; Habel, Wolfgang; Nover, Christoph; Meyer, Hans**
Granulated product composed of silicon carbide powder and silicon carbide ceramic formed therefrom.—73-12465
**Hurwitz, F. I.; Heimann, P.; Farmer, S. C.; Hembree, D. M., Jr.**
Characterization of the pyrolytic conversion of polysilsesquioxanes to silicon oxycarbides.—73-16049
**Hurych, Z.** See Huttel, Y.; Mangat, P. S.; Schirm, K. M.; Soukiassian, P.
**Huse, David A.** See Bishop, David J.; Safar, H.
**Hussain, Ghulam; Sheppard, Norman**
Ir investigation of the surface species obtained by chemisorption [of] acetylene (ethyne), $C_2H_2$, and $C_2D_2$ on high-area ZnO.—73-16188
**Hussain, M. Sakhawat; Khattak, G. D.; Keith, Vepan; Al-Shatei, Mansour A.**
Superconducting ceramics: preparation, XRD, SEM, and EPR measurements to study the influence of compositional variations on superconductivity of La-(Ba/Sr/Ca)-CuO ceramic systems.—73-08216
**Hussain, S. E.** See Rasheeduzzafar,
**Hussain, S. E.; Rasheeduzzafar**
Chloride-induced corrosion of reinforcing steel.—73-03443
**Hussain, Z.** See Green, Mino
**Hussey, B. W.** See Chern, M. Y.; Dekker, C.
**Husslein, T.** See Morgenstern, I.
**Hussmann, E.** See Dislich, Helmut
**Husson, E.** See Bonneau, P.
**Hutcheon, Ronald M.** See Fathi, Zak; Moore, Edmund H.; Schulz, Rebecca L.
**Hutcheon, Ronald M.; Morin, G. F.; Smith, B. H.; De Jong, M. S.; Adams, F. P.**
High-temperature microwave response of industrial ferrites.—73-05577
**Hutchings, D. C.** See Bolger, J. A.
**Hutchings, I. M.** See Shipway, P. H.; Sparks, A. J.
**Hutchinson, J. W.** See Chan, K. S.
**Hutchison, R. G.; Chang, J. T.; Jennings, Hamlin M.**
Thermal acceleration of portland cement mortars with microwave energy.—73-00198
**Hutson, Nick D.**
Behavior of the platinum group metals in a borosilicate waste glass and their effects on the operation of a joule heated ceramic melter.—73-08284
**Huttel, Y.** See Soukiassian, P.
**Huttel, Y.; Bourdie, E.; Soukiassian, P.; Mangat, P. S.; Hurych, Z.**
Promoted oxidation of aluminum thin films using an alkali metal catalyst.—73-06845
**Huttinger, K. J.; Greil, P.**
Ceramic composites for extremely high-temperature applications.—73-12318
**Huve, M.; Martin, C.; Michel, C.; Maignan, A.; Hervieu, M.; Raveau, B.**
Influence of the size of alkaline-earth cations on the structural distortion and transport properties of the semiconducting 1212-type cuprates $TlBa_{2-x}Sr_xLnCu_2O_7$.—73-04368
**Huybrechts, Ben** See Ishizaki, Kozo; Osaki, Susumu
**Huybrechts, Ben; Ishizaki, Kozo; Takata, Masasuke**
Effect of sintering aids on microstructures and PTCR characteristics of $(Sr_{0.2}Ba_{0.8})TiO_3$ ceramics—comment.—73-09096; Grain-boundary properties of oxygen hot isostatically pressed barium strontium titanate with positive temperature coefficient of resistivity.—73-01175; Proposed phenomenological PTCR model and accompanying phenomenological PTCR chart.—73-04457
**Huybrechts, D. R. C.** See Deo, Goutam
**Hwan, Kim** See Kook, Lee-Jong
**Hwang, C. James** See Pyzik, Aleksander J.
**Hwang, C. James; Fuller, Sharon M.; Beaman, Donald R.**
Development of a high-performance $Si_3N_4$ material: using transient-liquid-phase and self-reinforcing technology.—73-16702
**Hwang, C.-L.; Lin, R.-Y.; Hsieh, S.-L.**
Cement/clay-based segments made by compaction and sintering technologies.—73-03977
**Hwang, C.-Y.** See Gurary, A.
**Hwang, Chao-Lung; Shen, Der-Hsien**
Effects of blast-furnace slag and fly ash on the hydration of portland cement.—73-00080
**Hwang, Cheol-Seong; Kim, Hyeong-Joon**
Deposition and characterization of $PbTiO_3$ thin films on silicon wafers using metallorganic sources.—73-07878
**Hwang, Chii-Shyang** See Fang, Der-Yang; Nagatome, Tomoo
**Hwang, Chii-Shyang; Fang, Der-Yang**
Effects of $Y_2O_3$ addition on the sinterability and microstructure of mullite: I, Phase transformation and sinterability.—73-02808; Effects of $Y_2O_3$ addition on the sinterability and microstructure of mullite: I, Phase transformation and sinterability.—73-13038
**Hwang, Chii-Shyang; Lin, Ching-Yi; Lu, Hung-Hua**
Effect of $SiO_2$ and $TiO_2$ on the sinterability and microstructure of alumina ceramics.—73-16741
**Hwang, Chii-Shyang; Lin, Wen-Haur**
Preparation and sinterability of zirconia-toughened-alumina composite powder.—73-02936
**Hwang, Chii-Shyang; Nakagawa, Zenbee; Hamano, Kenya**
Microstructure and mechanical strength of $TiO_2$-doped $Al_2O_3$ ceramics fired in vacuum atmosphere.—73-17160; Microstructures and mechanical properties of $TiO_2$-doped alumina ceramics owing to decomposition of formed $Al_2TiO_5$.—73-17173
**Hwang, Chii-Shyang; Tsaur, Shuen-Ching**
Effect of calcination on characteristics and sintering behavior of $Al_2O_3$-$ZrO_2$ composite powders.—73-05755
**Hwang, Doo-Sup** See Cho, Chang-Hyun
**Hwang, I.-S.; Youm, H.-N.; Chang, J.-S.; Lee, J.-M.; Song, J.-T.**
Influence of properties on carbon solid by preheat-treatment temperature.—73-13553
**Hwang, J.-R.** See Chung, I.-J.; Oh, C.-H.; Chung, I.-H.; Jeong, B.-S.
**Hwang, J.-S.; Chung, C.-H.; Park, H.-L.; Kim, T.-W.**
Intersubband transition of $CdTe/Cd_{0.9}Zn_{0.06}Te$ strained single quantum wells grown by hot-wall epitaxy.—73-14998
**Hwang, Jai-Suk** See Lee, Jeong-Hyung
**Hwang, Jin-Ha; Mason, Thomas O.; Dravid, Vinayak P.**
Microanalytical determination of ZnO solidus and liquidus boundaries in the ZnO-$Bi_2O_3$ system.—73-12630
**Hwang, K. C.** See Ballingall, J. M.; Gupta, S.
**Hwang, K.-S.; Kim, Byung-Hoon; Choi, S.-J.**
Influence on the chemical durability of $B_2O_3$-$SiO_2$ and $Al_2O_3$-$SiO_2$ thin films at the addition of $P_2O_5$.—73-12818
**Hwang, Kyu-Hong; Kim, Eui-Hoon; Kim, Hwan**
Thermal shock behavior of Y-TZP/Y-TZP-$Al_2O_3$ composites having dual microstructure.—73-05667
**Hwang, Kyu-Hong; Yoon, Tae-Kyung; Koh, Kee-Joon**
Fabrication of zirconia fibers from sol-gel process.—73-02827
**Hwang, Ming-Yi; Lin, J. T.**
Temperature dependence of SHG in NYAB crystals.—73-08771
**Hwang, R.-Y.** See Juang, C.
**Hwang, S. J.** See Hou, H. Q.; Shan, W.
**Hwang, S. L.** See Becher, Paul F.
**Hwang, S.-S.** See Lambropoulos, John C.
**Hwang, Shyh-Lung** See Chen, I-Wei
**Hwang, Shyh-Lung; Chen, I-Wei**
Nucleation and growth of α′-SiAlON on α-$Si_3N_4$.—73-13434; Nucleation and growth of ß′-SiAlON.—73-13435; Reaction hot-pressing of α′- and ß′-SiAlON ceramics.—73-06011; Superplastic forming of SiAlON ceramics.—73-17015
**Hwang, W.-Y.** See Lee, Kyung-Hee
**Hwang, Y.** See Yin, L.-W.; Zhang, Tong

**Hwang, Y.; Aizawa, T.; Hayami, W.; Otani, Shigeki; Ishizawa, Y.; Park, S.-J.**
Charge transfer between monolayer graphite and NbC single-crystal substrates.—73-02559
**Hwu, R. J.** See Sadwick, L. P.
**Hwu, S.-J.** See Wang, S. M.
**Hwu, Y.** See McKinley, J. T.
**Hybler, J.; Simeckova, M.; Durcok, S.; Veselovsky, F.**
Bi-Sr-Ca-Cu-(Al)-O system; accompanying phases: I.—73-11695
**Hyde, A. R.; Partridge, G.; Vignesoult, S.**
Comparison of particulate and platelet reinforcement of a lithium disilicate glass-ceramic.—73-07003
**Hyde, A. R.; Partridge, G.**
Particulate reinforcement of a magnesium aluminosilicate glass-ceramic.—73-00677
**Hyde, A.** See Vignesoult, S.
**Hyde, B. G.** See Makovicky, E.
**Hyde, J. M.** See Tomozawa, Minoru
**Hyland, J. N. K.** See Stanley, David R.
**Hylton, T. L.; Parker, M. A.; Coffey, K. R.; Howard, J. K.**
Properties of epitaxial Ba hexaferrite thin films on *A*-, *R*-, and *C*-plane-oriented sapphire substrates.—73-04642
**Hyun, Buh-Sung** See Park, Yong-Wan
**Hyun, D. G.** See Sohn, S. H.
**Hyun, O. B.** See Borsa, F.
**Hyun, Sang-Hoon** See Ahn, Sang-Wook; Kim, Dae-Joon; Kim, Tae-Yun
**Hyun, Sang-Hoon; Anderson, Marc A.; Yoon, Sung-Pil**
Development of ceramic composite membranes for gas separation: I, Coating characteristics of nanoparticulate $SiO_2$ sols.—73-02771
**Hyun, Sang-Hoon; Choi, Young-Min**
Characteristics of alumina-supported $TiO_2$ composite ultrafiltration membranes prepared by the sol-gel method.—73-05162; Sol-gel coating process for the preparation of supported $TiO_2$ composite membranes.—73-03019
**Hyun, Sang-Hoon; Kang, Beom-Seok; Choi, Doo-Jin**
Development of ceramic composite membranes for gas separation: IV, Permeation characteristics of γ-alumina membranes.—73-12323
**Hyun, Sang-Hoon; Lee, Ji-Hyun; Song, Won-Seon**
Preparation and characteristics of ceramic composite powders coated with $Al_2O_3$: III, Composite powders of $Al_2O_3$-$ZrO_2$.—73-05956
**Hyun, Sang-Hoon; Song, Won-Seon**
Control of microstructures and properties of composites of the $Al_2O_3/ZrO_2$ spinel system: II, $Al_2O_3/ZrO_2$ spinel composites prepared by the solution infiltration method.—73-16685; Control of microstructures and properties of composites of the $Al_2O_3/ZrO_2$-spinel system: I, Preparation and sintering behavior of $Al_2O_3$-$ZrO_2$ composite powder.—73-12956
**Hyun, Sang-Hoon; Yoon, Sung-Pil; Kang, Beom-Seok**
Development of ceramic composite membranes for gas separation: III, Examination of membrane characteristics by the gas permeation model.—73-12981
**Hyun, Sang-Hoon; Yoon, Sung-Pil; Kim, Jun-Hak**
Development of ceramic composite membranes for gas separation: V, Synthesis of nanoparticulate silica membranes by the pressurized sol-gel coating technique.—73-08509
**Hyung, Kyung-Woo; Park, Sung-Ho; Lee, Doo-Won**
Effect of sintering time on the stabilization of the Bi-Pb-Sr-Ca-Cu-O superconducting phase.—73-04705
**Iacobucci, Paul A.** See Garvey, Garry J.
**Iacocca, R. G.; Duquette, D. J.**
Effects of matrix microcracking on the oxidation behavior of carbon-fiber/glass-matrix composites.—73-07019
**Iaconis, C.** See Ashworth, S.
**Iacovangelo, Charles D.; Fillion, Raymond A.; Burgess, James F.**
Electronic apparatus [made of GaAs] with improved thermal expansion match.—73-14749
**Iacovangelo, Charles D.; Jerabek, Elihu C.; Wilson, Ronald H.; Schaefer, Peter C.**
Process for making metallized vias in diamonds substrates.—73-14759
**Ianno, Natale J.** See Nafis, Suraiya; Pittal, S.
**Ianno, Natale J.; McConville, L.; Shaikh, N.; Pittal, S.; Snyder, P. G.**
Characterization of pulsed-laser-deposited zinc oxide.—73-13377
**Iannuzzi, Giulio**
Lithographic processes in microelectronics.—73-07638
**Iasonna, A.** See Magini, M.
**Iatrides, Jean-Yves; Laurencearu, Serge; Gernies, Bernard; Delvar, Gerard; Piquet, Albert; Lalart, Denis**
French all-oxygen conversion trials.—73-12219
**Ibach, H.** See Daum, W.
**Ibarra, A.** See Molla, J.; Tijero, J. M. G.
**Ibarra, A.; Jimenez de Castro, M.**
Thermoluminescence in $MgAl_2O_4$ X-ray irradiated at 90 K.—73-12723
**Ibbetson, J. P.** See Yin, L.-W.
**Ibbetson, J. P.; Speck, J. S.; Nguyen, N. X.; Gossard, A. C.; Mishra, U. K.**
Role of microstructure in the electrical properties of GaAs grown at low temperature [LT].—73-15151
**Ibbetson, J.** See Bolognesi, C. R.; Pond, K.
**Ibbotson, A. R.; Beevers, C. J.; Bowen, P.**
Damage assessment and lifting of continuous-fiber-reinforced metal-matrix composites.—73-03257
**Ibbotson, Andy**
Rise of oxy-fuel system from small to large [glass-melting] furnaces.—73-12241
**Ibers, J. A.** See Brennan, T. D.; Keane, P. M.; Lu, Y.-J.; Mar, A.
**Ibragimov, I. R.; Fazlizhanov, I. I.; Falin, M. L.; Ulanov, V. A.**
EPR of $Ce^{3+}$ ions in $KMgF_3$ crystal.—73-16140
**Ibragimov, K. I.; Lushchik, A. Ch.; Lushchik, Ch. B.; Frorip, A. G.; Yaanson, N. A.**
Radiative and nonradiative decay of electronic excitations in CsCl crystals.—73-17096
**Ibragimov, Zh. D.** See Vakhidov, Sh. A.
**Ibragimova, M. I.; Faizrakhmanov, I. A.; Khaibullin, I. B.; Sainov, N. A.**
Transformation of the crystal structure of $Cd_xHg_{1-x}Te$ due to ion implantation.—73-11485
**Ibragimova, M. I.; Petukhov, V. Yu.; Khaibullin, I. B.**
Radiation swelling and sputtering of $Cd_xHg_{1-x}Te$ as a result of a large-dose ion implantation.—73-15134
**Ibrahim, A. K.; Abou Aly, A. I.; El-Khatieb, A.; Habib, T.**
Structural relaxations in irradiated Ni-P metallic glasses.—73-03763
**Ibrahim, H.; Ronarch, D.; Guibert, M.; Poignant, H.; Rivoallan, L.; Bayon, J. F.**
Efficiency $Er^{3+}$-doped fluorozirconate fiber amplifier.—73-07020
**Ibrahim, Manjula M.** See Seehra, Mohindar S.
**Iburi, Kisao**
Method for making glass beads with surface decoration.—73-10565
**Icbudak, H.** See Yilmaz, V. T.
**Ichii, A.** See Tsou, Y.
**Ichii, Tomoko** See Nishida, Tetsuaki
**Ichikawa, F.** See Fukami, T.
**Ichikawa, Hiroshi** See Okamura, Kiyohito; Shimoo, Toshio; Takeda, Michio
**Ichikawa, Hiroshi; Imai, Yoshikazu**
Manufacturing sintered body of silicon carbide by using SiC whiskers in a multiple heating step process.—73-02104
**Ichikawa, Kelichi** See Yagi, Hideaki
**Ichikawa, Kenji** See Asano, Sadame
**Ichikawa, Kenji; Tsukamoto, Noboru; Iida, Eiji; Nakamura, Makoto; Yamamura, Takemi**
Si-Ti-C-O fiber addition to alumina-graphite refractories.—73-00862
**Ichikawa, Kenji; Tsukamoto, Noboru; Iida, Eishi**
Alumina buildup in submerged entry nozzle.—73-00773
**Ichikawa, Kenji**
Progress in Japanese refractory industry.—73-04014
**Ichikawa, M.**
Relationship between Weibull moduli for tensile and bonding fracture strength of brittle solids (the case of a three-parameter Weibull distribution).—73-13583
**Ichikawa, Makihiko** See Ikeda, Susumu
**Ichikawa, Makihiko; Imai, Jiro; Komukai, Yuto**
Color change of ferrite phase.—73-09857
**Ichikawa, Makihiko; Komukai, Yuto**
Effect of burning conditions and minor components on the color of portland cement clinker.—73-06649
**Ichikawa, Michiharu** See Sugii, Nobuyuki
**Ichikawa, Mizuhiko; Gustafsson, Torbjorn; Olovsson, Ivar**
Linear relation between transition temperature and H-bond distance in $M_3S(SeO_4)_2$ type crystals (M=K, Rb, Cs) with O–D H-bond network.—73-16196; X-ray study of the ordering behavior in the low-temperature phase of $Cs_3D(SeO_4)_2$.—73-08795
**Ichikawa, Satoshi; Takami, Akihide; Iwakuni, Hideharu**
Exhaust gas disposable catalyst and method of manufacturing the same.—73-02035
**Ichikawa, Shuichi; Takahashi, Tomonori**
Initial-stage sintering of ß-alumina.—73-17149
**Ichikawa, Yukihito; Fushimi, Koji**
Ceramic guide pin.—73-05201
**Ichiko, Tadatoshi**
Glazing of bone china.—73-14659
**Ichikura, Eiji** See Maeda, K.; Manabe, Tsuneo
**Ichimura, Hiroshi** See Ishii, Yoshiro
**Ichimura, Koichi; Nomura, Kazushige; Minami, Fujio; Takekawa, S.**
STM study of the electronic density of states in the superconducting phase of $Bi_2Sr_2CaCu_2O_8$.—73-08207
**Ichimura, Masaya; Wada, Takao; Fujita, Shizuo; Fujita, Shigeo**
Stabilization of Li acceptors in ZnSe by above-band-gap photoirradiation.—73-07809
**Ichimura, S.** See Nonaka, Hidehiko
**Ichino, Akihiro** See Kasuga, Toshihiro
**Ichino, K.; Iwami, K.; Kawakami, Y.; Fujita, S. Z.; Fujita, S. G.**
Ultraviolet semiconductor laser structures with pseudomorphic ZnCdSSe quaternary alloys on GaP substrates.—73-04504
**Ichino, Tadasu** See Moriyama, Minoru
**Ichinokawa, Takeo**
Surface structure [observation] by ultrahigh vacuum scanning electron microscopy.—73-06295
**Ichinose, Ataru** See Maeda, Toshihiko; Wada, Takahiro
**Ichinose, Hideki**
Atomic arrangement at grain boundaries and interfaces [observed] by high-resolution electron microscopy.—73-06187
**Ichinose, Hiromichi** See Katsuki, Hiroaki; Kawahara, Akihiko
**Ichinose, Hiromichi; Akamatsu, Kazuo; Terasaki, Makoto; Katsuki, Hiroaki; Nagano, M.**
Deposition of TiN films onto glaze of porcelain by reactive sputtering.—73-00768
**Ichinose, I.** See Grieser, Franz
**Ichinose, N.; Hazeyama, I.**
Thermal properties of AlN sintered at lower temperature with additives.—73-02710
**Ichinose, N.; Watanabe, M.**
VDR [voltage-dependent resistor] effect in Bi-diffused $SrTiO_3$-based ceramics.—73-11504
**Ichinose, Yukio** See Saitoh, Hidetoshi
**Ichitsuka, Takeshi; Ogawa, Tetsuro; Sumita, Masaya; Yokoo, Akihiko**
Process for producing shaped article of oriented calcium phosphate type compound.—73-02063
**Ichiyama, Hiroshige** See Eguchi, Tadataka
**Iddles, D. M.; Bell, A. J.; Moulson, A. J.**
Relationships between dopants, microstructure, and the microwave dielectric properties of $ZrO_2$-$TiO_2$-$SnO_2$ ceramics.—73-04161
**Ide, Hideo** See Shimpo, Akihiro
**Ide, Ichio; Hayashi, Toshio; Sawamura, Shuji**
Controlling method of setting time for low-heat cement concrete.—73-09800
**Idemoto, Y.; Fueki, Kazuo; Sugiyama, M.**
Diffusion coefficients of oxygen in $Nd_2CuO_{4-\delta}$.—73-03091
**Ido, Shunji** See Komabayashi, Masashi
**Ido, T.** See Aoki, Masahiro
**Idorn, Gunnar M.**
Expansive mechanisms in concrete[—review].—73-09956
**Idriss, H.; Andrews, R. M.; Barteau, M. A.**
Application of luminescence techniques to probe surface-adsorbate interactions on oxide single crystals.—73-05022
**Idrissi, M. A.** See Bennouna, A.
**Iga, Atsushi; Ito, Masahiro; Okinaka, Hideyuki**
Exaggerated grain growth of ZnO in low-voltage ZnO varistor.—73-14897
**Iga, Atsushi**
Method for manufacturing a ceramic capacitor having varistor characteristics.—73-04217
**Iga, Fumitoshi** See Ha, Dong-Han
**Iga, Fumitoshi; Nishihara, Yoshikazu**
Metal-insulator transition with oxygen content in $CaVO_{3-y}$.—73-05596
**Iga, K.** See Uchida, Takashi
**Iga, Ryuzo** See Yasaka, Hiroshi
**Iga, Takeo** See Mori, Toshiaki; Murase, Yoshio
**Igarashi, Hideaki** See Yoshida, Kozaburo
**Igarashi, Hideji** See Tashiro, Shinjiro
**Igarashi, Hiroshi** See Mizuno, Noritaka
**Igarashi, Jun** See Mori, Hidetsugu
**Igarashi, Kaoru** See Tsubone, Daisuke
**Igarashi, Shinichi** See Kawamura, Mitsunori
**Igarashi, Tadashi** See Kawai, Chihiro
**Igari, Akihide** See Ochi, Hideo
**Igashira, Kenichiro** See Tanaka, Isao
**Ignat'ev, A. S.; Kamenev, A. V.; Kopylov, V. B.; Nemtsev, G. Z.; Posvyanskii, D. V.**
Static *I-V* characteristics of resonant tunnel diodes based on GaAs/AlAs heterostructures.—73-11453
**Ignat'ev, I. V.** See Abramov, A. P.; Belousov, M. V.
**Ignat, M.** See Scafidi, P.
**Ignat, M.; Ducarroir, M.; Lelogeais, M.; Garden, J.**
Experimental approach to the analysis of the adhesion properties of SiC coatings deposited on steel substrates.—73-10227
**Ignatenko, S. P.** See Gerasimovich, L. S.
**Ignatiev, A.** See Strozier, J.
**Ignatiev, M.; Kovalev, E.; Melekhin, I.; Smurov, I. Yu.; Sturlese, S.**
Hardening of a titanium alloy by laser nitriding.—73-06799
**Ignatov, A. V.** See Burlak, A. V.
**Ignatov, A. Yu.** See Menushenko, A. P.
**Ignatova, R. M.; Val'be, N. A.; Shaikhutdinova, I. F.**
Flotation reagent as a clay substitute in enamel slips.—73-00234
**Ignatyuk, V. A.; Goncharuk, V. K.; Stavnistyi, N. N.; Merkulov, E. V.; Shushpanova, L. S.**
Structure of glass based on $BaZr_3F_{10}$.—73-14109
**Igrashev, T. I.** See Magrupov, R. D.
**Igsawa, Shigenari; Yasuda, Kouichi; Matsuo, Yohtaro; Kimura, Shiushichi**
Changes in fracture surface area and actual fracture energy of a carbon-fiber-reinforced silicon nitride composite during failure.—73-09546
**Iguchi, Akira** See Iguchi, Eisuke; Lee, Keun-Jin
**Iguchi, Akiyoshi** See Yoshikawa, Akihiko
**Iguchi, Eisuke** See Lee, Keun-Jin
**Iguchi, Eisuke; Akashi, Keisuke**
Dielectric relaxations and electrical transport due to nonadiabatic small polarons in *p*-type NiO doped with Li.—73-12767
**Iguchi, Eisuke; Lee Keun-Jin; Iguchi, Akira**
Estimates of Anderson's electron-phonon coupling constants of small polarons localized at oxygen ions in $Ni_{1-x}Li_xO$ using a polarizable point-ion shell model.—73-08865
**Iguchi, Eisuke; Lee, Keun-Jin**
Dielectric relaxations in $SrTiO_3$ doped with $La_2O_3$ and $MnO_2$ at low temperatures.—73-16448
**Iguchi, Eisuke; Miyagi, H.**
Stability of polarons in monoclinic $WO_3$.—73-05488
**Iguchi, Takahisa; Nakamura, Tsutomu; Nakai, Tetsuo**
Method of manufacturing a diamond heat sink.—73-12495
**Iguchi, Y.** See Terabe, Kazuya
**Iguchi, Yasutaka** See Narushima, Takayuki
**Iguchi, Yoshiaki** See Yamaguchi, Shu
**Ihara, Chiaki; Shigeyama, Yoshihide**
Static fatigue crack propagation behavior of glass in a vacuum.—73-10483
**Ihara, Hideo** See Hayakawa, Hiroshi; Hirabayashi, Masayuki; Kaneko, Hiroko
**Ihara, Hideo; Hirabayashi, Masayuki; Tanino, Hiroshi; Tokiwa, Kazuyasu; Ozawa, Hirotomo; Akahama, Yuichi**
Resistivity measurements of $HgBa_2Ca_2Cu_3O_{8+\delta}$ [1223] and $HgBa_2Ca_3Cu_4O_{10+\delta}$ [1234] superconductors under high pressure.—73-11893
**Iharada, T.; Hammouche, A.; Fouletier, Jacques; Kleitz, M.; Boivin, J. C.; Mairesse, G.**
Electrochemical characterization of BIMEVOX oxide ion conductors.—73-00961
**Ihm, G.** See Kim, T.-W.
**Iida, Eiji** See Ichikawa, Kenji
**Iida, Eiki** See Inoue, Norio
**Iida, Eishi** See Asano, Sadame; Ichikawa, Kenji
**Iida, Junji** See Matsumoto, Takehiko

**Iida, Junji; Tanaka, Midori; Nakagawa, Yasuaki; Funahashi, Satoru; Kimizuka, Noboru; Takekawa, S.**
Magnetization and spin correlation of two-dimensional triangular antiferromagnet $LuFe_2O_4$.—73-07961

**Iida, Takamichi** See Ueda, Mitsuru

**Iijima, K.; Terashima, T.; Bando, Yoshichika**
Atomic layer growth of oxide thin films with perovskite-type structure by reactive evaporation.—73-12924

**Iijima, Kenji** See Takada, Toshio

**Iijima, Tomohiko; Oomori, Yoshiyuki; Oku, Takashi**
Properties of apatite cement composed of α-tricalcium phosphate and tetracalcium phosphate.—73-10106

**Iijima, Y.; Onabe, K.; Futaki, N.; Tanabe, N.; Sadakata, Nobuyuki; Kohno, Osamu**
Structural and transport properties of biaxially aligned $YBa_2Cu_3O_{7-x}$ films on polycrystalline Ni-based alloy with ion-beam-modified buffer layers.—73-08210

**Iimura, Y.** See Oyama, T.

**Iio, Satoshi** See Asano, Tetsuo; Ito, Toshimichi; Itoh, Hideaki; Okada, Akira; Otsuka, Jun

**Iio, Satoshi; Niwa, Tomonori; Tajima, Yo; Watanabe, Masakazu**
Crack propagation behavior in gas-pressure-sintered silicon nitride.—73-13497

**Iio, Satoshi; Niwa, Tomonori; Tajima, Yo**
Crack propagation behavior in gas-pressure-sintered silicon nitride.—73-06353

**Iio, Satoshi; Okada, Akira; Asano, Tetsuo; Yoshimura, Masahiro**
Corrosion behavior of silicon nitride ceramics in aqueous solutions: III, Corrosion behavior in hot sulfuric acid and microstructure of corroded layer.—73-03216; 73-13471

**Iio, Satoshi; Yokoi, Hitoshi; Watanabe, Masakazu**
Oxidation behavior of oxide/SiC whisker composites.—73-06313

**Iitsuka, Shoji** See Shikano, Hiroshi

**Iiyama, Michitomo** See Inada, Hiroshi; Nakamura, Takao; Saitoh, Mitsuchika

**Iizuka, R.** See Ma, H. L.

**Iizuka, Shuichi**
Utilization of industrial wastes and byproducts in cement industry.—73-10188

**Iizumi, Kiyokata** See Kudaka, Katsuya

**Ijdo, D. J. W.** See Blasse, G.; Cordfunke, E. H. P.; Fu, W. T.

**Ijichi, Tetsuro** See Ohkubo, Michio

**Ijsselsteijn, R. P. J.** See Flokstra, J.

**Ikabata, Tatsuo** See Horiguchi, Koji

**Ikabata, Tatsuo; Miyama, Yasuyuki; Sato, Masao**
Effects of clinkering temperature and silicate phase on the hydration of $C_{11}A_7CaF_2$.—73-09931

**Ikarashi, Taeko** See Kimura, Shigeru

**Ikazaki, Fumikazu** See Ohtake, Takeshi

**Ikebe, Masaru** See Ueda, Kunihiro

**Ikeda, A.** See Wakasa, K.

**Ikeda, H.** See Ohsawa, Fumiyuki

**Ikeda, Jeri Ann S.** See Chiang, Yet-Ming

**Ikeda, K.** See Osaka, Akiyoshi

**Ikeda, Kayuto; Takamuku, Kenshi; Itti, Rittaporn; Koshizuka, N.**
Atomic resolution scanning tunneling spectroscopic studies of $Bi_2Sr_2CaCu_2O_x$ single crystals.—73-05361

**Ikeda, Kazunari** See Kuwabara, Makoto

**Ikeda, Kazuo** See Komorita, Hiroshi

**Ikeda, Ko** See Schneider, H.

**Ikeda, Ko; Matsui, Hideki; Tashiro, Chuichi**
Calcium sulfoaluminate cements prepared from waterworks slime, a potential alumina resource for the production, and the possibility of lowering firing temperature.—73-09835

**Ikeda, Kou** See Tashiro, Chuiti

**Ikeda, Masaki** See Hiraka, Masahiro; Lee, Seok-Keun; Mizuno, Yasuo; Mizutani, Nobuyasu

**Ikeda, Masaki; Kimura, Kunio; Oyabu, Hajime; Nishino, Atsushi**
Effect of frit composition on the crystallization and relative opacity of low-temperature melting $TiO_2$-opacified porcelain enamels in the $SiO_2$-$B_2O_3$-$Na_2O$-$K_2O$- $Li_2O$-CaO-$TiO_2$-$ZrO_2$-F-$P_2O_5$ system.—73-00221; Effect of frit compositions on the glass transition temperature, water durability, and coloring of the CdS-CdSe pigment containing low-temperature porcelain red enamel in the system $SiO_2$-$B_2O_3$-$Na_2O$-$K_2O$-$Li_2O$-ZnO-$Al_2O_3$-$ZrO_2$-F.—73-03722; Effect of frit compositions on the glass transition temperature, water durability, and coloring of the CdS-CdSe pigment containing low-temperature porcelain red enamel in the system $SiO_2$-$B_2O_3$-$Na_2O$-$K_2O$-$Li_2O$-ZnO-$Al_2O_3$-$ZrO_2$-F.—73-14358

**Ikeda, Masaki; Lee, Seok-Keun; Shinozaki, Kazuo; Mizutani, Nobuyasu**
Preparation of monodispersed $BaTiO_3$ powders by hydrolysis of Ba/Ti bimetallic alkoxide.—73-13194

**Ikeda, Masaki; Lee, Seok-Keun; Shinozaki, Kazuo**
Preparation of monodispersed $BaTiO_3$ powders by hydrolysis of Ba/Ti bimetallic alkoxide.—73-02956

**Ikeda, Masaki; Mizuno, Yasuo; Hiraka, Masahiro; Nishino, Atsushi**
Effect of addition of divalent metal oxides on the crystallization, thermal expansion, and surface roughness of alkali-free porcelain enamel in the MgO-$ZrO_2$-$P_2O_5$-$SiO_2$-$B_2O_3$ system.—73-13823

**Ikeda, Masashi** See Tsuji, Yukikazu

**Ikeda, Naoshi** See Nakamura, Shin

**Ikeda, Nariaki** See Azuma, Masaki

**Ikeda, S.** See Kamiyama, T.

**Ikeda, Susumu** See Agui, Akane; Fukuda, Koichiro

**Ikeda, Susumu; Ichikawa, Makihiko**
Influence of firing conditions and minor components on the fine textures of alite.—73-10007

**Ikeda, Susumu; Okuno, Yoshihiro; Fujita, Hiroharu; Yoshio, M.**
Synthesis of diamondlike carbon (a-C:H) films by hybrid plasma CVD—effects of ion-beam injection energy on film deposition.—73-13303

**Ikeda, Susumu; Okuno, Yoshihiro; Fujita, Hiroharu; Yoshio, Masaki**
Influence of substrate temperature on the formation of carbon films by hybrid plasma CVD.—73-16842; Synthesis of diamondlike carbon (a-C:H) films by hybrid plasma CVD—effects of ion beam injection energy on film deposition.—73-03046

**Ikeda, Susumu; Okuno, Yoshihiro; Fujita, Hiroharu; Yoshio, Masayuki**
Inference of substrate temperature on the formation of carbon films by hybrid plasma CVD.—73-09171

**Ikeda, Takashi** See Miwa, Kenji

**Ikeda, Tsutomu** See Tanaka, Yusuke

**Ikeda, Tsutomu; Satoh, Toshiki**
Wear-resistant [BN] coating films and their coated articles.—73-16023

**Ikeda, Yasuhira; Yasuike, Yoshiyuki; Takahashi, Koichi; Yamamoto, Mitsuo; Takashima, Yoichi**
Carbonation reaction of synthetic 11-Å tobermorite in aqueous solution.—73-03440

**Ikeda, Yasuhisa; Yasuike, Yoshiyuki; Kumagai, Mikio; Park, Yoon-Yul; Harada, Masayuki; Tomiyasu, Hiroshi**
$^{29}Si$ MAS NMR study on structural change of silicate anions with carbonation of synthetic 11-Å tobermorite.—73-02430

**Ikeda, Yasuhisa; Yasuike, Yoshiyuki; Kumagai, Mikio; Park, Yoon-Yul; Harada, Masayuki; Tomiyasu, Hiroshi**
$^{29}Si$ MAS NMR study on structural change of silicate anions with carbonation of synthetic 11-Å tobermorite.—73-12679

**Ikeda, Yasuhisa; Yasuike, Yoshiyuki; Takahashi, Koichi; Yamamoto, Mitsuo; Takashima, Yoichi**
Carbonation reaction of synthetic 11-Å tobermorite in aqueous solution.—73-16044

**Ikeda, Yasunori** See Kusano, Yoshihiro; Niinae, Toshinobu

**Ikeda, Yasunori; Daitoh, Yoshihiro; Takano, Mikio; Bando, Yoshichika; Niinae, Toshinobu; Takada, Jun**
Mechanical grinding and reforming process of the Bi-2201 phase.—73-01600

**Ikeda, Yasushi**
Neutron radiography for $Si_3N_4$ fine ceramics.—73-12171

**Ikegami, T.** See Mitsuhashi, Takefumi; Watanabe, Akio

**Ikegami, Takayasu** See Mitomo, Mamoru

**Ikegaya, Akihiko; Fujimori, Naoji; Yashiki, Tetsuo; Abe, Tetsuya; Murakami, Yoshio**
Insulating member and electric parts using the same.—73-11022

**Ikemachi, Takaaki** See Takai, Minoru

**Ikemachi, Takaaki; Kawano, Takashi; Koriyama, Shinichi; Yamauchi, Hisao**
Method of preparing Pb-Sr-Ca-Ln-Ca-O metal oxide superconductor.—73-01723

**Ikenaga, Hirotake** See Ishigami, Shinobu; Mori, Daisuke

**Ikeno, Susumu** See Shiota, Ichiro

**Ikeno, Yoshimitsu** See Kohno, Osamu

**Ikesue, Akio** See Kawano, Fusao

**Ikesue, Akio; Shikano, Hiroshi**
Corrosion test for BOF [basic oxygen steelmaking furnaces] tap hole refractories.—73-00793

**Ikesue, Akio; Yamamoto, Hiroshi; Shikano, Hiroshi; Hiragushi, Keisuke**
Behavior of carbon-containing refractories at high temperature.—73-00780

**Ikesue, Akio; Yoshitomi, J.; Shikano, Hiroshi; Eguchi, T.**
Formation of precipitated-complex spinel in magnesia-chrome refractories and its characteristics.—73-10729

**Iketani, A.** See Ohkubo, Michio

**Ikeuchi, Seiji; Kamada, Kohichi**
New architectural glass.—73-10460

**Ikeyama, Masami** See Nakamura, Mamoru

**Ikeyama, Masami; Saitoh, Kazuo; Chayahara, Akiyoshi; Tanaka, Takahiro; Tamari, Nobuyuki; Iwasa, Mikio**
Variations of surface hardness of alumina induced by ion implantation.—73-16647

**Ikoma, Keiko; Yamanaka, Mitsugu**
Preparation of textured diamond films on Si substrates by hot-filament chemical vapor deposition.—73-09270

**Ikoma, Shuji; Ohki, Kimiko; Yokoi, Hiroshi**
Preparation and characterization of silica-supported maghemite.—73-02933; Preparation and characterization of silica-supported maghemite.—73-13172

**Ikoma, T.** See Kimura, T.

**Ikonic, Z.; Srivastava, G. P.; Inkson, J. C.**
Calculation of the X-valley intersubband optical transition linewidth in [111] grown AlAs/(GaAl)As quantum wells.—73-04257; Intersubband absorption line broadening in $In_{0.53}Ga_{0.47}As$/- $In_{0.52}Al_{0.48}As$ quantum wells: a pseudopotential calculation.—73-07620

**Ikpong, A. A.**
Relationship between the strength and nondestructive parameters of rice husk ash [RHA] concrete.—73-03528

**Ikrami, D. D.** See Ol'khovaya, L. A.

**Ikramov, G. I.** See Evstrop'ev, S. K.

**Ikuhara, Yuichi** See Kohler, Nicola

**Ikuhara, Yuichi; Miyazaki, Hirokazu; Kurishita, Hiroaki; Yoshinaga, Hideo**
Grain-boundary structure and strength of SiC bicrystals.—73-03148

**Ikuhara, Yuichi; Suzuki, T.; Kusunoki, M.; Kubo, Yukio**
Crack propagation in alumina during in situ straining by TEM.—73-03251

**Ikuhara, Yuichi; Suzuki, Toshiyuki; Kubo, Yukio**
Microstructure and composition analysis of high-$T_c$ $YBa_2Cu_3O_{7-x}$ oxides studied by analytical electron microscopy.—73-01608

**Ikuhara, Yuichi; Suzuki, Toshiyuki; Sasaki, Yukichi; Kubo, Yukio**
TEM direct observation of the crack propagation in ceramics.—73-13459

**Ikuhara, Yumi** See Michishita, Kazuo

**Ikuma, Yasuro** See Ioku, Koji

**Ikuma, Yasuro; Nakayama, Masaaki; Harada, Yuushi; Hiuga, T.**
Effect of heating rate on the shrinkage of isothermal sintering.—73-05760

**Ikuma, Yasuro; Shigemura, Takashi**
Rapid-rate sintering of anatase-type $TiO_2$ by microwave heating.—73-09292; Rapid-rate sintering of anatase-type $TiO_2$ by microwave heating.—73-16969

**Ikuma, Yasuro; Takahashi, Kenji**
Rapid-rate sintering of ZnO by microwave heating.—73-06010; Rapid-rate sintering of ZnO microwave heating.—73-13226

**Ikushima, A. J.** See Hiraga, H.; Uno, Tomoko

**Ikuta, H.** See Inaguma, Yoshiyuki

**Ikuta, H.; Hirota, N.; Nakayama, Y.; Kishio, K.; Kitazawa, K.**
Giant magnetostriction in $Bi_2Sr_2CaCu_2O_8$ single crystal in the superconducting state and its mechanism.—73-15492

**Ikuta, Y.** See Maruyama, Toshiro

**Il'chenko, O. P.** See Blank, A. B.

**Il'ichev, E. A.** See Gergel, V. A.; Zakosarenko, V. M.

**Il'ichev, E. V.; Andreev, A. V.; Jacobsen, C. S.**
Inductance mode characteristics of a ceramic $YBa_2Cu_3O_{7-x}$ radio-frequency superconducting quantum interference device at 77 K.—73-08104

**Il'in, N. P.; Masterov, V. F.**
Simple model for rare-earth impurities in the compound semiconductors.—73-04481

**Il'in, N. P.; Vasil'ev, A. E.; Masterov, V. F.**
Ground state of transition elements of the Fe group in GaAs and GaP.—73-07548

**Il'in, N. V.** See Fisher, L. M.

**Il'in, V. G.** See Yaremov, P. S.

**Il'in, Yu. L.** See Andreeva, E. V.

**Il'ina, V. P.** See Berenshtein, P. I.

**Il'inskii, A. V.; Kutsenko, A. B.; Stepanova, M. N.**
Screening of the field in *p-i-n* structures made of GaAs and subjected to a voltage-causing carrier depletion.—73-01310

**Il'inykh, N. I.** See Moiseev, G. K.

**Il'khamov, R. A.; Lunter, S. G.; Pestrikova, M. V.; Ter-Nersesyants, V. E.; Fedorov, Yu. K.; Chernova, V. A.**
Determination of the content of hydrogen in neodymium ultraphosphate glass.—73-13959

**Il'mer, G. P.** See Noskov, E. S.

**Il'nitskaya, O. N.; Grin, Yu. N.; Kuz'ma, Yu. B.**
Crystal chemical studies of inhomogeneous linear structures: IX, Series of $M_{2m+2n}X_{2m+2n}$ inhomogeneous linear structures and its new member $Ni_5Si_2P_3$.—73-16075

**Il'nitskaya, O. N.; Kuz'ma, Yu. B.**
Interaction of nickel with silicon and phosphorus.—73-12605

**Il'yashenko, I. S.** See Matveev, V. A.

**Il'yasov, A. Z.; Mikhailin, A. V.; Kaufmann, H.-J.**
YBaCuO ceramics [studied] by positron annihilation and Rutherford backscattering techniques.—73-15672

**Il'yasov, T. M.** See Rustamov, G. P.; Rustamov, P. G.

**Ilarsky, J.; Berndt, C. C.; Herman, H.; Forman, J.; Dubsky, J.; Chraska, P.**
Porosity of free-standing ceramics manufactured by plasma spraying.—73-08955

**Ilavsky, J.; Berndt, C. C.; Herman, H.; Beardsley, M. B.**
Thermal expansion of metallic and cermet coatings.—73-08987

**Ilegems, M.** See Moreira, M. V. B.

**Ilett, Douglas J.; Islam, M. Saiful**
Role of structural defects and oxygen ion migration in the catalytic activity of $La_2O_3$.—73-13366

**Ilg, Matthias** See Ploog, Klaus H.

**Ilg, Matthias; Alonso, M. Isabel; Lehman, Arno; Ploog, Klaus H.; Hohenstein, Matthias**
InAs submonolayer and monolayer structures on GaAs(100) and (311) substrates.—73-11266

**Iliescu, T.; Simon, S.; Calugar, D.**
Raman spectroscopy of oxide glass system $(1-x)(yB_2O_3{\cdot}zLi_2O){\cdot}xMO$ (MO=CuO, $V_2O_5$).—73-10397

**Iliev, M.** See Jandl, S.

**Ilinykh, P. N.** See Dooghin, A. V.

**Ilisavskii, Yu. V.; Yakhkind, E. Z.; Gol'man, E. K.; Karmanenko, S. F.**
Acoustoelectronic interaction in superconducting $YBa_2Cu_3O_{7-x}$ films.—73-01491

**Illenseer, Thomas; Hennicke, Hans-Walter**
Ceramic sprayed coatings and their applications.—73-12320

**Illingsworth, J.; Hashemi, T.; Al-Shahrani, A.; Brinkman, A. W.**
New ceramic-based composites for electrical contacts.—73-00999

**Illston, T. J.; Ponton, C. B.; Marquis, P. M.; Butler, E. G.**
Electrophoretic deposition of silica/alumina colloids for the manufacture of CMC's.—73-16761

**Ilonca, G.** See Cozar, O.

**Ilupin, I. P.** See Kopylova, M. G.

**Ilyinskaya, N. D.; Kokhanovskii, S. I.; Seisyan, R. P.**
Oscillatory magnetoabsorption of multilayer quantum well structures.—73-15081

**Ilyukha, N. G.** See Karaulov, A. G.

**Ilyushechkin, B.** See Medvedev, E.

**Im, H.-B.** See Chung, Gil-Yong; Kim, Shi-Yul; Park, S.-W.

**Im, Jong-In** See Kim, Su-Nuk; Yoon, Man-Soon

**Ima, Kazunari** See Hosona, Hideo

**Imada, K.**
Applications of porous glass as Merrifield-type support.—73-14134

**Imaeda, Minoru; Asai, Emi; Okamoto, Katsunori**
Method of manufacturing ferrite crystals.—73-04667

**Imaeda, Minoru; Kozuka, Yoshinari; Matsuzawa, Soichiro**
Discontinuous grain growth and the grain boundary in a solid-solid reaction growth method for ferrite single crystals.—73-01452

**Imaev, M. F.; Kaibyshev, O. A.; Musin, F. F.**
Effect of the grain-boundary orientation on the current-carrying capacity of $YBa_2Cu_3O_{7-x}$ ceramics.—73-04706

**Imafuji, Osamu; Takayama, Toru; Sugiura, Hideyuki; Yuri, M.; Naito, H.; Kume, M.**
600-mW cw single-mode GaAlAs triple quantum well laser with a new index-guided structure.—73-11447
**Imagawa, Hiroshi** See Hosono, Hideo
**Imagawa, Takao** See Soeya, Susumu
**Imahashi, Taichi; Harada, Katsuki; Kasai, Hideshi**
Properties of special concrete with super-low-heat-type ternary cement.—73-10115
**Imai, Atsuo** See Terabe, Kazuya; Yamaguchi, Shu
**Imai, F.; Kunimori, K.; Uchijima, T.; Nozoye, H.**
Interfacial reaction of MgO/$TiO_x$ superlattice thin films.—73-05424
**Imai, Fujio** See Nakazawa, Takao
**Imai, H.** See Kishimoto, T.
**Imai, Hiroyuki; Yamaguchi, Takashi**
Sintering of electrically conductive silver–glass paste for thick-film devices.—73-10989
**Imai, Hisao** See Murakami, Yasushi
**Imai, Hisao; Sekiguchi, Junnosuke; Murakami, Yasushi**
Characterization of fine particles of ruthenium–alumina composites prepared by different methods.—73-10202; Characterization of fine particles of ruthenium-alumina composites prepared by different methods.—73-03566
**Imai, Jiro** See Ichikawa, Makihiko
**Imai, Nobuhiro** See Tanigawa, Yasuo
**Imai, Osamu; Ohira, Kunio; Sato, Ritsu**
Voltage nonlinear resistor.—73-11058
**Imai, Osamu; Sato, Ritsu**
Process for manufacturing a voltage nonlinear resistor.—73-01065
**Imai, Syozo** See Sugai, Tokuko
**Imai, T.; Slichter, C. P.; Yoshimura, K.; Katoh, M.; Kosuge, K.**
Spin-spin correlation in the quantum critical regime of $La_2CuO_4$.—73-15628
**Imai, T.; Slichter, C. P.; Yoshimura, K.; Kosuge, K.**
Low-frequency spin dynamics in undoped and Sr-doped $La_2CuO_4$.—73-15539
**Imai, Tadayuki** See Okuyama, Masanori
**Imai, Takahiro** See Tanabe, Keiichiro
**Imai, Tsunemichi** See Mabuchi, Mamoru
**Imai, Y.** See Mukaida, Masakazu; Muto, Norio; Takeda, Michio; Watanabe, Akio
**Imai, Yoshikazu** See Ichikawa, Hiroshi
**Imai, Yoshio** See Shiota, Ichiro
**Imaida, Y.** See Inamura, Suguru
**Imajo, H.** See Watanabe, W.
**Imai, A.** See Kamo, L.
**Imamov, R. M.** See Afanas'ev, A. M.
**Imamura, Kihachiro** See Tomoshige, Ryuichi
**Imamura, Masaaki** See Yamaguchi, Toshinao
**Imamura, Seichiro; Ishida, Shingo; Tarumoto, Hiroyuki; Saito, Y.; Ito, T.**
Effect of the composition of titania silica on its physical and catalytic properties.—73-12776
**Imamura, Seiichiro; Hayashi, Yuki; Kajiwara, Kanji; Hoshino, H.; Kaito, C.**
Imogolite: a possible new type of shape-selective catalyst.—73-05171
**Imamura, T.** See Nishikubo, K.
**Imamura, Takeshi** See Yoshida, Akira
**Imamura, Y.** See Sato, Sennosuka
**Imanaka, N.** See Adachi, G.; Aono, Hiromichi
**Imanaka, O.** See Uematsu, T.
**Imanaka, Yoshihiko** See Yokoyama, Hiromitsu
**Imanaka, Yoshihiko; Kamehara, Nobuo**
Influence of shrinkage mismatch between copper and ceramics on dimensional control of the multilayer ceramic circuit board.—73-03601; Influence of shrinkage mismatch between copper and ceramics on dimensional control of the multilayer ceramic circuit board.—73-10238
**Imanishi, Nobuyuki** See Mukai, Yasuo; Nishijima, M.; Ogawa, Minoru; Takeda, Yasuo
**Imanishi, Nobuyuki; Kanamaru, Kiyoshi; Takehara, Zenichiro**
Synthesis of $MoS_2$ thin film by chemical vapor deposition method and discharge characteristics as a cathode of the lithium secondary battery.—73-01032
**Imashita, Katsuhiro** See Funakubo, Hiroshi
**Imazawa, K.** See Nakayama, M.
**Imazu, Itsuro** See Okuda, Hiroshi
**Imbert, P.; Jehanno, G.; Debray, P.; Garcin, C.; Hodges, J. A.**
Mossbauer study of $^{57}$Fe-doped $La_{2-x}Sr_xCuO_4$: local magnetic properties in the semiconducting, superconducting, and normal metallic regions of the phase diagram.—73-08671
**Imenkov, A. N.** See Andaspaeva, A. A.; Baranov, A. N.
**Imizu, Yuzo** See Itoh, Hinenobu
**Immarigeon, J.-P.** See Berriche, R.
**Immerwahr, Henry R.**
New wine in ancient wineskins: the evidence from Attic vases.—73-09791
**Imthurn, G. P.** See De la Houssaye, P. R.
**Imura, Toru** See Enami, Hiroyoshi; Hoshizaki, Hiroki
**Imuta, M.** See Itoh, K.
**Inaba, Akira** See Fukai, Mari
**Inaba, Hiroshi** See Yamasaki, Seiji
**Inaba, Y.** See Uchida, Takashi
**Inada, H.** See Iwata, M.
**Inada, Hiroshi** See Hirano, Masanori; Nakamura, Takao
**Inada, Hiroshi; Iiyama, Michitomo**
Process for patterning layered thin films including a superconductor.—73-15692
**Inada, Isamu** See Tanaka, Kenji
**Inagaki, Hideya; Shimoo, Toshio; Okamura, Kiyohito; Honjo, Kuniaki**
Pyrolytic behavior of CVD-coated SiC fibers.—73-02986; Pyrolytic behavior of CVD-coated SiC fibers.—73-12665
**Inagaki, Michio** See Tsumura, Tomoki; Ueda, Midori; Yamamoto, Osamu
**Inagaki, Michio; Ishida, T.**
Carbonization behavior and graphitization of organic precursor films reported to give graphite.—73-12932
**Inagaki, Michio**
Carbons and fullerenes.—73-12417
**Inagaki, Shigemi** See Ezura, Eizi
**Inaguma, Yoshiyuki** See Itoh, Mitsuru; Kim, In-Seon
**Inaguma, Yoshiyuki; Chen, Li-Quan; Itoh, Mitsuru; Nakamura, T.; Uchida, T.; Ikuta, H.**
High ionic conductivity in $Li_{0.35}La_{0.51}TiO_{2.94}$.—73-07327
**Inai, M.** See Kobayashi, K.
**Inai, Makoto** See Yamamoto, Teiji
**Inaka, Yoshiyuki** See Nagashima, Yukihito
**Inaka, Yoshiyuki; Nagashima, Yukihito; Manabe, Seiichiro**
Advanced vertical melting furnace for high-quality glass.—73-15863
**Inal, O. T.; Bengisu, M.; Guardian, J.**
Plasma-assisted chemical vapor deposition of tin oxide coatings.—73-02926
**Inam, Arun** See Ramesh, Ramamoorthy
**Inam, Arun; Ramesh, Ramamoorthy; Rogers, C. T.**
Growth of *a,b*-axis oriented perovskite thin films over a buffer/template layer.—73-15678
**Inamaru, N.** See Ohyanagi, M.
**Inamura, Suguru** See Hirota, Ken; Ishida, Koji; Kimoto, Shinya; Saiki, J.; Shimazaki, M.; amakata, Koji
**Inamura, Suguru; Miyamoto, M.; Imaida, Y.; Takagawa, M.; Hirota, Ken; Yamaguchi, Osamu**
High fracture toughness of $ZrO_2$ solid-solution ceramics with nanometer grain size in the system $ZrO_2$-$Al_2O_3$.—73-09610
**Inamura, Takashi** See Shigegaki, Yasuhiro
**Inao, Takaaki; Hayashi, Masanori; Kimura, Youichi**
Method and apparatus for forming a mouth in a glass container.—73-03941
**Inaoka, W.** See Sano, T.
**Inasaka, Jun**
Method for fabricating a ceramic multilayer substrate.—73-04216
**Inazawa, Shinji** See Sawada, Kazuo; Takano, Satoshi
**Indge, John**
Ceramic machining.—73-04904
**Indutnyi, I. Z.** See Dan'ko, V. A.
**Inel, Yuksei; Ertek (Haciu), Durata**
Photocatalytic deposition of Bi(III) ions onto $TiO_2$ powder.—73-12855
**Ingle, S. G.; Moon, K. S.**
Domain formation by impurity dipoles in $KNbO_3$ single crystals.—73-03132
**Ingo, G. M.; Padeletti, G.**
X-ray photoelectron spectroscopy and secondary ion mass spectrometry of boron nitride thin films on austenitic stainless steel.—73-03668
**Ingo, G. M.; Scavia, G.; Giorgi, L.**
Effect on lacquer adhesion of solid-state properties of tin oxides.—73-05549
**Ingram, Kevin D.; Daugherty, Kenneth E.**
Limestone additions to portland cement: uptake, chemistry, and effects.—73-13747
**Ingram, S. G.** See Wong, Terence K. S.
**Ingrey, S.** See Kwok, P. W. M.; Lau, W. M.; Springthorpe, A. J.
**Iniguez, J. I.** See Torres, L.
**Inkson, J. C.** See Ikonic, Z.
**Inman, J. P.** See Houde-Walter, S. N.
**Inman, Richard V.** See Morris, Winfred L.
**Inniss, Daryl** See Gupta, Prabhat K.
**Inniss, Daryl; Zhong, Qian; Kurkjian, Charles R.**
Chemically corroded pristine silica fibers: blunt or sharp flaws—correction.—73-06200; Chemically corroded pristine silica fibers: blunt or sharp flaws.—73-03126
**Innocenzi, P.** See Guglielmi, M.
**Ino, Juichi; Hayashi, Shigeo; Yamaguchi, Jun; Takemura, Kazuo; Kawahara, Hideo**
Characteristics and structure of LPD-$SiO_2$ film incorporating organic dye.—73-13934
**Ino, Juichi**
Liquid-phase-deposited $SiO_2$ film with incorporated organic dye.—73-03855
**Ino, Kazuo** See Okuda, Hiroyuki
**Ino, S.** See Shimizu, S.
**Ino, Takashi; Anzai, Iwao; Fujino, Yuzo**
Catalysts for the high-temperature steam reforming of hydrocarbons.—73-05194
**Ino, Takashi; Shibata, Seigou**
Method of manufacturing hydrocarbon conversion catalyst.—73-02052
**Inoko, C. K.** See Lemos, V.
**Inokuma, T.** See Hasegawa, S.
**Inomata, Yasuyuki** See Chazono, Hirokazu
**Inoue, A.; Nosaki, K.; Kim, B.-G.; Yamaguchi, T.; Masumoto, T.**
Mechanical strength of ultrafine Al-AlN composites produced by a combined method of plasma-alloy reaction, spray deposition, and hot-pressing.—73-06821
**Inoue, Akira** See Nagai, Bin
**Inoue, Akira; Fukuta, Junzo; Matano, Yoshinori; Matsumoto, Y.**
Anorthite and thermal expansion of CaO-$Al_2O_3$-$SiO_2$-$B_2O_3$ ceramics.—73-12746
**Inoue, Akira; Fukuta, Junzo; Matano, Yoshinori**
Anorthite and thermal expansion of CaO-$Al_2O_3$-$SiO_2$-$B_2O_3$ ceramics.—73-05532
**Inoue, H.** See Ramulu, M.
**Inoue, Hideshi** See Kawai, Kenji
**Inoue, Hirashi** See Tanaka, Katsumi
**Inoue, Hiroyuki; Makishima, A.**
Computer simulation of the vibrational spectra and properties of fluoride glasses based on $ZrF_4$.—73-07005
**Inoue, Hiroyuki**
Introduction to database utilization.—73-09723
**Inoue, Junichi** See Asano, Sadame
**Inoue, Kazuhiko**
Field effect transistor.—73-01371
**Inoue, Kazuhisa; Tanaka, Satoshi; Shimoyama, Yoshihide**
Effect of gypsum on early hydration of blast-furnace slag blended cement.—73-09907
**Inoue, Keita; Watari, Takanori; Torikai, Toshio; Matsuda, Ohnaka**
Preparation of alminum nitride/aluminum composites by nitridation of aluminum.—73-13884; Preparation of aluminum nitride/aluminum composites by nitridation of aluminum.—73-06841
**Inoue, Makoto** See Miyahara, Nobuyuki
**Inoue, Masahiro** See Kotani, Takao
**Inoue, Masasi** See Koyano, Mikio
**Inoue, Masataka** See Yano, Mitsuaki
**Inoue, Michiko; Ono, Toshihiko; Sato, Isao**
Evaluation of strength and edge flaw severity of barium borosilicate glass substrate by thermal downshock testing.—73-03788; Evaluation of strength and edge flaw severity of barium borosilicate glass substrate by thermal downshock testing.—73-14183
**Inoue, Norio; Sakura, Makoto; Iida, Eiki**
Zeolite-containing adsorptive composition and adsorptive decomposition composition containing such zeolite-containing composition.—73-02079
**Inoue, S.** See Tatsumisago, Masahiro
**Inoue, Satoru** See Nukui, Akihiko
**Inoue, Satoru; Nukui, Akihiko; Soga, Kohei; Makishima, Akio**
Effect of $Yb^{3+}$ codoping on the upconversion emission intensity in $Er^{3+}$-doped ZBLAN fluoride glasses under 800-nm excitation.—73-14164
**Inoue, Shinsuke** See Goto, Seishi
**Inoue, Shunji; Kasahara, Senshi; Sekizawa, Kazuhiko**
Catalyst for purifying exhaust gas.—73-02026
**Inoue, T.** See Odagawa, Tetsufumi
**Inoue, Takanori; Hoashi, Keiichiro; Eguchi, K.; Arai, Hiromichi**
Effect of microstructure on the interface resistance between a perovskite-type oxide electrode and yttria-stabilized zirconia.—73-07305
**Inoue, Takanori; Kamimae, Junichi; Ueda, Masami; Eguchi, K.; Arai, Hiromichi**
Ionic and electronic conductivities of $LaCoO_3$- and $LaMnO_3$-based perovskite-type oxides measured by the ac impedance method with electron-blocking electrodes.—73-07330
**Inoue, Takanori; Seki, Noriaki; Kamimae, Junichi; Eguchi, K.; Arai, H.**
Conduction mechanism and defect structure of acceptor- and donor-doped $SrTiO_3$.—73-03082
**Inoue, Takayoshi; Tachibana, Hiroyuki; Nakaue, Akimitsu; Kumagai, Kazuo; Miyata, Koichi; Kobashi, Koji**
Process for the selective deposition of thin diamond film by gas phase synthesis.—73-12511
**Inoue, Takayuki** See Kashihara, Seiichi
**Inoue, Takeshi** See Sasaki, Yasuhiro; Uehara, Kaneo
**Inoue, Tatsuya** See Kagata, Hiroshi; Kameyama, Ichiro
**Inoue, Tohru** See Maruyama, Kazunori
**Inoue, Yasuhide** See Hirosaki, Naoto
**Intrater, James B.**
Microanalysis of a copper-to-graphite solder bond.—73-00250
**Inui, Tomoyuki**
Control of solid catalyst structure for resource production from carbon dioxide.—73-02008
**Inumaru, Kei; Okuhara, Toshio; Misono, Makoto; Matsubayashi, N.; Shimada, H.; Nishijima, A.**
EXAFS analysis of $V_2O_5$ thin overlayers on $SiO_2$ prepared by CVD.—73-08622
**Inuzka, Hajime** See Suzuki, Yasutoshi
**Ioannou, A. S.; Maskell, W. C.**
Influence of substrate composition on the sintering behavior of zirconia thick films.—73-05875
**Ioannou-Sougleridis, B.** See Papaioannou, G. J.
**Iodkazis, S.; Pyatrauskas, M.; Nyatikshis, V.; Utenko, V.**
Processes of recombination of nonequilibrium carriers in epitaxial GaAs films.—73-01291
**Ioffe, I. V.** See Koss, V. A.
**Ioganson, A. K.** See Ryzhik, A. B.
**Ioganson, A. K.; Kouglya, M. V.; Fraiman, Lev S.**
Complete substitution of natural raw materials by shale industry waste at cement plant reconstruction.—73-09862
**Iokokava, T.** See Savaguti, N.
**Ioku, Koji** See Yanagisawa, K.
**Ioku, Koji; Murakami, Takeshi; Ikuma, Yasuro; Yoshimura, Masahiro**
Preparation of microstructure-controlled porous hydroxyapatite–β-tricalcium phosphate composites by reaction sintering.—73-13193; Preparation of microstructure-controlled porous hydroxyapatite–β-tricalcium phosphate composites by reaction sintering.—73-02955
**Ioku, Koji; Somiya, Shigeyuki; Yoshimura, Masahiro**
Hydroxyapatite ceramics with tetragonal zirconia particles dispersion prepared by HIP postsintering.—73-02856
**Ion, S. E.; Watson, R. H.**
20 years of production of $UO_2$ by the integrated dry route—a BNFL [British Nuclear Fuels plc] perspective on dry conversion.—73-08311
**Ionov, Radoslav I.**
Folded acoustic phonons [observed] by Raman scattering in amorphous chalcogenide superlattices.—73-08625
**Iordanova, R.** See Dimitriev, Y.
**Iorgov, Dimitr; Kolotov, O. S.; Pogozhev, V. A.**
Shape of the pulsed remagnetization curve of ferrite-garnet films.—73-01481

**Ip, S. W.; Kucharski, M.; Toguri, J. M.**
Wetting behavior of aluminum and aluminum alloys on $Al_2O_3$ and CaO.—73-13908
**Ipatov, I. P.; Malyshkin, V. G.; Maslov, A. Yu.; Shchukin, V. A.**
Formation of periodic-modulated composition structure by coherent separation of phases in quaternary solid solutions of III-V semiconductors.—73-14929
**Ipatov, V. V.** See Khalilev, V. D.
**Ippommatsu, Masamichi** See Sasaki, Hirokazu
**Iqbal, M. Z.** See Afridi, Musarrat Ullah Khan
**Iqbal, T.** See Shahriari, Mahmoud R.
**Iqbal, Zafar** See Shah, H. U.
**Irby, J.** See Qian, R.
**Iredale, N.** See Linfield, E. H.
**Irene, E. A.** See Hu, Y. Z; Li, M.; Poler, J. C.
**Irene, E. A.**
Applications of spectroscopic ellipsometry to microelectronics.—73-15778
**Irgashev, T. I.** See Magrupov, R. D.
**Irick, Gether, Jr.**
Photoactive catalyst of barium phosphate or calcium phosphate supported on anatase titanium dioxide.—73-02055
**Irie, Hiroyuki** See Hakamatsuka, Yasuharu
**Irisawa, Akinori; Kikkawa, Shinichi; Kanamaru, Fumikazu**
Annealing effects on $(Ln, Ce)_2CuO_4$ system.—73-15388
**Irisawa, Naosi** See Sunahara, Kazuo
**Irish, Sally; Haigh, Mike**
Assessment of spodumene in ceramic bodies.—73-04042
**Irisova, K. N.; Suslova, E. I.; Salata, T. P.; Volkova, S. N.**
Synthesis and investigation of aluminum oxide sols on the basis of commercial aluminum hydroxide.—73-17020
**Irkakhodzhaeva, A. P.** See Azizkhodzhaeva, M. M.; Mukhamedzhanova, M. T.; Sirazhiddinov, N. A.
**Irmer, G.; Herms, M.; Monecke, J.; Vorlicek, V.; Gregora, I.**
Second-order Raman scattering of LO phonon-plasmon modes in $GaAs_{1-x}P_x$.—73-15155
**Irons, G.** See Kratochvil, W.; Munjone, F. W.
**Ironside, C. N.** See Al-Hemyari, K.
**Irvine, S. J. C.** See Bajaj, J.
**Irvine, S. J. C.; Bajaj, J.; Bubulac, L. O.; Lin, W. P.; Gedridge, R. W.; Higa, K. T.**
New *n*-type doping precursor for MOCVD-IMP [interdiffusion multilayer process] growth of detector quality MCT [HgCdTe].—73-11347
**Irvine, S. J. C.; Edwall, D. D.; Bubulac, L. O.; Gil, R. V.; Gertner, E. R.**
Microinhomogeneities in midwave infrared mercury cadmium telluride grown by metallorganic chemical vapor deposition–interdiffused multilayer process onto GaAs and GaAs/Si substrates.—73-07671
**Isaev, A. I.** See Kazakova, L. P.
**Isaev, D. G.; Serova, N. A.; Isaev, G. S.**
Production of alumina-magnesia spinel powder using a high-frequency plasmatron.—73-16957
**Isaev, G. S.** See Isaev, D. G.
**Isagawa, Shigeru** See Ezura, Eizi
**Isai, Masaaki; Yasuda, Shunichi; Ogita, Masami; Tanaka, Ikuo**
Temperature fluctuations during the deposition of InSb films.—73-09372
**Isakov, A. A.** See Dub, S. N.
**Isakov, S. L.; Ishmaev, S. N.; Malinovsky, V. K.; Novikov, V. N.; Paishin, P. P.; Popov, S. N.**
Transformation of the vibrational spectrum and structure of glasses after quenching.—73-03771
**Isakov, T. U.** See Abduvaliev, T. A.
**Isakova, R. A.** See Khrapunov, V. E.
**Isard, J. O.; Kruschke, D.; Muller, W.**
Shape of complex impedance arcs for alkali ion conducting glasses.—73-04165
**Iseki, Takayoshi** See Kato, Satoshi; Li, Hong; Lin, Bor-Wen; Yamagishi, Chitake
**Isenberg, John K.** See Berlin, Carl W.
**Isgorodin, V.** See Medvedev, E.
**Ishchenko, S. S.; Okulov, S. M.; Vorona, I. P.; Roitsin, A. B.; Klimov, A. A.**
Structure of $CO_3^{3-}$ center in tooth enamel.—73-16335
**Ishchenko, T. V.** See Demishev, S. V.
**Ishi, Hiroaki; Nagafune, Mari; Tsuchiya, Ichiro**
Reaction between magnesia and carbon at high temperature.—73-00847
**Ishiba, T.** See Yamamoto, H.
**Ishibashi, H.** See Nakahigashi, K.
**Ishibashi, Hirotaka** See Chu, Judy
**Ishibashi, Michio**
Power station with low environmental pollution.—73-02017
**Ishibashi, Teruo; Yoda, Osamu**
Effects of electron irradiation on the local structural change in oriented $Bi_2Sr_2CaCu_2O_x$ superconductors.—73-15443
**Ishibashi, Toshiyuki; Akioka, Koji; Shimoda, Tatsuya**
Densification behavior of compression-molded resin-bonded rare-earth magnets.—73-15311
**Ishibashi, Yoichi** See Torizuka, Shiro
**Ishibashi, Yoshihiro** See Furusawa, Shinichi; Wada, Mitsuo
**Ishibashi, Yoshihiro**
90° wall in the tetragonal phase of $BaTiO_3$-type ferroelectrics.—73-07901
**Ishida, Atsumu; Miyayama, Masaru; Yanagida, Hiroaki**
Prediction of fracture and detection of fatigue in ceramic composites from electrical resistivity measurements.—73-09657
**Ishida, H.** See Kimura, T.
**Ishida, Hideaki; Yajima, Yasuhide; Tsurumi, Takaaki; Ohba, Yoko; Daimon, Masaki**
Hydration of amorphous $12CaO{\cdot}7Al_2O_3$ $[C_{12}A_7]$ coated with $SiO_2$.—73-13730
**Ishida, Hideki** See Harada, Ryusuke; Hibino, Takeshi; Isu, Norifumi; Kawai, Kazuyuki; Okada, Yoshihiko; Sasaki, Kaori; Watanabe, Osamu; Yamamoto, Takeyuki
**Ishida, Hideki; Sasaki, Kaori; Mitsuda, Takeshi**
Hydration of highly reactive $\beta$-$C_2S$ prepared from hillebrandite.—73-09991; Hydrothermal synthesis of hillebrandite and thermal decomposition to highly reactive $\beta$-$C_2S$.—73-09993
**Ishida, Hiroshi; Nakagawa, Koji**
Method for producing a particulate zeolite and a particulate zeolite produced thereby.—73-05224
**Ishida, Koichi** See Sakai, Akira
**Ishida, Koji; Hirota, Ken; Yamaguchi, Osamu; Kume, Hideki; Inamura, Suguru; Miyamoto, Hiroki**
Formation of zirconia solid solutions containing alumina prepared by new preparation method.—73-09142
**Ishida, Masanobu; Okawa, Yoshihiro**
Aluminum nitride sintered body and process for preparation thereof.—73-05282
**Ishida, Noboru** See Yoshikawa, Takaya
**Ishida, R.** See Sato, Sennosuka
**Ishida, Shigeki** See Kanezo, Katsumi
**Ishida, Shingo** See Imamura, Seichiro; Ishikawa, Makoto
**Ishida, Shinyo** See Ren, Feng
**Ishida, T.** See Inagaki, Michio; Kobayashi, H.
**Ishida, T.; Kobayashi, H.; Nakato, Y.**
Structures and properties of electron-beam-evaporated indium tin oxide films as studied by X-ray photoelectron spectroscopy and work-function measurements.—73-02470
**Ishida, Tetsuya** See Yamauchi, Kazuhisa
**Ishida, Yoshihiko**
Solid oxide fuel electrodes and process for producing the same.—73-04235; Solid oxide fuel electrodes and process for producing.—73-14763
**Ishida, Yuzo** See Saukura, Nobuhiko; Yanagawa, T.
**Ishigaki, T.; Bando, Yoshio; Moriyoshi, Yusuke; Boulos, M. I.**
Deposition from the vapor phase during induction plasma treatment of alumina powders.—73-09063
**Ishigame, J.** See Shiomi, Haruhisa
**Ishigame, M.** See Huang, H.-H.; Yugami, H.
**Ishigami, Shinobu** See Mori, Daisuke
**Ishigami, Shinobu; Ikenaga, Hirotake; Umekuni, Akira**
Experimental study on water extraction sheet sheathings (performance and convertibility on a fiber-layered permeable sheet).—73-09959
**Ishige, Keiko** See Koguchi, Nobuyuki
**Ishiguro, Fujio**
Resistor element [including insulating ceramic substrate].—73-14761
**Ishiguro, Takashi** See Saitoh, Hidetoshi
**Ishiguro, Takashi; Matsushima, Kazuo; Hamasaki, Katsuyoshi**
Sectional structures and electrical properties of ultrathin NbN/MgO bilayers on Si(100).—73-02683
**Ishiguro, Takayuki** See Sakata, Hironobu
**Ishiguro, Yasuhide** See Suzuki, Makoto
**Ishiguro, Yoichi** See Kyoto, Michihisa; Ooe, Masaharu
**Ishihara, F.** See Uwasawa, K.
**Ishihara, Kousou** See Okuda, Hiroyuki
**Ishihara, Mari; Matsui, Hiroshi; Hashizume, Genzo**
Change in S–O bonding states of calcium sulfite hemihydrate during thermal reactions in air.—73-09844
**Ishihara, Masayuki** See Nawa, Masahiro
**Ishihara, Minoru** See Kuwajima, Hidegi
**Ishihara, Ryoichi; Kanoh, Hiroshi; Uchida, Yasutaka; Sugiura, Osamu; Matsumura, Masakiyo**
Low-temperature [≥300°C] chemical vapor deposition of silicon nitride from tetrasilane and hydrogen azide.—73-05898
**Ishihara, Shonsaku** See Toda, Gyozou
**Ishihara, T.** See Ding, J.
**Ishihara, Tatsumi** See Mizuhara, Yukako
**Ishihara, Tatsumi; Kudo, Takanari; Matsuda, Hideaki; Takita, Yusaku**
Doped perovskite oxide, $PrMnO_3$, as a new cathode for solid-oxide fuel cells [SOFC's] that decreases the operating temperature.—73-10933
**Ishihara, Tatsumi; Watanabe, Yasuharu; Abe, Yumi; Takita, Yusaku**
$CaSiO_3$ as a substrate material for Ba-Y-Cu-O superconducting oxide films.—73-01499; $CaSiO_3$ as a substrate material for Ba-Y-Cu-O superconducting oxide films.—73-11698
**Ishihara, Tsuguo** See Kohzuki, Hidenori; Tanaka, Katsuhisa
**Ishihara, Yoshimi** See Hirata, Yoshihiro
**Ishihara, Yozo** See Kobayashi, Kenkichiro
**Ishii, Akio** See Asano, Keisuke; Morioka, Toshimichi
**Ishii, H.** See Nagase, M.; Takahashi, K.
**Ishii, Hiroaki** See Uzaki, Nobuyuki
**Ishii, K.** See Fujinami, M.; Okada, A.
**Ishii, M.** See Akaishi, M.; Meguro, T.; Sato, H.
**Ishii, Mamoru** See Tsukamoto, Keizou
**Ishii, Mamoru; Tsukamoto, Keizou; Shimojima, Hiromasa; Yamagishi, Chitake; Takata, Masasuke; Yamashita, Tsutomu**
Flux penetration in Bi(Pb)-Sr-Ca-Cu-O superconductor.—73-15476
**Ishii, Mamoru; Tsukamoto, Keizou; Shimojima, Hiromasa**
Improvement in the magnetic shielding property of Bi(Pb)-Sr-Ca-Cu-O superconducting tubes.—73-04738
**Ishii, Masahiko** See Suda, Akihiko
**Ishii, Mitsuhiro** See Shima, Hiroshi
**Ishii, Takaaki** See Ohnishi, Kazumasa; Sugihara, Fumihito
**Ishii, Yoshiro; Shibata, Takashi; Yoshino, Yuichi; Ichimura, Hiroshi; Kobayashi, Kuniaki**
Active plasma species in TiN film formation process by plasma CVD method.—73-02723; Active plasma species in TiN film formation process by plasma CVD method.—73-12908
**Ishikawa, K.** See Iwamoto, Yuji
**Ishikawa, Kenji** See Nomura, Takashi
**Ishikawa, Makoto; Nakano, Yutaka; Ishida, Shingo; Takeuchi, Nobuyuki; Wakamatsu, Mitsuru; Watanabe, Koji**
Effect of water vapor on high-temperature oxidation of SiC.—73-03224; Effect of water vapor on high-temperature oxidation of SiC.—73-13473
**Ishikawa, Makoto; Takeuchi, Nobuyuki; Ishida, Shingo**
High-temperature oxidation of $Si_3N_4$ in wet Ar.—73-13475
**Ishikawa, Masayuki** See Itaya, Kazuhiko
**Ishikawa, Nobuo** See Kataoka, Masako
**Ishikawa, S.** See Yoshida, Hideto
**Ishikawa, Satoshi**
Small-scale melting furnace for colored glasses.—73-12243
**Ishikawa, Shigeki** See Nakamura, Yoshinobu
**Ishikawa, Shin; Fukagai, Kazuo; Chida, Hiroaki; Miyazaki, T.; Fujii, H.; Endo, K.**
0.98–1.02-μm strained InGaAs/AlGaAs double quantum well high-power lasers with GaInP buried waveguides.—73-15232
**Ishikawa, Shinji** See Kanamori, Hiroo; Kyoto, Michihisa; Ohga, Yuichi
**Ishikawa, Shinji; Ohga, Yuichi; Tsuchiya, Ichiro; Kanamori, Hiroo; Yokota, Hiroshi; Kyoto, Michihisa**
Process for thermal treatment of glass fiber preform.—73-10659
**Ishikawa, T.** See Doi, A.; Kandori, Kazuhiko; Takahashi, Hideaki; Takeda, Michio
**Ishikawa, Tadayuki** See Kumar, K. V.
**Ishikawa, Tatsuo; Cai, Wei-Yan; Kandori, Kazuhiko**
Characterization of thermal decomposition products of δ-FeOOH by FTIR spectroscopy and $N_2$ adsorption.—73-12549
**Ishikawa, Tatsuo; Kodaira, Naoki; Kandori, Kazuhiko**
Steplike adsorption isotherms of molecules on γ-FeOOH and the surface homogeneity of γ-FeOOH.—73-08742
**Ishikawa, Tatsuo; Saito, Hiroshi; Kandori, Kazuhiko**
FTIR study of $CO_2$ adsorption on nonstoichiometric Sr-HAp.—73-16158
**Ishikawa, Tatsuo; Saito, Hiroshi; Yasukawa, Akemi; Kandori, Kazuhiko**
Adsorption of $CO_2$ on nonstoichiometric strontium calcium HAp.—73-12743
**Ishikawa, Tetsuya** See Kimura, Shigeru
**Ishikawa, Toshihiro** See Yamamura, Takemi
**Ishikawa, Toshihiro; Yamamura, Takemi; Okamura, Kiyohito**
Effect of curing in air on synthesis of Si-Ti-C-O fiber.—73-05758; Effect of curing in air on synthesis of Si-Ti-C-O fiber.—73-13002
**Ishikawa, Yasuhiro** See Egashira, Makoto
**Ishikawa, Yoshimitsu** See Mori, Toshiyuki
**Ishikawa, Yuichiro; Shigematsu, Koji**
Electron spin resonance in $Sr_{0.6}Ca_{0.4}CuO_2$.—73-11746
**Ishikawa, Yukari; Shibata, Noriyoshi**
Preparation of thin silicon-on-insulator films by low-energy oxygen ion implantation.—73-10984
**Ishikawa, Yuuichi** See Tenya, Kenichi
**Ishimaru, H.** See Takahashi, Y.
**Ishimori, Fumitaka** See Shimono, Isao
**Ishino, T.; Kido, N.**
Recent development of fused high zirconia refractory.—73-14612
**Ishitani, Akihiko** See Koseki, Shiro
**Ishitani, Akihiko**
Method of producing a silicon nitride film and method of fabricating a semiconductor device.—73-15239
**Ishito, Cari K.**
Powder classification technologies in ceramics.—73-01814
**Ishiwara, Hiroshi** See Hayashi, Tsunemasa
**Ishiwata, Shosuke; Ohshima, Hideaki; Ishizaki, Kanjiro**
Fluidity analysis of cement paste using a tuning-fork vibrating viscometer.—73-09965
**Ishiwata, Yutaka** See Itoh, Yoshiyasu
**Ishiwata, Yutaka; Itoh, Yoshiyasu; Kashiwaya, Hideo**
Densification of plasma-sprayed ceramic coatings by HIP treatment and their cracking behavior.—73-02766
**Ishiyama, Koichi** See Miyamoto, Yoshiko
**Ishiyama, Shintarou; Eto, Motokuni; Oku, T.**
Effect of oxidation on fracture toughness of nuclear graphite.—73-13512; Measurement methods of crack extension in HTGR graphite.—73-12161
**Ishiyama, Shintarou; Eto, Motokuni**
High stress–low stress type low cycle fatigue of an HTGR graphite.—73-13545
**Ishiyama, Shintarou**
Process for preparing an impermeable carbon fiber-reinforcing type of composite material.—73-02124
**Ishizaka, Yasunori** See Hojo, Junichi
**Ishizaki, Chanel** See Kawamoto, M.; Saito, Naruki
**Ishizaki, Futoshi** See Yamaguchi, Katsuhiko
**Ishizaki, Futoshi; Nakahara, Muneo; Shishido, Hiroshi; Yamaguchi, Katsuhiko**
Optical glass.—73-10653
**Ishizaki, Kanjiro** See Ishiwata, Shosuke
**Ishizaki, Kozo** See Hamasaki, Toyohiro; Harada, Ryusuke; Huybrechts, Ben; Kawamoto, M.; Kono, Yoshihito; Kurushima, Toyokazu; Kuzjukevics, Anatolijs; Nanko, Makoto; Osaki, Susumu; Saito, Naruki; Sato, K.; Sawai, Yuichi; Watari, Koji; Yamakawa, Akira; Yanai, Tomohiro
**Ishizaki, Kozo; Shepherd, Laurel; Okada, Shojiro; Hamasaki, Toyohiro; Huybrechts, Ben**
Ceramic Transactions, Volume 31: Porous Materials.—73-09761
**Ishizaki, Masato; Kageyama, Keisuke**
Dielectric resonators for quasi-microwave filters.—73-07300
**Ishizaki, Nobuo; Kano, N.; Yoshino, J.; Kukimoto, H.**
Atomic layer epitaxy of AlAs and $(AlAs)_n(GaAs)_m$.—73-04246
**Ishizawa, Nobuo** See Wakiya, Naoki; Yashima, Masatomo
**Ishizawa, Y.** See Hwang, Y.; Souda, R.
**Ishizawa, Yoshio** See Otani, Shigeki
**Ishizuka, Yoshio** See Tsuge, Akira

**Ishizuka, Yoshiki** See Miura, Tadao
**Ishmaev, S. N.** See Isakov, S. L.
**Iskander, Magdy F.** See Bringhurst, Shane; Janas, Victor F.; Newman, J. D.
**Iskander, Magdy F.**
Modeling the microwave process—challenges and new directions.—73-05931
**Iskender-Zade, Z. A.** See Abilov, Ch. I.
**Ishkakova, A. A.** See Boldyrev, A. S.; Volzhenskii, A. V.
**Islam, D.; Changkakoti, Rupak; Manivannan, Gurusamy; Lessard, Roger A.**
Holographic recording in $Ge_{1-x}Sn_xSe_2$ glassy films.—73-10446
**Islam, M. N.** See Ambia, M. G.
**Islam, M. Saiful** See Ilett, Douglas J.
**Islam-Raja, M. M.; Chang, C.; McVittie, J. P.; Cappelli, M. A.; Saraswat, K. C.**
Two-precursor model for low-pressure chemical vapor deposition of silicon dioxide from tetraethylorthosilicate.—73-13328
**Isles, A. J.** See Turner, G. W.
**Ismail, M. R.; El-Hemaly, S. A. S.**
Hydration kinetics of cement paste containing concrete admixture.—73-00103
**Ismail, Mohamed G. M. U.** See Shiga, Hiroshi
**Ismail, Mohamed G. M. U.; Arai, Hiroshi**
Sol-gel synthesis of $B_2O_3$-doped anorthite and its characteristics.—73-03023; Sol-gel synthesis of $B_2O_3$-doped anorthite and its characteristics.—73-13280
**Ismail, Mohammed** See Connors, Timothy L.
**Ismailov, A. A.** See Allakhverdiev, K.
**Ismailov, A. A.; Gasymov, Sh. G.; Mamedov, T. S.; Allakhverdiev, K. R.**
Influence of pressure on the electrical conductivity and Hall effect in indium selenide.—73-07598
**Ismailov, K. I.** See Basiev, T. T.
**Ismailov, K. M.; Murk, V. V.**
Thermally stimulated luminescence excitation spectra and electronic excitation relaxation branching in $Y_3Al_5O_{12}$ crystals.—73-16635
**Ismatov, A. A.; Abdullaev, Kh. A.**
Glasses and pyroceramics based on industrial wastes.—73-07134
**Ismatov, K. Yu.** See Yunusov, M. Yu.
**Ismatova, R. I.** See Tadzhiev, F. Kh.
**Isoardi, R.** See Decca, R.
**Isobe, Masaaki** See Tanaka, Masahiro
**Isobe, T.** See Hirano, M.
**Isobe, T.; Senna, Mamoru**
Effects of mechanical activation of inorganic gels on their thermal behavior: I, Crystallization process of titania gels.—73-02247; Effects of mechanical activation of inorganic gels on their thermal behavior: II, Comparison of structure and thermal behavior between zirconia and titania gels.—73-02248
**Isobe, Tetsuhiko** See Komatsubara, Satoru
**Isobe, Toshihiro** See Nagai, Bin
**Isobe, Y.** See Hirano, Shinichi
**Isobe, Yoshihiko** See Takagi, Kenichi
**Isoda, Hiroshi** See Kawashima, Riki
**Isoda, T.** See Sato, Kiyoshi
**Isoda, Takeshi** See Matsuo, Hideki; Tredway, William K.
**Isogai, Yuji; Toda, Hiroki**
Piezoelectric ceramic laminate device.—73-11636
**Isomura, Kenji** See Kamiya, Hidehiro
**Isomura, Manabu** See Sakai, Hiroaki; Takahashi, Tomonori
**Isonage, Teruto** See Shibata, Masatoshi
**Isozaki, Kei; Ogawa, Mitsushige**
Nondestructive evaluation of the density of silicon nitride powder compacts and sintered bodies.—73-02909
**Isozumi, Yasuhito; Chen, Yong-He; Katano, Rintaro**
Application of carbon fibers to the resistive wire anode of position-sensitive proportional counters for soft X-rays (100–1000 eV).—73-04059
**Israelachvili, Jacob N.** See Ducker, William A.
**Israelit, S.** See Fisher, B.
**Issa, M. A.; Hammad, A. M.; Chudnovsky, A.**
Correlation between crack tortuosity and fracture toughness in cementitious material.—73-05032
**Issa, M. A.; Hammad, A. M.**
Fractal characterization of fracture surfaces in mortar.—73-03471
**Issaad, A.** See Robins, P. J.
**Isshiki, H.** See Kimura, T.
**Isshiki, Kunihiko; Takami, Akihiro; Karakida, Shoichi; Kamizato, T.; Kakimoto, S.; Aiga, M.**
High-power individually addressable monolithic four-beam array of GaAlAs window diffusion stripe lasers.—73-01185
**Ista, Troy K.** See Bloom, Richard L.
**Isu, Norifumi; Sasaki, Kaori; Ishida, Hideki; Mitsuda, Takeshi**
Mechanical property evolution during autoclaving process of aerated concrete using slag: I, Tobermorite formation and reaction behavior of slag.—73-13752
**Isu, Norifumi; Teramura, Satoshi; Ishida, Hideki; Mitsuda, Takeshi**
Mechanical property evolution during autoclaving process of aerated concrete using slag: II, Fracture toughness and microstructure.—73-13753
**Isu, Norifumi; Teramura, Satoshi; Mitsuda, Takeshi**
Fracture toughness of autoclaved aerated concrete [AAC] products.—73-03473
**Isupov, V. A.**
Phenomena observed under gradual diffusion of ferroelectric phase transition.—73-16271
**Itabashi, K.** See Miyamoto, I.
**Itami, Masao** See Nakagawa, Yoshiro
**Itatani, Kiyoshi** See Aizawa, Mamoru; Kishioka, Akira; Miyamoto, Yutaka; Murata, Tsuyoshi
**Itatani, Kiyoshi; Aizawa, Mamoru; Kishioka, Akira**
Formation of porous calcium phosphate films on titanium oxide substrate by spray pyrolysis technique.—73-13065
**Itatani, Kiyoshi; Kishioka, Akira; Kinoshita, Makio**
Properties of magnesia powders prepared by vapor-phase oxidation technique.—73-16960; Synthesis of starting powders for ceramics by spray-pyrolysis technique.—73-12066
**Itatani, Kiyoshi; Nishioka, Toshio; Seike, Satoru; Howell, F. Scott; Kishioka, Akira; Kinoshita, Makio**
Sinterability of β-calcium orthophosphate powder prepared by spray pyrolysis.—73-06049
**Itatani, Kiyoshi; Sano, K.; Howell, F. Scott; Kishioka, Akira; Kinoshita, Makio**
Properties of aluminum nitride powder synthesized by low-pressure chemical vapor deposition [LPCVD].—73-09283
**Itaya, Kazuhiko; Hatakoshi, G.; Ishikawa, Masayuki; Nishikawa, Y.; Saito, S.; Okajima, M.**
Remarkable improvement in the temperature characteristics of GaAs lasers using an InGaAlP cladding layer.—73-15147
**Itho, M.** See Hashiba, M.
**Itkin, S. M.** See Zemlyanskii, Yu. V.
**Ito, Akio** See Nagae, Hajime
**Ito, Atsuo** See Tateishi, Tetsuya
**Ito, Hidetaka; Fujitsu, Satoru; Miyayama, Masaru; Koumoto, Kunihito; Yanagida, Hiroaki**
Alcohol sensor by using a *p-n* semiconductor contact.—73-01070; 73-11063; Molecular recognition by a *p-n* semiconductor contact.—73-01252; Molecular recognition by a *p-n* semiconductor contact.—73-11338
**Ito, Hidetaka; Kajita, Michiyo; Fujitsu, Satoru; Yanagida, Hiroaki**
Measurement of electrical conduction in *c*-axis-oriented ZnO.—73-01239; Measurement of electrical conduction in *c*-axis-oriented ZnO.—73-12831
**Ito, Hidetoshi** See Oikawa, Takahito
**Ito, Hiromasa; Fujiwara, Toshiki; Takyu, Choichi**
Cherenkov-type SHG from an $LiNbO_3$ waveguide with a periodic domain grating.—73-04541
**Ito, Hiroshi**
Technical progress of insulators for electric power transmission and substation.—73-07365
**Ito, Kenichi** See Yuda, Ryoichi
**Ito, Kenji** See Akita, Chiyoshi; Shibagaki, Shigeki
**Ito, Masahiro** See Iga, Atsushi
**Ito, Masaya** See Taniguchi, Masato
**Ito, Masumi** See Danzuka, Toshio; Kanamori, Hiroo
**Ito, Mitsuhiro** See Onuma, Eiichi
**Ito, R.** See Takahashi, Yutaka
**Ito, S.** See Maeda, K.; Maki, Iwao; Nishikawa, T.
**Ito, Shigeru** See Hata, Kazuo
**Ito, Shigeru; Ebato, Ichiro; Fukui, Hideo; Koura, Nobuyuki; Yoneda, N.**
Preparation of aluminum nitride using slightly oxidized Al powders.—73-13183
**Ito, Shigeru; Ebato, Ichiro; Fukui, Hideo**
Preparation of aluminum nitride using slightly oxidized Al powders.—73-02944
**Ito, Shigeru; Yoshida, Kazuharu; Koura, Nobuyuki; Akashi, Kazuo**
Preparation of AlN powders by nitriding of aluminum chips.—73-16912
**Ito, Shoji** See Kanematsu, Wataru; Yamauchi, Yukihiko
**Ito, Suketoshi** See Fukuda, Koichiro
**Ito, T.** See Imamura, Seichiro
**Ito, T.; Takenaka, K.; Uchida, Shinichi**
Systematic deviation from *T*-linear behavior in the in-plane resistivity of $YBa_2Cu_3O_{7-\delta}$: evidence for dominant spin scattering.—73-15648
**Ito, Takuji** See Mizuno, Mineo
**Ito, Tohru** See Nakajima, Toshio
**Ito, Toshimichi** See Hayashi, Nariyuki; Moon, Jong; Takahashi, Katsumasa
**Ito, Toshimichi; Tsubokawa, Masaya; Watanabe, Masakazu; Iio, Satoshi**
Diamond-coated body.—73-16711
**Ito, Toshio** See Nakazawa, Tadahisa
**Ito, Wataru** See Michishita, Kazuo
**Ito, Yasuhiko; Tada, Masayuki**
Film formation from molten salts by electrochemical process.—73-14706
**Ito, Yoshiaki; Koto, K.; Yoshikado, S.; Ohachi, T.; Kanamaru, Fumikazu; Mukoyama, Takeshi**
Variable-temperature X-ray diffraction analysis of the behavior of the mobile fluorine ions in a superionic conductor ß-$PbF_2$.—73-02537
**Ito, Yoshiaki; Mukoyama, Takeshi; Omote, Kazuhiko**
Structural evaluation of Mo/Si multilayers based on diffraction theory.—73-05492
**Ito, Yoshiro** See Fukuzawa, Yasushi
**Ito, Yoshiro; Kitamura, Kazumasa; Kanno, Masayoshi**
Joint of silicon nitride and molybdenum with vanadium foil and its high-temperature strength.—73-10246
**Ito, Yukio** See Uchino, Kenji
**Itoh, H.** See Maruno, Shigeo
**Itoh, Hibiki** See Mori, Masashi
**Itoh, Hideaki** See Lee, Sung-Soo; Nakamura, Tadashi
**Itoh, Hideaki; Sugimoto, H.; Iwahara, Hiroyasu; Otsuka, Jun; Iio, Satoshi**
Microstructure and properties of the sintered composite prepared by hot-pressing of TiN-coated alumina powder.—73-17165
**Itoh, Hideaki; Takao, Hisaaki; Iwahara, Hiroyasu**
Reaction sintering of cubic boron nitride using volatile catalysts.—73-02990
**Itoh, Hinenobu; Tabata, Takeshi; Kokitsu, Mikako; Okazaki, Noriyasu; Imizu, Yuzo; Tada, Akio**
Preparation of $SiO_2$-$Al_2O_3$ gels from tetraethoxysilane and aluminum chloride—a new sol-gel method using propylene oxide as a gelation promoter.—73-16935
**Itoh, K.; Hirata, Y.; Masumura, H.; Nakamura, E.; Deguchi, K.**
Decomposition of ferroelectric $LiH_3(SeO_3)_2$.—73-07877
**Itoh, K.; Imuta, M.; Sakai, A.**
Pulsed chemical vapor infiltration of SiC to three-dimensional carbon fiber preforms.—73-02984
**Itoh, M.** See Okamura, Hideko
**Itoh, Mitsuru** See Inaguma, Yoshiyuki; Kim, In-Seon; Sawabe, A.
**Itoh, Mitsuru; Sawada, T.; Kim, In-Seon; Inaguma, Yoshiyuki; Nakamura, T.**
Composition dependence of carrier concentration and conductivity in $(Ba_{1-x}Sr_x)PbO_{3-\delta}$ system.—73-08827
**Itoh, S.** See Arai, M.
**Itoh, Satoshi**
Electronic structure of $SrVO_3$.—73-16135
**Itoh, Shigeru** See Tomoshige, Ryuichi
**Itoh, T.** See Abe, M.; Narutaki, N.; Zhang, Q.
**Itoh, Takashi; Wanibe, Yoshimoto**
Quantitative analysis of powder and powder processing.—73-16968
**Itoh, Toshiaki; Asai, Sachio**
Method of minutely roughening substrate surface by etching.—73-00747
**Itoh, Yasuji** See Suzuki, Kazuo
**Itoh, Yoshiyasu** See Ishiwata, Yutaka
**Itoh, Yoshiyasu; Ishiwata, Yutaka; Miyazaki, Matsuo; Kashiwaya, Hideo**
Thermal stress characteristics of graphite coated with $Y_2O_3$.—73-02713; Thermal stress characteristics of graphite coated with $Y_2O_3$.—73-12897
**Itoh, Yoshiyasu; Kashiwaya, Hideo**
Residual stress characteristics of functionally gradient materials.—73-03639; Residual stress characteristics of functionally gradient materials.—73-10272
**Itou, Masahiro** See Sakai, Norio
**Itozaki, Hideo** See Fujita, Nobuhiko; Harada, Keizo; Hattori, Hisao; Nagaishi, Tatsuoki; Nakanishi, Hidenori; Tanaka, Saburo
**Itozaki, Hideo; Tanaka, Saburo; Fujita, Nobuhiko; Yazu, Shuji; Jodai, Tetsuji**
Compound oxide high-temperature superconducting material and a method for preparing [the] same.—73-11948; Method of forming an inorganic protective layer on an oxide superconducting film.—73-04850; Superconducting material.—73-04877
**Itskevich, E. S.** See Dizhur, E. M.; Kraidenov, V. F.
**Itti, Rittaporn** See Ikeda, Kayuto
**Ivakin, V. B.** See Skokov, V. N.
**Ivanchenko, I. V.** See Vertii, A. A.
**Ivanchenko, T. S.** See Soldatov, A. V.
**Ivanchenkova, L. G.**
Classifying filters for refining metals.—73-00788; Iron modification in the mold using foam-ceramic filters.—73-00828
**Ivanchik, I. I.** See Akimov, B. A.; Belokon, S. A.; Khokhlov, D. R.
**Ivanenko, A. A.; Blatov, V. A.; Serezhkin, V. N.**
Application of Dirichlet polyhedra for calculating valence balance in crystal structures.—73-15698
**Ivankovic, H.** See Tkalcec, E.
**Ivannik, G.** See Gorshunova, N.
**Ivannikov, V. I.** See Dan'kov, I. A.
**Ivanov, A. A.** See Menushenko, A. P.; Vigasina, M. F.
**Ivanov, D. A.** See Barinov, Sergej M.; Krylov, A. V.
**Ivanov, G. G.** See Stolyarova, V. L.
**Ivanov, I. A.** See Sirota, N. N.; Stefanovskii, S. V.; Zaitsev, Yu. V.
**Ivanov, I. A.; Gulin, A. N.; Shatkov, V. M.; Efimov, A. V.; Shashkin, V. S.**
Diffusion of sodium cations in high silicon xerogels and gel-glass.—73-00325
**Ivanov, I. P.** See Kazansky, P. R.; Nikol'skaya, L. V.; Wahab, Q.
**Ivanov, L. A.** See Ventsel, V. A.
**Ivanov, M. A.; Loktev, V. M.; Pogorelov, Yu. G.**
Localization of spin excitations and disruption of long-range order in weakly doped $La_2CuO_4$.—73-05431
**Ivanov, O. I.** See Meshcheryakov, Yu. G.
**Ivanov, P. A.** See Anikin, M. M.
**Ivanov, P. A.; Pantelеev, V. N.; Samsonova, T. P.; Suvorov, A. V.; Chelnokov, V. E.**
Metal-oxide-semiconductor capacitor formed from thermally oxidized *n*-type 6H-SiC with the (000$\bar{1}$)C orientation.—73-11313
**Ivanov, S. B.** See Udovenko, A. A.
**Ivanov, S. N.** See Vorotilova, L. S.
**Ivanov, S. N.; Egorov, G. V.; Popov, P. A.**
Specific heat and thermal conductivity of $ZrO_2$:$Y_2O_3$ fianites.—73-16597
**Ivanov, S. N.; Egorov, G. V.**
Specific heat and characteristic temperature of yttrium- and gadolinium-aluminum borates.—73-02438
**Ivanov, S. N.; Kororezov, A. G.; Khazanov, E. N.; Taranov, A. V.**
Heat pulse transport in single-phase ceramics.—73-02616
**Ivanov, S. N.; Kozorezov, A. G.; Taranov, A. V.**
Propagation of nonequilibrium phonons in ceramic materials.—73-09419
**Ivanov, S. V.** See Alferov, Zh. I.
**Ivanov, V. A.** See Odin, I. N.; Ved, V. E.
**Ivanov, V. Yu.** See Vinokurova, L. I.
**Ivanov, Vladimir G.** See Savranskii, Semen D.
**Ivanov, Yu. P.; Roshavelov, T. T.**
Flow behavior of modified cement pastes.—73-06656
**Ivanov, Yu. F.** See Abzaev, Yu. A.; Dedov, N. V.
**Ivanov, Yu. F.; Paul, A. V.; Koneva, N. A.**
Stabilization of high-temperature modification of zirconium dioxide.—73-03028
**Ivanov, Z. G.** See Wang, S. Z.
**Ivanov-Omskii, V. I.** See Andrukhiv, A. M.; Georgitse, E. I.; Tsypishka, D. I.
**Ivanov-Omskii, V. I.; Kharchenko, V. A.; Tsypishka, D. I.**
Spectrum of a shallow acceptor in a semimagnetic semiconductor subjected to a magnetic field.—73-07804

**Ivanov-Omskii, V. I.; Kutekhov, N. V.; Smirnov, V. A.; Yuldashev, S. U.; Gadaev, O. A.**
Neutron irradiation of $Cd_xHg_{1-x}Te$.—73-07691
**Ivanov-Omskii, V. I.; Petrov, I. A.; Smirnov, V. A.; Yastrebov, S. G.**
Magnetophotoluminescence of a narrow-gap semiconductor $Hg_{0.77}Cd_{0.23}Te$.—73-07656
**Ivanov-Omskii, V. I.; Smirnov, V. A.; Yuldashev, S. U.; Gadaev, O. A.; Stradling, R. A.; Ferguson, I.**
Photoluminescence of an epitaxial InSb film on a quasi-insulating *p*-type InSb substrate.—73-07727
**Ivanov-Shits, A. K.** See Mikhailov, V. I.; Sorokin, N. I.
**Ivanova, G. A.** See Demidenko, L. M.
**Ivanova, G. S.** See Chekhovskii, V. G.
**Ivanova, I. F.; Ganago, L. I.; Ezerskaya, T. V.**
Combined flotation and photometric method of determining germanium in glasses.—73-01891
**Ivanova, L. P.; Romashin, A. G.; Burovova, N. D.; Kryuchkov, V. A.**
Production and properties of zirconia ceramics.—73-02018
**Ivanova, M. S.** See Bogomolov, V. N.
**Ivanova, T. A.** See Yablokov, Yu. V.
**Ivanova, V. M.** See Gerasimova, L. V.
**Ivanova, V. V.** See Volchek, I. Z.
**Ivanova, Y.; Kashchieva, E. P.**
Glass and glass-ceramic materials in the $Y_2O_3$-$Al_2O_3$-$B_2O_3$-PbO system.—73-13992
**Ivanova, Y.; Vassilev, V. S.; Stefanova, S.; Staneheva, M.**
Phase equilibrium in the $SnO_2$-$V_2O_5$ system.—73-08693
**Ivanova, Z. G.; Vassilev, V. S.**
Glass phases based on the Se-S-X (X=Cu, Zn) system.—73-00347
**Ivanova-Korfini, I. N.** See Pakhomov, V. I.
**Ivanovskaya, I. S.; Bandurko, L. V.; Panichev, N. A.; Myasnikova, E. A.**
Interaction of alkali tungsten tellurite glass with aqueous solutions.—73-00355
**Ivanovskaya, M. I.; Branitskii, G. A.; Orlik, D. R.; Mal'chenko, S. I.; Vrublevskii, A. I.**
Nature of paramagnetic centers in tin dioxide.—73-17178
**Ivanovsky, A. L.; Sabiryanov, R. F.**
Interatomic interactions and electronic properties of NaCl-type $Ti_xAl_{1-x}N_y$.—73-12609
**Ivanovsky, I. L.** See Gubanov, V. A.
**Ivantsov, L. F.** See Berkovits, V. L.
**Ivanyutenko, V. I.**
Fluidized-bed heat exchangers operating with small-particle solids.—73-16499
**Ivashchenko, A. I.; Kopanskaya, F. Ya.; Tarchenko, V. P.**
Calculation of nonstoichiometry of ternary solid solutions of $Ga_{1-x}Al_xAs$ and $GaAs_{1-x}P_x$.—73-01089
**Ivashchenko, S. I.**
Cements based on modified portland and sulfoaluminate-belite clinkers.—73-13690
**Ivashevskii, M. A.** See Grebenshchikov, L. T.
**Ivashova, T. A.** See Kadushkin, V. I.
**Ivchenko, E. L.** See Aleiner, I. L.
**Ivchenko, E. L.; Kaminskii, A. Yu.; Aleiner, I. L.**
Exchange cleavage of excitonic levels in type-I and type-II superlattices.—73-11201
**Ivchenko, E. L.; Kiselev, A. A.**
Electron *g* factor of quantum wells and superlattices.—73-01153
**Ivchenko, L. G.** See Raikhel, A. M.
**Ivcleva, V. A.** See Shchetinin, N. M.
**Ivers, J. D.** See Schachter, L.
**Ivers, J. D.; Schachter, L.; Nation, J. A.; Kerslick, G. S.; Advani, R.**
Electron-beam diodes using ferroelectric cathodes.—73-01407
**Ives, L. K.** See Gettings, R. J.
**Ives, L. K.; Evans, C. J.; Jahanmir, Said; Polvani, R. S.; Strakna, T. J.; McGlauflin, M. L.**
Effect of ductile-regime grinding on the strength of hot isostatically pressed silicon nitride.—73-06377
**Ivey, Douglas C.; Ping, Jian; Bruce, Robert**
Reactions between Pd thin films and InP.—73-15140
**Ivlev, Boris** See Blatter, Gianni
**Ivleva, T. I.** See Medvedeva, L. I.
**Ivzhenko, N. A.; Kolesnikova, E. P.; Kudin, G. L.; Lomako, I. D.**
Magnetoreflection of birefringent crystals.—73-16534
**Iwabuchi, Mamoru; Fujii, Tatsuhiko; Kobayashi, Takeshi**
Photo- and electron-beam-induced currents from epitaxial $YBa_2Cu_3O_x$ metal-insulator-superconductor (MIS) structure in the normal state.—73-15580
**Iwadate, Y.** See Hattori, Takeo
**Iwado, Hitoshi** See Asano, Sadame
**Iwahara, Hiroyasu** See Itoh, Hideaki; Lee, Sung-Soo; Nagata, M.; Nakamura, Tadashi; Yajima, T.
**Iwahara, Hiroyasu; Esaka, Takao; Miyawaki, Yasuo**
Oxide ion conduction in highly electronic conductors based on $SrMnO_{3-\delta}$.—73-01004
**Iwahashi, Akira** See Morioka, Toshimichi
**Iwai, Masakazu** See Nozaki, Shunkichi
**Iwai, N.** See Kasukawa, Akihiko
**Iwai, Norihiro** See Namegaya, Takeshi
**Iwai, S.** See Simko, J. P.
**Iwai, Yoshio** See Yano, Mitsuaki
**Iwakuma, Masataka** See Komori, Mochimitsu
**Iwakuni, Hideharu** See Ichikawa, Satoshi
**Iwamatsu, Takayuki; Uwe, Hiromoto**
Normal-state uniform magnetic susceptibility and superconductivity in $Bi_2Sr_2Ca_{2-z}Cu_2O_x$ [z=1–2].—73-08151
**Iwami, K.** See Ichino, K.
**Iwamoto, Akio** See Uehara, Kaneo
**Iwamoto, M.; Kamai, M.**
Fundamental concepts for joining $Si_3N_4$ and metals.—73-03592
**Iwamoto, Masaaki** See Tsubone, Daisuke
**Iwamoto, N.** See Chen, J.-H.; Nogi, K.
**Iwamoto, N.**
State of the art in Japan for joining ceramic materials[—a review].—73-03644
**Iwamoto, Takahiro** See Moriroto, Hiroaki
**Iwamoto, Yuji; Kuibira, Akira; Sugiura, Isao; Tsubaki, Junichiro**
Effect of powder properties on thermal conductivity of aluminum nitride.—73-12774; Effect of powder properties on thermal conductivity of aluminum nitride.—73-13016
**Iwamoto, Yuji; Kuibira, Akira; Sugiura, Isao**
Effect of powder properties on thermal conductivity of aluminum nitride.—73-03138
**Iwamoto, Yuji; Nomura, Hiroshi; Sugiura, Isao; Tsubaki, Junichiro; Takahashi, H.; Ishikawa, K.**
Direct observation of microstructure change during densification of silicon nitride ceramics with a novel characterization method.—73-06208
**Iwamura, Hidetoshi** See Kagawa, Toshiaki
**Iwanaga, Hiroshi** See Ando, Yoshinori
**Iwanaga, Hiroshi; Iwasaki, T.**
Mechanical properties of fine carbon filaments by microtensile test method.—73-13563
**Iwanaga, Hiroshi; Ohyama, Takehiko; Reizen, Kouji; Matsunami, Tadashi**
Growth mechanism and properties of sectorlike magnesium hydroxide sulfate hydrate.—73-17142
**Iwanciw, J.** See Konik, Z.
**Iwasa, Masanobu** See Sakai, Norio
**Iwasa, Mikio** See Ikeyama, Masami
**Iwasa, Naruhito** See Nakamura, Shuji
**Iwasaki, Atsushi** See Oda, Tetsuhiro
**Iwasaki, H.; Torikai, D.**
Thermal shock of quartz lascas.—73-12894
**Iwasaki, Hiroyuki** See Matsuhisa, Tadaaki
**Iwasaki, Hiroyuki; Sakai, Syuji**
Method of forming molded body.—73-12086
**Iwasaki, Iwao** See Bhatty, Javed I.
**Iwasaki, Katsuhiro** See Komatsu, Masao
**Iwasaki, Kazuharu; Segawa, Ken; Kagami, Keiichi; Kikkawa, Masahiro**
Effect of fabrication conditions on microwave dielectric properties of $BaO$-$RE_2O_3$-$TiO_2$ ceramics.—73-14696
**Iwasaki, T.** See Iwanaga, Hiroshi
**Iwasaki, Takashi** See Onodera, Yoshio; Torii, Kazuo
**Iwase, Masayuki** See Fukushima, Toru
**Iwase, Nobuo** See Yasumoto, Takaaki
**Iwashita, Hiroyuki** See Mizunami, Toru
**Iwashita, S.** See Okada, M.
**Iwata, H.** See Maruno, Shigeo
**Iwata, Hitoshi; Noguchi, Kazumi; Goto, Ryo; Yamazaki, Masamobu**
Flying type composite magnetic head having Mn-Zn ferrite core.—73-01486
**Iwata, M.; Nakahira, Atsushi; Inada, H.; Niihara, Koichi**
Hybrid matrix composites reinforced with carbon fibers via polymer pyrolysis.—73-02853
**Iwata, Misao** See Nakano, Kikuo; Tredway, William K.
**Iwata, Tomio** See Kawamura, Kazuro
**Iwata, Yoshiyuki** See Tsunooka, Tsutomu
**Iwatsu, Osamu** See Arami, Yoshiro
**Iwatsuki, Masashi**
In situ observation of atomic movement at surface by scanning tunneling microscope—high-temperature STM.—73-05418
**Iwatsuki, Takane** See Goto, Tomoko
**Iwaya, Syoichi** See Sato, Yuichi
**Iye, Yasuhiro**
Doping-, pressure-, and temperature-dependence of Hall coefficients in high-$T_c$ cuprates.—73-11727
**Iyer, Ranga Mahadeva** See Gunasekaran, R. A.; Rajagopal, H.
**Iyer, S. Ramakrishna** See Annamalai, V. E.; Ponraj, R.
**Iyer, S. S.** See Gennser, Ulf; Kesan, V. P.; Powell, A. R.
**Iyi, Nobuo** See Tanaka, Hidehiko
**Iyori, Masahiro** See Kamino, Maruo
**Iyori, Masahiro; Suzuki, Seiji; Suzuki, Hiroshi; Yamano, Koji; Takahashi, Kazuhiko; Usuki, Tatsuro**
Property control for high-quality $Ba_{1-x}K_xBiO_3$ {BKBO} epitaxial thin films prepared by high-pressure reactive rf magnetron sputtering.—73-15604
**Izaiku, Takeshi** See Hirata, Yoshihiro
**Izak, P.**
Aspects of forming ceramic bodies by the molding process.—73-01762
**Izaki, Kansei** See Niihara, Koichi; Wakai, Fumihiro
**Izaki, Toru; Haneda, Hajime; Watanabe, Akio; Tanaka, Junzo; Shirasaki, Shinichi; Tsuji, Kazuhiro**
Self-diffusion of oxygen in PLZT ceramics.—73-04570
**Izawa, Hajime** See Ohyanagi, M.
**Izawa, Hajime; Miyaji, Yoshiyuki; Yamamoto, Yuji**
Preparation of C-SiC composites and its properties.—73-02946
**Izmaylova, L. K.** See Trofimov, N. N.
**Izotov, A. I.** See Tsymbal, L. T.
**Izotov, Alexander D.; Lazarev, V. B.; Shevchenko, Vladimir Ya.**
Strength analysis of ceramics under mechanical and thermal loading.—73-06528
**Izquierdo, R.** See Lecours, A.
**Izrael, A.** See Azoulay, R.
**Izumi, Fujio** See Hayakawa, Hiroshi; Kanke, Y.; Kim, Yong-Il
**Izumi, Hirohiko** See Hase, Takashi
**Izumi, J.** See Funayama, Masahiro
**Izumi, Junichi** See Korenaga, Sadayoshi
**Izumi, Keiji**
Coating (of silicate films) on steel sheet by the sol-gel method.—73-06751
**Izumi, Shinya** See Hayashi, Hidetaka
**Izumi, T.; Show, Y.; Deguchi, M.; Kitabatake, M.; Hirao, T.; Mori, Y.**
Electron spin resonance study of diamondlike nuclei produced in an Si surface layer by high-dose C ion doping.—73-06157
**Izumida, Hiromu** See Katsuyama, Shigeru
**Izumitani, Teturo** See Zou, Xue-Lu
**Izumitani, Teturo; Zou, Xue-Lu**
Zero 0.55 μm and 1.55 μm emissions of $Er^{3+}$-doped glasses.—73-14313
**Izzatov, B. M.** See Aslanov, G. K.
**Jaaskelainen, T.** See Kamshilin, Alexei A.
**Jablochkov, S.** See Bartnitskaya, N.
**Jabobker, K.** See Granier, W.
**Jabry, E.** See Saadi, L.
**Jaccodine, Ralph J.** See Huang, J. G.; Kouvatsos, Dimitrios N.
**Jach, Terrence** See Chester, M. J.
**Jack, Kenneth H.**
SiAlON ceramics: retrospect and prospect.—73-05274
**Jackman, T. E.** See Aebi, P.; Allard, L. B.; Landheer, D.
**Jackson, H. W.** See McDonough, C.
**Jackson, H. W.; Barmatz, M.; Wagner, P.**
Transient temperature behavior of a sphere heated by microwaves.—73-06125
**Jackson, Howard E.** See Miyoshi, Kazuhisa; Ramabadran, Uma B.
**Jackson, James D. J.; Matthews, Tony M.; Glover, Darren J.**
Microporous thermal insulation material.—73-10784
**Jackson, John E.; Nitta, Hideo; Shoichi, Katoh; Amano, Masahiko; Kurisu, Yasushi; Ohno, Keiichiro**
Powder feed composition for forming a refraction oxide coating, process used and article so produced.—73-10337
**Jackson, Larry L.; Baedecker, Phillip A.; Fries, Terry L.; Lamothe, Paul J.**
Geological and inorganic materials.—73-08402
**Jackson, M. K.** See Foing, J.-P.
**Jackson, Mitchell L.** See Janney, Mark A.
**Jackson, P. R.**
Removal of lead from ceramic tableware.—73-10895
**Jackson, Peter J.; Lawton, John M.**
International development of standards for cements.—73-10018
**Jackson, R. A.** See Bell, R. G.
**Jackson, S. L.** See Moy, A. M.
**Jackson, S. L.; Baillargeon, J. N.; Curtis, A. P.; Liu, X.; Baker, J. E.; Malin, J. J.**
Generation of fast-switching $As_2$ and $P_2$ beams from $AsH_3$ and $PH_3$ for gas-source molecular beam epitaxial growth of InGaAs/InP multiple quantum well and superlattice structures.—73-11220
**Jackson, S.** See Hagston, W. E.
**Jackson, W. B.** See Park, Y. C.
**Jackson, William M., II**
Unique tile glaze concept—free of pinholes.—73-07277
**Jacob, J. M.** See Kim, Dai-Sik
**Jacob, K. Thomas** See Matthews, Tom
**Jacob, K. Thomas; Waseda, Yoshio**
High-temperature stability of $Ca_2ZrSi_4O_{12}$.—73-16169
**Jacob, Karl-Heinz** See Knozinger, Eric
**Jacoboni, C.** See Balda, R.; Guery, J.; Legein, C.
**Jacobs, Cornelis A. J.** See Renardus, Max L. P.
**Jacobs, David S.; Chen, I-Wei**
Mechanical and environmental factors in the cyclic and static fatigue of silicon nitride.—73-09631
**Jacobs, James K.** See Bhola, Rakesh; Dasgupta, Sankar; Payzant, E. A.
**Jacobs, K.** See Schafer, P.
**Jacobs, P. A.** See Deo, Goutam
**Jacobs, Patrick W. M.; Kotomin, Eugene A.**
Modeling of point defects in corundum crystals.—73-17088; Quantum chemical simulation of the self-trapped hole in α-$N_2O_3$ crystals.—73-08716
**Jacobs, R.** See De Kempeneer, E. H. A.; Smeets, J.
**Jacobs, T. H.** See Coene, W.
**Jacobs, W. P. J. H.** See De Man, A. J. M.
**Jacobs, W. P. J. H.; Jobic, H.; Van Wolput, J. H. M. C.; Van Santen, R. A.**
Fourier transform infrared and inelastic neutron scattering study of HY zeolites.—73-05406
**Jacobs, W. P. J. H.; Van Wolput, J. H. M. C.; Van Santen, R. A.**
FTIR study of the protonation of the protonation of the zeolite lattice—influence of Si:Al ratio and structure.—73-12592
**Jacobsen, C. S.** See Il'ichev, E. V.
**Jacobsen, R. L.** See Tritt, T. M.
**Jacobson, A. J.** See Huan, G. H.
**Jacobson, D. C.** See Ren, F. Y. G.; Vredenberg, A. M.
**Jacobson, Howard W.**
Coated refractory composition and method for making the same.—73-00886
**Jacobson, Leon** See Bollong, Charles A.
**Jacobson, Nathan S.** See Lee, Kang-N.
**Jacobson, R. D.** See Orloff, Glennis J.
**Jacoby, E. R.** See Klein, L.
**Jacowitz, R. D.** See Kamins, T. I.
**Jacques, P.** See Pitkethly, M. J.
**Jacquet, M.** See Caperaa, C.
**Jacquet-Francillon, N.** See Mueller, P.
**Jacquez, Andrew E.**
Bonding diamond to metal in electronic circuits.—73-13801
**Jacquier, B.; Remillieux, A.; Joubert, M. F.; Christensen, P.; Poignant, H.**
Upconversion and relaxation of high-lying states in rare-earth-doped ZBLAN bulk and fibers.—73-07095
**Jadaan, Osama M.**
Lifetime prediction for ceramic tubular components.—73-17372
**Jadhav, K. M.** See Bichile, G. K.
**Jadrijevic, Ante**
Determination of cement content in a concrete mix by heat flow measurement.—73-00057
**Jaeger, N. I.** See Tkachenko, Olga P.
**Jaegermann, W.** See Balogh, A. G.
**Jaenicke-Ressler, K.** See Kretzschmar, C.
**Jaffe, S.** See Eilers, H.

**Jaffrezic, N.** See Baraton, Marie-Isabelle
**Jagannath, H.; Venkateswarlu, Putcha**
Effect of counterpropagating beams on beam fanning in $BaTiO_3$.—73-02577
**Jager, Karlheinz** See Bonnet, Dieter
**Jager, N. D.; Verma, Ashish K.; Dreszer, P.; Newman, N.; Liliental-Weber, Z.; Van Schilfgaarde, M.**
First observation of EL2-like defect levels in annealed [low-temperature] LT GaAs.—73-14927
**Jager, R. G.; Esser, G.; Knofel, Dietbert**
Development of compressive strength and porosity of some regulated set cements (RSCS) both made from rotary-kiln and laboratory-oven clinker hydrated at 20° and 5°C.—73-03451
**Jagota, Anand** See Maden, Michele A.; Tong, Quinn K.
**Jagota, Anand; Scherer, George W.**
Viscosities and sintering rates of a two-dimensional granular composite.—73-03072
**Jagota, Anand**
Simulation of the viscous sintering of coated particles.—73-16988
**Jahanmir, Said** See Dong, X.; Ives, L. K.; Xu, Hockin H. K.
**Jahanmir, Said; Liang, H.**
Chemomechanical effects of boric acid in core drilling of alumina.—73-05706
**Jahanmir, Said; Strakna, T. J.; Quinn, George D.; Kopp, R. N.; Yoon, Soo-C.; Kumar, K. V.**
Effect of grinding on strength and surface integrity of silicon nitride: II.—73-06384
**Jahanmir, Said; Strakna, T. J.; Quinn, George D.; Liang, H.; Allor, Richard L.; West, R. D.**
Effect of grinding on strength and surface integrity of silicon nitride: I.—73-06383
**Jahanmir, Said**
Friction and Wear of Ceramics.—73-17526
**Jahn, L.** See Kotzler, J.
**Jahnke, F.** See Kim, Dai-Sik
**Jain, Dilip C.**
New high-quality Chinese bauxite.—73-12289
**Jain, H.** See Huang, W. C.
**Jain, Kiran; Tripathi, R. B.; Das, B. K.**
Transport critical current properties of $Bi_2Sr_2CaCu_2O_x$/Ag tapes.—73-04822
**Jain, L. K.** See Wetherhold, R. C.
**Jain, L. K.; Wetherhold, R. C.**
Effect of fiber orientation on the fracture toughness of brittle matrix composites.—73-17286
**Jain, Mukesh** See Parent, Luc
**Jain, N. K.** See Sharma, R. C.
**Jain, V. K.**
Superposition model analysis of zero-field splitting of $Mn^{2+}$ in $LiNbO_3$.—73-02472
**Jain, Vijay** See Richards, R. S.; Simpson, J. C.; Varshneya, Arun K.
**Jain, Vijay**
Issues related to volatilization, phase alteration, and presence of unreacted feed in the borosilicate glass waste form.—73-06933
**Jakel, G.** See Van Olfen, U.
**Jaklevic, J. M.** See Yu, Kin-Man
**Jakobsen, Ulla Hjorth; Thaulow, Niels; Johansen, Vagn**
Analyses of sodium- and potassium-rich droplets observed on the surface of alkali-silica reactive aggregates and on gel in polished thin sections.—73-09814
**Jakubik, Robert F.** See Barkatt, Aaron
**Jakubowski, W.** See Krok, F.
**Jakushenko, E. A.** See Gamants, E. M.
**Jamarani, F.** See Berriche, R.
**James, A. C. W. P.; Murphy, D. W.; Siegrist, T.; Waszczak, J. V.; Marsh, P.; Fleming, R. M.**
Crystal growth, structure, and magnetic properties of $H_{0.23}Li_{1.68}Mo_{1.05}O_3$.—73-02178
**James, A. S.** See Fancey, K. S.
**James, A. S.; Matthews, A.**
Deposition of stabilized zirconia onto metallic substrates using a dc thermionic triode ion plating technique.—73-10213
**James, Barry**
In situ replaceable pusher bar for a batch charger pan.—73-01857
**James, J. B.** See Johnson, S. M.
**James, Jonathan H.** See Frangi, Francesca
**James, Michael R.** See Morris, Winfred L.
**James, Michael** See Hunter, Robert J.
**James, N. A.** See Qin, C. D.
**James, P. F.** See Butler, M. A.; Chen, M.; Gonzalez Oliver, C. J. R.; Wu, J.
**James, P. F.; Chen, M.; Jones, F. R.**
Strengthening of soda-lime-silica glass by sol-gel- and melt-derived coatings.—73-00707
**James, P. F.; Chen, M.; Lee, W. E.**
Densification of gel-derived celsian glass.—73-03830
**James, P. F.; Wu, J.; Chen, M.; Jones, F. R.**
Preparation of mullite by transient viscous sintering of alumina with sol-gel-derived silica.—73-05976
**James, Timothy W.; Nilsson, Boo J. L.**
In situ growth of Tl-containing oxide superconducting films.—73-15680
**Jamet, J.-M.** See Meyers, M. A.
**Jamet, S.** See Ozkul, C.
**Jan, N.** See Bowen, Chris
**Jana, Carsten** See Holand, Wolfram
**Jana, Carsten; Holand, Wolfram; Vogel, Werner**
Apatite glass ceramic.—73-14533
**Janas, Victor F.** See Allaire, Roger A.
**Janas, Victor F.; Malarkey, C. J.; Iskander, Magdy F.; Andrade, Octavio M.; Bringhurst, Shane**
Dielectric property measurement of ceramic bodies.—73-05040
**Jancke, Karin** See Schultze, Dietrich
**Jandl, S.; Iliev, M.; Thomsen, C.; Ruf, T.; Cardona, M.; Wanklyn, B. M.**
Crystal field Raman scattering in $Nd_2CuO_4$.—73-16078
**Jandl, S.; Rousseau, J.; Boatner, Lynn A.**
Ir and Raman investigations of OH impurities in doped and pure $KTaO_3$ single crystals.—73-16187
**Janecka, L.** See Werynski, B.
**Janes, R.** See Parker, M. J.
**Janes, S.**
Testing the hot-temperature strength of ceramic pins.—73-03365
**Jang, Byung-Koog; Kishi, Teruo**
Fabrication and microstructure of $Al_2O_3$-SiC-YAG hybrid composites prepared by particulate dispersion.—73-09125
**Jang, Cheol-Woo** See Han, Dong-Bin
**Jang, Dong-Hoon** See Kim, Jeong-Soo
**Jang, Gun-Eik** See No, Kwang-Soo; Shin, Woo-Suck
**Jang, Hyun-M.** See Cho, Sung-R.; Lee, Kyu-Mann
**Jang, Hyun-M.; Lim, Byung-C.**
Characteristics of cordierite-$ZrO_2$ composites fabricated by the multiphase sol-gel route.—73-06193
**Jang, Hyun-M.; Moon, Jong-H.; Kim, Byung-Hoon**
Correlation of green microstructure of $Al_2O_3$ with colloid/interface variables.—73-17121
**Jang, Jin-Wook; Lee, Tae-Keun; Chung, Soo-Jin**
Crystal habits of corundum single crystals grown in cryolite flux.—73-02179
**Jang, Jun-Won** See Lee, Hyung-Bock
**Jang, Min-Su** See Han, Seok-Kil
**Jang, Se A.; Lee, Kyung M.; Han, Chung-S.**
Method for forming a field oxide film of a semiconductor device.—73-15237
**Jang, Sei-Joo** See Takada, Takahiro; Yoon, Man-Soon
**Jang, Sung-Do** See Je, Hae-June; Kim, Chong-Don; Kim, Sang-Woo
**Jang, Yoon-Sik** See Kim, Kyum
**Jang, Young; Obana, Hiroshi; Yoshimoto, Katsuhiko**
Operating results of OK roller mills in Japanese and Korean cement plants.—73-03511
**Jang, Yun-Sik** See Kim, B.-S.; Kim, In-Sool
**Janghorban, Kamal Shiraz**
Processing of ceramic matrix SiC-Al composites.—73-13885
**Janke, D. S.** See Merrill, R. A.
**Jankovic, M.; Mostaghimi, J.; Noga, J. O.**
Mathematical modeling in thermal plasma spraying.—73-09198
**Jankowski, A. F.; Schrawyer, L. R.; Hayes, J. P.**
Sputter deposition of yttrium oxides.—73-09340
**Jankowski, A. F.; Schrawyer, L. R.; Perry, P. L.**
Reactive sputtering of molybdenum oxide gradient index filters.—73-02994
**Janks, M. Ryszard**
Choice of casting alloys for machine elements for equipment in milling and crushing installations.—73-01767
**Janney, Mark A.** See Grellinger, Daniel J.; Zeltner, Walter A.
**Janney, Mark A.; Jackson, Mitchell L.; Kimrey, Hal D.**
Microwave sintering of $ZrO_2$-12 mol% $CeO_2$.—73-05926
**Jannot, B.** See Gillot, C.
**Janoschek, J.** See Kaisersberger, K.
**Janosik, Lesley A.** See Nemeth, Noel N.
**Janovsky, Amy E.** See Talmy, Inna G.
**Janowiak, Mark A.** See Bleam, William F.
**Janowitz, C.** See Anderson, R. O.
**Janowski, F.** See Foltynowicz, Z. A.
**Jansen, A. G. M.** See Samuely, P.
**Jansen, F.; Day, A.; Wamboldt, L.**
Chemical and mechanical properties of sputtered silicon nitride films.—73-13496
**Jansen, Heinz A.** See Bottger, D.
**Jansen, Heinz A.; Thompson, Fred A.**
Use of oxide dispersion-strengthened platinum for the production of high-quality glass.—73-10614
**Jansen, J. C.** See Arafat, A.
**Jansen, Martin** See Stein, Andreas; Wannagat, Ulrich
**Jansen, Martin; Baldus, Hans-Peter; Wagner, Oliver**
Silicon boron nitride ceramic and precursor compounds, a process for their preparation and their use.—73-02135
**Jansen, P.** See Van Hove, M.
**Jansma, Jon B.; Parham, Thomas G.; Whitman, Pamela K.**
Fluorescent lamps having reduced interference colors.—73-03919
**Janssen, G. C. A. M.** See Jongste, J. F.
**Janssen, Rolf** See Garcia, D. E.; Holz, Dietmar; Schon, Stefan; Wendorff, J.
**Janssen, Rolf; Schon, Stefan; Prielipp, Helge; Claussen, Nils**
Multifunctional ceramics for thermal shock applications.—73-03626
**Jantzen, Carol M.** See Ramsey, W. Gene; Schumaker, R. F.
**Jantzen, Carol M.; Bibler, Ned E.; Beam, D. Chris;**
**Crawford, Charles L.; Pickett, Margaret A.**
Development and characterization of the Defense Waste Processing Facility (DWPF) Environmental Assessment (EA) glass standard reference material (U).—73-08293
**Jantzen, Carol M.; Pickett, John B.; Ramsey, W. Gene**
Reactive additive stabilization process (RASP) for v trification of hazardous and mixed waste (U).—73-08308
**Janvrin, B.** See Molian, P. A.
**Janz, Peter** See Winkler, Herwig
**Janz, S.** See Dai, H.
**Japka, Joseph E.**
Microwave absorbing [glass] article.—73-14554
**Jappy, T. G.; Glasser, Fredrick P.**
Synthesis and stability of silica-substituted hydrogarnet $Ca_3Al_2Si_{3-x}O_{12-4x}(OH)_{4x}$.—73-10176
**Jaque, F.** See Vergara, I.
**Jaramillo, D.** See Cerezo, E.
**Jaras, A. C.** See Norman, B. J.
**Jarasiunas, Kestutis; Delaye, Phillipe; Launay, Jean-Claude; Roosen, G.**
Space-charge-field feedback effect on carrier transport in photorefractive CdTe:V.—73-09422
**Jarassiunas, Kestutis** See Delaye, Philippe
**Jardim, R. F.** See Barbeta, V. B.
**Jardinier-Offergeld, M.** See Maoujoud, M.
**Jarman, R. H.** See Wilkinson, A. P.
**Jaros, M.** See Gilliland, G. D.
**Jarosinski, W. J.; Gruninger, M. F.; Londry, C. H.**
Characterization of tungsten carbide cobalt powders and HVOF [high-velocity oxy-fuel] coatings.—73-06748
**Jarrige, Jean** See Helali, D.
**Jarrige, Jean; Michelet, Jean-Pascal; Mexmain, Jacques**
Pressureless sintering of aluminum nitride in the presence of yttrium-containing additives: relationships between microstructure, thermal conductivity, and oxygen content.—73-13214
**Jarry, P.** See Vinchant, J.-F.
**Jaschek, R.; Geith, A.; Bergmann, H. W.**
Polishing of ground lead crystal glasses with $CO_2$ lasers.—73-03863
**Jaschinski, W.; Nagel, A.**
Possibilities and limits in the shaping of ceramic powders.—73-15744
**Jaskie, James E.; Kane, Robert C.**
Field emission electron source employing a diamond coating.—73-04514
**Jaskowiak, Martha H.** See Philipp, Warren H.
**Jaso, Mark A.; Jones, Paul B.; Meyerson, Bernard S.; Patel, Vishnubhai V.**
CVD diamond or diamondlike carbon for chemical-mechanical polish etch stop.—73-02093
**Jasra, Raksh V.** See Choudary, Venkateswartu N.
**Jastrabik, L.** See Basovich, A. J.
**Jaturapitakkul, Chai** See Cerkanowicz, Anthony E.
**Javel, Jean-Francois** See Matecki, Marc
**Javorniczky, J.** See MacFarlane, Douglas R.
**Jaw, D. H.** See Sadwick, L. P.
**Jay, Paul R.**
GaAs electronics in the marketplace.—73-07541
**Jayannawar, A. M.**
Electronic conduction in highly anisotropic systems.—73-07320
**Jayanthi, Gopal V.** See Messing, Gary L.
**Jayaraj, M. K.** See Paulose, K. V.
**Jayarama Reddy, P.** See Sravani, C.
**Jayaraman, A.; Sharma, S. K.; Wang, Z.; Wang, S. Y.; Ming, L. C.; Manghnani, M. H.**
Pressure-induced amorphization of $Tb_2(MoO_4)_3$: a high-pressure Raman and X-ray diffraction study.—73-16279
**Jayaraman, N.** See Ramakrishnan, V.
**Jayasundere, N.; Smith, B. V.**
Dielectric constant for binary piezoelectric 0-3 composites.—73-01400
**Jayavel, R.** See Murugakoothan, P.
**Je, Hae-June** See Ahn, Jeong-Hwan
**Je, Hae-June; Byeon, Soon-Cheon; Hong, Kug-Sun; Jang, Sung-Do**
Electromagnetic properties of Mn-Zn ferrite single crystal with small variation of $Fe_2O_3$ concentration.—73-15321
**Je, Hae-June; Park, Byeong-Won; Hong, Seong-Hyeon; Hong, Kug-Sun**
Magnetic property and chemical reaction in the interface of ferrite and glass.—73-11664
**Je, Jung-Ho** See Oh, U.-C.
**Je, Jung-Ho; Lee, G.-Y.**
Microstructures of diamond films deposited on (100)silicon wafer by microwave plasma-enhanced chemical vapor deposition.—73-06261
**Jean, A.** See Chaker, M.; El Khakani, M. A.
**Jean, A.; Chaker, M.; Diawara, Y.**
Characterization of a-SiC:H films produced in a standard plasma-enhanced chemical vapor deposition system for X-ray mask application.—73-12939
**Jean, A.; El Khakani, M. A.; Chaker, M.; Gat, E.; Dodier, J.; Papadopoullos, A.**
Mechanical properties of SiC films for X-ray lithography application.—73-09642
**Jean, Jau-Ho; Gupta, Tapan K.; Straub, William D.**
Low-dielectric inorganic composition for multilayer ceramic package.—73-04214
**Jean, Jau-Ho; Gupta, Tapan K.**
Alumina as a devitrification inhibitor during sintering of borosilicate glass powders—correction.—73-00588; Aluminum borate devitrification inhibitor in low-dielectric borosilicate glass.—73-04186; Crystal growth inhibitor for glassy low-dielectric inorganic composition.—73-04196
**Jean-Jean, P.; Sicart, J.; Robert, J. L.; Le Berre, M.; Pinard, P.; Conedera, V.**
Annealing-related electrical and piezoresistive properties of B- and As-implanted LPCVD silicon films.—73-05531
**Jeandin, M.** See Bucher, C.; Provot, X.; Vardavoulias, M.
**Jebrouni, M.** See Descemond, M.
**Jech, D. E.** See Sepulveda, Juan L.
**Jedral, L.; Ruda, H. E.; Sodhi, R.; Ma, H.; Mannik, L.**
Electronic passivation of GaP surfaces using $(NH_4)_2S$ treatment.—73-07496
**Jedryka, E.** See Dekoster, J.
**Jedrzejewski, K. P.** See Morkel, P. R.
**Jeelani, Shaik** See Huq, N.; Mahfuz, Hassan; Vaidya, Uday K.
**Jeffers, Frederick J.; Smith, Neil**
Laminated magnetic record/playback head with thin films of high permeability material spaced apart by very thin films of insulating magnetic material for high bit densities and data transfer rates.—73-01488
**Jefferson, D. A.** See Hardcastle, Franklin D.; Liu, R. S.
**Jeffrey, P. M.** See Fish, D. A.
**Jeffrey, P. M.; Clapham, S. L.; Eason, R. W.; Fish, D. A.; Powell, A. K.; Hall, T. J.**
Mechanism of photorefractive enhancement of photochromic gratings in $Bi_{12}SiO_{20}$—experimental results and phenomenological modeling.—73-05595
**Jehanno, G.** See Imbert, P.
**Jeitschko, W.** See Kaczorowski, Dariusz; Kersting, K. B.; Klug, J.; Pottgen, Rainer; Zeppenfeld, K.

**Jelinek, M.** See Basovich, A. J.
**Jelinek, Raz; Pines, Alexander; Ozkar, Saim**
Nanostructure assemblies and guest-host interactions in sodium zeolite-Y [studied] using $^{23}Na$ double-rotation NMR.—73-05070
**Jelinkova, H.** See Stankov, K. A.
**Jen Wang, I.; Niarchos, D.; Tsakalakos, Thomas**
Bi-Sr-Ca-Cu-O superconducting films by plasma sputtering of nanocrystalline compound targets.—73-04676
**Jen, H.-W.** See Halasz, I.
**Jeng, D.-Y.; Rahaman, M. N.**
Effect of rigid inclusions on the sintering of mullite synthesized by sol-gel processing.—73-09095; Sintering and crystallization of mullite powder prepared by sol-gel processing.—73-13258
**Jeng, Ming-Chang; Yan, Li-Yung**
Environmental effects on wear behavior of alumina.—73-09592
**Jeng, Nan-Seng** See Batra, Shubneesh
**Jenkins, L. C.; Griffiths, C. L.; Hughes, A.; Richards, J.; Williams, R. H.**
Epitaxial rare-earth fluoride insulating layers on semiconductors: structure, phase transitions, and interface reactions.—73-11197
**Jenkins, M. L.** See Pienkowski, M. C.
**Jenkins, Mary**
Look at ISO 9000.—73-09726
**Jenkins, Michael G.** See Ferber, Mattison K.; Ghosh, Asish; Hong, William S.; Lin, Chih-Kuang Jack; Menon, Mamballykalathil N.
**Jenkins, Michael G.; Ferber, Mattison K.; Lin, C.-K. J.**
Beneficial effects of cyclic tensile loading on fatigue resistance of an $Si_3N_4$.—73-17241
**Jenkins, Michael G.; Ferber, Mattison K.**
Stress-relaxation tests used to determine the elevated temperature creep parameters of structural ceramics.—73-06532
**Jenkins, Michael G.; Piccola, J. P., Jr.; Mello, M. D.; Lara-Curzio, Edgar; Wereszczak, A. A.**
Mechanical behavior of a 3-D braided, continuous SiC fiber-reinforced/CVI SiC matrix composite at ambient and elevated temperatures.—73-17379
**Jenkins, T. E.** See Morris, I. L.
**Jennings, Hamlin M.** See Bergstrom, T. B.; Christensen, Bruce J.; Day, Paul S.; Hutchison, R. G.; Skamser, Daniel J.; Thomas, Jeffrey J.
**Jenq, Fenq-Lin** See Chen, Jiann-Ruey
**Jenq, J.-S.** See Ding, J.
**Jensen, A. Damgard** See Strunge, H.
**Jensen, E. M.** See Berek, H. E.
**Jensen, H.** See Bienk, E.-J.
**Jensen, J. E.** See Liu, B.
**Jensen, J. F.** See Metzger, R. A.
**Jensen, James A.**
Polymer precursors for aluminum nitride.—73-12505; Silicon-filled aluminum polymer precursors to SiC-AlN ceramics.—73-05339; Thermoset polymeric precursor for aluminum nitride.—73-05347
**Jensen, Klavs F.** See Huh, Jeung-Soo
**Jensen, Knud Bundgaard** See Haslov, Peter
**Jensen, L. C.** See Dickinson, J. T.; Webb, R. L.
**Jensen, S.** See Dam, H.
**Jentzsch, F.** See Schad, R.
**Jeon, D. Y.; Tennant, D. M.; Kim, Y. O.; Yan, R. H.; Lee, K. F.; Early, K.**
Gate technology for 89-GHz vertical doping engineered Si metal-oxide-semiconductor field effect transistor.—73-14939
**Jeon, Deok-Il; Kim, Jeong-Wook; Lee, Eung-Sang**
Thermal resistance strength with the formation of the zircon phase in LAS system.—73-12893
**Jeon, Dong-Ryul** See Bai, Chun-Li
**Jeon, G.; Lee, H.-D.; Kim, G.-B.; Bang, S.-H.**
Quantitative analysis of quality control factors related with compressive strength and cement fineness.—73-10120
**Jeon, H.** See Ding, J.
**Jeon, J.-S.** See Yoo, Y.-C.
**Jeon, Jae-Ho; Kang, Suk-Joong L.; Han, Sang-Chul; Yoon, Duk-Yoon**
Chemically induced interface migration in oxides.—73-13339
**Jeon, Jae-Ho; Kang, Suk-Joong L.**
Effect of sintering atmosphere on interface migration of niobium-doped strontium titanate during infiltration of oxide melts.—73-10938
**Jeon, Yong-Hee; Han, Ki-Sung**
Mechanical properties of high-strength cement composite with carbon fiber.—73-06685
**Jeon, Yoo-Chan; Lee, Ho-Young; Joo, Seung-Ki**
Effect of microwave power and reactive gas ratio on the properties of silicon nitride thin films deposited by ECR PECVD.—73-13009; Electrical properties of silicon nitride thin films fabricated by ECR PECVD at room temperature.—73-04087
**Jeong, B.-S.** See Park, S.-H.
**Jeong, B.-S.; Choi, J.-S.; Chang, S.-K.; Chung, C.-H.; Park, H.-L.; Lee, H.-J.**
K-nonconserving transition in heavily doped LPE-grown *n*-type $In_{0.5}Ga_{0.5}P$.—73-07626
**Jeong, B.-S.; Park, H.-K.; Kim, S.-I.; Lee, J.-H.; Hwang, J.-S.; Chung, C.-H.**
Band offset measurement at the $In_{0.5}Ga_{0.5}P/GaAs$ heterojunction by using properties of transition metal.—73-04253
**Jeong, Chang-Oh; Kim, Sung-June; Choe, Byung-Doo**
Role of complementary species in P/Be- and Ar/Be-coimplanted InP.—73-15150
**Jeong, Eun-Kee; Ouyang, Bo; Norberg, R. E.; Fedders, P. A.; Conradi, M. S.**
HD and $D_2$ layers physiosorbed on MgO studied by NMR.—73-09459
**Jeong, Hong-Sik; Lee, In-Ja; Seo, Jung-Chul; Lee, M.-Y.; Kim, D.-H.; Park, S.-J.**
Temperature- and size-dependent excitonic relaxation process in GaAs/AlGaAs quantum wells.—73-04496
**Jeong, Hyung-Jin** See Yoon, Seok-Jin
**Jeong, J.-I.; Hong, J.-H.; Kang, J.-S.; Shin, H.-J.; Lee, Y.-P.**
Analysis of TiC and TiN films prepared by an arc-induced ion plating.—73-00209
**Jeong, K.-C.** See Kim, Eung-Ho
**Jeong, Soo-Jong; Lee, Joo-Wan; Kim, Deug-Joong; Shin, Yu-Seon; Kang, Suk-Joong L.**
SiC whisker dispersion and mechanical properties of $Al_2O_3$-SiC whisker composite.—73-13588
**Jeong, Y.-H.** See Lee, S.-M.
**Jeoung, Jun-Sang** See Park, Yong-Wan
**Jerabek, Elihu C.** See Iacovangelo, Charles D.
**Jeremie, A.** See Seibt, E. W.
**Jerke, Wilan** See Dorbath, Bernd
**Jerkiewicz, G.** See Tremiliosi-Filko, G.
**Jerkiewicz, Gregory; Borodzinski, Janusz J.**
Formation of very thin oxide films on polycrystalline rhodium electrodes: applications of the Mott-Cabrera theory.—73-07325
**Jerman, R.** See Vagin, S. V.
**Jero, Paul D.** See Kerans, Ronald J.
**Jeschar, R.** See Hunlich, T.
**Jesko, Karol**
Glass cullet preheating modeling.—73-03847; Use of waste gas heat for glass batch preheating.—73-03901
**Jessen, Todd L.** See Bender, Barry A.
**Jessen, Todd L.; Bender, Barry A.; Pattnaik, Amitav; Everett, Richard K.**
Microstructural study comparing CFCMC's [continuous fiber ceramic matrix composites] with differing mechanical properties.—73-17156
**Jessen, Todd L.; Bender, Barry A.**
Layered BN-coated/as-received unidirectional fiber CFCC's [continuous fiber ceramic composites] with enhanced mechanical performance.—73-17370
**Jessup, P. E.** See Ye, F.
**Jeun, Sun-Ho** See Choi, Byung-Jin
**Jewell, John M.; Higby, Paige L.; Aggarwal, Ishwar D.**
Properties of $BaO-R_2O_3-Ga_2O_3-GeO_2$ (R=Y, Al, La, and Gd) glasses.—73-03809
**Jewell, John M.; Ruller, Jacqueline A.**
Structural model for $PbO-Ga_2O_3-SiO_2$ glasses.—73-00409
**Jewell, John M.; Shelby, J. E.**
Role of water content in the phase separation of soda-lime-silicate glasses: rate of phase separation.—73-06966
**Jeyadevan, Balachandran; Tohji, Kazuyuki; Nakatsuka, Katsuto**
Local structure analysis of $ZnFe_2O_4$ by extended X-ray absorption fine structure.—73-16198; Magnetic behavior of magnetite and cobalt ferrite particles in magnetic fluid and their local structure analysis using EXAFS.—73-15333
**Jeynes, C.** See Lynch, S.
**Jezek, V.** See Musil, J.
**Jezequel, G.** See Landesman, J. P.
**Jezierski, K.** See Bryja, L.; Misiewicz, J.
**Jezquel, G.** See Gota, S.
**Jha, Animesh** See Deol, R. S.; Jordan, Wayne G.
**Jha, Animesh**
Formation of scattering centers in fluoride glass preforms and fibers.—73-06919; Phase equilibria in the Si-C-N-O system and the kinetic analysis of silicon carbide whisker growth.—73-08692; Viscous flow and glass formation tendency of platinum- and palladium-based metallic glasses.—73-00578
**Jha, N. K.** See Raman, V.
**Jha, S. R.; Rajput, R.; Kumar, D.; Reddy, Y. S.; Sharma, R. G.**
Thermoelectric power and percolation in BSCCO system.—73-08994
**Jhans, H.** See Bhargava, S. C.; Chakrabarty, J. S.; Malik, S. K.
**Jhans, H; Malik, S. K.; Vijaraghavan, R.**
Magnetic properties of $PrBa_2Cu_2MO_{8-\delta}$ (M=Ta, Nb).—73-07954
**Ji, Chun-Lin** See Fan, Zhang-Guo
**Ji, He-Lin** See Zhang, Chang-Gui
**Ji, Hong** See Chen, Ji-Ping
**Ji, Rong-Fu** See Huang, Run-Sheng
**Ji, Shang-Xing; Xu, Feng-Juan**
Forming mechanism of portland cement clinker under different burning conditions.—73-09971
**Ji, Xi-Huang** See Feng, Nai-Qian
**Ji, Xiao-Li** See Wu, Xi-Jun
**Ji, Yang-Yang; Zhao, Shu-Qing; Huo, Yu-Jing; Zhang, H.-W.; Li, M.; Huang, C.-O.**
Growth of lithium triborate (LBO) single-crystal fiber by the laser-heated pedestal growth method.—73-02847
**Ji, Z.-M.** See Zhang, Hui
**Jia, Abun-Lian** See Che, Guang-Can
**Jia, C. L.** See Lubig, A.
**Jia, Chuang-Rong** See Jin, Yu-Lin
**Jia, Chun-Juan; Massiani, Pascale; Barthomeuf, Denise**
Characterization by ir and NMR spectroscopies of calcined beta zeolite.—73-12548
**Jia, Guang-Yao** See Xie, Jian-Lin
**Jia, J. J.** See Lee, Sun-Woo
**Jia, Jiang-Qing** See Xiao, Han-Ning
**Jia, Nan-Ying; Bodet, Raphael; Tressler, Richard E.**
Effects of microstructural instability on the creep behavior of Si-C-O (Nicalon) fibers in argon.—73-03276
**Jia, Q. X.** See Shi, Z. Q.
**Jia, Q. X.; Jiao, K. L.; Anderson, W. A.; Collins, F. M.**
Microstructural analysis and modeling of $RuO_2$ thin-film resistors.—73-07341; Nature of zero temperature coefficient of resistance of $RuO_2$ thin-film resistor formation using in situ annealing.—73-07346
**Jia, Q. X.; Jiao, K. L.; Anderson, W. A.**
Development and fabrication of $RuO_2$ thin-film resistors.—73-04071
**Jia, Q. X.; Yi, J.; Shi, Z. Q.; Ho, K. K.; Chang, L. H.; Anderson, W. A.**
Electrical properties of ferroelectric thin-film capacitors with different structures.—73-04549
**Jia, Xiao-Lin** See Li, Ming-Hua
**Jia, Yun-Fa** See Shi, Ai-Ru
**Jia, Z.-R.** See Wang, W.
**Jian, C.-Y.** See Yokobori, A. T.
**Jian, Wang** See Goletti, C.
**Jian, Yle** See Bo, Bian
**Jiang, B.** See Zhong, Wei-Lie
**Jiang, Bo-Chang** See Huang, Hui-Ning
**Jiang, C.-C.; Goto, Takashi; Hirai, T.**
Deposition rates of titanium nitride plates prepared by chemical vapor deposition of $TiCl_4+NH_3$ system.—73-16698
**Jiang, C.-Y.** See Yue, T.-M.
**Jiang, Chun** See Wu, Yi-Ming
**Jiang, D.-C.** See Gong, J.-H.
**Jiang, H. X.** See Lin, J. Y.
**Jiang, H.; Yuan, T.; How, Hoton; Widom, A.; Vittoria, Carmine; Drehman**
Measurements of anisotropic characteristic lengths in YBCO films at microwave frequencies.—73-04768
**Jiang, Hua** See Xiao, Ling-Zhu
**Jiang, J.-G.** See Xia, Hua
**Jiang, J.-H.** See Hu, Z.-W.
**Jiang, Jian** See Weng, Lu-Qian
**Jiang, Jian-Yi** See Sun, Yu-Ping
**Jiang, Jin-Ming; Ao, Jing-Qiu; Yu, Xu-Jin**
High-strength porcelain.—73-10854
**Jiang, Lian-Hua; Du, Xiao-Qun; Ma, Hong**
Thermopower of superconducting $GdBa_2Cu_3O_7$ thin films.—73-07924
**Jiang, M. R. M.; Weller, Mark T.**
Ionic conductivity of (Ag, Na) nitrite sodalites.—73-04124
**Jiang, M.** See Wang, Hai-Lin
**Jiang, Min-Hua** See Shi, Lu-Ping; Wang, X.-L.
**Jiang, Ming-Xue; Chen, Zhao-You**
Penetration of $Al_2O_3$- and $CaF_2$-containing secondary refining slags into magnesia-dolomite refractories.—73-14609
**Jiang, N.** See Agius, B.
**Jiang, Peng; Luo, Shou-Jing; Hu, Lian-Xi**
Experimental study using sillimanite to fabricate mullite ceramics.—73-16768
**Jiang, Peng; Luo, Shou-Jing; Huo, Wen-Can**
Formation mechanism of pressing cracks on ceramic body.—73-09137; Formation of pressing cracks of sillimanite compacts and its mechanical analysis.—73-09140; Measurement of compressibilty curve of sillimanite powders and choice of pressing pressure.—73-13129
**Jiang, Q.** See Zhang, Zhi-Guo
**Jiang, Qi-Yue; Cao, Wen-Wu; Cross, L. Eric**
Electric fatigue in lead zirconate titanate ceramics.—73-04548
**Jiang, Qi-Yue; Cross, L. Eric**
Effects of porosity on electric fatigue behavior in PLZT and PZT ferroelectric ceramics.—73-07884
**Jiang, S.-S.** See Hu, Z.-W.
**Jiang, Sheng-Rui** See Peng, Dong-Liang
**Jiang, Shibin** See Myers, John D.
**Jiang, Sou-Hong** See Zhang, Ning
**Jiang, W.** See Roy, Della M.; Sumarlin, I. W.
**Jiang, W.; Yang, Nan-Ru**
Phosphate-bonded dental cements.—73-15929
**Jiang, X.** See Clawson, S. R.
**Jiang, Xiao-Long** See Zhong, Fu-Min
**Jiang, Xiu-Qin** See Tang, De-Li
**Jiang, Y.-D.** See Zhu, Yong
**Jiang, Yi** See Zhang, Dao-Yuan
**Jiang, Ying-Hong; Xiong, Mao-Ren; Chen, Xu-Ming**
Effect of sintering and polarizing conditions on electrical properties of $Pb(Zr_{0.53}Ti_{0.47})O_3$- $BiFeO_3$-$Ba(Cu_{1/3}Nb_{2/3})O_3$ (PZT-BF-BCN).—73-11564
**Jiang, You-Cai**
Approach to iron-red crystalline glaze.—73-10798
**Jiang, You-Xing** See Wang, Yu-Ping
**Jiang, Yuan-Hai**
Production of binding materials using coal gangue.—73-10102
**Jiang, Z.** See Desrousseaux, G.
**Jiang, Zhe-Chun** See Wang, Fu-Ya
**Jiang, Zhi-Ping; Rhine, Wendell E.**
Preparation and characterization of $Y_3Al_5O_{12}$ (YAG) from an alkoxide-derived polymer.—73-05960; Preparation of nanophase SiC/$Si_3N_4$, SiC/$B_4C$, and stoichiometric SiC from mixtures of a vinylic polysilane [VPS] and metal powders.—73-05977
**Jiang, Zhong-Hua** See Ge, Man-Zhen
**Jiang, Zuo-Hong** See Yu, You-Long
**Jiang, Zuo-Zhao** See Miao, He-Zhuo; Zhang, Zong-Tao
**Jiao, K. L.** See Jia, Q. X.
**Jiao, Shu-Liang** See Liu, Da-Ming
**Jiao, Shu-Liang; Liu, Da-Ming; Guan, Wen-Jie**
Plasma expansion produced by excimer laser evaporation of $YBa_2Cu_3O_{7-y}$ target.—73-11865
**Jiao, Z.-K.** See Sha, J.
**Jiao, Zhi-Qiang**
Composition, structure, and activity of liquid slag from coal-fired cyclone furnaces.—73-08495
**Jickells, A. J.** See Pearce, D. H.
**Jie, Yang** See Oitmaa, J.
**Jimbo, Genji** See Kamiya, Hidehiro
**Jimenez de Castro, M.** See Ibarra, A.
**Jimenez Melendo, M.** See Martinez Fernandez, Julian

**Jimenez, C.** See Soriano, L.

**Jimenez, C.; Perriere, J.; Palacio, C.; Enard, J. P.; Albella, J. M.**
Transformation of titanium nitride in oxygen plasma.—73-06321

**Jimenez, I.; Palomares, F. J.; Avita, J.; Cuberes, M. T.; Soria, F.; Sacedon, J. L.**
Thermal effects on the growth of $SiO_2$ on GaAs(100) by reduction of native oxides.—73-07838

**Jimenez, J.** See Gomez, P.

**Jimenez, M. A.** See Soriano, L.

**Jimenez-Crespo, A.** See Caneiro, A.

**Jimenez-Garay, R.** See Ligero, R. A.; Ramirez-Malo, J.

**Jimenez-Lopez, A.** See Criado, C.; Ramos-Barrado, J. R.

**Jin, Byung-Moon; Bhalla, Amar S.; Kim, Jung-Bae; Kim, Jung-Nam**
Dielectric response of $Li_{0.4}K_{0.6}NbO_3$ crystal in the frequency domain.—73-15256

**Jin, Chang-Qing** See Wu, Bing-Qing

**Jin, Duo** See Li, Lai-Feng

**Jin, Fang-Ming; Jing, Zhen-Zi; Zhang, Zhang-Hui**
High-voltage ceramic dielectric material of $(100-x)(Sr_{1-y-z}Mg_yPb_z)$- $TiO_3$:$xBi_2O_3$:$3TiO_2$ system.—73-07328

**Jin, Feng; Zhu, Guang**
$TE_0$ mode polarizer of Ti:$LiNbO_3$ optical waveguides in 1.5-μm wavelength.—73-01436

**Jin, Fu-Shun; Gao, Shu-Heng**
Application of superfine zircon powders to glazes for daily fine stoneware.—73-07233

**Jin, Fu-Shun**
Sub-bright glaze for fast firing in push bat kilns.—73-14667

**Jin, G.; El Rhaleb, H.; Roger, J. P.; Boccara, A. C.; Stehle, J. L.**
Spectroscopic ellipsometry [SE] under external excitation.—73-12197

**Jin, Ji-Rong** See Shi, Ke-Xin; Shi, Zhi-Xiang

**Jin, Ji-Rong; Xu, Qi-Gao; Zhang, Yi-Tong**
Effect of 14-MeV fast neutron irradiation on melt-textured $YBa_2Cu_3O_{7-\delta}$.—73-11729

**Jin, Ji-Sun; Sakka, Sumio; Kozuka, Hiromitsu; Yoko, Toshinobu**
Formation and chemical durability of Na-Si-O-N and Na-Al-Si-O-N oxynitride glasses.—73-00629; Formation and chemical durability of Na-Si-O-N and Na-Al-Si-O-N oxynitride glasses.—73-10534

**Jin, P.** See Ota, Toshitaka; Sakamoto, I.; Schilling, A.

**Jin, S.** See Lau, W. M.

**Jin, S.-R.** See Xu, Z.-Y.

**Jin, S.; Wen, X.-Y.; Gong, Z.-X.; Zhu, Y.-C.**
Structure and adhesion of ZrN films formed by reactive magnetron sputtering ion plating [RMSP] and dynamic ion mixing [DIM].—73-08973

**Jin, Sung-Ho** See Graebner, John E.

**Jin, Sung-Ho; Nakahara, Shohei; Tiefel, Thomas H.**
Method of making high-$T_c$ superconductor material, and article produced by the method.—73-01718

**Jin, Tao** See Yu, Kang-Tai

**Jin, Tetsuro** See Sato, Mineo

**Jin, Wei; Kalia, Rajiv K.; Vashishta, P.; Rino, J. P.**
Structural transformation, intermediate-range order, and dynamic behavior of $SiO_2$ glass at high pressure.—73-10407

**Jin, Xin** See Feng, Yong; Zhang, Chang-Gui; Zhang, Yi-Tong

**Jin, Xin; Fan, Hong-Chang; Zhang, Yi-Tong**
Magnetic relaxation and flux pinning of $YBa_2(Cu_{1-y}Sn_y)_3O_{3-y}$.—73-11822

**Jin, Y.** See Zhang, X.-C.

**Jin, Y.; Dzwonkowski, P.; Emery, J.-Y.; Eddrief, M.; Riess, J.**
Limits of complex impedance spectroscopy in ionic conductor thin-film measurements.—73-05062

**Jin, Yu-Lin; Jia, Chuang-Rong**
Development of rebonded brick of electrically fused high-purity periclase–magnesia alumina (MA) spinel.—73-07205

**Jin, Zhe-Gao; Park, Soon-Ja**
Driving force and the process of mass transport in the solid-state sintering.—73-16718; Effect of gas pressure on the shape of closed pores on grain boundaries.—73-03135; Effect of gas pressure on the shape of closed pores on grain boundaries.—73-13390

**Jin, Zheng-Guo; Wang, Zhan-Min; Xu, Ming-Xia**
Improvement of mechanical properties of ZTM ceramics by heat treatment and deep-cool treatment.—73-05853

**Jin, Zong-Zhe** See Ma, Juan-Rong

**Jinbo, K.** See Matsuo, Yohtaro; Nishimura, Toshiyuki

**Jindai, Hitoshi** See Nishida, Toshihiko

**Jindal, Anjana** See Seth, V. P.

**Jindal, Prem C.; Quinto, Dennis T.**
Physical vapor deposition of titanium nitride on a nonconductive substrate.—73-05324

**Jing, Bing** See Zhang, Pin-Xuan

**Jing, D.** See Xiong, Guang-Cheng

**Jing, Feng** See Zhu, Ning-Hua

**Jing, J.** See Cadogan, J. M.

**Jing, Jing** See Wang, Hong

**Jing, Xi-Ping** See Glasser, Fredrick P.

**Jing, Zhen-Zi** See Jin, Fang-Ming

**Jinguji, Kaname** See Takagi, Akihiro

**Jinnai, K.** See Tsunematsu, Kinue

**Jinnai, Kazuhiko** See Kimura, Kunio

**Jinno, H.** See Miyata, N.

**Jinno, Hiroshi** See Yao, Takeshi

**Jirak, Z.**
Coordination and the bond valence sums in modulated $Bi_2(Sr,Ca)_2Cu_2O_{6+x}$.—73-01512

**Jirman, Pavel** See Matousek, Ivo

**Jirman, Pavel; Matousek, Ivo**
Possibilities of using computer-aided technologies in the glass industry.—73-14463

**Jmyhov, G. V.** See Atkarskaya, A. B.

**Jo, B. H.; Vook, R. W.**
Epitaxial bilayer growth of $CaF_2$(111)/Pd(111) on $CaF_2$(111) substrates.—73-08530

**Jo, Dong-Soo** See Rhee, Jhun

**Jobic, H.** See Jacobs, W. P. J. H.

**Jobic, S.** See Sourisseau, C.

**Jobic, S.; Evain, M.; Brec, R.; Deniard, P.; Jouanneaux, A.; Rouxel, J.**
Crystal structure of polymeric pyrite-type $Ir_3Te_8$.—73-02209

**Jochs, W. W.** See Hoffmann, H. J.

**Jodai, Tetsuji** See Fujita, Nobuhiko; Itozaki, Hideo; Tanaka, Saburo; Yamamoto, Susumu; Yamauchi, Kazuhisa

**Joe, Yasuichi** See Yoshida, Tomonori

**Joeckle, Rene** See Muller, Olivier

**Joerger, R.** See Gombert, A.

**Joffre, M.** See Foing, J.-P.

**Jogai, B.** See Reynolds, D. C.

**Joguchi, Hiromu** See Sato, Yasushi

**Johansen, T. H.; Bratsberg, H.**
Theory for lateral stability and magnetic stiffness in a high-$T_c$ superconductor–magnet levitation system.—73-08251

**Johansen, Vagn** See Jakobsen, Ulla Hjorth

**Johansen, Vagn; Kuznetsova, Tamara V.**
Clinker formation and new processes.—73-09855

**Johansen, Vagn; Thaulow, Niels; Skalny, Jan**
Simultaneous presence of alkali-silica gel and ettringite in concrete.—73-06715

**Johansson, Erik; Westberg, Helena**
Method of producing integral, hard nitride layer on titanium/titanium alloy.—73-13919

**Johansson, J. O.** See Chandrasekaran, H.

**Johansson, L.-S.** See Hirvonen, J.-P.

**Johansson, Lars Gunnar; Jonson, Bjorn**
Development of nonlead compositions.—73-10516

**Johansson, Lars-Gunnar** See Berastegui, Pedro

**Johansson, Leena-Sisko** See Ritala, Mikko

**Johansson, Per G.; Brandt, L.; Gunnar, L.**
Whisker-reinforced composites for cutting tools with improved performance.—73-05250

**Johansson, S.** See Ljungcrantz, H.

**John, D.; Maurage, R.**
SiAlON-bonded silicon carbide sidewall pieces for the aluminum reduction cell.—73-10768

**John, K. Jacob; Pradeep, B.; Mathai, Elizabeth**
Electrical properties of $Bi_2Se_3$ thin films prepared by reactive evaporation.—73-08856; Polycrystalline $Bi_2S_3$ thin films prepared by reactive evaporation.—73-04446

**John, P. C.; Alwan, J. J.; Eden, J. G.**
Photochemical growth of GaN and AlN on sapphire(0001) and GaAs(100).—73-13162

**Johnson, A. C.** See Lauf, R. J.; Rudder, R. A.

**Johnson, A. C.; Espinosa, R. J.; Lewis, W. A.; Thigpen, L. T.; Everleigh, C. A.; Garard, R. S.**
Use of a variable-frequency microwave furnace [VFMF] for large-area, uniform processing.—73-05135

**Johnson, A. M.** See Becker, P. C.; Feldman, R. D.

**Johnson, B. R.** See Achutharaman, V. S.

**Johnson, C. J.** See Vydyanath, H. R.

**Johnson, Curtis A.** See Cuccio, John; Tucker, William T.

**Johnson, Curtis A.; Tucker, William T.**
Weibull estimators for pooled fracture data.—73-17458

**Johnson, D. D.** See White, L. R.

**Johnson, D. Lynn** See Day, Paul S.; Skamser, Daniel J.; Thomas, Jeffrey J.; Zhang, J.-Z.

**Johnson, D. Lynn; Robinson, Quentin K.**
Textured, polycrystalline, superconducting ceramic compositions and method of preparation.—73-04886

**Johnson, D. Lynn; Skamser, Daniel J.; Spotz, Mark S.**
Temperature gradients in microwave processing: boon and bane.—73-06110

**Johnson, D.** See Buckle, K. A.

**Johnson, David W., Jr.** See Chandross, Edwin A.; Gyorgy, Ernst M.

**Johnson, F. G.; Wicks, G. W.; Viturro, R. E.; Laforce, R.**
Molecular beam epitaxial growth of arsenide/phosphide heterostructures using valved, solid group V sources.—73-11327

**Johnson, G. W.** See King, Wayne E.

**Johnson, J. D.** See Liu, R. S.

**Johnson, Jack W.** See Huan, G. H.

**Johnson, Jack W.; Brody, John F.**
Zirconia-pillared clays and micas.—73-02001

**Johnson, Joseph E.** See Li, Kin

**Johnson, K. H.** See Mishra, K. C.

**Johnson, M. D.** See Sudijono, J.

**Johnson, Michael A.** See Selcuker, Ahmet R.

**Johnson, N. M.** See Park, Y. C.

**Johnson, Paul E.** See Zheng, Jing-Min

**Johnson, R. L.** See Logothetidis, S.

**Johnson, Randall L.**
Talc.—73-12303

**Johnson, Robert D.; Yannoni, Costantino S.; Dorn, Harry C.**
$C_{60}$ solid-state rotational dynamics and production and EPR spectroscopy of fullerenes containing metal atoms.—73-16038

**Johnson, S. A.** See Mahfuz, Hassan

**Johnson, S. M.** See Hamilton, W. J.

**Johnson, S. M.; Rhiger, David R.; Rosbeck, Joseph P.; Peterson, J. M.; Taylor, S. M.; Boyd, M. E.**
Effect of dislocations on the electrical and optical properties of long-wavelength infrared HgCdTe photovoltaic detectors.—73-07462

**Johnson, S. M.; Vigil, J. A.; James, J. B.; Cockrum, C. A.; Konkel, W. H.; Kalisher, M. H.**
MOCVD-grown CdZnTe/GaAs/Si substrates for large-area HgCdTe IRFPAs.—73-11317

**Johnson, S. R.; Lavoie, C.; Tiedje, T.; Mackenzie, J. A.**
Semiconductor substrate temperature measurement by diffuse reflectance spectroscopy [DRS] in molecular beam epitaxy.—73-12193

**Johnson, Sylvia M.** See Moorhead, Arthur J.

**Johnson, Timothy V.** See Day, John P.

**Johnson, W. S.** See Bakuckas, J. G., Jr.; Mirdamadi, M.

**Johnson, W. S.**
Damage development in titanium metal-matrix composites subjected to cyclic loading.—73-03258

**Johnson, William B.** See Claar, Terry D.; Newkirk, Marc S.

**Johnson, William B.; Wang, James C. K.**
Method for reducing metal content of self-supporting composite bodies and articles formed thereby.—73-00288

**Johnson, William B.**
Silicon carbide bodies and methods of making the same.—73-12518

**Johnson, William C.**
Thermodynamic equilibria in two-phase, elastically stressed ionic crystals.—73-12721

**Johnston, Alan**
Pottery from Archaic building Q at Kommos[, Crete].—73-09792

**Johnston, Chris**
Is your air power fit to face the competition.—73-04926

**Johnston, Colin D.**
Effects of testing rates and age on ASTM C-1018 toughness parameters and their precision for steel-fiber-reinforced concrete.—73-09938

**Johnston, D. C.** See Cho, J. H.; Chou, F. C.

**Johnston, D. E.; Sinclair, D. C.; West, Anthony R.**
Characterization of PTCR barium titanate by impedance spectroscopy.—73-01102

**Johnston, George M.,** See Halverson, Danny C.

**Johnston, Lisa E.; Mann, Larry G.; Quintal, J. Mario**
Glass dimensional control using ion exchange.—73-00733

**Johri, U. C.; Singru, R. M.; Bahadur, D.**
Mossbauer spectroscopic studies of glass-ceramics with hexagonal barium and strontium ferrites.—73-00669

**Johs, Blaine** See McGahan, W. A.; Nafis, Suraiya

**Johs, Blaine; Doerr, Dave; Pittal, S.; Bhat, Ishwara B.; Dakshinamurthy, S.**
Real-time monitoring and control during MOVPE growth of CdTe using multiwavelength ellipsometry.—73-15839

**Johs, Blaine**
Regression calibration method for rotating element ellipsometers.—73-12184

**Jokanovic, V.; Zumberkovic, V.; Kozic, Z.**
Phase analysis and wear mechanism of basic refractories.—73-10754

**Jokiel, P.** See Borisov, Y.; Smith, R. W.; Vityaz, P.

**Jolicoeur, C.** See Simard, M.-A.

**Jolly Kutty, K. G.** See Khangaonkar, P. R.

**Joly, J. F.** See Caullet, P.; Guth, J. L.

**Jonas, J. J.** See Akmoulin, I. A.

**Jonasz, Miroslaw**
Light scattering: a basis of effective particle characterization techniques.—73-15811

**Jonathan, Neville B. H.** See Flowers, Michael C.

**Jonckheere, R.** See Van Hove, M.

**Joneckis, Lance G.; Ho, P. T.; Burdge, Geoffrey L.**
Power evolution of an actively mode-locked AlGaAs semiconductor laser.—73-15108

**Jones, Anthony G.**
Nonoxide ceramic particles coated with zirconium oxide or hydrous oxide.—73-05322

**Jones, B.** See Morris, P. A.

**Jones, Brian; Kahle, Charles F.**
Morphology, relationship, and origin of fiber and dendrite calcite crystals.—73-15908

**Jones, C. W.** See Battle, P. D.

**Jones, Clifford K.** See Mole, Cecil J.

**Jones, D. E.** See Ye, M.

**Jones, D. W.; McColm, Ian J.; Yerkess, J.**
Tetragonal and cubic crystal structures of some binary and ternary metal dicarbides in the series Ce-Er, Ce-Lu, U-La, and U-Ce.—73-02518

**Jones, D.** See Ding, Y.

**Jones, David C.** See Bryan, William J.

**Jones, David J.** See French, Roger H.

**Jones, Deborah J.** See Colomban, P.

**Jones, F. R.** See Chen, M.; James, P. F.; Wu, J.

**Jones, F.** See Fang, C. C.

**Jones, Frances E.; Jones, Gregory M.**
Composition and method for cleaning greenware and wetting expelled silica dust.—73-01850

**Jones, G. A. C.** See Linfield, E. H.

**Jones, G. W.** See Sune, C. T.

**Jones, G.; Ghiti, A.; Silver, M.; O'Reilly, E. P.; Adams, A. R.**
Radiative performance of strained-layer lasers.—73-15135

**Jones, Gregory M.** See Jones, Frances E.,

**Jones, H.** See Han, Do-Suck

**Jones, J. D. C.** See Su, D.

**Jones, J. K.** See Hanna, D. C.

**Jones, J. T.**
Role of R&D in the product development process.—73-10896

**Jones, Jack A.; Phillips, Wayne M.**
Manganese nitride sorption in Joule–Thomson refrigerator.—73-12434

**Jones, K. A.** See Flemish, J. R.; Mazzarese, D.

**Jones, K. M.** See Kuo, C. T.; Schultz, J. C.; Shum, Kai

**Jones, Linda E.** See Trumbauer, Eric R.

**Jones, M. R.** See Dhir, R. K.

**Jones, P. L.; Swift, G.**
Rf-assisted process heating.—73-01969

**Jones, Paul B.** See Jaso, Mark A.

**Jones, Peter C.** See Amos, Lynn G.

**Jones, R. W.** See Russell-Floyd, R. S.

**Jones, R.** See Qadri, S. B.

**Jones, R.; McKinnon, W. R.**
Lithium insertion into the layered perovskites $LiCa_2Nb_3O_{10}$ and $LiLaNb_2O_7$.—73-05430

**Jones, Richard**
Eagle eye on float line defects.—73-10520

**Jones, Robert L.**
India-stabilized zirconia coating for composites.—73-12476

**Jones, Russell H.** See Henager, Charles H., Jr.
**Jones, S. L.** See Turrillas, Xavier
**Jones, Stephen D.; Pritchard, Timothy N.**
Porous amorphous silica-alumina.—73-10785
**Jones, W.** See Mateos, J. M. J.
**Jong, B. W.; Slavens, G. J.; Traut, D. E.**
Synthesis of silicon and silicon nitride powders by vapor-phase reactions.—73-03057
**Jongerius, M. J.** See Leo, G.
**Jongste, J. F.; Alkemade, P. F. A.; Janssen, G. C. A. M.; Radelaar, S.**
Kinetics of the formation of C49 $TiSi_2$ from Ti-Si multilayer as observed by in situ stress measurements.—73-07630
**Jongste, J. F.; Loopstra, O. B.; Janssen, G. C. A. M.; Radelaar, S.**
Elastic constants and thermal expansion coefficient of metastable C49 $TiSi_2$.—73-02593
**Jonker, B. T.; Fu, L. P.; Yu, W.-Y.; Chou, W. C.; Petrou, A.; Warnock, J.**
Long hole spin relaxation times in diluted magnetic semiconductor heterostructures.—73-04382
**Jonker, B. T.; Warnock, J.; Fu, L. P.; Yu, W.-Y.; Chou, W. C.; Petrou, A.**
Electron and hole spin lifetimes in $Zn_{1-x}Mn_xSe$- and $Zn_{1-y}Fe_ySe$-based heterostructures.—73-07491
**Jonkou, T.** See Udagawa, Masayuki
**Jono, Masahiro; Sugeta, Atsushi; Kimura, Tomohiro**
Fracture origins and evaluation of fracture strength of aluminum oxide ceramic thin coating films.—73-17330
**Jonosono, Keiko** See Kato, Akio
**Jonson, Bjorn** See Hagberg, Mats; Johansson, Lars Gunnar
**Jonsson, S.** See Gehman, B. L.
**Jonusaukas, G.** See Dubietis, A.
**Joo, Chi-Hong** See Kim, Kyum
**Joo, Gi-Tae** See Kim, Chong-Don; Oh, Y.-J.
**Joo, Jae-Hyun; Joo, Seung-Ki**
Characteristics of PZT thin film deposited on new buffer layer by sputtering.—73-09036
**Joo, Jae-Hyun; Kil, Deok-Sin; Joo, Seung-Ki**
Effect of Pb content on the phase transformation of sputter-deposited PZT thin film during RTA.—73-16121
**Joo, Seung-Ki** See Jeon, Yoo-Chan; Joo, Jae-Hyun
**Jordan, Y.; Dubois, J.; Fantozzi, G.**
Elaboration by acid dispersion of yttria-stabilized zirconia-alumina composites with good mechanical properties.—73-16757
**Jordan, D. W.; Faber, K. T.**
X-ray residual stress analysis of a ceramic thermal barrier coating undergoing thermal cycling.—73-13610
**Jordan, Wayne G.; Jordery, Sophie; Jha, Animesh**
Properties of mixed cadmium halide glasses.—73-14260
**Jordery, Sophie** See Deol, R. S.; Jordan, Wayne G.
**Jordi, Robin G.** See Do, Duong D.
**Jordi, Robin G.; Do, Duong D.**
Frequency-response analysis of sorption in zeolite crystals with finite intracrystal reversible mass exchange.—73-09407
**Jorge, E.** See Chartier, T.
**Jorgensen, C. K.** See Gorodetskaya, O.
**Jorgensen, J. D.** See Pei, S.
**Jorget, Serge**
New CF/FCB low-$NO_x$ precalciner.—73-05124
**Jorik, V.**
Semiempirical approach to determination of framework aluminum content in faujasite-type zeolites by X-ray powder diffraction.—73-08729
**Josefowicz, Jack Y.; Rensch, David B.; Nieh, Kai-Wei**
Passivation of thin-film oxide superconductors.—73-04863
**Joseph, I.** See Eaton, W. C.; Korwin, D. M.; Simpson, J. C.
**Joseph, J.** See Hu, Y. Z
**Josepson, J.** See Aben, H.
**Joshi, A.**
Refractory carbide coatings on carbon synthesized by fused slurry process.—73-06018
**Joshi, Ashok V.** See Liu, Mei-Lin
**Joshi, Ashok V.; Liu, Mei-Lin; Bjorseth, Alf; Renberg, Lars**
NaOH production from ceramic electrolytic cell.—73-11040
**Joshi, Chandrashekhar H.; Craven, Christopher A.**
Connection between high-temperature superconductors and superconductor precursors.—73-15675
**Joshi, Chandrashekhar H.; Schempp, Ellery; Schiff, Edward A.**
Putting a chill into the new HTS application.—73-15605
**Joshi, H. H.; Pandya, P. B.; Kulkarni, R. G.**
Mossbauer study of Co-Zn ferrites prepared by coprecipitation techniques.—73-07966
**Joshi, M. L.** See Neff, Glenn C., Sr.
**Joshi, Narayan R.**
Analyzing and avoiding fishscale phenomena in porcelain enameling.—73-13798
**Joshi, P. C.; Krupanidhi, S. B.**
Structural and electrical characteristics of $SrTiO_3$ thin films for dynamic random access memory applications.—73-07359; Structural and electrical studies on rapid thermally processed ferroelectric $Bi_4Ti_3O_{12}$ thin films by metallorganic solution deposition.—73-11621
**Joshi, Pankaj N.; McCauley, Ronald A.**
Metallorganic surfactants as sintering aids for silicon nitride in an aqueous medium.—73-16865
**Joshi, R. P.; Schoenbach, K. H.; Molina, C.; Hofer, W. W.**
Electron-beam penetration and free-carrier generation in diamond films.—73-08861
**Joshi, S. K.** See Lal, R.
**Joshi, S. V.** See Chatterjee, M.
**Joshi, S. V.; Srivastava, M. P.; Pal, A. J.; Pal, S.**
Plasma spraying of biologically derived hydroxyapatite on implantable materials.—73-16899
**Joshi, S. V.**
Prediction model to assist plasma and HVOF spraying.—73-16904
**Joshi, S. Y.** See Ogale, S. B.
**Joss, W.** See Kaatz, F. W.
**Joswig, H.; Pamler, W.**
Stoichiometry effects in TiN diffusion barriers.—73-13286
**Jou, Jwo-Huei; Chung, Cheng-Sheng**
Mechanical characteristics of aluminum thin films on silicon and gallium arsenide.—73-10249
**Jou, S.** See Cha, Y. H. C.
**Jouanin, C.** See Briot, N.
**Jouanne, M.** See Tran, C. A.
**Jouanne, M.; Testelin, C.; Rigaux, C.; Mycielski, A.**
Raman scattering by $3d^5$ electrons of $Fe^{2+}$ in zinc blende diluted magnetic semiconductors.—73-04459
**Jouanneaux, A.** See Jobic, S.
**Jouanny-Tresy, C.** See Vardavoulias, M.
**Joubert, J. C.** See Labeau, M.; Langlet, M.; Tiburcio-Silver, A.
**Joubert, M. F.** See Jacquier, B.
**Joubert, O.** See Vallier, L.
**Jouin, Jean-Marie** See Lamouroux, Franck
**Jousse, Didier; Vilato, Pablo; Bruyere, Jean-Claude; Reynes, H.**
Silicon nitride thin films with improved properties.—73-12524
**Jovanovic, Zoran; Kimura, Shoichi; Levenspiel, Octave**
Effects of hydrogen and temperature on the kinetics of the fluidized-bed nitridation of silicon.—73-05780
**Jovanovic, Zoran; Kimura, Shoichi**
Use of two-phase standards of unknown compositions to determine calibration constants for powder XRD by linear regression.—73-16391
**Joy, David C.** See Gauvin, R.; Zhang, Xiao
**Joyce, T. B.; Bullough, T. J.**
Use of a silicon strip doping source in chemical beam epitaxy.—73-15222
**Jozewicz, W.; Gullett, B. K.**
Effect of storage conditions on handling and $SO_2$ reactivity of $Ca(OH)_2$-based sorbents.—73-00078
**Ju, Bing-Xiu; Zhang, Dian-Yuan**
Preparation of building mortar using calcium-added fly ash.—73-06699
**Ju, Bing-Xu; Zhang, Dian-Yuan; Xu, Guo-Xiang**
Durability of building mortar mixed with fly ash.—73-09895
**Ju, Yan-Fei; Shyu, Wan-Tsai**
Method of making a ceramic burner head.—73-10783
**Juang, C.; Chang, J.-H.; Hwang, R.-Y.**
Properties of very low temperature plasma-deposited silicon nitride films.—73-09286
**Juang, Fung-Lung** See Meen, Teen-Hang
**Juang, Y.-T.** See Hsu, K.-C.
**Judy, Jack H.** See Chang, Thomas; Sin, Kyusik
**Jue, J. F.** See Log, T.
**Juhasz, A. Zoltan** See Kristof, Eva
**Juhasz, A. Zoltan**
Microstructural implications by studying water vapor adsorption.—73-03164
**Juhasz, T.** See Smith, G. O.
**Juklicek, Jiri** See Sedmidubsky, David
**Julian, S. R.** See Mackenzie, A. P.
**Julien, C.** See Eddrief, M.
**Julien, C.; Sekine, T.; Balkanski, M.**
Lattice dynamics of lithium-intercalated $MoS_2$.—73-02315
**Julsrud, S.** See Aasland, S.; Grande, T.
**Juma, Kassim** See Robertson, John
**Jumas, J. C.** See Akinocho, G.
**Jun, Byung-Sei** See Son, Young-Don
**Jun, Chi-Hoon** See Kim, Youn-Tae
**Jun, Seok-Taek; Choi, Gyeong-Man**
CO gas-sensing property of ZnO/CuO heterocontact ceramics.—73-01104
**Jundt, D. H.** See Fluck, D.
**Jundt, D. H.; Fejer, M. M.; Norwood, R. G.**
Composition dependence of lithium diffusivity in lithium niobate at high temperature.—73-13342
**Jung, Chang-Ju** See Oh, Kyung-Young
**Jung, Chang-Ju; Kim, Nam-Il; Oh, Kyung-Young**
Effects of alkali oxides on the cristobalitization of quartz in whiteware body.—73-10831
**Jung, Choong-Hwan** See Park, Ji-Yun
**Jung, Duk-Young** See Demazeau, Gerard
**Jung, Hyung-Jin** See Ahn, Sang-Wook; Kim, Dae-Joon; Kim, Tae-Yun; Yoo, Kwang-Soo
**Jung, Hyung-Jin; Lee, Hee-Hyung; Lee, Dong-Heun; Lee, Jeon-Kook**
Energy-saving properties of sol-gel dip-coated indium tin oxide films on a glass pane.—73-00478
**Jung, J.-S.; Wu, B. O.; Stevens, E. D.; O'Conner, C. J.**
Synthesis and crystal structure of a novel zintl phase: $K_2SbTe_3$.—73-02481
**Jung, Jong-In** See Baik, Yong-Hyuck
**Jung, K.** See Fuchs, A.
**Jung, L.** See Fowler, B.; Lian, S.
**Jung, M.** See Kim, T.-W.; Lee, J.-H.
**Jung, Peter**
Key to trouble-free cold-end handling.—73-10558
**Jung, S.-T.; Kang, J.-K.; Kim, J.-H.; Chung, S.-J.**
Growth of $NdAl_3(BO_3)_4$ single crystal for miniature solid-state laser.—73-10548
**Jung, W.-H.; Kim, J.-H.; Cho, Sang-Hee**
Effects of grain size on the degradation phenomena of PZT ceramics.—73-01406
**Jung, W.; Rauer, H.; Fuhrmann, L.**
Nonmetallic raw materials in former East Germany.—73-01990
**Jung, Won-Do** See Bae, Won-Tae; Cho, Chull-Koo
**Junge, Bernd; Klein, Dieter**
Rheology in the plaster of Paris industry—possibilities of the application.—73-12188
**Junge, Karsten**
Reduction of tunnel kiln energy consumption in the brick and tile industry.—73-00772
**Junger, Sabine** See Schwarz, Martin
**Jungowska, W.; Znamierowska, T.**
System $LaPO_4$-$K_3PO_4$.—73-02510
**Junji, Hirokane; Tetsuya, Inui; Michinobu, Mieda; Kenji, Ohta**
Method of fabricating glass substrate for disk.—73-00744
**Jupe, K. N.** See Tomlinson, W. J.
**Jupina, M. H.; Garmire, Elsa M.; Shibata, N.; Zembutsu, S.**
Electroabsorption and electrooptic modulation in single-crystal ZnSe-ZnSSe waveguides grown by OMPVE on GaAs.—73-01149
**Jurado, J. R.** See Caceres, J.; Duran, A.; Gonzalez, M.; Pascual, Luis; Villegas, Maria Angeles
**Jurbergs, David** See Riley, David R.
**Jurewicz, J.; Boulos, M. I.**
High energy density induction plasma system for materials processing.—73-08340
**Jursenas, S.; Strumskis, M.; Zukauskas, A.; Ekimov, A. I.**
Surface recombination of nonequilibrium electron-hole plasma in laser-modified semiconductor-doped glasses.—73-15194
**Jusserand, B.; Richards, D.; Peric, H. C.; Etienne, B.**
Zero-magnetic-field spin splitting in the GaAs conduction band from Raman scattering on modulation-doped quantum wells.—73-07867
**Justnes, Harald**
Hydraulic binders based on condensed silica fume and slaked lime.—73-13732
**Justus, Brian L.** See Tonucci, Ronald J.
**Justus, Brian L.; Campillo, A. J.; Hendershot, D. G.; Gaskill, D. K.**
Optical limiting in semiconductor nanocrystals in glass.—73-11359
**Juszczyk, Wojciech; Marczewski, Marek**
Solid superacids: the alumina–$ZrCl_4$ system.—73-12684
**Juza, P.** See Faschinger, W.; Hauzenberger, F.
**Kaatz, F. W.; Graham, W. R.; Van Der Spiegel, J.; Joss, W.; Chroboczek, J. A.**
Anomalous magnetotransport in epitaxial $TbSi_{2-x}$.—73-03079
**Kaba, Takahiro** See Fujita, Hideo
**Kabacoff, Lawrence T.; Barkyoumb, John**
Method of doping single-crystal diamond for electronic devices.—73-11530
**Kabanov, V. F.; Sverdlova, A. M.**
Photomagnetic properties of $Eu_{1-x}Sm_xO$ magnetic semiconductor films.—73-12859
**Kabanov, V. O.; Karapetyan, G. O.; Rusan, V. V.**
Structural role of $GeO_2$ in sodium germanium phosphate glasses.—73-00411
**Kabanov, V. O.; Sedmale, G. P.; Yanush, O. V.**
Interactions of components in the system $BaO$-$B_2O_3$-$P_2O_5$ according to Raman spectra data.—73-14014
**Kabanova, E. V.** See Gritsenko, B. P.
**Kabasawa, Makoto** See Shinbo, Yukio
**Kabasawa, U.; Tarutani, Yoshinobu; Okamoto, Masahide; Fukazawa, Tokuumi; Tsukamoto, A.; Hiratani, M.**
Size effect on variable-range-hopping transport in $PrBa_2Cu_3O_{7-y}$.—73-15622
**Kabin, A. Yu.** See Barash, E. G.
**Kabler, M. N.** See Long, J. P.
**Kabos, P.** See Truedson, John R.; Wiese, G.
**Kaboyeros, A. E.** See Chen, Ling
**Kabun, V. Ya.; Goncharuk, V. K.; Merkulov, E. B.; Usol'tseva, T. I.**
Dynamics of an anion subsystem in new olivofluorozirconate glasses by the method of $^{19}F$ nuclear magnetic resonance.—73-00328
**Kabychenkov, A. F.; Mansfel'd, G. D.; Nagirnyak, V. N.; Rubtsov, A. A.**
Features of acoustic wave attenuation in polycrystalline YIG.—73-01460
**Kabychenkov, A. F.**
Magnetic bubble in light wave field.—73-15334; Optomagnetocaloric effect.—73-15353
**Kabyshev, A. V.; Ketskalo, V. M.; Surov, Yu. P.**
Postradiation defects in neutron-irradiated pyrolytic boron nitride.—73-13364
**Kachalov, M. B.** See Ozhovan, M. I.
**Kachalov, O. V.** See Zaitseva, N. P.
**Kachlishvili, T. Z.**
Magnetic-field-induced unbinding effects in CdTe-$Cd_{1-x}Mn_xTe$ quantum wells.—73-04396; Relaxation processes and in-plane electron mobility limited by interface defects in CdTe-$Cd_{1-x}M_xTe$ quantum wells.—73-04468
**Kachur, I. S.** See Shapiro, V. V.
**Kachur, I. S.; Kurnosov, V. S.; Peschanskii, A. V.**
Vibrational spectra and the nature of thermal broadening of light absorption bands in $YBa_2Cu_3O_{7-y}$.—73-08274
**Kachurin, G. A.; Tyschenko, I. V.; Plotnikov, A. E.; Popov, V. P.**
Growth of single-crystal $\alpha$-$Si_3N_4$ in buried layers formed by low-rate implantation of $N^+$ ions in heated Si.—73-01180
**Kachwalla, Z.** See Chin, V. W. L.
**Kacirek, H.** See Lechert, H.
**Kacker, R. N.** See Malghan, Subhas G.
**Kaczor, D.** See Dobaczewski, L.
**Kaczorowski, Dariusz** See Pottgen, Rainer
**Kaczorowski, Dariusz; Pottgen, Rainer; Gajek, Z.; Zygmunt, A.; Jeltschko, W.**
Crystal structure and magnetic susceptibility of UOSe single crystals.—73-04889
**Kaden, C.; Griesinger, U.; Schweizer, H.; Pilkuhn, M. H.; Stath, N.**
Fabrication of nonconventional distributed feedback lasers with variable grating periods and phase shifts by electron-beam lithography.—73-14910
**Kadin, A. M.** See Ballentine, P. H.; Mogro-Campero, A.
**Kadlec, Vaclav** See Bruha, Richard
**Kadlek, S.** See Hultman, L.
**Kadomtseva, A. M.** See Artem'ev, G. G.; Moskvin, A. S.
**Kadono, Kohei** See Akai, Tomoko; Kineri, Tohru; Matsuoka, Jun; Wakabayashi, Hajimu

**Kadono, Kohei; Mitani, Katsura; Yamashita, Masaru; Tanaka, Hiroshi**
New lithium ion-conducting glasses.—73-04144
**Kadono, Kohei; Sakaguchi, Toru; Miya, Masaru; Matsuoka, Jun; Fukumi, T.; Tanaka, Hiroshi**
Optical nonlinear property of Au-colloid-doped glass and the laser irradiation stability.—73-14242
**Kadono, Kohei; Yasuyoshi, Akio; Nakano, Kazumi; Kinugawa, Kenichi; Tanaka, Hiroshi**
Glass formation in systems based on AgX (X=Cl, Br, or I).—73-00346; Glass formation in systems based on AgX (X=Cl, Br, or I).—73-10541
**Kadono, Masaya** See Yamazaki, Shunpei
**Kadowaki, Y.** See Kanezo, Katsumi
**Kadrgulov, R. F.; Livshits, A. I.; Yakshibaev, R. F.**
Structural features and diffusive motion of copper ions in $Ag_2Se$-$Cu_2Se$ superionic conductor alloys from NMR data.—73-17101
**Kadushin, A. A.** See Bobrov, A. V.
**Kadushkin, V. I.; Ivashova, T. A.**
Heterostructure with 2-D electrons as a Hall sensor.—73-01183
**Kadushkin, V. I.; Shangina, E. L.**
Transport phenomena in spaced doped GaAs/$Al_xGa_{1-x}As$ superlattices.—73-11487
**Kadyrov, D. I.; Minaev, V. S.; Frankevich, E. L.**
Magnetic spin effects in the photoconductivity of amorphous $As_2Se_3$.—73-07651
**Kadyrova, N. I.** See D'yachkova, T. V.
**Kadyshev, S. K.** See Gromovoi, Yu. S.
**Kaerle, M. C.** See Colin, S.
**Kafader, U.; Tuilier, M. H.; Pirri, C.; Wetzel, P.; Gewinner, G.; Bolmont, D.**
Formation of epitaxial CsCl-type iron silicide on Si(111).—73-16156
**Kafka, James D.** See Spence, D. E.
**Kafka, James D.; Watts, Michael L.; Pieterse, J. W. J.**
Picosecond and femtosecond pulse generation in a regeneratively mode-locked Ti:sapphire laser.—73-07733
**Kaga, Hiroyuki; Saikawa, Taiichirou**
Origins of the anomalous doping effects of the Hall constants of $La_{2-x}Sr_xCuO_4$ and $Nd_{2-x}Ce_xCuO_{4-\delta}$.—73-08155
**Kaga, Takao; Hoshi, Yuzi; Kimura, Yutaka**
Slurry composition and sintered part prepared therefrom.—73-12404
**Kagami, Keiichi** See Iwasaki, Kazuharu
**Kagan, H.** See Pan, L. S.
**Kaganovskii, V. A.** See Chertov, V. M.
**Kagata, Hiroshi** See Kameyama, Ichiro
**Kagata, Hiroshi; Inoue, Tatsuya; Kato, Junichi; Kameyama, Ichiro**
Dielectric ceramic composition and multilayer microwave device employing the same.—73-04200
**Kagawa, Masaki** See Mizoguchi, Y.; Takeda, Naoya
**Kagawa, Toshiaki; Kawamura, Yuichi; Iwamura, Hidetoshi**
Wide-bandwidth low-noise InGaAsP-InAlAs superlattice avalanche photodiode with a flip-chip structure for wavelengths of 1.3 and 1.55 μm.—73-15229
**Kagawa, Yutaka** See Ahlborn, K.; Kogo, Yutaka; Mizuno, Mineo; Sekine, Kenichiro
**Kagaya, Makoto** See Kawakami, Makoto
**Kageyama, H.** See Saito, Yuria
**Kageyama, Hiroyuki** See Takeuchi, Tomonari
**Kageyama, Keisuke** See Ishizaki, Masato
**Kageyama, Keisuke**
Dielectric properties and densification by HIP for low-loss microwave dielectrics.—73-04077
**Kageyama, Sachiko** See Yanagisawa, Masaaki
**Kageyama, Y.; Taga, Y.**
Anisotropy of deposition rate in magnetron sputtering of $CeO_2$.—73-02726
**Kagi, Nobuyuki** See Oyobe, Akira
**Kagohara, Hiromi** See Ookouchi, Takahiko
**Kagoshima, Seiichi** See Sato, Hirohiko
**Kahle, Charles F.** See Jones, Brian
**Kahmann, F.** See Sugg, B.
**Kahn, A.** See Chen, W.; Lessor, D. L.; Mao, D.
**Kahn, Manfred** See Nazeri, Azar
**Kahn, Muhammad A.** See Van Hove, J. M.
**Kahn-Harari, A.** See Delacarte, V.
**Kahn-Harari, A.; Abolhassani, S.; Michel, D.; Mazerolles, Leo; Portier, R.; Perezramirez, J. G.**
Ordering in silicon and germanium mullites.—73-03181
**Kahn-Harari, A.; Aka, G.; Thery, J.**
Structural refinements on a sodium β-aluminogallate crystal and a parent $Nd^{3+}$-exchanged crystal.—73-02452
**Kahnt, H.** See Reau, J. M.
**Kahnt, H.; Reau, J. M.; Elyamani, A.; Poulain, M.**
Influence of chlorine-fluorine substitution on the electrical properties of some fluoride glasses.—73-07039
**Kahnt, H.; Reau, J. M.**
Microscopic model of the mixed mobile ion effect.—73-14226
**Kahnt, H.**
Mechanism of ionic conductivity in glass.—73-14716
**Kahora, P. M.** See Lux, G. E.
**Kahrizi, M.** See Misra, S. K.
**Kaibyshev, O. A.** See Imaev, M. F.; Zaripov, N. G.
**Kaimai, A.** See Arashi, Haruo
**Kaindl, G.** See Bauer, A.; Lopez, M. F.
**Kainer, Ulrich** See Graf, Isolde
**Kainuma, Tadashi** See Shimada, Fumio
**Kaiser, A.**
Treatment of filter dusts from glass furnaces for reuse or safe disposal.—73-14522
**Kaiser, N.; Zuber, A.; Kaiser, U.**
Evaluation of thin $MgF_2$ films by spectroscopic ellipsometry.—73-17133
**Kaiser, U.** See Kaiser, N.
**Kaiser, W.** See Lohner, A.
**Kaisersberger, K.; Janoschek, J.; Davies, P.**
Application of thermal analysis in modern ceramic technology.—73-01885
**Kaito, C.** See Imamura, Seiichiro
**Kaji, Masaki** See Kokaji, Akira; Ono, Takashi; Uchimura, Hiroshi
**Kajima, Hirokazu** See Hayashi, Shinsuke
**Kajimoto, Atsushi** See Yoshimoto, Masahiro
**Kajimura, Atsuko** See Sugiura, Nozomi
**Kajimura, K.** See Yamasaki, H.
**Kajinami, Akihiko** See Deki, Shigehito
**Kajino, Masao** See Konishi, Masahiro
**Kajioka, H.; Higuchi, K.; Kawashimo, Y.**
Morphology of TiN films deposited by arclike plasma-enhanced ion plating.—73-09493; Reactivity between Ti and $N_2$-$C_2H_2$ mixed gas on Ti(C,N) film deposition by arclike plasma-enhanced ion plating.—73-06016
**Kajita, Michiyo** See Ito, Hidetaka
**Kajita, Susumu** See Hashimoto, Noboru
**Kajiura, Takeji** See Takeda, Shuichi
**Kajiwara, Kanji** See Imamura, Seiichiro; Nishio, Toshiyuki
**Kajiwara, T.** See Muto, Norio; Nakano, T.
**Kajiyoshi, Koji; Tomono, Kunisaburo; Hamaji, Yukio; Kasanami, Tohru; Yoshimura, Masahiro**
Growth of strontium titanate thin films of controlled thickness by the hydrothermal-electrochemical method.—73-16810
**Kakali, G.; Tsivilis, S.**
Effect of intergrinding and separate grinding of cement raw mix on the burning process.—73-03456
**Kakarantzas, G.; Townsend, P. D.**
Chemical effects in ion-implanted glass waveguides.—73-03712
**Kakasaki, B. W.; Preston, J. S.; Evans, J. D.; Simmons, J. G.; Charbonneau, S.; Moss, D.**
Carrier lifetimes in strained InGaAsP multiple quantum-well laser structures.—73-07398
**Kake, Ichiro** See Wang, De-Ping
**Kakegawa, Kazuyuki** See Abe, Y.
**Kakegawa, Kazuyuki**
CSJ-Net and ceramic titles.—73-09707
**Kakegawa, Yukihide** See Kobayashi, Yoshio
**Kakhramanov, N. B.** See Abdulaev, G. B.
**Kakihana, Masato** See Bernstegui, Pedro; Cho, Woo-Seok; Du, Yong; Makaki, Hiromasa; Yashima, Masatomo; Yasuoka, Hiroshi
**Kakihana, Masato; Fujimori, Hirotaka; Yashima, Masatomo; Yoshimura, Masahiro; Mazaki, Hiromasa; Yasuoka, Hiroshi**
Synthesis of high-purity $YBa_2Cu_3O_{7-d}$ superconductors by polymerized complex method.—73-15645; 73-08239
**Kakihana, Masato; Fujimori, Hirotaka; Yoshimura, Masahiro; Mazaki, Hiromasa; Yasuoka, Hiroshi**
Characterization of Co-substituted $YBa_2Cu_3O_7$ superconductors by Raman spectrosocopy—application of Raman spectroscopy to high-$T_c$ superconductors: I.—73-15397; Polymerized complex synthesis and post-$O_2$ HIP treatment of $YBa_{2-x}Sr_xCu_4O_8$ superconductors.—73-01630
**Kakihana, Masato; Yashima, Masatomo; Yoshimura, Masahiro; Mazaki, Hiromasa; Yasuoka, Hiroshi**
Polymerized complex synthesis of superconductors and their properties.—73-01632
**Kakimoto, Kenichi** See Shimoo, Toshio
**Kakimoto, Kenichi; Shimoo, Toshio; Okamura, Kiyohito**
Effect of oxygen content on pyrolysis-suppression of Si-Ti-C-O fibers coated with surface oxide layers.—73-16734
**Kakimoto, Koichi; Hibiya, Taketoshi**
Structure and properties of semiconductor melts.—73-15185
**Kakimoto, S.** See Isshiki, Kunihiko
**Kakiuchi, Arata** See Sato, Katsuaki
**Kakizaki, Koichi; Sano, Hiroyuki; Fujita, Minoru; Hiratsuka, Nobuyuki**
Recording characteristics of acicular barium ferrite particulate medium with perpendicular magnetic anisotropy.—73-04645
**Kakizawa, Katsutoshi** See Yagi, Isao
**Kakumu, Masakazu**
Complementary semiconductor device using diamond thin film and the method of manufacturing this device.—73-11513
**Kakurai, Kazuhisa** See Sato, Masatoshi
**Kakuta, T.** See Umegaki, Takeo
**Kalacheva, L. V.** See Yamnova, N. A.
**Kalacheva, L. V.; Yamnova, N. A.; Pushcharovskii, D. Yu.; Konovalenko, S. I.**
Crystal structure of new natural borate tusionite, $MnSn[BO_3]_2$.—73-16087
**Kalantarian, V. P.** See Karneeva, S. S.
**Kalaskar, Shashi; Bialkowski, Stephen E.**
Comparison of $BaTiO_3$ optical novelty filter and photothermal lensing configurations in photothermal experiments.—73-12756
**Kalboussi, A.** See Benyattou, T.
**Kalchikhin, V. V.** See Kulkova, S. E.
**Kaldis, E.** See Bucher, B.; Domenges, B.
**Kalenik, V. I.** See Gasan-Zade, S. G.
**Kalenik, V. M.** See Baidakov, L. A.
**Kalenik, Zbigniew** See Cen, Wei
**Kalia, Rajiv K.** See Jin, Wei; Nakano, Aichiro
**Kaliaguine, S.** See Akolekar, D. B.; Huang, Min-Ning
**Kalibaeva, G. M.; Gromov, S. A.; Stepanyuk, V. S.; Sas, A.; Katsnel'son, A. A.**
Short-range order in dilute Ni-P, Ni-B alloys.—73-16300
**Kalidindi, S.** See Brodkin, D.
**Kalikmanov, Vitaly I.; Schra, P. P. J. M.; Zybin, S. V.**
Parametric resonance in suspension of superconducting particles.—73-15354
**Kalikmanov, Vitaly I.**
Suspension of high-$T_c$ superconducting particles: properties in alternating magnetic field.—73-08236
**Kalimin, V. B.** See Lipson, A. G.
**Kalinichev, A. G.** See Zha, C. S.
**Kalinichev, A. G.; Bass, Jay D.; Zha, C. S.; Han, P. D.; Payne, D. A.**
Elastic properties of orthorhombic $KNbO_3$ single crystals by Brillouin scattering.—73-11568
**Kalinin, A. A.; Mil'vidskii, M. G.; Nuller, T. A.**
Features of defect formation in active region of GaAlAs/GaAs epitaxial heterostructures for solar cells under alternating heat effects.—73-03094
**Kalinin, N. A.** See Vologdina, S. G.
**Kalinin, V. B.** See Genkina, E. A.; Golubev, A. M.; Vigdorchik, A. G.
**Kalinin, V. B.; Golubev, A. M.; Tafeenko, V. A.; Stefanovich, S. Yu.**
Crystal structure and phase transitions n $NaTh_2(PO_4)_3$.—73-16081
**Kalinin, V. B.; Golubev, A. M.**
Phase transition in stoichiometric Nasicon.—73-16265
**Kalinin, V. I.** See Bagdasarov, Kh. S.
**Kalinin, V. V.** See Bagaev, V. S.; Yamnova, N. A.
**Kalinina, A. M.; Filipovich, V. N.; Alekseeva, Z. D.**
Kinetics of sintering and crystallization of glass powders of cordierite composition.—73-16847
**Kalinina, M. V.** See Tikhonov, V. B.
**Kalinkin, I. P.** See Belyaev, A. P.
**Kalinov, V. S.** See Bazylev, A. G.; Mikhnov, S. A.
**Kalinovskaya, I. N.** See Vasil'eva, N. M.
**Kalinovskii, V. S.** See Andreev, A. M.
**Kalinovsky, V. S.; Shubina, T. V.; Shvechikov, I. Y.; Toropov, A. A.**
Free-carrier effects in GaAs single modulation-doped quantum well as applied to active $Q$ switching of injection lasers.—73-07539
**Kalinushkin, V. P.; Yur'ev, V. A.; Murin, D. I.; Ploppa, M. G.; Thieme, T. V.**
Influence of the process of vapor phase epitaxy on clusters of electrically active defects in GaAs:Cr substrates.—73-14988
**Kalinushkin, V. P.; Yur'ev, V. A.**
Changes in the light-scattering diagram of undoped GaAs single crystals due to electron bombardment.—73-14795
**Kalisher, M. H.** See Johnson, S. M.
**Kaliszewski, Mary S.; Behrens, Gesa; Heuer, Arthur H.; Shaw, M. C.; Marshall, David B.; Dransmann, Gerhard W.**
Indentation studies on $Y_2O_3$-stabilized $ZrO_2$: I. Development of indentation-induced cracks.—73-09466
**Kaljujnaia, G. A.** See Gorima, J.
**Kalkhoran, N. M.** See Namavar, Fereydoon
**Kalkur, T. S.** See Huffman, Maria
**Kall, M.** See Litvinchuk, A. P.
**Kall, Per-Olov** See Persson, J.
**Kallaev, S. N.** See Pakhomov, V. I.
**Kallas, M. Nabil** See Koss, Donald A.
**Kallion, R. V.** See Andreev, A. M.; Seleznev, B. L.
**Kallo, D.** See Zsadon, B., Jr.
**Kalmykov, A. E.** See Aver'yanov, V. I.
**Kalmykov, L. F.** See Batrakov, V. G.; Kapustin, A. P.
**Kalnin, Ilmar L.** See Goldberg, Harris A.
**Kalnina, A. M.** See Yuritsin, N. S.
**Kalnitsky, A.; Boothroyd, A. R.; Ellul, Joseph P.; Tarr, N. G.; Weaver, L.; Beerkens, Rudd G. C.**
Experimental investigation of N-MOS inversion layers in the electric quantum limit.—73-14902
**Kalogirou, O.**
Preparation and properties of polycrystalline monovalent-cation ß´´-ferrites.—73-04637
**Kalosha, V. P.** See Demchuk, M. I.
**Kaloyeros, A. E.** See Chen, Ling
**Kalt, H.** See Bogdanov, S. V.
**Kalu, P. N.** See McNelley, T. R.
**Kalugin, S. M.** See Antonenko, V. I.
**Kaluzna, Marta; Vozar, Libor; Gembarovic, Jozef**
Effect of texture on the thermal diffusivity of a ceramic material.—73-12775
**Kalyamin, A. V.; Semenov, V. G.; Zarubina, T. V.**
Formation of cobalt ferrites in glasses based on potassium aluminoborate systems.—73-00344; Formation of cobalt ferrites in glasses based on potassium aluminoborate systems.—73-00345; Magnetic anisotropy of microcrystals of cobalt ferrite in a glass matrix.—73-01468; Magnetic anisotropy of microcrystals of cobalt ferrite in the matrix of a glass.—73-00370
**Kalyazin, A. E.** See Zaitsev, V. K.
**Kalygin, V. G.; Gromkov, B. K.; Chekhov, O. S.**
Effects of charge preparation technique and type of boron raw material on the working properties of molten glasses.—73-00618
**Kalygina, V. M.** See Voronkov, V. P.
**Kalyuzhnaya, M. I.** See Semenova, G. V.
**Kamada, Eiji** See Kwon, Young-Jin
**Kamada, Kohichi** See Ikeuchi, Seiji
**Kamada, Ryusei** See Harada, Hiroshi
**Kamada, Toshiro; Matsuura, Hiroshi; Nagataki, Shigeyoshi; Otsuki, Nobuaki**
Evaluation of joint between the original concrete and the repair materials by ultrasonic testing method.—73-09952
**Kamai, M.** See Chen, J.-H.; Iwamoto, M.
**Kamalasanan, M. N.; Kumar, N. Deepak; Chandra, Subhas**
Dielectric and ferroelectric properties of $BaTiO_3$ thin films grown by the sol-gel process.—73-11561; Structural, optical, and dielectric properties of sol-gel-derived $SrTiO_3$ thin films.—73-08972
**Kamaluddin, Burhanuddin** See Arof, Abdul Kariem
**Kamaras, K.** See Barth, K.-L.; Humlicek, J.
**Kamat, S.; Manoharan, M.**
Work hardening behavior of alumina particulate-reinforced 2024 aluminum alloy matrix composites.—73-13911
**Kamata, Atsushi** See Uemoto, Tsutomu
**Kamata, I.** See Hara, N.
**Kamata, Kiichiro** See Maruyama, Kazunori; Moriyama, Minoru

**Kamata, Kiichiro; Maruyama, Kazunori**
Preparation of diamondlike carbon films by ECR plasma CVD with an additional negative bias.—73-16922
**Kamata, Kiichiro; Nishino, Junichi; Ohshio, Shigeo; Maruyama, Kazunori; Ohtuki, Motohiko**
Rapid formation of zinc oxide films by an atmospheric-pressure chemical vapor deposition method.—73-06006
**Kamata, Kiichiro; Ohshio, Shigeo; Tanaka, Kiyoshi; Kawai, Koh; Yamada, Tomoo; Nishino, Junichi**
Preparation of high-density perovskite $LaNiO_3$ by using HIP.—73-02952; 73-13190
**Kamata, Norihiko; Yamada, Koji; Miura, Noboru; Eaves, L.**
Role of emitter states in magnetotunneling through double-barrier resonant-tunneling diodes at high magnetic fields.—73-07777
**Kamata, Yoshirou** See Kosuda, Tetsuo
**Kamba, S.** See Ferreira, V. M.
**Kameda, Tsuneji** See Asayama, Masahiro
**Kamehara, Nobuo** See Imanaka, Yoshihiko; Suzuki, Hitoshi; Tanaka, Atsushi; Yokouchi, Kishio; Yokoyama, Hiromitsu
**Kamehara, Nobuo**
Glass powders for circuit boards.—73-00492
**Kamei, Masayuki; Aoki, Yuji; Ogota, Seiya; Usui, Toshio; Morishita, Tadataka**
In situ observation of Ba oxide layer at the interface between $Y_1Ba_2Cu_3O_{7-x}$ film and MgO substrate.—73-08101
**Kamei, Masayuki; Yoshida, Isao; Takahashi, Hiromi**
Residual hydrogen-gas-induced defects in heteroepitaxial $Y_1Ba_2Cu_3O_{7-x}$ films.—73-11891
**Kamenetskii, Yu. L.; Kvasman, N. M.; Antonov, G. I.; Kulik, A. S.**
Application of mathematical and statistical methods for analyzing the wear of the tuyere assembly of open-hearth furnaces.—73-00777
**Kamenev, A. V.** See Ignat'ev, A. S.
**Kamenev, V. I.** See Zavadskii, E. A.
**Kamertsel, A. Yu.** See Syrbu, N. N.
**Kameyama, Ichiro** See Kagata, Hiroshi; Nishida, Toshihiko
**Kameyama, Ichiro; Kagata, Hiroshi; Kato, Junichi; Inoue, Tatsuya**
Low-fire Bi-based dielectric ceramics for microwave use.—73-07334; Dielectric ceramic compositions and microwave devices using the same.—73-04204
**Kameyama, T.** See Mukaida, Masakazu; Watanabe, Akio
**Kameyama, Tetsuya** See Hasegawa, Akihiro
**Kamezaki, Hiroshi** See Aoki, Shigenori; Yokouchi, Kishio
**Kamijo, Eiji** See Ogata, Kiyoshi
**Kamijoh, Takeshi** See Takamori, Takeshi
**Kamikakimoto, Junko** See Hirata, Yoshihiro
**Kamilov, I. K.** See Aliev, Sh. M.
**Kamimae, Junichi** See Inoue, Takanori
**Kamimura, Hiroshi** See Ushio, Hideki
**Kamino, Maruo; Iyori, Masahiro; Yamano, Koji; Suzuki, Hiroshi; Takahashi, Kazuhiko; Usuki, Tatsuro**
Fabrication of $Ba_{1-x}K_xBiO_3$ superconductors prepared by the plasma-arc melting and rapid quenching method.—73-11757; Fabrication of $Ba_{1-x}K_xBiO_3$ superconductors prepared by the plasma-arch melting and rapid quenching method.—73-01548
**Kamino, Maruo; Takahashi, Kazuhiko; Usuki, Tatsuro; Yoshisato, Yorinobu; Nakano, Shoichi**
Formation of a superconducting $YbBa_2Cu_3O_x$ phase on an insulating $Yb_2BaCuO_5$ substrate prepared by the PMQ method.—73-01556; Formation of a superconducting $YbBa_2Cu_3O_x$ phase on an insulating $Yb_2BaCuO_5$ substrate prepared by the PMQ method.—73-11768
**Kamino, Maruo; Takahashi, Kazuhiko; Yoshisato, Yorinobu**
Preparation of high-$T_c$ superconductors by a plasma-arc melting and rapid quenching method [PMQ].—73-01638
**Kamins, T. I.; Nauka, K.; Jacowitz, R. D.; Hoyt, J. L.; Noble, D. B.; Gibbons, J. F.**
Electrical characteristics of diodes fabricated in selective $Si/Si_{1-x}Ge_x$ epitaxial layers.—73-14866
**Kaminska, E.** See Lin, X. W.; Piotrowska, A.
**Kaminskii, A. Yu.** See Ivchenko, E. L.
**Kamio, Nobuyuki**
Manufacturing process of halogen lamps.—73-00657
**Kamioka, Yasuharu** See Takahashi, Naoyuki
**Kamiryo, Eiji** See Shibata, Masatoshi
**Kamisada, Yoshimasa** See Michishita, Kazuo
**Kamisaku, Katsuya** See Shibaoka, Kazuo
**Kamitani, Masataka** See Nakamura, Masahiko
**Kamitsos, E. I.** See Chryssikos, G. D.; Duffy, J. A.; Huang, W. C.
**Kamitsos, E. I.; Kapoutsis, J. A.; Chryssikos, G. D.; Patsis, A. P.**
Infrared structural studies of silver ion-conducting glasses $xAgI\cdot(1-x)(Ag_2O\cdot nB_2O_3)$.—73-14709
**Kamitsos, E. I.; Patsis, A. P.; Chryssikos, G. D.; Kapoutsis, J. A.**
Infrared reflectance investigation of the structure of mixed alkali glasses.—73-14010
**Kamitsos, E. I.; Patsis, A. P.; Chryssikos, G. D.**
Infrared reflectance investigation of alkali diborate glasses.—73-00351
**Kamiya, Akira** See Nakano, Kikuo; Nawa, Masahiro
**Kamiya, Akira; Nakano, K.**
Reaction synthesis of SiC-reinforced Ti(C,N) composites from TiC and $Si_3N_4$.—73-09294; Mechanical properties of SiC whisker-reinforced $TiB_2$ composites fabricated by hot-pressing.—73-17392
**Kamiya, Hidehiro** See Nishikawa, Tadahiro
**Kamiya, Hidehiro; Isomura, Kenji; Jimbo, Genji; Hotta, Tadashi; Tsubaki, Junichiro**
Influence of powder properties and green microstructure on the sintering behavior of $Si_3N_4$.—73-05870; Influence of powder properties and green microstructure on the sintering behavior of $Si_3N_4$.—73-16839
**Kamiya, Hidehiro; Sakakibara, Masato; Sakurai, Yukio; Jimbo, Genji; Wada, Shigetaka**
Erosion wear properties of tetragonal $ZrO_2(Y_2O_3)$-toughened $Al_2O_3$ composites.—73-06405
**Kamiya, Itaru** See Aspnes, D. E.
**Kamiya, Itaru; Aspnes, D. E.; Tanaka, H.; Florez, L. T.; Harbison, J. P.; Bhat, R.**
Dimer formation on (001)GaAs under organometallic chemical vapor deposition growth conditions.—73-07446; Surface science at atmospheric pressure: reconstruction on (001)GaAs in organometallic chemical vapor deposition.—73-11468
**Kamiya, K.** See Matsuoka, Jun; Ohtake, Takeshi
**Kamiya, Kanichi** See Katagiri, Yuji; Matsuoka, Jun; Nasu, Hiroyuki; Sugimoto, Osamu; Yamamoto, Hideki
**Kamiya, Kanichi; Tatsumi, Masashi; Nasu, Hiroyuki; Matsuoka, Jun**
Structure of the sol-gel-derived sodium germanate glass—comparison with the melt-derived glass.—73-14113
**Kamiya, Kanichi; Wada, M.; Matsuoka, Jun; Nasu, Hiroyuki; Fukunaga, T.; Misawa, M.**
Diffraction study of the sol-gel-derived $SiO_2$ gels.—73-13960
**Kamiya, Nobuo** See Makino, Hiroaki; Yamada, Katsunori
**Kamiya, Nobuo; Wada, Shigetaka**
Izod impact test for measuring the fracture energy of fiber-reinforced ceramics.—73-05059; Izod impact test for measuring the fracture energy of fiber-reinforced ceramics.—73-12153
**Kamiya, Nobuo**
Thermal proof test of ceramics.—73-05090
**Kamiya, Takashi** See Ninomiya, Hideaki
**Kamiyama, T.** See Hara, N.; Kanke, Y.
**Kamiyama, T.; Haneda, K.; Sato, T.; Ikeda, S.; Asano, Hajime**
Cation distribution of $ZnFe_2O_4$ fine particles studied by neutron powder diffraction.—73-08561
**Kamiyama, Yoshihide** See Kobayashi, Hidehiko
**Kamiyoshikawa, Makoto** See Ashizuka, Masahiro
**Kamizato, T.** See Isshiki, Kunihiko
**Kammerdiner, L.** See Huffman, Maria
**Kammermeier, D.** See Konig, W.
**Kamo, L.; Kamo, R.; Imai, A.**
Friction characteristics of ceramic slurry and plasma-sprayed coatings.—73-09606
**Kamo, R.** See Kamo, L.
**Kamo, Tomoichi** See Doi, Toshiya; Nabatame, Toshihide; Okada, Michiya
**Kamori, Masanobu** See Tone, Kisato
**Kampfer, Kersten; Prescher, Erwin; Mobius, Hans-Heinrich**
Use of solid electrolyte probes in production kilns for porcelain.—73-01972
**Kampfer, Sabine**
Biotechnology—state of the art and applications in ceramic technologies.—73-00893
**Kamshilin, Alexei A.; Ravattinen, Risto; Tuovinen, Hemmo; Jaaskelainen, T.; Prokofiev, V. V.**
Double-phase conjugation in $Bi_{12}TiO_{20}$ photorefractive fiberlike crystal.—73-12770
**Kamshilin, Alexei A.**
Simultaneous recording of absorption and photorefractive gratings in photorefractive crystals.—73-08967
**Kamzin, A. S.** See Barash, I. S.
**Kamzin, A. S.; Grigor'ev, L. A.**
Mossbauer investigation of the surface and volume spin-reorientation phase transition in $Fe_3BO_6$.—73-12634
**Kamzina, L. S.** See Salaev, F. M.
**Kamzina, L. S.; Korzhenevskii, A. L.**
Percolation processes and anomalous light scattering in ferroelectrics with diffuse phase transition.—73-15275
**Kan'an, A. M.; Puri, A.; Odagaki, T.**
Double barrier resonant tunneling device with selectively applied field in the well.—73-06154
**Kan, V. V.** See Salikhov, T. P.
**Kanaah, A.; Rockett, P. I.; Roberts, J. S.; Pate, M. A.; Woodward, M. V.**
Influence of silicon nitride cap on the thermal stability of strained $Al_{0.33}Ga_{0.68}As$/- $In_{0.1}Ga_{0.9}As$ high-mobility structures grown by metallorganic chemical vapor deposition.—73-07601
**Kanaboshi, Akihiro** See Eda, Kazuo
**Kanaev, V. K.** See Gal'perina, M. K.
**Kanai, Hideyuki; Furukawa, Osamu; Abe, Hidekazu; Yamashita, Yohachi**
Dielectric properties of $(Pb_{1-x}X_x)(Zr_{0.7}Ti_{0.3})O_3$ (X=Ca, Sr, Ba) ceramics.—73-14691
**Kanai, Hideyuki; Yoshiki, Masahiko; Hayashi, Masaru; Kuwae, Ryosho; Yamashita, Yohachi**
Grain-boundary-phase identification of a lead-based relaxor by X-ray photoelectron spectroscopy.—73-14708
**Kanai, Hiroshi** See Takahashi, Seizo
**Kanai, Ken** See Yamaguchi, Takashi
**Kanai, Kensuke** See Yasue, Tamotsu
**Kanai, Kunio** See Arai, Yasuo
**Kanai, Kunio; Ohta, Yukio**
Thin-film [ferrite] magnetic head.—73-15382
**Kanai, Kunio; Yamaguchi, Masashi**
Nonmagnetic substrate material and floating-type magnetic head.—73-12390
**Kanai, M.** See Kawai, S.
**Kanai, Takao; Tanemoto, Kei**
Hot-pressed BN-AlN ceramic composites with high thermal conductivity: III.—73-16821
**Kanaji, Y.** See Deki, Shigehito
**Kanaji, Yukio** See Hashimoto, Noboru
**Kanakaraju, S.** See Krishna, M. Ghanashyam
**Kanamaru, Fumikazu** See Irisawa, Akinori; Ito, Yoshiaki; Kikkawa, Shinichi
**Kanamaru, Kiyoshi** See Imanishi, Nobuyuki
**Kanamaru, Kozo** See Nanba, Yasutoshi
**Kanamaru, Moriyoshi; Tatsuno, Tsuneo; Kusaka, Teiji**
Hot-pressed $Al_2O_3$/SiC whisker/TiC nanocomposites.—73-13548
**Kanamori, Hiroo** See Ishikawa, Shinji; Kogo, T.; Ohga, Yuichi; Onishi, Masashi
**Kanamori, Hiroo; Ito, Masumi; Ishikawa, Shinji; Aikawa, Haruhiko; Hoshino, Sumio**
Quartz optical waveguide and method for producing the same.—73-00760
**Kanamori, M.** See Kitajo, S.
**Kanamori, Terutoshi** See Fujiura, K.; Ohishi, Yasutake
**Kanamori, Yasuo; Kume, Atsushi; Okamura, Osamu; Shiohara, Y.**
Fabrication of $Y_1Ba_2Cu_3O_8$ films and $Y_1Ba_2Cu_3O_{7-x}$ films with higher $J_c$ by metallorganic deposition.—73-15262
**Kanamura, Moriyoshi; Tatsuno, Tsuneo; Kusaka, Teiji**
Hot-pressed $Al_2O_3$/SiC whisker/TiC nanocomposites.—73-05847
**Kanaoka, C.** See Tsuchinari, Akihiro
**Kanashima, Takeshi; Nagayoshi, Ryoichi; Okuyama, Masanori; Hamakawa, Yoshihiro**
Optical characterizations of photoinduced chemical vapor deposition produced $SiO_2$ films in vacuum ultraviolet, ultraviolet, and visible region.—73-12846
**Kanatani, Toshio** See Motomachi, Tsutomu
**Kanaya, Muneki** See Tashiro, Chuichi
**Kanaya, Osamu** See Katsumata, Masaaki
**Kanayama, Kouzou** See Nakamura, Mamoru; Shigematsu, Ichinori
**Kanazawa, Eiji** See Kohno, Kiyoshi
**Kanazawa, Katsuyoshi; Chikamatsu, Ryuichi; Sogo, Shigeyuki**
Effects of the ground granulated blast-furnace slag and fly ash on the low-heat-generating concrete.—73-09939
**Kanazawa, T.** See Okura, T.
**Kanazuka, Yasuo** See Saito, Tadashi
**Kanazuka, Yasuo; Saito, Tadashi; Katsuda, Junichiro; Ohkuma, Kenichi; Kurashina, Yukinobu; Yamamoto, Kenji**
Improvement of service life of ladle shroud.—73-00823
**Kanba, Seiji; Wada, Nobuyuki; Sano, Harunobu; Takagi, Hiroshi**
Functionally gradient circuit board.—73-10311
**Kanbara, Hirohisa** See Kobayashi, Hideki
**Kanbara, Kohji** See Takizawa, Takeo
**Kanbara, Kunihiko; Uchida, N.; Uematsu, Keizo; Kurita, T.; Yoshimoto, K.; Suzuki, Y.**
Corrosion of silicon nitride ceramics by nitric acid.—73-06306
**Kanbayashi, Masayuki** See Soeda, Koichi
**Kanbe, Rokuro** See Kimura, Yukihiro
**Kanbe, Sadao** See Miyashita, Satoru
**Kanda, Atsushi** See Tashiro, Shinjiro
**Kanda, H.** See Tsuchiya, Toshio
**Kanda, Hajime; Saiki, Atsushi; Shinozaki, Kazuo; Mizutani, Nobuyasu**
Formation mechanism of oxygen-deficient region in electrochemically reduced Y-PSZ crystal.—73-05403; Formation mechanism of oxygen-deficient region in electrochemically reduced Y-PSZ crystal.—73-17134; Phase transition and oxygen deficiency in electrochemically reduced Y-, Ca-PSZ crystals.—73-05455; Phase transition and oxygen deficiency in electrochemically reduced Y-, Ca-PSZ crystals.—73-16262
**Kanda, Hisao** See Lawson, Simon C.
**Kanda, Reiko** See Sugie, Yosohiro
**Kandelaars, Theodorus P. P.** See Renardus, Max L. P.
**Kander, R. G.** See Namboodri, Shannon L.
**Kandori, Kazuhiko** See Ishikawa, Tatsuo
**Kandori, Kazuhiko; Toshioka, Minako; Nakashima, Hiroko; Ishikawa, T.**
Pore structure of uniform spherical cobalt phosphate particles.—73-08705
**Kandori, Toshio** See Ukyo, Yoshio
**Kane, Robert C.** See Jaskie, James E.
**Kane, Russell D.**
Know when to use "advanced" materials.—73-15928
**Kaneda, H.** See Tanihara, M.
**Kaneda, Yoshihisa** See Kobayashi, Hidehiko
**Kanehisa, M. A.**
Alkali content dependence of the ionic conductivity of oxide glasses.—73-10417
**Kaneko, Hiroko; Kaneko, Keiji; Ihara, Hideo; Negishi, Akira**
Method of producing oxide superconductor.—73-11977
**Kaneko, Hiroyuki** See Taimatsu, Hitoshi
**Kaneko, K.** See Uekawa, N.
**Kaneko, Katsumi; Murata, Katsuyuki; Shimizu, Kazuyuki; Camara, S.; Suzuki, T.**
Enhancement effect of micropore filling for supercritical methane by MgO dispersion.—73-08529
**Kaneko, Kazuhide**
Lead-titanate-based piezoelectric ceramic material.—73-04580
**Kaneko, Keiji** See Kaneko, Hiroko
**Kaneko, R.** See Miyamoto, T.
**Kaneko, Shoji** See Dong, Dun-Zhuo; Nasu, Hiroyuki; Yagi, Isao
**Kaneko, Syoji** See Matsuoka, Jun
**Kaneko, Takejiro** See Kimura, Akio
**Kaneko, Takeshi** See Watanabe, Akira
**Kaneko, Yasunari** See Kankawa, Yoshimitsu; Sano, Toshio
**Kaneko, Yawara** See Kishino, Katsumi
**Kaneko, Yuji; Kitajima, Kunio; Takusagawa, Nobuo**
Effects of CaO and $SiO_2$ addition on microstructure and intrinsic coercivity of [iHc] of sintered Sr ferrite.—73-01456; Preparation of Sr ferrite magnets by the new annealing–remilling process.—73-07972; Preparation of Sr ferrite magnets by the new annealing–remilling process.—73-15361
**Kanel, G. I.** See Razorenov, S. V.
**Kanematsu, Daigorou** See Takahashi, Naoyuki
**Kanematsu, Wataru** See Yamauchi, Yukihiko
**Kanematsu, Wataru; Ito, Shoji; Kubo, Katsushi**
Estimation of grinding force for ceramics.—73-06406; Estimation of grinding force for ceramics.—73-16763; Strength of ground ceramics at elevated temperature.—73-17434

**Kanematsu, Wataru; Yamauchi, Yukihiko; Ohji, Tatsuki; Ito, Shoji; Kubo, Katsushi**
Formulation for the effect of surface grinding on strength degradation of ceramics.—73-03294; Formulation for the effect of surface grinding on strength degradation of ceramics.—73-13533
**Kanematsu, Wataru**
Grinding damage of ceramics and its effects on mechanical properties.—73-05826
**Kanemichi, Yukihiro** See Yasuda, Kouichi
**Kanert, O.** See Ngai, K. L.
**Kaneshige, Toshihiko** See Yamamura, Takashi
**Kanetkar, S. M.** See Ardakani, H. Kordi
**Kaneto, T.; Kim, K. W.; Littlejohn, M. A.**
Dielectric response functions of heavily doped zinc blende semiconductors with finite particle lifetime.—73-11138
**Kanev, I.** See Mintova, S.
**Kanezaki, E.; Sakamoto, T.; Ookubo, Akira; Ooi, K.**
Solid-state chemistry of thermally induced yellow coloring in synthetic hydrous titanium oxide from $TiCl_3$.—73-12685
**Kanezo, Katsumi; Kugawa, Shuichi; Ishida, Shigeki; Kadowaki, Y.; Uekawa, N.; Suzuki, T.**
Electronic and molecular dynamics of chemisorption on $\alpha$-$Fe_2O_3$ with time-delayed injection of donor-acceptor gases.—73-08862
**Kang, B.-K.** See Chung, M.-S.
**Kang, Bao-Sheng** See Wei, Shou-Xin
**Kang, Beom-Seok** See Hyun, Sang-Hoon
**Kang, C.-S.** See Lee, W.-C.
**Kang, Chang-Seok** See Kwon, Kee-Won
**Kang, Dong-Heon** See Yoon, Ki-Hyun
**Kang, Eul-Son** See Baek, Yong-Kee; Cheong, Dong-Ik
**Kang, Eun-Tae** See Park, Gang-Seok
**Kang, Han-Chyul** See Kim, Jeong-Soo
**Kang, Hee-Bog** See Cho, N.-H.
**Kang, Hee-Kyung** See Ahn, Byung-Chul
**Kang, Huai-Yun** See Li, Liu-Sheng
**Kang, J.-K.** See Jung, S.-T.
**Kang, J.-S.** See Jeong, J.-I.
**Kang, Lin** See Dai, Jian-Guo
**Kang, S.; Selverian, J. H.**
Effect of active metal coatings on the mechanical properties of silicon-nitride-based ceramics.—73-10219
**Kang, Sang-Kyu; Kim, Kyung-Nam; Han, Sang-Mok**
Sintering characteristics of ZnO powder prepared by precipitation method.—73-13264
**Kang, Suk-Joong L.** See Choi, Kyoon; Han, Sang-Moo; Jeon, Jae-Ho; Jeong, Soo-Jong; Kim, Nam-Kyun; Lee, Ho-Yong
**Kang, Suk-Won; Ko, Jae-Woong; Kim, Hai-Doo**
Formation of La-ß-aluminate in $\alpha$-alumina matrix and its influence on mechanical properties.—73-02833
**Kang, T.-K.** See Kim, S.-J.
**Kang, Tae-Won** See Oh, Won-Ung
**Kang, W.-N.** See Kim, T.-W.; Yom, S.-S.; Yoon, Y.-S.
**Kang, Y.-M.** See Kim, S.-S.
**Kang, Yong-Gwan** See Kim, Kwang-Ho
**Kang, Young-Min; Kim, Sang-Sub; Baik, Sung-Gi**
Crystallization of amorphous $PbTiO_3$ thin film.—73-12964
**Kangasniem, Ilkka** See Li, Pan-Jian
**Kani, Akira** See Korenaga, Sadayoshi
**Kani, Akira; Tejima, Yoshihiro; Hirabayashi, Hiroshi; Ura, Akira**
Grooving on SiC ceramic surface by reaction with solid metal: I.—73-02841; Grooving on SiC ceramic surface by reaction with solid metal: II, Reaction between SiC ceramics and Ni foil.—73-10235
**Kani, Akira; Tejima, Yoshihiro; Hirabayashi, Hiroshi**
Grooving on SiC ceramic surface by reaction with solid metal: II, Reaction between SiC ceramics and Ni foil.—73-02842
**Kani, Akira; Tejima, Yoshihiro; Ura, Akira**
Grooving on SiC ceramic surface by reaction with solid metal: III, Reaction product layer between SiC ceramics and Ni foil.—73-03594; Grooving on SiC ceramic surface by reaction with solid metal: III, Reaction product layer between SiC ceramics and Ni foil.—73-13842
**Kani, Keiko** See Awano, Masanobu; Tsuzuki, A.
**Kani, Keiko; Murakami, H.; Watari, Koji**
Sol-gel processing and pyroelectric properties of lanthanum-modified $PbTiO_3$ thin films.—73-06064
**Kania, D. R.** See Pan, L. S.
**Kanicki, Jerzy** See Kung, Ji-Ho; Seager, C. H.; Warren, W. L.
**Kanimov, B. K.** See Egorov, G. B.
**Kankanala, S. V.; Kashani, R.**
Control modeling and regulation of thermal spraying process.—73-09048
**Kankawa, Yoshimitsu; Kaneko, Yasunari; Saitou, Katsuyoshi**
Injection molding of ß-TCP powder.—73-05878; Injection molding of ß-TCP powder.—73-13104; Injection molding of highly purified hydroxyapatite and TCP utilizing solid-phase reaction method.—73-05879
**Kanke, Y.; Izumi, Fujio; Takayama-Muromachi, E.; Kato, K.; Kamiyama, T.; Asano, H.**
Synthesis and structure refinement of $SrT_xV_{6-x}O_{11}$ (T=Ti, Cr, and Fe).—73-02496
**Kanke, Y.; Takayama-Muromachi, E.; Uchida, Y.; Kato, K.; Takekawa, S.**
Synthesis and magnetic property of $NaFe_3V_9O_{19}$.—73-02487
**Kanke, Yoko** See Kasai, Masahiro; Ohno, Toshiyuki
**Kanke, Yoko; Kasai, Masahiro; Ohno, Toshiyuki; Kozono, Yuzoo**
Fabrication of $YBa_2Cu_3O_y$-$La_{0.7}Ca_{0.3}MnO_z$-$YBa_2Cu_3O_y$ coplanar junctions and their anisotropic current-voltage characteristics.—73-08076
**Kanki, Yasufumi**
Basic theory of finite element method.—73-14572
**Kannan, K. R.** See Laurent, C.
**Kannan, N.; Bansal, C.; Rajaram, G.**
Effect of $Ga_2O_3$ substitution on Bi-2212 superconductor.—73-01528
**Kannan, R.** See Seehra, Mohindar S.
**Kanno, Akira** See Saito, Masao
**Kanno, M.** See Ohyanagi, M.
**Kanno, Masayoshi** See Ito, Yoshiro
**Kanno, R.** See Kawamoto, Y.; Takahashi, M.
**Kanno, R.; Takeda, Yasuo; Hasegawa, M.; Kawamoto, Y.; Yamamoto, Osamu**
Mechanistic studies on the electrochemically lithiated spinel $LiCuVO_4$.—73-02326
**Kanno, Yoshinori; Nishino, J.**
Effect of hydrolysis water on the crystallization of sol-gel-derived $GeO_2$.—73-02787
**Kanno, Yoshinori**
Effects of dopants on the formation of hafnon via a sol-gel route.—73-16750
**Kano, Fumiyoshi; Yamanaka, Takayuki; Yamamoto, Norio; Yoshikuni, Y.; Mawatari, H.; Tohmori, Y.**
Reduction of linewidth enhancement factor in InGaAs-InP modulation-doped strained multiple quantum well lasers.—73-15142
**Kano, Haruyuki** See Kojima, Shoichi
**Kano, N.** See Ishizaki, Nobuo
**Kano, S. S.** See Takahashi, Yutaka
**Kanoh, Hiroshi** See Ishihara, Ryoichi
**Kanomata, Takeshi** See Kimura, Akio
**Kanost, Harold**
New tough, exceptionally wear-resistant, diamond-based composite for cutting tools.—73-15967
**Kansal, Pallavi; Laine, Richard M.**
Pentacoordinate silicon complexes as precursors to silicate glasses and ceramics.—73-08690
**Kantcheva, Margarita M.; Bushev, Vladimir P.; Hadjivanov, Konstantin I.**
Nitrogen dioxide adsorption of deuteroxylated titania (anatase).—73-08927; Nitrogen dioxide adsorption of deuteroxylated titania (anatase).—73-16228
**Kanter, B. Z.** See Nikiforov, A. I.
**Kantha Rao, V. V. L.; Krishnamoothy, S.**
Aggregate mixtures for least-void content for use in polymer concrete.—73-09809
**Kantner, John W.** See Thomas, William J.
**Kantner, Robert C.** See Aghajanian, Michael K.; Newkirk, Marc S.
**Kantsedal, V. P.** See Shevyakova, E. P.
**Kanzaki, Shuzo** See Hirao, Kiyoshi; Kumazawa, Takeshi; Nagaoka, Takaaki; Nakamura, Kazuo; Proverbio, Edoardo; Yasuoka, Masaki
**Kao, C.-C.** See Lin, J.-N.
**Kao, Chi-Yi** See Mallon, Thomas G.
**Kao, Chih-Chang** See Lin, Wen-Tai
**Kao, Chin-Hai; Lee, Liang-Chih; Chiu, Yi-Da; Lei, Tien-Shou; Wu, Maw-Kuen**
Effects of rolling process on the microstructural and superconducting properties of [Ag-sheathed] Bi-Pb-Sr-Ca-Cu-O tape.—73-11742
**Kao, Chin-Hai; Tang, H.-Y.; Shiue, Y.-S.; Sheen, S. R.; Wu, Maw-Kuen**
Fabrication of $Bi_{1.7}Pb_{0.4}Sr_{1.6}\cdot Ca_{2.4}Cu_{3.6}O_y$ superconducting films on silver substrates by the electrophoretic deposition technique.—73-15467
**Kao, H. L.** See Chang, A. M.; Chen, C. T.; Takagi, H.
**Kao, K. C.** See Chau, T. T.
**Kao, Ming-Yuan**
Properties of silicon nitride–molybdenum disilicide particulate ceramic composites.—73-03345
**Kao, Y. C.** See Celii, F. G.
**Kao, Y. C.; Celii, F. G.; Liu, H. Y.**
Detection and reduction of indium segregation during molecular beam epitaxial growth of InGaAs/GaAs using in situ reflection mass spectrometry [REMS].—73-11133
**Kao, Y. J.; Haegel, N. M.**
Electroluminescence of vanadium in GaAs.—73-01152
**Kao, Yao-Huang; Lin, Hung-Tser**
Study of harmonic distortion and period doubling in DFB ridge waveguide laser with strong current modulation.—73-01328
**Kapitulnik, A.** See Ma, Zheng-Xiang; Newman, Nathan; Safar, H.
**Kapkina, T. V.** See Solinov, V. F.
**Kaplan, I. G.; Vaisberg, B. S.; Smutnyi, V. N.**
Features of the electronic structure of high-temperature superconducting yttrium ceramics.—73-04723
**Kaplan, L.** See Ben-Shalom, A.
**Kaplan, M. D.** See Vasil'ev, A. V.
**Kaplan, Richard B.; Pierson, Hugh O.; Sheek, J. Grady; Tuffias, Robert H.; Williams, Brian E.**
High-temperature-resistant structure.—73-12472
**Kaplan, T. A.** See Mahanti, S. D.
**Kaplan, W.** See Zhang, S.-L.
**Kaplina, T. V.** See Gorokhovskii, A. V.; Polyakov, K. V.; Solinov, V. F.
**Kaplyanskii, A. A.** See Basun, S. A.
**Kapolnai, Ivan**
History of the ceramic whitewares industry [in Hungary], 1920-1994.—73-00911
**Kapoor, Madan L.** See Tandon, Sashi
**Kapoor, Sanjiv** See Olson, Darin S.
**Kapoutsis, J. A.** See Chryssikos, G. D.; Kamitsos, E. I.
**Kappelmann, W.** See Bloech, H.
**Kappers, L. A.** See Watterich, A.
**Kappler, J. P.** See Schille, J. P.; Tighezza, A.
**Kapralova, R. M.** See Abramson, I. G.
**Kaprielov, S. S.; Sheinfel'd, A. V.; Krivoborodov, Yu. R.**
Influence of the structure of cement stone with admixtures of microsilica and superplasticizers on concrete properties.—73-14598
**Kaps, Christian; Goring, Rolf**
Structural relaxation of glass BK7 during the development of refraction index gradients by Na/K exchange at $T \leq T_g$.—73-00550
**Kaps, Christian; Hager, A.**
Ionic transport in alkali-rich glassy oxide structures without nonbridging oxygen.—73-14715
**Kaps, Christian; Schubert, R.; Franke, G.**
Optical composite glasses from reactive deposition of chalcogenides in porous silica.—73-14449
**Kapsa, P.** See Bauer, M.
**Kapshuk, A. A.** See Nagornyi, P. G.
**Kapur, S.; Sakarya, N.; FitzPatrick, E. A.**
Mineralogy and micromorphology of Chalcolithic and Early Bronze Age Ikiztepe ceramics.—73-09789
**Kapustin, A. P.; Kalmykova, L. F.; Stanevich, V. T.**
Ceramic brick production making use of coal mining wastes of Ekibastuzsky basin.—73-00766
**Kar, A. K.** See Bolger, J. A.
**Kar, S.** See Bandyopadhyay, S. K.
**Kar, S.; Ashok, S.**
Interaction of atomic hydrogen with ion-bombardment-induced defects at $Si/SiO_2$ interfaces.—73-04121
**Kara, F.; Little, J. A.**
Sintering of pre-mullite powder obtained by chemical processing.—73-03010
**Kara, Miklos T.** See Rizkalla, Maher E.
**Karabekian, S. I.** See Obukhovskii, V. V.
**Karachevtseva, L. A.** See Bakshi, I. S.; Grigor'ev, N. N.
**Karachevtseva, L. A.; Lyubchenko, A. V.; Malovichko, E. A.**
Characteristic features of magnetic-field dependences of the transport coefficients of two-layer $Cd_xHg_{1-x}Te$ structures.—73-04262
**Karachevtseva, L. A.; Lyubchenko, A. V.**
Problem of the intrinsic carrier density in $Cd_xHg_{1-x}Te$ solid solutions.—73-01289
**Karaki-Doy, T.; Kasai, Toshio**
New polishing technology to turn functional material-clad glass substrate into high-precision thin film and its application.—73-14439
**Karakida, Shoichi** See Isshiki, Kunihiko
**Karam, N. H.** See Bhat, Ishwara B.; Vernon, S. M.
**Karam, N. H.; Wolfson, R. G.; Bhat, Ishwara B.; Ehsani, H.; Ghandhi, S. K.**
Growth and characterization of CdTe, HgTe, and HgCdTe by atomic layer epitaxy.—73-04346
**Karaman, M. I.; Mushinskii, V. P.; Syrbu, N. N.**
Vibrational spectra of $PbMoO_4$ crystals.—73-02539
**Karamis, M. B.**
Wear characteristics of $TiO_2$ coating and silicon carbide alloyed layer on Ti-6Al-4V material.—73-10297
**Karamyan, A. A.** See Krainik, N. N.
**Karandashev, S. A.** See Aidaraliev, M. Sh.
**Karandikar, Prashant; Chou, Tsu-Wei**
Characterization and modeling of microcracking and elastic moduli changes in Nicalon/CAS composites.—73-03243
**Karanovic, L. J.** See Milosavljevic, Z.; Milosevic, O.
**Karapetyan, G. O.** See Kabanov, V. O.
**Karapetyan, G. O.; Maksimov, L. V.; Yanush, O. V.**
Manifestation of irregularity and inhomogeneity in spectra of scattered light.—73-14032
**Karapetyan, G. O.; Maksimov, L. V.**
Phenomenon of segregation in glasses.—73-14457
**Karapetyan, G.; Petrovskii, G. T.**
Optical glasses with distributed parameters.—73-14241
**Karasawa, Junichi** See Fukami, Tatsuo
**Karasawa, Shiro** See Mitsuhashi, Masahiko
**Karasawa, T.; Miyata, Y.**
Electrical and optical properties of indium tin oxide thin films deposited on unheated substrates by dc reactive sputtering.—73-02594
**Karasek, K. R.** See Marrero, Madelyn
**Karasek, Miroslav** See Vichr, Roman
**Karaseva, L. G.** See Bondarenko, G. P.
**Karaseva, M. D.** See Chernyakhovskii, V. A.
**Karaulov, A. G.** See Gal'chenko, T. G.; Zoz, E. I.
**Karaulov, A. G.; Ilyukha, N. G.**
Concrete shapes based on zirconia and aluminum-barium zirconate cement.—73-10710
**Karaulov, A. G.; Zoz, E. I.**
Solid solutions in the $ZrO_2$-$HfO_2$-$SiO_2$ system and obtaining new refractories from them.—73-00865
**Karaulov, A. G.**
Concrete shapes based on zirconia and a calcium-aluminum zirconate binder.—73-10709
**Karavaev, G. F.** See Davarashvili, O. I.
**Karaylanni, Eleni** See Dalpi, Maria
**Karbhari, V. M.** See Pitchumani, R.
**Karczewski, G.** See Heremans, J.; Hu, B.
**Karekar, R. N.** See Ardakani, H. Kordi
**Karen, Pavel; Fjellvag, H.; Kjekshus, Arne; Andersen, A. F.**
Chemical pressure and other effects on strontium substitution in $YBa_2Cu_3O_{9-\delta}$.—73-01507
**Karen, Pavel; Kjekshus, Arne**
Citrate-gel syntheses in the Y(O)-Ba(O)-Cu(O) system.—73-05708
**Karful, R.** See Dmitriev, A. G.
**Karge, H. G.** See Subramanian, S.
**Karger, J.; Pfeifer, Harry; Stallmach, F.; Feoktistova, N. N.; Zhdanov, S. P.**
$^{129}Xe$ and $^{13}CPFG$ NMR study of the intracrystalline self-diffusion of Xe, $CO_2$, and CO.—73-09430
**Kargin, Yu. F.; Zhereb, V. P.; Skorikov, V. M.**
Stable and metastable phase relations in the system $Bi_2O_3$-$SiO_2$.—73-02445
**Karim, Khalid** See Dwyer, John; Rawlence, David J.
**Karim, M. Z.** See Cameron, D. C.
**Karim, R.; Ball, S. D.; Truedson, John R.**
Frequency dependence of the ferromagnetic resonance linewidth and effective linewidth in manganese-substituted single-crystal barium ferrite.—73-01463
**Karimov, I. N.** See Belyakova, E. D.
**Karimov, Z. F.; Shershnev, A. A.; Chekrygina, T. M.**
Calculation of the movement and heating of gunite particles in a gas-oxygen jet.—73-00781

**Karimave, A. G.** See Grivickas, V.
**Karkinski, J.** See Steiner, P.
**Karklit, A. K.; Dolgikh, T. N.**
Kyanite and fireclay from Vietnam.—73-01985
**Karklit, A. K.**
Destructive processes in silicon carbide refractories in a high-temperature gas flow.—73-03997
**Karkut, M. G.** See Guilloux-Viry, M.
**Karl, H.; Stritzker, B.**
Reflection high-energy electron diffraction oscillations modulated by laser-pulse deposited $YBa_2Cu_3O_{7-\delta}$.—73-08186
**Karlin, B. A.** See Kendelewicz, T.
**Karlina, O. K.** See Ozhovan, M. I.
**Karlsson, B.** See Levin, M.
**Karlsson, K. H.** See Hupa, L.
**Karlsson, L.** See Vuorinen, Sakari
**Karlsson, U. O.** See Rogelet, T.
**Karmakar, B.** See De, G.
**Karmanenko, S. F.** See Ilisavskii, Yu. V.; Vendik, O. G.
**Karmann, S.; Suttrop, W.; Schoner, A.**
Chemical vapor deposition and characterization of undoped and nitrogen-doped single-crystalline 6H-SiC.—73-12944
**Karnachev, A. S.; Lukina, M. M.; Moskvin, A. S.; Solov'ev, E. E.**
NMR study of spin reorientation in $Ho_{0.07}Y_{0.093}CrO_3$.—73-16231
**Karnaukhov, B. G.** See Bendovskii, E. B.
**Karneeva, S. S.; Kalantarian, V. P.; Guess, A. P.; Fedetova, V. V.; Shimchak, R.; Shamsutdinov, M. A.**
Magnetic properties of $TmFeO_3$ and $TmGa_{0.13}Fe_{0.87}O_3$ orthoferrites.—73-15342
**Karpachev, S. N.** See Zarembo, L. K.
**Karpenko, G. A.** See Ol'khovaya, L. A.
**Karpierz, K.** See Lusakowski, J.
**Karpilovskiy, L. P.**
Simple approach to technological control of clay-containing ceramic bodies.—73-08364
**Karpinski, J.** See Bucher, B.; Domenges, B.
**Karpinskii, O. G.** See Arakcheeva, A. V.
**Karpov, G. V.** See Gal'tseva, E. V.
**Karpov, I. B.** See Shardakov, N. T.
**Karpov, O. G.** See Simonov, M. A.
**Karpov, S. Yu.; Koval'chuk, Yu. V.; Myachin, V. E.; Pogoulskii, Y. V.; Silova, M. Y.; Sokolov, I. A.**
Phase transformations of amorphous binary semiconductors under pulsed laser irradiation.—73-01272
**Karpov, V. G.** See Zherzdev, A. V.
**Karpova, E. A.** See Alekseev, Yu. I.
**Karpova, T. A.** See Volzhenskii, A. V.
**Karpovich, I. A.** See Aleshkin, V. Ya.; Bednyi, B. I.
**Karpovich, I. A.; Aleshkin, V. Ya.; Anshon, A. V.; Baidus, N. V.; Batukova, L. M.; Zvonkov, B. N.**
Photoelectron phenomena in GaAs layers with a built-in surface quantum heterowell.—73-07718
**Karpovich, I. A.; Plankina, S. M.**
Photoelectric method for determination of the optical absorption coefficient and its application to semiinsulating GaAs.—73-01273
**Karpushko, F. V.** See Agullo-Lopez, F.
**Kartashov, P. M.** See Sokolova, M. N.
**Kartavykh, A. V.; Yurova, E. S.**
Testing for nonuniformity of the resistivity in semiinsulating GaAs substrates by the "dark spot" method.—73-07833
**Kartheuser, E.; Rodriguez, Sergio; Villeret, Murielle**
Anisotropy of the magnetization of isolated $Fe^{2+}$ ions in II-VI compounds.—73-01075
**Kartsev, V. Yu.** See Makarov, A. N.
**Karube, I.** See Uo, Motohiro
**Karulkar, Pramod C.; Wyatt, P. W.**
Radiation hardening of SIMOX buried oxide by nitridation.—73-04160
**Karuna, N. B.; Cherenkov, V. A.**
Nonresonant microwave absorption in granulated superconductors.—73-01617
**Karunasiri, R. P. G.** See Arghavani, R.; Li, H. S.
**Karvinen, R.; Nieminen, P. J.**
New technique for economical manufacture of cement-based binders.—73-13757
**Karyagin, S. N.; Konstantinova, E. A.; Lupacheva, A. N.**
Effect of illumination on the properties of paramagnetic defects in variable-composition films of hydrogenated amorphous SiC.—73-11156
**Karyagin, S. N.; Konstantinova, E. A.**
Use of the ESR signal-saturation method in an experimental study of hydrogenated amorphous variable-composition SiC.—73-07855
**Karzanov, V. V.** See Pavlov, P. V.
**Karzhavin, R. V.** See Belyakova, E. D.
**Kasa, Stanislav** See Lisy, Antonin; Skvor, Z.
**Kasa, Stanislav; Lisy, Antonin**
Glass melt homogenization in glass furnace—mathematical and physical model.—73-10542; Influence of divided electric boosting on the distribution of temperatures and on flowing.—73-15882
**Kasahara, Nobuyoshi** See Hayashi, Takao
**Kasahara, Senshi** See Inoue, Shunji
**Kasai, H.** See Harada, K.
**Kasai, Hideshi** See Imahashi, Taichi
**Kasai, Junichi** See Tsuyuki, Naomitsu
**Kasai, Masahiro** See Kanke, Yoko; Ohno, Toshiyuki
**Kasai, Masahiro; Kanke, Yoko; Ohno, Toshiyuki**
Possible mechanism of proximity effect coupled to spin fluctuation in $YBa_2Cu_3O_x$/magnetic manganese oxide/$YBa_2Cu_3O_x$ junctions.—73-11866
**Kasai, Noboru** See Okamura, Kiyohito; Seguchi, Tadao
**Kasai, Norifumi; Kawasaki, Morio; Hayashi, Yasushige; Kawai, Hidekazu**
Explanation of clogging phenomena of CC [continuous casting] submerged nozzle.—73-00814
**Kasai, Toshio** See Horio, Kenichiro; Karaki-Doy, T.
**Kasai, Yoshio** See Hiraishi, Shinya; Nakata, Yoshihisa; Tobinai, Keishi
**Kasamatsu, Mitsuo** See Komatsu, Shojiro
**Kasanami, Tohru** See Kajiyoshi, Koji
**Kasanami, Tohru; Tani, Hiroji; Fujiwara, Shigeki**
Temperature sensor.—73-02072
**Kasas, Karoly** See Ranogajec, Jonjaua
**Kasatani, Hirofumi** See Terauchi, Hikaru; Yoneda, Yasuhiro
**Kasatani, Hirofumi; Umeki, Takashi; Terauchi, Hikaru**
Crystal structure analysis and phase transition in lead orthovanadate $Pb_3(VO_4)_2$.—73-08585
**Kaschmitter, J. L.** See Mayer, S. T.
**Kase, K.** See Aono, T.
**Kasemann, R.; Schmidt, H.; Bruck, S.**
Functional coatings on glass surfaces by the sol-gel process.—73-14387
**Kasenov, T. B.** See Zelinskii, V. Yu.
**Kasgoz, Ahmet; Misono, Takahisa; Abe, Yoshimoto**
Preparation of $SiO_2$-$M_xO_y$ thin films and gels by sol-gel method using silicic acid and metal halides.—73-02970; Preparation of $SiO_2$-$M_xO_y$ thin films and gels by sol-gel method using silicic acid and metal halides.—73-13203
**Kash, K.; Mahoney, Derek D.; Van der Gaag, B. P.; Gordz, A. S.; Harbison, J. P.; Florez, L. T.**
Quantum dot levels produced by strain modulation of GaAs-AlGaAs quantum wells.—73-07753
**Kashaev, A. A.** See Rastsvetaeva, R. K.
**Kashani, R.** See Kankanala, S. V.
**Kashcheev, I. D.; Nazarova, T. I.**
Aspects of mullite synthesis in relation to the grain size of $Al_2O_3$ and $SiO_2$.—73-00778; Aspects of mullite synthesis in relation to the grain size of $Al_2O_3$ and $SiO_2$.—73-02728
**Kashcheev, I. D.**
Principles of development of protective coatings on refractories.—73-00842
**Kashchieva, E. P.** See Dimitriev, Y.; Ivanova, Y.
**Kashiba, Yoshihiro; Okada, Masaru**
Ceramic-metal composite substrate and method for producing the same.—73-03675
**Kashida, S.** See Yamamoto, K.
**Kashihara, Seiichi; Yamanaka, Shozo; Inoue, Takayuki; Komatsu, Takahiro; Toyoshima, Hideo**
Quantum chemical determination of the Al-substituted site in tobermorite.—73-16286
**Kashihara, Tadashi**
Porous glass carrier for immobilization of brewer's yeast.—73-03753
**Kashiwagi, Kazumi** See Kitaoka, Satoshi
**Kashiwagi, Kunihiro** See Murayama, Yoichi
**Kashiwaya, Hideo** See Ishiwata, Yutaka; Itoh, Yoshiyasu
**Kashkarov, P. K.; Rusina, M. V.; Timoshenko, V. Yu.**
Modification of the reflection coefficient of III-V semiconductors by pulsed laser bombardment.—73-07677
**Kashkarov, P. K.; Timoshenko, V. Yu.**
Modification of the spectrum of shallow states in GaAs by the action of laser radiation pulses.—73-01250
**Kashkina, T. V.; Romanovskaya, L. V.; Kazantsev, V. V.**
Discharge of the raw materials used in the production of chromium-oxide-based products from bunkers.—73-01774
**Kashu, Seiichiro** See Oda, Masaaki
**Kashurnikov, V. A.** See Elesin, V. F.
**Kasik, Ivan** See Lezal, Dimitrij; Sysala, Otmar
**Kasik, Ivan; Sysala, Otmar; Gotz, Jiri**
Optical quartz fibers with nontraditional doping agents[—literature review].—73-12329
**Kasimov, A. M.** See Makarenko, E. S.
**Kasiviswanathan, S.; Rangarajan, G.; Lakshmiraghavan, S.; Rao, G. V. S.**
Single-particle tunneling studies on $Bi_2Sr_2Ca_1Cu_2O_y$.—73-01659
**Kasiyan, V. A.** See Blazhku, A. I.; Dzhuadi, D.
**Kasman, A. Ya.**
Wall thickness determination for glass hollowware in annealing calculations.—73-00720
**Kasner, W. H.** See Buhay, H.
**Kasori, Mitsuo; Horiguchi, Akihiro; Goto, Yoshiko; Ueno, Fumio**
Method of manufacturing aluminum nitride structure with anisotropic properties.—73-12496
**Kasori, Mitsuo; Ueno, Fumio; Tsuge, Akihiko**
Effects of transition-metal additions on the properties of AlN.—73-16469
**Kasowski, Robert V.** See Hsu, W. Y.
**Kasowski, Robert V.; Hatta, Shinichiro; Hsu, William Y.**
Computation of antiferromagnetic properties of orthorhombic $CaCuO_2$.—73-07420
**Kasperovich, V. S.** See Vorotilova, L. S.
**Kasperovich, V. S.; Charnaya, E. V.**
Effect of oxygen subsystem ordering on copper NQR spectrum in $YBa_2Cu_3O_x$ high-$T_c$ superconductors.—73-15432
**Kaspi, R.** See Talwar, D. N.
**Kasrai, Masoud** See Li, Dien
**Kasrai, Masoud; Yin, Zhan-Feng; Bancroft, G. M.; Tan, Kim H.**
X-ray fluorescence measurements of X-ray absorption near edge structure [XANES] at the Si, P, and S *L* edges.—73-16395
**Kassem, A. S. A.** See Mostafa, M. Z.
**Kastelik, J. C.; Gazalet, M. G.; Bruneel, C.; Bridoux, E.**
Acoustic shear wave propagation in paratellurite with reduced spreading.—73-08801
**Kastner, M. A.** See Falck, J. P.; Matsuda, Masaaki
**Kastura, Laszlo J.** See Mirchandani, Prakash K.
**Kasuga, Tomoko** See Uno, Tomoko; Yanagita, Hiroaki
**Kasuga, Tomoko; Kasuga, Toshihiro**
Glass-ceramic and artificial dental crown formed therefrom.—73-02040
**Kasuga, Toshihiro** See Kasuga, Tomoko; Uno, Tomoko
**Kasuga, Toshihiro; Ichino, Akihiro; Abe, Yoshihiro**
Preparation of calcium phosphate fibers for applications to biomedical fields.—73-02947; Preparation of calcium phosphate fibers for applications to biomedical fields.—73-10577
**Kasukawa, Akihiko** See Fukushima, Toru; Namegaya, Takeshi
**Kasukawa, Akihiko; Namegaya, Takeshi; Fukushima, Toru; Iwai, N.; Kikuta, T.**
1.3-μm $InAs_yP_{1-y}$-InP strained-layer quantum-well, laser diodes grown by MOCVD.—73-15066
**Kasuya, Masahiro** See Sugimoto, Kenji
**Kasymova, S. S.; Guryev, N. V.; Yudin, D. M.**
Oxygen in fluorozirconate glasses.—73-14064
**Kata, Keiichiro; Kobayashi, Yoshinobu; Shimada, Yuzo**
Process for manufacturing a ceramic wiring substrate having a low dielectric constant.—73-11044
**Kata, Keiichiro; Shimada, Yuzo**
Ceramic substrate having wiring of silver series.—73-10306; Low dielectric constant glass-ceramic composite controlled isolated porosity.—73-04128; Low-temperature sintering low-dielectric inorganic composition.—73-11025
**Katada, M.** See Omata, T.
**Kataev, S. G.** See Davarashvili, O. I.
**Katsev, V.** See Braunisch, W.
**Katagiri, Naruhito; Hattori, Yasuhisa; Ota, Toshitaka; Yamai, Iwao**
Thermal shock resistance of $KZrO_3(PO_4)_3$ [KZP] ceramic.—73-16633
**Katagiri, Yuji; Nasu, Hiroyuki; Matsuoka, Jun; Kamiya, Kenichi**
Sol-gel preparation and optical nonlinearity of lead(II) oxide–titanium(IV) oxide amorphous monoliths.—73-06062
**Katano, Rintaro** See Isozumi, Yasuhito
**Katano, Yasushi** See Akimune, Yoshio
**Katsoka, Masako; Suda, Katsumi; Ishikawa, Nobuo; Marumo, Fumiyuki; Shimizugawa, Yutaka; Ohsumi, Kazumasa**
Determination of the *c*/*a* ratio of a submicrometer-sized crystal of tetragonal barium titanate by synchrotron radiation.—73-16109
**Katsoka, Masayuki** See Makita, T.; Takami, Tetsuya
**Katsoka, Mitsuo**
Transfer-integral expansion for the *d*-*p* model of the $CuO_2$ plane—ground state of the undoped system.—73-01696
**Katsoka, Shinichirou** See Shikano, Hiroshi
**Katsoka, Shoei; Sato, Hiroya; Tsuchimoto, Shuhei; Nojima, Hideo; Toyoyama, Shinji; Koba, Masayoshi**
Superconductive logic device.—73-12004
**Katayama, Iwao** See Matsubara, Shigeo
**Katayama, Keiichi** See Mitamura, Takashi; Shiga, Hiroshi
**Katayama, M.** See Shimizu, K.
**Katayama, Shingo** See Matsuno, Yoshihiro
**Katayama, Shingo; Sekine, Masahiro**
Low-temperature synthesis of $Ba(Mg_{1/3}Ta_{2/3})O_3$ perovskite by the metal alkoxide method.—73-16855
**Katayama, Shinya** See Matsuda, Atsunori
**Katayama, Tetsuya** See Komura, Osamu
**Katayama, Y.; Ando, Eiichi; Kawaguchi, T.**
Characterization of $SiO_2$ films on glass substrate by sol-gel and vacuum deposition methods.—73-10506
**Katayama, Y.; Tanaka, I.; Kato, Takashi**
In situ STM observation of MBE surfaces of III-V semiconductors.—73-14974
**Kathrina, T.; Round, R.; Bridge, B.**
Composition dependence of the elasticity, reaction rate, and porosity of orthophosphate bonded ceramics using an ultrasonic double-probe method.—73-02752
**Katiyar, M.** See Yang, Y. H.
**Katkov, V. F.** See Mekekechko, A. V.; Volnyanskii, M. D.
**Kato, A.** See Nogami, Masayuki
**Kato, Akio** See Nagai, H.; Nagashima, Satoko; Nakamura, Hiroyuki
**Kato, Akio; Jonosono, Keiko; Nagashima, Satoko**
Crystallization of $CaCO_3$ from $Ca(NO_3)_2$ solution: I, Reaction conditions and morphology of $CaCO_3$.—73-09878
**Kato, Chika** See Fukuda, Koichiro
**Kato, Chuzo** See Kuroda, Kazuyuki; Sugahara, Yoshiyuki
**Kato, Etsuro** See Kobayashi, Yuichi
**Kato, H.** See Hui, D.; Watanabe, A.
**Kato, Hideo** See Tsurumi, Takaaki
**Kato, Hideo; Tsurumi, Takaaki; Yano, Toyohiko; Asaga, Kiyoshi**
Fine texture and hydration reactivity of β-$Ca_2SiO_4$ solid solutions.—73-09962
**Kato, Hiroshi** See Sato, Rikiya
**Kato, Hisaki** See Manabe, Katsuhide; Yamamura, Takashi
**Kato, Hisao** See Kojima, Masahiko
**Kato, Hitoshi** See Okada, Kaoru
**Kato, Junichi** See Kagata, Hiroshi; Kameyama, Ichiro
**Kato, K.** See Gautier, P.; Hirano, M.; Kanke, Y.
**Kato, K.**
Temperature-insensitive SHG at 0.5321 μm in KTP.—73-08773
**Kato, Kazuaki** See Sugiyama, Osamu
**Kato, Kazuhiko** See Nishizaka, Tsuyoshi
**Kato, Kazumi**
Photocatalytic property of $TiO_2$ anchored on porous alumina ceramic support by the alkoxide method.—73-05612; Photocatalytic property of $TiO_2$ anchored on porous alumina ceramic support by the alkoxide method.—73-16564
**Kato, Kazutoshi; Hata, Susumu; Kawano, Kenji; Yoshida, J.; Kozen, A.**
High-efficiency 50-GHz InGaAs multimode waveguide photodetector.—73-07559
**Kato, Kiminari**
Method for manufacturing ceramic products.—73-04987
**Kato, Kiyoshi; Kato, Naoki; Kawai, Tadashi**
Application to field construction work of extremely early strength method and accuracy detection of materials control of concrete.—73-09821
**Kato, Koji** See Adachi, Koshi
**Kato, Kunio** See Takarada, Takayuki
**Kato, M.** See Koike, Y.
**Kato, Munenori** See Nishiyama, Akio
**Kato, Namie** See Kikkawa, Shinichi
**Kato, Naoki** See Kato, Kiyoshi

**Kato, Naomiki; Maruyama, Kazuyuki**
Ceramic-glass ic package assembly having multiple conductive layers.—73-11008
**Kato, Osamu** See Guo, Qi-Xin
**Kato, Satoshi; Yano, Toyohiko; Iseki, Takayoshi**
Interfacial structure between Ag-Cu-Ti alloy and sintered SiC with various additives.—73-03609; 73-13852
**Kato, Shigeki** See Matsuhisa, Tadaaki
**Kato, Shuuji; Yamaguchi, Takashi**
Mechanism of resistance variation of thick-film resistors on commercial 96% alumina substrates.—73-00994;
Mechanism of resistance variation of thick-film resistors on commercial 96% alumina substrates.—73-10971
**Kato, Takafumi** See Tsugeki, Keiichi
**Kato, Takashi** See Katayama, Y.; Osaka, Fukunobu
**Kato, Junichi** See Kameyama, Ichiro
**Kato, Tokiomi; Ozeki, Hirofumi**
Ceramic composition for microwave dielectric.—73-01044
**Kato, Tomoaki; Komatsu, Keiro; Sasaki, Tatsuya**
Optical waveguide formed of compound semiconductor materials and process of fabricating the optical waveguide.—73-01380
**Kato, Tomohiro** See Funayama, Osamu; Matsuo, Hideki
**Kato, Yasuyoshi** See Yoshida, Naomi
**Kato, Yoshihito** See Kobayashi, Tadayuki
**Kato, Zenji** See Miyashita, Masayori; Zhang, Yao
**Kato, Zenji; Uematsu, Keizo**
Micromechanical processing for ordered structure.—73-02896
**Katoh, Akira** See Naitoh, Takashi; Ohishi, T.
**Katoh, M.** See Imai, T.
**Katoh, Miyuki** See Kobayashi, Hidehiko
**Katoh, Rie** See Kobashi, Koji
**Katoh, Satoshi** See Ono, Hironobu
**Katoh, Toshio** See Kitaoka, Satoshi
**Katoh, Yujiro; Sugimoto, Naoto; Tate, Akiyuki; Shibukawa, Atsushi**
Preparation of substituted $Y_3Fe_5O_{12}$ single-mode buried waveguides on a [100]-oriented $Gd_3Ga_5O_{12}$ substrate.—73-16939
**Katsaros, A.** See Savvides, N.
**Katsnel'son, A. A.** See Kalibaeva, G. M.; Stepanyuk, V. S.
**Katsu, Isao** See Oda, Masaaki
**Katsube, Masayoshi** See Takahashi, Minoru
**Katsuda, Junichiro** See Kanazuka, Yasuo
**Katsuda, Shinichi; Kawanishi, Yoshitaka**
Stability of SiN thin films prepared by reactive sputtering.—73-05640; Stability of SiN thin films prepared by reactive sputtering.—73-13285
**Katsuki, Hiroaki** See Furuta, Sachiko; Ichinose, Hiromichi; Kawahara, Akihiko; Matsuda, Ohsaku; Tamari, Nobuyuki
**Katsuki, Hiroaki; Ichinose, Hiromichi; Shiraishi, Atsunori; Takagi, Hiroyoshi; Hirata, Yoshihiro**
Preparation and fracture characteristic of laminated alumina/mullite composite.—73-17414
**Katsuki, Hiroaki; Kawahara, Akihiko; Ichinose, Hiromichi**
Preparation and some properties of porous alumina ceramics obtained by the gelatination [by HCl] of ammonium alginate.—73-02937; Preparation and some properties of porous mullite ceramics using needlelike crystals.—73-02938
**Katsuki, Nobuharu** See Katsumata, Masaaki
**Katsumata, H.** See Uekusa, Shinichiro
**Katsumata, Masaaki; Kanaya, Osamu; Katsuki, Nobuharu**
Zinc oxide varistor, a method of preparing the same, and a crystallized glass composition for coating.—73-11551
**Katsumata, T.** See Matsuo, T.
**Katsumi, Ryuichi** See Namegaya, Takeshi
**Katsumoto, Masumi** See Enomoto, Naoya; Sakurai, Osamu
**Katsumura, Yuji** See Takahashi, Toshiyuki
**Katsumura, Yuji; Fukatsu, Tamotsu; Kobayashi, Masaki**
Effects of TiC content and grain size on cutting performance of $Al_2O_3$-TiC ceramic tools.—73-08511
**Katsuyama, Shigeru** See Majima, Kazuhiko
**Katsuyama, Shigeru; Harada, Yoshinao; Majima, Kazuhiko; Nagai, Hiroshi**
Effect of MG [mechanical grinding] on the critical current density and global pinning force of $YBa_2Cu_3O_x$-Ag composite superconductor.—73-15429; Microscopic structure and flux pinning effect in the $Sm_xBa_{1-x}CuO_y$ system.—73-01604
**Katsuyama, Shigeru; Ueda, Hiroshi; Majima, Kazuhiko; Nagai, Hiroshi**
Stabilization and thermoelectric properties of rare-earth chalcogenides γ-$LaS_x$.—73-08740
**Katsuyama, Tsukuru** See Hashimoto, Junichi
**Kattelus, H.** See Hirvonen, J.-P.
**Kattelus, H.; Ylilammi, Markku; Salmi, Jorma; Ranta-Aho, Timo; Nykanen, Erja; Suni, Ilkka**
Electrical properties of tantalum-based composite oxide films.—73-04088
**Kattelus, Hanno; Ylilammi, Markku; Saarilahti, J.; Antson, J.; Lindfors, S.**
Layered tantalum-aluminum oxide films deposited by atomic layer epitaxy.—73-04126
**Katyal, N. K.** See Prakash, Ram
**Katz, A.** See Chakrabarti, U. K.; Lothian, J. R.; Pearton, S. J.
**Katz, A.; Pearton, S. J.; Nakahara, Shohei**
Tantalum nitride films as resistors on chemical vapor deposited diamond substrates.—73-01035
**Katz, Joel D.** See Ahmad, Iftikhar; Blake, R. D.
**Katz, Joseph L.; Hung, Cheng-Hung**
Ceramic oxide powders and the formation thereof.—73-05203
**Katz, L.** See Zhang, Y.
**Katz, M.** See Eger, D.
**Katz, R. N.** See Toutanji, H. A.
**Katz, R. N.; Grendahl, S.; Cho, Kyu; Bar-On, Isa; Rafaniello, William**
Fracture toughness of ceramics in the AlN-SiC system.—73-17335
**Katz, R. N.**
Applications of silicon-nitride-based ceramics in the U.S.—73-05259; Ongoing example of advanced ceramics development.—73-12438
**Katzenmeier, Bianca** See Bauer, Hans J.
**Katzer, D. S.; Shanabrook, B. V.**
Comparison of optical pyrometry and infrared transmission measurements on indium-free mounted substrates during molecular beam epitaxial growth.—73-11114
**Kaucic, Venceslav** See Batista, Jurka; Rajic, Nevenka
**Kaufher, N.** See Kodintsev, I. M.
**Kaufman, I. Kh.** See Barysheva, T. P.
**Kaufman, J. G.** See Weida, W. A.
**Kaufman, Leon; Carlson, Joseph W.**
Open architecture iron core electromagnet for MRI using superconductive winding.—73-04859
**Kaufmann, H.-J.** See Il'yasov, A. Z.
**Kaul, A. R.** See Gorbenko, O. Yu
**Kauppinen, P.** See Hirvonen, J.-P.
**Kauser, Dennis E.** See LaMastro, Robert A.
**Kaute, D. A. W.; Shercliff, H. R.; Ashby, Michael F.**
Delamination, fiber bridging, and toughness of ceramic matrix composites [CMC's].—73-06370
**Kavalyauskas, Yu. I.; Krivailite, G.; Shileika, A.; Sharonova, L. V.; Shmartsev, Y. V.**
Modulation spectra of doped GaAs-$Al_{0.3}Ga_{0.7}As$ quantum-well structures.—73-11321
**Kavamura, K.** See Savaguti, N.
**Kavanagh, K. L.; Chang, J. C. P.; Chen, J.; Fernandez, J. M; Wieder, H. H.**
Lattice tilt and dislocations in compositionally step-graded buffer layers for mismatched InGaAs/GaAs heterointerfaces.—73-07635
**Kaviani, Kian; Chen, Li; Hu, Ke-Zhong; Xie, Q. H.; Madhukar, A.**
Effect of structural and chemical parameters on the optical properties of highly strained AlGaAs/InGaAs/AlGaAs quantum wells.—73-11164
**Kavokin, A. V.** See Pozina, G. R.
**Kavokin, K. V.; Nikulin, E. I.; Baikov, Yu. M.; Stepanov, Yu. P.**
Effect of oxygen disordering in $YBa_2Cu_3O_{6+x}$ on the electrical conductivity and $T_c$ at $0.21 \leq x \leq 0.73$.—73-15431
**Kavun, V. Ya.** See Baidakov, L. A.
**Kawa, P. M.** See Li, Yi
**Kawabata, Kyoko; Yamashita, Hiroshi; Maekawa, Takashi**
Effects of diols on surface area and pore radius of alkoxy-derived silica gels.—73-05779
**Kawabata, Kyoko; Yamashita, Hiroshi; Maekawa, Takashi**
Effects of diols on surface area and pore radius of alkoxy-derived silica gels.—73-14165
**Kawabata, Noritsugu** See Kinoshita, Kazuhisa
**Kawabata, Shoichi; Sakai, Norio; Minowa, Kenji**
Method of manufacturing ceramic multilayer electronic component.—73-11034
**Kawabata, Shoichi; Wakatsuki, Hiromichi; Sakai, Norio; Okada, Keiichi**
Method of fabricating ceramic laminated electronic component.—73-04219
**Kawabe, Kouji** See Nishikawa, Tadahiro
**Kawabe, Nozomu** See Yamamoto, Susumu
**Kawabe, U.** See Harada, K.
**Kawabe, Ushio** See Nishino, Toshikazu
**Kawachi, Masao** See Takagi, Akihiro
**Kawachi, Shinji; Sato, Yoshifumi**
Glass composition for glass bubbles with increased compressive strength.—73-10628
**Kawada, Hiroki** See Takahashi, Kazue
**Kawada, Tatsuya** See Sakai, Natsuko; Yokokawa, Harumi
**Kawada, Tatsuya; Sakai, Natsuko; Yokokawa, Harumi; Dokiya, Masayuki; Anzai, Iwao**
Fabrication of a planar solid oxide fuel cell by tape casting and cofiring method.—73-00969; Fabrication of a planar solid oxide fuel cell by tape casting and cofiring method.—73-10947
**Kawaguchi, H.**
Progress in optical function devices using two-section laser diodes/amplifiers.—73-15122
**Kawaguchi, Junichi** See Yoshida, Shuji
**Kawaguchi, Kozo**
Ceramic bracket with coated base.—73-05197
**Kawaguchi, Masatugi** See Shimizu, Yoshio
**Kawaguchi, Masayuki; Kita, Yasushi; Nozaki, Koji**
Coated aluminum nitride powder and its preparation.—73-05294
**Kawaguchi, T.** See Katayama, Y.; Koike, Y.
**Kawaguchi, Takeo; Kawasaki, Kazuhiro; Nakagawa, Takeo**
$MoSi_2$ infrared light source.—73-05270; 73-15966
**Kawaguchi, Yoshiaki** See Yamade, Yoshiaki
**Kawahara, Akihiko** See Katsuki, Hiroaki
**Kawahara, Akihiko; Ichinose, Hiromichi; Furuta, Sachiko; Katsuki, Hiroaki**
Preparation of porous alumina ceramics by using the gelation of ammonium alginate.—73-13199
**Kawahara, Akihiko; Ichinose, Hiromichi; Furuta, Sachiko**
Preparation of porous alumina ceramics by using the gelation of ammonium alginate.—73-05979
**Kawahara, Hideo** See Goda, Takuji; Ino, Juichi; Sakai, Yasuto
**Kawahara, Nobuaki** See Enami, Hiroyoshi; Hoshizaki, Hiroki
**Kawai, Chihiro; Igarashi, Tadashi**
Carbon-fiber-reinforced composite material having a gradient carbide coating.—73-05289
**Kawai, Chihiro; Miyake, Masaya**
Fabrication and characterization of CVD-deposited TiC-SiC composites.—73-02819
**Kawai, Chihiro; Suzuki, Kenzi; Tanaka, Keisuke**
Fracture toughness of TiC-SiC composites fabricated by CVD and the mechanism of toughening.—73-03302; Fracture toughness of TiC-SiC composites fabricated by CVD and the mechanism of toughening.—73-13541
**Kawai, Chihiro; Teraki, Junichi; Hirano, Tohru; Nomura, Toshio**
Fabrication of a functionally gradient material of TiC-SiC system by chemical vapor deposition.—73-02822; Fabrication of a functionally gradient material of TiC-SiC system by chemical vapor deposition.—73-13052
**Kawai, Chihiro; Wakamatsu, S.; Sakagami, Seigou; Nomura, Toshio**
Fabrication of continuous-fiber-reinforced SiC matrix composites with gradient compositions.—73-09130
**Kawai, Hidekazu** See Kasai, Norifumi
**Kawai, Kazuyuki; Goto, Kazumasa; Shirai, Takayuki**
Cement-containing ceramic articles and method for production thereof.—73-12344
**Kawai, Kazuyuki; Ishida, Hideki; Otsuka, Nozomu**
Thermal expansion of ceramic for building materials.—73-04050; Thermal expansion of ceramic for building materials.—73-14670
**Kawai, Kenji** See Tawaza, Eiichi; Teranishi, Shuji
**Kawai, Kenji; Tazawa, Eiichi; Inoue, Hideshi**
Ion diffusivity in cement hydrates containing silicious mineral admixtures.—73-10021
**Kawai, Koh** See Kamata, Kiichiro
**Kawai, M.** See Hara, Shiro
**Kawai, Maki** See Hikita, Tokihisa; Watanabe, Shunji
**Kawai, Maki; Liu, Zi-Yuan; Sekine, Rika; Koinuma, Hideomi**
Transport properties of $SrCuO_2$ thin films with artificially modulated structures.—73-15373
**Kawai, S.** See Tabata, Hitoshi
**Kawai, S.; Kanai, M.; Matsumoto, T.; Kawai, Tomoji**
Layer-by-layer growth of oxide superconductor thin films by laser MBE and their superconducting characteristics.—73-15533
**Kawai, Shichio** See Nishiyama, Yukio
**Kawai, Susumu; Motoyama, Muneyuki**
Effects of zirconia on crystallization of glasses with lepidolite composition.—73-14370
**Kawai, T.** See Lopez, M.
**Kawai, T.; Yonezu, H.; Ogasawara, Y.; Saito, D.; Pak, K.**
Growth mechanism of $(InAs)_m(GaAs)_n$ strained short-period superlattices grown by molecular beam epitaxy.—73-11229
**Kawai, Tadashi** See Kato, Kiyoshi
**Kawai, Tomoji** See Kawai, S.; Matsubara, Ichiro; Nishiyama, Yukio; Tabata, Hitoshi
**Kawai, Tomoji**
Atomic layer and unit-cell layer growth of superconducting thin films by laser molecular beam epitaxy.—73-11691
**Kawakami, Makoto; Tokuda, Hiroshi; Kagaya, Makoto; Kobayashi, Tadashi; Hayashi, Toshio**
Mechanical behavior of silica fume mortar slabs reinforced by AFRP and CFRP rods.—73-10035
**Kawakami, Masayuki; Watarizaki, Jiro**
$^{59}Co$ NMR from magnetic domains in $Y_2Co_{14}B$ and $Gd_2Co_{14}B$.—73-11648
**Kawakami, S.** See Sato, Takashi
**Kawakami, Takamasa** See Wakai, Fumihiro
**Kawakami, Tatsuo** See Mori, Junichirou; Sakaguchi, Masayuki; Tsunetsugu, Kunio; Uzaki, Nobuyuki
**Kawakami, Y.** See Ichino, K.
**Kawalek, Marek** See Datka, Jerzy
**Kawamata, K.** See Sato, Sennosuka
**Kawamata, Shuichi** See Ohta, Hitoshi
**Kawaminami, Masaru** See Hirose, Toshikazu
**Kawamoto, Hiroshi** See Kishimoto, Hidehiro; Ueno, Akira
**Kawamoto, Kohshi; Osanaga, Tadahiro**
Moldable composition, process for producing sintered body therefrom, and products from [the] same.—73-10333
**Kawamoto, M.; Ishizaki, Kozo; Ishizaki, Chanel**
Temperature-programmed desorption [TPD] as a surface characterization method of ceramic powders.—73-08448
**Kawamoto, S.; Tanahashi, T.**
Applications of high-speed GSMAC-FEM to glass manufacture.—73-14323
**Kawamoto, Y.** See Kanno, R.; Takahashi, M.
**Kawamoto, Y.; Kanno, R.; Takahashi, M.; Tanabe, S.; Hirao, H.; Soga, Naohiro**
Compositional dependence of upconversion fluorescence of $Er^{3+}$ ions in alkali and alkaline-earth fluorozirconate glasses.—73-14147
**Kawamoto, Y.; Kanno, R.; Umetani, Yukihiro; Tohji, K.; Morikawa, H.**
Zr-EXAFS study of fluoride ion-conducting $ZrF_4$-$BaF_2$-CsF glasses.—73-01042
**Kawamoto, Y.; Kanno, R.**
Development of heavy-metal fluorides with electrofunctionality by reactions under fluorine or hydrogen-fluoride gas atmosphere.—73-14688
**Kawamoto, Yukari** See Toriyama, Motohiro; Yokogawa, Yoshiyuki
**Kawamura, H.; Kita, Hideki**
Change of fracture toughness and strength caused by thermal shock for $Si_3N_4$ with microcrack.—73-06339
**Kawamura, K.** See Kobayashi, M.; Unuma, Hidero
**Kawamura, Katsuyuki**
Structural analysis of new glass—computer-aided modeling of glass structure.—73-03812
**Kawamura, Kazuhisa** See Ota, Rikuo
**Kawamura, Kazuro; Koga, Jyoji; Iwata, Tomio; Yamanaka, S.; Ono, M.**
SiC/C composite sheets produced from polycarbosilane/resin/binder mixtures.—73-13252
**Kawamura, Kazuro; Koga, Jyoji; Iwata, Tomio**
SiC/C composite sheets produced from polycarbosilane/resin/binder mixtures.—73-06040
**Kawamura, Kazuro**
Bending strength of SiC/$Al_2O_3$ composite sheet obtained from polycarbosilane/alumina powder/binder mixture.—73-03242
**Kawamura, M.** See Ohtake, Takeshi; Sano, T.
**Kawamura, Masashi** See Hiraishi, Shinya

**Kawamura, Mitsunori** See Chatterji, Susanta; Mihara, Morihiro; Penev, Dragomir; Taguchi, M.; Taguchi, T.

**Kawamura, Mitsunori; Igarashi, Shinichi**
Several methods to investigate the microstructural features of the interfacial zone between a steel fiber and cement paste matrix.—73-10150

**Kawamura, Mitsunori; Torii, Kazuyuki; Yamada, Masahiro; Chatterji, Susanta**
Deterioration of cement mortars immersed in NaCl and $CaCl_2$ solution.—73-09883

**Kawamura, Osamu** See Sato, Katsuaki

**Kawamura, Osamu; Murata, Shigeo**
Synchronizer ring.—73-03703

**Kawamura, S.** See Yokogawa, Yoshiyuki

**Kawamura, Yuichi** See Kagawa, Toshiaki

**Kawamura, Yuichi; Asai, Hiromitsu; Matsuo, Shinji; Amano, C.**
InGaAs-InAlAs multiple quantum well optical bistable devices using the resonant tunneling effect.—73-01213

**Kawanishi, H.** See Ohsawa, Fumiyuki

**Kawanishi, H.; Sugimoto, Y.; Akita, K.**
Patterning of GaAs by in situ electron-beam lithography toward nanometer-scale structures.—73-15084

**Kawanishi, Takuya** See Nakamura, Shizuo

**Kawanishi, Yoshitaka** See Katsuda, Shinichi

**Kawano, Fusuo; Yamoto, Isao; Nomura, Junji; Yoshitomi, J.; Ikesue, Akio; Shikano, Hiroshi**
CaO clinker with improved antihydration property.—73-00782

**Kawano, H.; Morii, K.; Nakayama, Y.**
Effects of crystallization on structural and dielectric properties of thin amorphous films of $(1-x)BaTiO_3$-$xSrTiO_3$ (x=0–0.5, 1).—73-02591

**Kawano, K.** See Tanaka, Katsumi

**Kawano, Kenji** See Kato, Kazutoshi; Watanabe, Isao

**Kawano, Kenji; Wakita, Koichi; Mitomi, Osamu; Kotaka, I.; Naganuma, M.**
Design of InGaAs-InAlAs multiple-quantum-well optical modulators.—73-01124

**Kawano, Motorhanu; Tomita, Katsutoshi**
Formation of allophane and beidellite during hydrothermal alteration of volcanic glass below 200°C.—73-10376

**Kawano, T.** See Aoki, Masahiro

**Kawano, Takashi** See Hirao, Kazuyuki; Ikemachi, Takaaki; Munakata, F.

**Kawanobe, Akio** See Kojima, Yoshiyuki

**Kawarada, Masaru** See Ohnishi, Kazumasa

**Kawarada, Motonobu; Kurihara, Kazuaki; Sasaki, Kenichi; Teshima, Akitomo; Koshino, Nagaaki**
Method for forming diamond films by plasma jet CVD.—73-05311

**Kawasaki, Akira** See Li, Jing-Feng; Watanabe, Ryuzo

**Kawasaki, Akira; Watanabe, Ryuzo**
Thermal shock fracture mechanism of metal/ceramic functionally gradient materials.—73-03654

**Kawasaki, H.** See Yoshimatsu, Hideyuki

**Kawasaki, Hisao** See Olowplafe, J. O.

**Kawasaki, Hisato; Yoshitomi, J.; Shikano, Hiroshi; Hayashi, Tsuyoshi**
Surface treatment of graphite for monolithic refractories.—73-00874

**Kawasaki, Kazuhiko** See Yu, Zhong-Da

**Kawasaki, Kazuhiro** See Kawaguchi, Takeo

**Kawasaki, Kenji** See Taketomi, Susamu

**Kawasaki, Kiyoshi** See Nakamota, Ichiro

**Kawasaki, M.** See Vandentop, G. J.

**Kawasaki, M.; Chaudhari, Praveen; Gupta, A.**
*1/f* noise in $YBa_2Cu_3O_{7-\delta}$ superconducting bicrystal grain-boundary junctions.—73-11813

**Kawasaki, Masashi; Gong, Jian-Ping; Nantoh, Masashi; Hasegawa, Tetsuya; Kitazawa, Koichi; Kumagai, Masao**
Preparation and nanoscale characterization of highly stable $YBa_2Cu_3O_{7-\delta}$ thin films.—73-15586

**Kawasaki, Morio** See Kasai, Norifumi

**Kawasaki, Mutsurou** See Zhang, Yao

**Kawasaki, Shinji** See Fukui, Takehisa

**Kawasaki, Tadashi** See Sasaki, Kazunori

**Kawase, R.**
Evaluation methods for thermal spray coatings.—73-08399

**Kawashima, Etsuya** See Anzai, Masahiro

**Kawashima, Hisakazu** See Miyahara, Mitsuo

**Kawashima, I.** See Akazawa, H.; Takahashi, Junichi

**Kawashima, Kazuo** See Taruta, Seiichi

**Kawashima, Riki; Sasaki, Takahiro; Isoda, Hiroshi**
Measurements on temperature and frequency variation of ac conductivity in a metastable state of europium nitrate crystal.—73-08914

**Kawashima, Takeshi; Okamoto, Hiromi; Yamamoto, Hideharu; Kitamura, A.**
Grain size dependence of the fracture toughness of silicon nitride ceramics.—73-06446

**Kawashima, Yasuyuki** See Sakata, Hironobu

**Kawashimo, Y.** See Kajioka, H.

**Kawata, Noriyuki** See Monji, Hideto

**Kawata, Yousuke** See Miyoshi, Shunzou

**Kawate, Yoshio** See Egi, Toshio; Fukumoto, Yoshito; Masuda, Yoshio

**Kawazoe, Hiroshi** See Awazu, Koichi; Hashimoto, Takuya

**Kay, John F.**
Plasma-sprayed hydroxyapatite coatings for enhanced biocompatibility.—73-13880

**Kay, John** See Baines, Tim

**Kaya, Hiroshi** See Matsuo, Hideki

**Kaya, Kiyoshi** See Chen, Xian-Tong

**Kayaba, Masakazu** See Fujiwara, Tadashi

**Kaye, B. H.**
Microencapsulation: the creation of synthetic fine particles with specified properties.—73-13135

**Kayser, O.** See Maassen, M.

**Kaysser, W. A.** See Gutmanas, E. Y.; Mogilevsky, P.; Schneider, H.

**Kayumov, R. T.; Manevich, V. E.**
Mechanism of the drying process of raw materials for a glass batch.—73-07148

**Kayushkin, V.** See Eliseev, J.

**Kazakov, G. T.** See Vysotskii, S. L.

**Kazakov, I. P.** See Bagulya, A. V.

**Kazakov, S. V.** See Borisovskii, E. S.; Rabinovich, A. S.

**Kazakov, S. V.; Kolynina, V. I.; Litovskii, E. Ya.**
Structure and electrical conductivity of polycrystalline silicon carbide.—73-02692

**Kazakov, S. V.; Rabinovich, A. S.; Kheifets, A. S.**
Fusion of silicon carbide products with aluminum during the siliconizing (firing) process.—73-03593

**Kazakov, V. A.** See Bukharaev, A. A.

**Kazakov, V. N.; Khripin, V. D.; Kleandrov, T. N.**
Cleaning gases from polishing crystal glass components.—73-00597

**Kazakova, L. P.; Lebedev, E. A.; Isaev, A. I.; Mekhtieva, S. I.; Zaharova, N. B.; Yatlinko, I. I.**
Influence of halogen impurities of charge transport in glassy Se-As semiconductors.—73-14981

**Kazansky, P. R.; Hultman, L.; Ivanov, I. P.; Sundgren, J. E.**
Gas porosity formation in epitaxial TiN films deposited by reactive magnetron sputtering in mixed $Ar/N_2$ discharges.—73-09455

**Kazantsev, A. B.; Larionov, V. R.; Rumyantsev, V. D.;**

**Tanklevskaya, E. M.; Khvostikov, V. P.**
Buried stripe AlGaAs heterolasers fabricated by one-stage LPE.—73-01087

**Kazantsev, V. V.** See Kashkina, T. V.

**Kazantseva, I. A.** See Panova, T. I.

**Kazantseva, S. I.; Smelkova, A. V.; Korneev, B. P.**
Asbestos cement products with protective and decorative coatings based on waste-diluted painting compositions.—73-13679

**Kazaoui, S.; Ravez, J.**
Dielectric relaxation in $Ba(Ti_{0.8}Zr_{0.2})O_3$ ceramics prepared from sol-gel and solid-state reaction powders.—73-01401

**Kazei, Z. A.; Kolmakova, N. P.**
ΔE effect in rare-earth phosphates $RPO_4$.—73-16438

**Kazel, Z. A.** See Vasil'ev, A. V.

**Kazeoka, H.** See Yajima, T.

**Kazikaev, D. M.; Miroshnichenko, I. I.; Potapenko, A. N.**
Solid-phase reaction for preparing strong magnetic ferrites by pulsed loading.—73-04652

**Kazmar, Theodore R.**
Low-frequency sonar projector and method.—73-01056

**Kazmerski, L. L.** See Abou-Elfotouh, Fouad A.

**Kazmierski, Christophe** See Blez, Monique

**Kazuchits, N. M.** See Brinkevich, D. I.

**Ke, Chang-Ming** See Li, Nan

**Keane, P. M.; Ibers, J. A.**
Synthesis, structure, and physical properties of the new group IV ternary tellurides, $Cu_2MTe_3$ (M=Ti, Zr, Hf).—73-02506

**Keating, Kenneth B.; The, Stephens S.**
Process for making oxide superconducting films by pulsed excimer laser ablation.—73-11640

**Kechouane, M.; Beldi, N.; Mohammed-Brahim, T.; L'Haridon, H.; Salvi, M.; Gauneau, M.**
1.54-μm photoluminescence of erbium-implanted hydrogenated amorphous silicon.—73-04422

**Kechouane, M.; L'Haridon, H.; Salvi, M.; Favenec, P. N.; Gauneau, M.; Guilloux-Viry, M.**
Crystalline characterization by Rutherford backscattering spectrometry and electron channeling of in situ grown $YBa_2Cu_3O_7$ thin films deposited on (100)MgO by dc sputtering or laser ablation.—73-11717

**Keck, E.**
AKW kaolins and feldspars for the {European} ceramic industry.—73-01977

**Keck, K.** See Zimmermann, U.

**Kecskes, Laszlo J.; Niiler, Andrus; Kottke, Thomas**
Precursor morphology effects in combustion-synthesized and dynamically consolidated titanium carbide and titanium boride.—73-02929

**Keddie, Joseph L.** See Giannelis, Emmanuel P.

**Keddie, Joseph L.; Braun, Paul V.; Giannelis, Emmanuel P.**
Interrelationship between densification, crystallization, and chemical evolution in sol-gel titania thin films.—73-13338

**Keeble, D. J.** See Umlor, M. T.

**Keefe, B. P.**
Advantages of external material recirculation in vertical roller mills.—73-12013

**Keeffe, M. E.** See Umbach, C. C.

**Keegan, Allen J.**
How to avoid thermocouple hazards.—73-12146

**Keeley, A. M.**
Interpreting the results of 3-D glass flow calculations.—73-00648

**Keem, J. E.** See Hopple, G. B.

**Keen, D. A.** See Hull, S.

**Kehl, Randall J.; McKay, John P.; Spiro, Clifford L.**
Abrasion protective and thermal dissipative coating for jet engine components leading edges.—73-10299

**Keiji, Tsunetomo** See Nasu, Hiroyuki

**Keilmann, F.** See Barth, K.-L.

**Keiner, C.** See Wirner, C.

**Keiren, G.** See Munz, W.-D.

**Keishner, Mark J.** See Stout, Phillip J.

**Keishs, Yu. Ya.** See Chekhovskii, V. G.; Kreitsberga, V. Z.

**Keister, Timothy**
How to control oil/grease in the effluent from glass container plants.—73-03850

**Keith, Vepan** See Hussain, M. Sakhawat

**Kelzer, Klaas** See Kumar, Krishnankutty-Nair P.

**Kelires, P. C.; Denteneer, P. J. H.**
Theory of electronic properties of amorphous silicon-carbon alloys: effects of short-range disorders.—73-16616

**Kelkar, Ajit D.** See Sankar, Jagannathan; Vaidyanathan, K. Ranji

**Kelkar, G. P.; Carim, A. H.; Spear, Karl E.**
Toward an understanding of the reaction sequences in brazed joints: investigation of the Ti-Cu-O ternary at 945°C.—73-00273

**Kelkar, G. P.; Carim, A. H.**
Microstructural study of alumina brazed with a copper-nickel-zirconium alloy.—73-03619

**Kelkar, M.** See Phelan, P. E.

**Kell, K.-J.** See Aben, H.

**Keller, A.** See Weisweiler, Werner

**Keller, Georges W.** See Fridez, Jean-Daniel

**Keller, H.** See Lee, S. L.

**Keller, J.** See Hastreiter, G.

**Keller, Joseph** See Smith, Peter A.

**Keller, K.** See Fett, Theo

**Keller, Kristin A.** See Moore, Edmund H.

**Keller, Rene**
Plunger mechanism with a Hall sensor movement detection device for a glassware forming machine.—73-15773

**Kelley, Kurtis C.** See Dam, Chuong Q.

**Kelley, R. J.** See Rao, S. M.

**Kelley, R. J.; Ma, Jai; Margaritondo, G.; Omelllion, M.**
Symmetry of the superconducting order parameter in $Bi_2Sr_2CaCu_2O_x$.—73-11921

**Kellie, J. L. F.** See Kirk, N. B.

**Kellman, Cheri**
How and why of chemically strengthened glass.—73-07139

**Kelly, B. E.** See King, Wayne E.

**Kelly, C. Michael; Garg, Diwakar; Dyer, Paul N.**
Kinetics of chemical vapor deposition of tungsten carbide.—73-13110

**Kelly, J. J.** See Meulenkamp, E. A.; Oskam, G.

**Kelly, J.** See Malghan, Subhas G.

**Kelly, M.** See Garriga, M.; Tanaka, Yusuke

**Kelly, Michael A.** See Olson, Darin S.

**Kelly, P. V.** See Lynch, S.

**Kelly, Timothy L.** See Hashemi, Amin H.

**Kelly, William**
Correlation of physical properties of casting kaolins.—73-07240

**Kelman, Josh; Hames, Robert**
Method of forming a preform by precoating glass fibers prior to chopping and preforming.—73-14552

**Kelnberger, A.** See Esser, N.; Richter, W.

**Kelsey, J. E.** See Chen, Ling

**Kelsey, Paul V.**
Process for preparing self-supporting ceramic composite bodies and bodies produced thereby.—73-10341

**Kelton, K. F.**
Numerical model for isothermal and nonisothermal crystallization of liquids and glasses.—73-14447

**Kembaiyan, K. T.** See Keshavan, Madapusi K.

**Kemmerer, P. Jeffrey**
Shell scanning systems improve plant operations.—73-05086

**Kemner, Carl A.** See Livingston, Jeffrey A.

**Kemp, Ottfried** See Leweringhaus, Manfred

**Kenan, Wilfred M.**
Graphite, natural and synthetic particles.—73-12277

**Kendall, J.** See Villeneuve, D.

**Kendall, Kevin** See Alford, Neil McN.; Clegg, William J.

**Kendall, Kevin**
Fundamentals of ceramic processing.—73-04924

**Kendall, P. C.** See Benson, T. M.

**Kendelewicz, T.** See Green, A. M.; Herrera-Gomez, A.; Wolcik, J. C.

**Kendelewicz, T.; Miyano, K. E.; Meissner, P. L.; Cao, R.; Spicer, W. E.**
Photoemission study of the annealed Pd/GaAs(110) interface.—73-01275

**Kendelewicz, T.; Wolcik, J. C.; Herrera-Gomez, A.; Miyano, K. E.; Cowan, P. L.; Karlin, B. A.**
X-ray standing wave study of the Sb/GaAs(110) interface structure.—73-07866

**Kendrick, J. L.** See Senior, S. A.

**Kendziora, C.** See Leach, D. H.; Mandrus, D.

**Kenj, H.; Hoding, Thomas; Storr, Manfred**
Ir investigation of mixed-layer minerals from Seilitz.—73-01983

**Kenji, Ohta** See Junji, Hirokane

**Kenkare, Prashant** See Pfiester, James R.

**Kennard, Mark A.** See Song, Y.-Q.

**Kennedy, Brendan J.** See Gokagac, Gulsun

**Kennedy, Brendan J.**
Electrochemical and surface properties of a metal carbonitride-oxide composite electrode.—73-00960

**Kennedy, C. J.** See Hovis, F. E.

**Kennedy, Christopher R.** See Aghajanian, Michael K.; Lesher, H. D.

**Kennedy, Christopher R.; Urquhart, Andrew W.; White, Danny R.; Newkirk, Marc S.; Ramberg, Jeffrey R.**
Method for producing self-supporting ceramic bodies with graded properties.—73-03691

**Kennedy, Christopher R.**
Coated ceramic filler materials.—73-05206

**Kennedy, Daniel T.** See Wang, Da-Yu

**Kennedy, Eric M.** See Yong, You-Sing

**Kennedy, J. J.** See Vydyanath, H. R.

**Kennedy, John H.; Schaupp, Christopher; Eckert, Hellmut; Ribes, M.**
Aluminum substitution in the glass system $0.33[(1-x)P_2S_5$-$xAl_2S_3]$-$0.67Li_2S$ $[0\leq x\leq 0.5]$.—73-00935

**Kennedy, Robin J.**
New laser ablation geometry for the production of smooth thin single-layer $YBa_2Cu_3O_{7-x}$ and multilayer $YBa_2Cu_3O_{7-x}/PrBa_2Cu_3O_{7-x}$ films.—73-15566

**Kennedy, T. A.** See Molnar, B.

**Kennefick, C. M.; Raj, Rishi**
Creep fracture experiments with planar sapphire-copper interfaces stressed in tension.—73-13815

**Kenny, Martyn B.; Sing, Kenneth S. W.; Theocharis, Charles R.**
Adsorptive properties and stability of VPI-5, a large-pore molecular sieve.—73-08806
**Kentjana, M.** See Homma, H.
**Kenway, Philip R.** See Hoche, Thomas
**Kenway, Philip R.**
Calculated stacking-fault energies in α-$Al_2O_3$.—73-08559; Calculated structures and energies of grain boundaries in α-$Al_2O_3$.—73-05364
**Kenzer, D. S.** See Kordas, G.
**Kepert, C. J.** See Thompson, John G.
**Kepten, A.; Reisman, A.; Ray, M. A.; Smith, P. L.; Temple, D.; Tapp, F.**
Possible reaction of $WF_6$ with $SiO_2$ and $Si_3N_4$ at several temperatures.—73-03184
**Ker, H.-L.** See Schilling, C. H.
**Ker, M. K.** See Boettger, J. M.
**Keramidas, V. G.** See Ghonge, Subodh G.
**Kerans, Ronald J.; Jero, Paul D.; Parthasarathy, Triplicane A.; Chatterjee, Amit**
Fracture and sliding in the fiber-matrix interface in ceramic composites.—73-06427
**Kerans, Ronald J.; Parthasarathy, Triplicane A.; Jero, Paul D.; Chatterjee, Amit; Pagano, N. J.**
Fracture and sliding in the fiber/matrix interface and failure processes in ceramic composites.—73-13534
**Kerber, A.** See Hofmann, Heinrich
**Kerch, Helen M.** See Li, Zhao-Hui; Smith, Peter A.
**Kerene, Ya. K.; Eldukyavichyus, K. K.; Grigonene, K. M.**
Brittleness of mineral wool fibers.—73-02731
**Kerherve, F.** See Rano, L.
**Kerimova, T. G.; Guseinov, T. D.; Guliev, R. A.; Mamedova, I. A.; Babaev, T. R.**
Optical properties of $CdGa_2S_{4x}Se_{4(1-x)}$.—**Kerko, David J.; Kozlowski, Theodore R.; Morgan, David W.; Winer, Theresa A.**
Slow fading photochromic glass.—73-03967
**Kerko, David J.; Lapp, Josef C.; Morgan, David W.**
Fast strengthening glass lenses.—73-03918
**Kerko, David J.; Morgan, David W.**
Multipurpose photochromic brown glasses.—73-00750; Neutral, ultraviolet-absorbing, fixed tint lenses.—73-03955
**Kermister, G.** See Zhang, X. D.
**Kern, R. S.** See Sumakeris, J.
**Kerr, D.** See Bretagnon, T.; Dannefaer, S.
**Kerr, Ian**
Fine and ultrafine milling.—73-04921
**Kerr, James M.** See Divecha, Amarnath P.
**Kerschner, M.; Mommsen, H.; Beier, T.**
Neutron activation of bird bowls and related archaic ceramics from Miletus.—73-06617
**Kershaw, R.** See Albert, M.
**Kerslick, G. S.** See Ivers, J. D.; Schachter, L.
**Kerstan, W.**
Effect of SiC contamination in glazes: blister formation in pink glazes.—73-10830
**Kersten, Ralf T.; Otto, Jugen; Paquet, Volker**
Thick coatings of doped synthetic silica glass by plasma impulse CVD.—73-00713
**Kersting, K. B.; Jeitschko, W.**
$BaNb_{10}SiO_{19}$: a complex oxide with a variety of different niobium-niobium interactions.—73-02148
**Kertman, A. V.** See Andreev, O. V.
**Kervadec, Dominique; Chermant, Jean-Louis**
Aspects of the morphology and creep behavior of a unidirectional $SiC_f$-MLAS material.—73-06326
**Kerwin, David B.; Galeener, Frank L.**
Energy dependence of *E′* spin production in X-irradiated vitreous $SiO_2$.—73-06910
**Kesan, V. P.** See Grutzmacher, D. A.
**Kesan, V. P.; Bassous, E.; Munguia, P.; Pesarcik, S. F.; Freeman, M.; Iyer, S. S.**
Electroluminescence and photoluminescence from microporous silicon *p-n* junctions.—73-07489
**Keshavan, Madapusi K.** See Liang, Dah-Ben
**Keshavan, Madapusi K.; Kembaiyan, K. T.**
Wear characterization and practical applications of thermal spray coatings in drilling applications.—73-06876
**Kesmodel, L. L.** See Clark, G. W.
**Keson, V. P.** See Gennser, Ulf
**Kessler, H.** See Hoffner, F. Marcucilli; Merrouche, A.
**Kessler, V. G.** See Yanovskaya, M. I.
**Kestigian, M.** See Tobin, S. P.
**Keswani, Santosh T.** See King, Alan G.
**Keszler, D. A.** See Smith, R. W.; Thompson, P. D.
**Ketata, K.; Debrie, R.; Ketata, M.**
Rapid thermal annealing of magnesium-implanted GaAs-GaAlAs heterostructures experimental and simulated distributions.—73-04462
**Ketata, M.** See Ketata, K.
**Ketcham, Thomas D.** See Aitken, Bruce G.
**Ketchik, S. V.** See Plyasova, L. M.
**Ketskalo, V. M.** See Kabyshev, A. V.
**Ketterson, A. A.** See Agrawala, S.; Ballegeer, D. G.
**Keulen, N. M.; Dissel, M.**
Temperature dependence of indentation cracking in soda-lime-silicate glass.—73-10488
**Keulen, N. M.**
Surface layer properties of soda-lime-silicate glass with various water contents.—73-14287
**Keur, W. C.** See Terheijden, J.
**Kevan, Larry** See Bensebaa, Farid; Bonvalot, Marceline; Shrivastava, Keshav N.; Xu, Bo
**Kevan, T.** See Lee, Chui-Wee
**Kevar, S. D.** See Arekat, S.
**Kevorkov, A. M.** See Bagdasarov, Kh. S.
**Key, J. F.** See McHugh, K. M.
**Keyes, B. M.** See Sheldon, P.
**Keyes, Robert W.**
Future of the transistor.—73-07540
**Kezhenis, A.** See Pechelyunaite, A.
**Khabarova, A. I.** See Klimashina, E. V.
**Khabibullaev, P. K.** See Aliev, A. E.
**Khabibullaev, P. K.; Tavshunskii, G. A.; Glebov, A. P.; Demina, V. M.; Kondrat'ev, Yu. N.; Kurkin, V. P.**
Action of γ-irradiation on light attenuation in waveguides made of multicomponent glass.—73-14130
**Khabibullaev, P. K.; Tavshunskii, G. A.; Yaskolko, E. V.**
Effect of radiation on longevity of light guides.—73-00331; Effect of radiation treatment on durability of light guides.—73-00461
**Khabi, H.** See Eggenkamp, M. E. W.
**Khachaturyan, A. G.** See Semenovskaya, S.; Wang, Yun-Zhi
**Khadilkar, S. A.** See Gore, V. K.; Krishnan, N. A.
**Khadilkar, S. A.; Lele, P. G.; Page, C. H.**
Application feasibility of a calcination catalyst in cement manufacture—a case study.—73-09817; Clinkerization through melting—a new approach.—73-09856
**Khaibullin, I. B.** See Ibragimova, M. I.
**Khal'baeva, K. M.** See Mokhosoev, M. V.
**Khalameida, D. D.** See Gritsyuk, B. N.
**Khaldei, T. V.** See Volchek, I. Z.
**Khalifa, F.** See Bolotov, A. M.
**Khalil, Diaa; Tedjini, Smail**
Electrooptic switching structure on III-V semiconductors using the coherent coupling of radiation modes.—73-14884
**Khalilev, V. D.** See Mitrofanov, V. V.; Muromtseva, M. E.
**Khalilev, V. D.; Amandikov, M. A.; Chekhovskii, V. G.**
Vitrification and properties of the glass system $Zn_{0.5}Cd_{0.5}B_2O_4$-La$(BO_2)_3$-$YF_3$.—73-14124
**Khalilev, V. D.; Chekhovskii, V. D.; Amandikov, M. A.**
Fluorine-containing lanthanum borate glasses colored by oxides of the *d* and *f* elements.—73-07130; Zirconium-containing fluorophosphate glasses colored with oxides of *d* and *f* elements.—73-07189; Conditions of fabrication and some properties of zirconium-containing fluorophosphate glasses.—73-00440; Conditions of synthesis and some properties of zirconium-containing fluorophosphate glasses.—73-00441
**Khalilev, V. D.; Chekhovskii, V. G.; Amandikov, M. A.; Ipatov, V. V.**
Glass crystallization of $Zn_{0.5}Cd_{0.5}B_2O_4$-La$(BO_2)_3$-$YF_3$ system.—73-13993
**Khalilov, S. Kh.** See Kyazym-Zade, A. G.
**Khaliq, Muhammad A.** See Brown, William D.
**Khalilulin, G. G.** See Garifullin, I. A.
**Khalyavin, E. A.** See Andrianov, D. G.
**Khamidov, M. M.** See Rizakhanov, M. A.
**Khamidov, Sh. R.** See Magrupov, M. A.
**Khan, A. Y.** See Malik, S.
**Khan, Abdus S.; Wright, Robert J.**
Method for protecting articles from hydrogen absorption by application of an alumina coating.—73-03692
**Khan, Ataullah** See Soroushian, Parviz
**Khan, B. Kh.** See Rastegaeva, G. G.
**Khan, D. C.** See Rao, G. Srinivasa; Singh, Sandeep
**Khan, J. A.; Butt, N. M.; Mahmood, A.**
Zero resistance of quenched $Bi_{1.5}Pb_{0.4}Sb_{0.1}Sr_2Ca_2Cu_3O_x$ at 140 K.—73-04828
**Khan, Jarnal**
Lapping and polishing process to achieve high-quality alumina surfaces for applications in device fabrication.—73-13113
**Khan, M. A.** See Krishnankutty, S.; Kuznia, J. N.
**Khan, M. N.; Al-Dallal, S.; Memon, A.; Ahmad, A.; Shah, S.**
Cation distribution investigation of the system $Li_{0.5}Fe_2Ga_{2.5-x}O_4$ by X-rays, electrical conductivity, and Mossbauer studies.—73-16045
**Khan, M. N.; Memon, A.; Al-Dallal, S.; Ahmed, Zahra**
Electrical, optical, and structural properties of binary semiconducting vanadate glasses containing rare-earth oxide.—73-14874
**Khan, M. S.; Ayers, M. E.**
Interrupted concrete curing.—73-00129
**Khan, Parwaiz A. A.; Paul, Anand J.**
High-speed joining of aluminum metal matrix composites using continuous wave and pulsed lasers.—73-00239
**Khan, Y.** See Abbas, Tahir
**Khan, Y.**
Structure and crystallization behavior of amorphous $Bi_{0.96}Pb_{0.24}SrCaCu_{1.4}O_{5+y}$ high-temperature superconductor material.—73-08212
**Khandelwal, Pramod K.**
Mechanical properties and NDE of a HIPed silicon nitride.—73-17380
**Khandl, V.** See Majling, Jan
**Khangaonkar, P. R.; Rahmat, Azmi; Jolly Kutty, K. G.**
Kinetic study of the hydrothermal reaction between lime and rice-husk-ash silica.—73-10023
**Khanna, B. N.** See Dwivedi, B. P.
**Khanna, Rita; Welberry, T. R.; Withers, R. L.**
Cation ordering and the stability of fluorite-related phases in $ZrO_2$-$Ln_{1.5}$ systems: a phase diagram simulation study using Monte Carlo methods.—73-08562
**Kharat, D. K.; Dhami, G. S.; Date, S. K.; Kulkarni, A. R.; Paulamer, R. D. A.**
Ac impedance spectroscopic characterization of 10 mol% MgO-doped ZnO varistors.—73-07376
**Kharat, D. K.; Dhami, G. S.; Date, S. K.**
Improvement in the performance parameters of ZnO-based varistors with 10 mol% MgO.—73-01194
**Kharchenko, M. V.** See Dotsenko, A. V.
**Kharchenko, N. F.** See Mil'ner, A. A.
**Kharchenko, T. D.** See Petrov, V. V.
**Kharchenko, V. A.** See Ivanov-Omskii, V. I.
**Kharchenkov, V. P.** See Golosovskii, I. V.
**Khare, Gyanesh P.; Williams, Hobert L.**
Preparation of shaped zirconia particles.—73-05239
**Kharlonovskii, A. V.** See Rykov, V. V.
**Kharitonov, F. Ya.** See Medvedovskii, E. Ya.
**Kharovsky, A. V.** See Konz, Flurin
**Kharroubi, M.** See Gillot, B.
**Kharshak, A. A.** See Chmel, A. E.
**Khasanova, I. A.** See Vladimirtsev, Yu. V.
**Khasanova, N. M.; Mukhutdinova, N. G.; Nizamutdinov, N. M.**
Characteristic surface and maximum invariant components of $B_{\Delta M}$ tensor of spin Hamiltonian of $Mn^{2+}$ ions in crystals of calcite, magnesite, and dolomite.—73-02159
**Khasieva, R. V.** See Berkovits, V. L.
**Khatir, S.; Romain, F.; Conflant, P.; Drache, M.; Tanguy, B.; Portier, J.**
Spectroscopic observations of temperature and composition effects on tellurium oxyhalide glasses.—73-10402
**Khattak, Chandra P.** See Schmid, Frederick
**Khattak, G. D.** See Hussain, M. Sakhawat
**Khattak, G. M.; Majid, J. M.; Scott, C. G.; Shaw, D.**
Spatial nonuniformity in Cd-annealed CdTe crystals.—73-11449
**Khawaja, E. E.; Bouamrane, F.; Hallak, A. B.; Daous, M. A.; Salim, M. A.**
Oxygen enrichment in zirconium oxide films.—73-06267
**Khawaja, E. E.; Hallak, A. B.; Salim, M. A.**
Surface segregation in sodium germanate glass containing cobalt.—73-00418
**Khazan, L. S.** See Klad'ko, V. P.
**Khazanov, E. N.** See Ivanov, S. N.; Vorotilova, L. S.
**Khazanov, V. E.** See Budov, V. V.; Stetsenko, V. Ya.
**Khazova, M. V.** See Kuchinskii, S. A.
**Kheifets, A. S.** See Kazakov, S. V.
**Khidirov, I.** See Yartys, V. A.
**Khidr, M. A.** See Abou, Sekkina M. M.
**Khil'tova, E. Yu.** See Nikitina, L. P.
**Khin, Y.** See Dugne, O.
**Khisina, N. P.; Khramov, D. A.; Kolosov, M. V.**
Products of low-temperature oxidation of olivine, $Mg_{1.78}Fe_{0.22}SiO_4$.—73-05461
**Khizhnyak, B. I.** See Bakshi, I. S.
**Khlopkin, M. N.; Toth, J.; Panova, G. Kh.; Zaitsev, R. O.; Babushkina, N. A.; Arnold, J. A.**
Thermoelectric power of $Pr_{2-y}Ce_yCuO_{4-\delta}$ [0.13<y<0.17] superconductors with various contents of Ce.—73-16636
**Khludkov, S. S.; Tolbanov, O. P.**
Mechanism of high-speed switching in GaAs structures with deep centers.—73-07665
**Khlyap, G. M.** See Andrukhiv, M. G.
**Khlystov, A. I.** See Koren'kova, S. F.
**Khlystov, A. S.** See Khrapunov, V. E.
**Khmelenko, T. P.** See Pitak, N. V.
**Khmelev, A. V.** See Aksenov, V. S.
**Khmelinina, A. B.** See Aleksandrov, A. S.
**Khobaib, M.** See Boyle, M.
**Khodakovskaya, R. Ya.** See Tulyaganov, D. U.
**Khodakovskaya, R. Ya.**
Internal stresses, structural defects, and mechanical properties of glass-ceramics.—73-14211
**Khodakovsky, M.**
Discreteness of high-strength state of glass.—73-14158
**Khodja, K. D.** See Berthier, S.
**Khodskii, L. G.** See Grozhik, V. A.; Kurakevich, L. A.
**Khodyashev, M. B.** See Onorin, S. A.
**Khoi, Nguyen-The** See Mac, W.
**Khokhlov, D. R.** See Akimov, B. A.; Belokon, S. A.
**Khokhlov, D. R.; Chesnokov, S. N.**
Relaxation of the delayed photoconductivity of $Pb_{1-x}Sn_xTe$:In alloys in an electric field.—73-04467
**Khokhlov, D. R.; Ivanchik, I. I.; De Visser, A.; Nikorich, A. V.**
Electron localization in $Pb_{1-x}Sn_xTe$(In) in high magnetic fields.—73-12795
**Khol'kin, A. I.** See Andrianova, T. N.
**Khomyakov, A. P.** See Genkina, E. A.; Rastsvetaeva, R. K.; Yamnova, N. A.
**Khonchik, I. V.; Drozd, V. I.; Alapin, B. G.**
New types of calcia mineralizers for silica brick production.—73-04011
**Khor, K.-A.** See Loh, N.-L.
**Khorosh, A. G.** See Brandt, N. B.
**Khoroshavin, L. V.; Perepelitsyn, V. A.**
Mechanical activation of periclase cements.—73-14603
**Khoroshun, L. P.** See Grigor'ev, O. N.
**Khramov, D. A.** See Bychkov, A. M.; Khisina, N. P.
**Khramova, L. V.** See Gritsenko, V. A.
**Khramtsov, V. A.** See Asatryan, G. R.
**Khranovskaya, T. M.** See Bevz, V. A.
**Khrapko, R. R.** See Biriukov, A. S.
**Khrapunov, V. E.; Spivak, M. M.; Spitsyn, V. A.; Khlystov, A. S.; Isakova, R. A.; Fedulov, I. O.**
Thermal behavior of arsenopyrite.—73-02522
**Khrenov, V. I.** See Krylov, V. N.
**Khripin, V. D.** See Kazakov, V. N.
**Khristova, I.** See Gyurov, G.
**Khristyuk, I. P.** See Kislov, B. I.
**Khromov, A. L.; Petrov, M. P.**
Hologram recording in GaAs through EL2 intracenter absorption.—73-01189
**Khrut'ba, V. A.** See Kolesnikova, R. N.
**Khudro, A. K.** See Zakharov, G. N.
**Khur, K. A.; Cheang, P.**
Characterization of plasma-sprayed hydroxyapatite powders and coatings.—73-09038
**Khushvakov, O. B.** See Vakhidov, Sh. A.
**Khusnutdinova, I. M.** See Nestertsov, A. I.
**Khutsishvili, A. N.; Bondarenko, E. I.; Ermolenko, Yu. E.**
Solution flow rate effects on the response time of selective electrodes having iodide and bromide functions.—73-14732
**Khuzhakulov, E. S.** See Mitrofanov, V. V.
**Khvostenko, N. I.** See Yakimenko, G. S.
**Khvostikov, V. P.** See Kazantsev, A. B.; Mintairov, A. M.
**Kiat, J. M.; Garnier, P.; Pinot, M.**
Neutron and X-ray Rietveld analysis of the three phases of lead orthovanadate $Pb_3V_2O_8$: importance of the electronic lone pairs in the martensitic transitions.—73-02342
**Kicevic, D.; Gasic, M.**
Hot-pressing of fused silica.—73-10550

**Kida, Michio; Arai, Yoshiaki; Ono, Naoki; Sahira, Kensho**
Apparatus for growing single crystals.—73-12340
**Kida, Minoru** See Nasu, Hiroyuki
**Kida, Tohru**
Process for producing titanium carbide whisker.—73-05330
**Kidder, J. N.** See Pearsall, T. P.
**Kido, Giyuu** See Koyano, Mikio
**Kido, N.** See Ishino, T.
**Kieda, Nobuo** See Funakubo, Hiroshi; Sakurai, Osamu; Wakiya, Naoki
**Kieda, Nobuo; Tanaka, Yuusuke; Ogura, Atsushi; Shinozaki, Kazuo; Mizutani, Nobuyasu**
Preparation of $BaTiO_3$ films by ICP flash evaporation.—73-05970; Preparation of $BaTiO_3$ films by ICP flash evaporation.—73-16917
**Kiefer, W.; Duroif, H.; Greulich, N.; Siebers, Friedrich**
Open pore sintered glasses and glass-ceramics: manufacture, properties, and applications.—73-14448
**Kieffer, J. C.** See El Khakani, M. A.
**Kieffer, John** See Freeman, S. A.; Masnik, John E.; Reardon, Brian J.
**Kielmeyer, William H.** See Olds, Leonard E.
**Kielski, Andrzej** See Mandecka-Kamien, Lucjana
**Kienow, Sigismund**
High strength, flexible ceramic materials with volumetric and shape stability on heating and cooling.—73-02014
**Kienzle, A.** See Riedel, R.
**Kiessler, Gonde; Korn, Dietmar; Elssner, Gerhard**
Metallographic and fracture surface investigations of metal-ceramic bicrystals.—73-06825
**Kiessling, B.** See Liebig, H.
**Kiessling, Uta; Claus, Jurgen; Borchardt, Gunter; Weber, Sylvain; Scherrer, Stanislas**
Oxygen tracer diffusion in lanthanum-doped single-crystal strontium titanate.—73-17090
**Kiggans, J. O.** See Tiegs, Terry N.
**Kiggans, J. O.; Tiegs, Terry N.; Kimrey, Hal D.; Holcombe, Cressie E.**
Processing of complex sintered reaction-bonded silicon nitride parts by microwave heating.—73-06000
**Kihara, Hiroshi** See Takahashi, Minoru
**Kiichi, T.** See Fujiyasu, H.
**Kijima, Kazunori** See Akimoto, Shigeru; Nishio, Toshiyuki
**Kijima, N.** See Xiang, X.-D.
**Kijlstra, Johan; Van Leeuwen, Herman P.; Lyklema, Johannes**
Low-frequency dielectric relaxation of hematite and silica sols.—73-08902
**Kikineshi, A.; Mishak, A.; Sterr, A.**
Structural stability of chalcogenide glasses in submicron multilayer films.—73-14100
**Kikkawa, Masahiro** See Iwasaki, Kazuharu
**Kikkawa, Shinichi** See Hashiguchi, Shoichi; Irisawa, Akinori
**Kikkawa, Shinichi; Er, Gang; Kato, Namie; Kanamaru, Fumikazu**
Superconductivity in the infinite layered $Sr_{1-x}La_xCuO_2$ and preparation of $CaCuO_2$ by sol-gel method.—73-01678
**Kikkawa, T.; Tanaka, H.; Komeno, J.**
Differences in Si doping efficiency in tertiarybutylarsine, monoethylarsine, and arsine for GaAs and AlGaAs grown by MOVPE.—73-14834
**Kikkawa, Takamoro; Endo, Nobuhiro**
Influence of hydrogen evolution from plasma-deposited silicon nitride on underlying aluminum deformations.—73-10237
**Kikkinides, Eustathios S.** See Baksh, M. Safdar A.
**Kikoin, K. A.; Mishchenko, A. S.**
Resonance states in the vibrational spectra of intermediate-valence semiconductors.—73-11420
**Kikuchi, Akihiko** See Kishino, Katsumi; Tachikawa, Kyoji
**Kikuchi, Hiroyuki** See Shiga, Shoji
**Kikuchi, K.; Yuhya, S.; Shiohara, Y.**
Large-area deposition of superconducting $YBa_2Cu_3O_x$ films by plasma flash evaporation.—73-08121
**Kikuchi, Makoto** See Yamamoto, Naoki
**Kikuchi, Masae** See Takei, Humihiko; Takahashi, Yutaka
**Kikuchi, Naoto; Sei, Tadanori; Tsuchiya, Toshio; Hayashi, Shigenobu; Hayamizu, Kikuko**
Preparation of cordierite ceramics by the sol-gel process and their properties.—73-09260; Preparation of cordierite ceramics by the sol-gel process and their properties.—73-16921
**Kikuchi, Shigeru; Yasutomi, Yoshiyuki; Arakawa, Hideo**
Reactivities of carbon fibers in hot-pressed carbon-fiber-reinforced SiC ceramic composite.—73-16971
**Kikuchi, Yoshio** See Nakamura, Makoto
**Kikugawa, Shinya** See Yaba, Susumu
**Kikukawa, Nobuyuki** See Maruyama, Katsuhisa
**Kikuta, Koichi** See Hirano, Shinichi
**Kikuta, T.** See Kasukawa, Akihiko; Ohkubo, Michio
**Kikuyama, Hiroshi** See Yokoe, Nobuo
**Kil, Deok-Sin** See Joo, Jae-Hyun
**Kilhenny, Brett** See Arthur, David J.
**Kilinski, Karl, II**
Teisias and Theodoros: East Boiotian potters.—73-10178
**Killian, Michael L.** See Dennis, Roger D.
**Kim, A. S.; Bengtsson, Stefan; Warren, R.**
Fracture strength testing of δ-alumina fibers with variable diameters and lengths.—73-09601
**Kim, B. S.** See Wolcik, J. C.
**Kim, B. Y.** See Barriere, A. S.
**Kim, B.-G.** See Inoue, A.
**Kim, B.-M.** See Chung, M.-S.
**Kim, B.-S.** See Kim, In-Sool
**Kim, B.-S.; Kim, In-Sool; Jang, Yun-Sik; Park, Hong-Chae; Oh, Ki-Dong**
High-strength $Si_3N_4$/SiC structural ceramics.—73-17341
**Kim, Bok-Hee** See Lee, Jeong-Hyung
**Kim, Bok-Hee; Ueda, Kazushige; Sakurai, Osamu; Mizutani, Nobuyasu**
Synthesis of $Pb(Mg_{1/3}Nb_{2/3})O_3$ powder by spray pyrolysis with ultrasonic atomizer.—73-03050; Synthesis of $Pb(Mg_{1/3}Nb_{2/3})O_3$ powder by the spray pyrolysis with ultrasonic atomizer.—73-13309
**Kim, Byeong-Yeol** See Bhan, Cheon-Su
**Kim, Byong-Ho** See Lee, Keun-Heon; Park, Jin-Chae; Yu, Young-Moon
**Kim, Byong-Ho; Moon, Sung-Hoon; Lee, Keun-Heon; Lim, Dae-Soon**
Synthesis and characterization of cordierite glass-ceramics for low-firing-temperature substrate: III, Fabrication substrates by tape casting process.—73-14738
**Kim, Byoung-Ho; Shin, Hyun-Ho; Lee, Jae-Young**
Synthesis of $Si_3N_4$ using residual organics trapped in the silica gel by sol-gel method.—73-03053
**Kim, Byoung-Ouk; Chung, Su-Jin**
Factors and mechanism of changes in the refractive index of sol-gel-derived $80TiO_2$·$20SiO_2$ films coated on soda-lime-silicate glass substrates.—73-13987
**Kim, Byung-Hoon** See Hwang, K.-S.; Jang, Hyun-M.
**Kim, Byung-Hoon; Na, Yong-Han**
Thermal spalling and resistance to slag attack in porous high-alumina ceramic (according to pore size).—73-12895
**Kim, Byung-Ick; Choi, Sang-Huel**
Effect on the forming property of ceramic powder by dynamic CIP.—73-02800
**Kim, Byung-Ick; Lee, Joong-Yoon; Choi, Sang-Huel**
Preparation of spherical monodispersed Y-doped $ZrO_2$ powders from metal alkoxide.—73-05981
**Kim, Byung-Kook; Park, Soon-Ja; Hamaguchi, Hiro-O.**
Raman spectrometric determination of the oxygen self-diffusion coefficients in oxides.—73-17097
**Kim, C.** See Qadri, S. B.
**Kim, C.-H.** See Park, S.-H.
**Kim, C.-H.; Choe, Byung-Doo; Lim, H.**
Charge trapping instabilities in a silicon-nitride/indium-phosphide metal-insulator-semiconductor structure [studied] by the constant-capacitance method.—73-11106
**Kim, C.-S.** See Back, Kyung-Seon
**Kim, Cha-Yeon** See Kim, T.-W.
**Kim, Chang-Dae** See Lee, Yang-Lae
**Kim, Chang-Eun** See Yang, Doo-Young
**Kim, Chang-Eun; Lee, Seung-Kyou**
Effects of the heavy metal ions on the hydration and microstructure of the cement paste.—73-13714
**Kim, Chang-Eun; Lim, Gwang-Il; Lee, Hae-Wook**
Preparation of seeded alumina from alkoxide: I, Powders.—73-02964; Preparation of seeded alumina from alkoxide: II, Sintering.—73-02965
**Kim, Chang-Jung; No, Kwang-Soo**
Impedance analyses of cooling-rate effects on the depletion layer of PTCR materials.—73-14972
**Kim, Chang-Yeoul** See Park, Yong-Wan
**Kim, Chang-Young; Cao, R.; Pianetta, P.**
Fermi-level variation on GaAs(110) surface with Sb overlayer studies with a photoelectron microscope.—73-11213
**Kim, Chang-Young; King, Paul L.; Pianetta, P.**
Fermi-level inhomogeneities on the GaAs(110) surface imaged with a photoelectron microscope.—73-07528
**Kim, Cheol-Young** See Cho, Jeong-Sik
**Kim, Cheol-Young; Lee, Ho-Pil**
Effect of modifiers in bioglass on the glass properties and the formation of apatite.—73-03724
**Kim, Chong-Don; Son, Yong-Bai; Joo, Gi-Tae; Jang, Sung-Du**
Low-temperature firing ceramic substrates for ic package.—73-00992
**Kim, Chong-Hee** See Kim, Do-Hyung; Kim, Tae-Song; Lee, Chae-Hyun; Lee, Seung-Kun; Seog, In-Sig
**Kim, Choon-Gon** See Heo, Jong
**Kim, Choon-Gon; Heo, Jong; Kim, You-Song**
Preparation and characteristics of infrared transmitting glasses in the $PbO-Bi_2O_3-Ga_2O_3$ system.—73-10471
**Kim, Chul-Koo** See Lee, Kyeong-Bock
**Kim, Chul-Sung; Ko, Heung-Moon; Lee, Woon-Hwa; Lee, Choong-Sub**
Site preference for $Zn^{2+}$ and $Ge^{4+}$ in mixed ferrite $Zn_xGe_{1-x}Fe_2O_4$.—73-04651
**Kim, D. E.; Suh, N. P.**
Frictional behavior of extremely smooth and hard solids.—73-09607
**Kim, D. H.** See Gray, K. E.
**Kim, D. K.** See Meyers, M. A.
**Kim, D. S.** See Vinattieri, A.
**Kim, D.-H.** See Jeong, Hong-Sik
**Kim, Dae-Joon** See Kim, Tae-Yun
**Kim, Dae-Joon; Becher, Paul F.; Hubbard, Camden R.**
Effect of $Nb_2O_5$ alloying on thermal expansion anisotropy of 2 mol% $Y_2O_3$-stabilized tetragonal $ZrO_2$.—73-02584
**Kim, Dae-Joon; Choi, Doo-Jin**
Effect of $Ta_2O_5$ alloying on low-temperature degradation of 3 mol% Y-TZP.—73-05385
**Kim, Dae-Joon; Hyun, Sang-Hoon; Kim, Seung-Goo; Yashima, Masatomo**
Effective ionic radius of $Y^{3+}$ determined from lattice parameters of fluorite-type $HfO_2$ and $ZrO_2$ solid solutions.—73-05387
**Kim, Dae-Joon; Kroeger, D. M.**
Optimization of critical current density of bulk YBCO superconductor prepared by coprecipitation in oxalic acid.—73-08154
**Kim, Dae-Joon; Lee, Hong-Lim; Jung, Hyung-Jin**
Effect of surface grinding on low-temperature degradation of 3Y-TZP.—73-09099
**Kim, Dae-Soo** See Kim, Kyung-Nam
**Kim, Dae-Weon** See Lee, Eung-Sang
**Kim, Dai-Ryong** See Choi, Byung-Jin
**Kim, Dal-Sik; Bouchalkha, Abdelatif; Jacob, J. M.; Zhou, J. F.; Song, J. J.; Klem, J. F.**
Confined-to-propagating transition of LO phonons in $GaAs/Al_xGa_{1-x}As$ superlattices observed by ps Raman scattering.—73-07422
**Kim, Dal-Sik; Shah, Jagdeep; Damen, T. C.; Schafer, W.; Jahnke, F.; Schmittrink, S.**
Unusually slow temporal evolution of femtosecond four-wave-mixing signals in intrinsic GaAs quantum wells: direct evidence for the dominance of interaction effects.—73-07854
**Kim, Deug-Joong** See Jeong, Soo-Jong
**Kim, Do-Hyung; Oh, Sung-Rok; Kim, Chong-Hee**
Densification and grain growth of alumina heated by microwave.—73-05732
**Kim, Doh-Yeon** See Kim, Nam-Kyun; Park, Hyoung-Joon
**Kim, Doh-Yeon; Wiederhorn, Sheldon M.; Hockey, Bernard J.; Handwerker, Carol A.; Blendell, John E.**
Stability and surface energies of wetted grain boundaries in aluminum oxide.—73-06284
**Kim, Dong-Gook; Lee, Hwan-Chul; Lee, Jai-Young**
Effect of reaction pressure on the nucleation behavior of diamond synthesized by hot-filament chemical vapor deposition.—73-16739
**Kim, Dong-Ho** See Kim, Seung-Jae
**Kim, Dong-Hwan** See Lee, Eung-Sang
**Kim, Dong-Pil** See Yoon, Ki-Hyun
**Kim, Dong-Pyo; Economy, J.**
Application of a polymeric boron nitride precursor as a matrix in carbon fibers.—73-09019
**Kim, Dong-Sang; Hrma, Pavel; Smith, Donald E.; Schweiger, Michael J.**
Crystallization in simulated glasses from Hanford high-level nuclear waste composition range.—73-08291
**Kim, Dong-Seop** See Kim, Shi-Yul
**Kim, Dong-Won** See Kim, Sang-Ho; Kim, Yoo-Taek
**Kim, Duk-Hee** See Um, Woo-Sik
**Kim, E.-C.** See Na, J.-G.
**Kim, E.-K.** See Kim, T.-W.
**Kim, Eui-Hoon** See Hwang, Kyu-Hong; Lee, Sang-Wan
**Kim, Eung-Ho; Choi, Cheong-Song; Jeong, K.-C.; Park, Jin-Ho; Chang, In-Soon**
Preparation of spherical gadolinium compound particles.—73-13204
**Kim, Eung-Ho; Choi, Cheong-Song; Park, Jin-Ho; Chang, In-Soon**
Calcination and reduction of AUC (ammonium uranyl carbonate)—characteristics and phase change of powder.—73-08285
**Kim, Eung-Soo** See Yoon, Ki-Hyun
**Kim, G. H.** See Ding, J.
**Kim, G.-B.** See Jeon, G.
**Kim, Goo-Dae** See Lee, Dong-A.
**Kim, Goo-Dae; Lee, Dong-A.; Lee, Hyun-Im; Yoon, Seok-Jin**
Development of mullite fibers using the sol-gel process.—73-09067
**Kim, Gwan**
$SO_3$ control compositions.—73-12405
**Kim, H.-R.** See Chung, M.-S.
**Kim, Hai-Doo** See Kang, Suk-Won; Kim, Shin
**Kim, Hee-Joon** See Egashira, Yasuyuki
**Kim, Ho-Gi** See Ahn, Ki-Cheol; Cheon, Chae-Il; Choi, Joon-Hoo; Chung, Hun-Taeg; Lee, Hae-Yong; Nam, Seung-Hee; Um, Woo-Sik
**Kim, Hong-Ki** See Chun, Seong-Yong
**Kim, Hong-Koo; Li, Cheng-Chung; Fang, Xiao-Ming; Solomon, James; Nykolak, Gerald; Becker, Philippe C.**
Erbium-doped semiconductor thin films prepared by rf magnetron sputtering.—73-04329
**Kim, Hong-Koo; Mathur, Michelle**
ZnO films deposited on GaAs substrates with an $SiO_2$ thin buffer layer.—73-07373
**Kim, Hong-Seok** See Kim, Song-Han
**Kim, Hwan** See Hwang, Kyu-Hong; Kim, Young-Jung; Ko, Il-Young; Lee, J.-K.
**Kim, Hye-Dong** See Chung, Gil-Yong
**Kim, Hyeong-Joon** See Hwang, Cheol-Seong; Kong, Sun-Sik
**Kim, Hyeong-Tae; Lee, Eung-Sang**
Preparation of the LAS ceramics for heat resistance using metal alkoxide: I.—73-16940
**Kim, Hyo-Joon** See Lee, Sang-Wan
**Kim, Hyo-Sup**
Transmission model InGaAs photocathode for night vision system.—73-04537
**Kim, Hyoun-Ee** See Park, Hyoung-Joon
**Kim, Hyoun-Ee; Moorhead, Arthur J.**
Oxidation behavior and flexural strength of aluminum nitride exposed to air at elevated temperatures [≤100 h].—73-09531
**Kim, Hyoun-Soo; Ramaswamy, Ramu V.**
Tapered, both in dimension and in index, velocity coupler: theory and experiment.—73-15291
**Kim, Hyoung-Wook** See Park, Jong-Hyun
**Kim, Hyun-Gyu; Komatsu, Takayuki; Sato, Ryuji; Matusita, Kazumasa**
Crystallization of $LiNbO_3$ in tellurite glasses.—73-07114
**Kim, Hyun-Ha; Park, Hyun; Choi, Sung-Churl**
R-curve behavior in $Al_2O_3$-$ZrO_2$-SiC whisker composite.—73-13582
**Kim, Hyun-Jai** See Yoon, Seok-Jin
**Kim, Hyun-Min** See Lee, Dong-A.; Park, Jeong-Hyun
**Kim, Hyun-Tak; Sumi, Atsushi; Uwe, Hiromoto; Fujita, Junichi; Ohshima, Kenichi**
Synthesis of superconducting epitaxial films of $Ba_{1-x}K_xBiO_3$ [$x$=0.4] by laser ablation.—73-11927
**Kim, Hyung-Sun**
Crystallization kinetics of CaO-MgO-$Al_2O_3$-$SiO_2$ glass system using thermal analysis.—73-00314; Effect of crystal phases on the properties of sintered glass-ceramics for CaO-MgO-$Al_2O_3$-$SiO_2$ system.—73-00452
**Kim, Ik-Beom** See Kim, Jeong-Soo

**Kim, Il-Soo; Hennicke, Hans-Walter**
Composites made by directed oxidation of Al alloy with aluminosilicate fibers.—73-10208; Mullite-$ZrO_2$ ceramic with bentonite, soapstone, and MnO+$TiO_2$ additives.—73-02337
**Kim, In-Ki** See Choi, Sung-Jun
**Kim, In-Ki; Choi, Sang-Heul; Ko, Young-Shin**
Deintercalation $H_2SO_4$-intercalated graphite fiber.—73-16105; Properties of residue compounds obtained from $H_2SO_4$–carbon-fiber-intercalated compound.—73-16578; Effect of the structure of carbon fibers on the structure of fiber intercalated compounds.—73-12577
**Kim, In-Seon** See Itoh, Mitsuru
**Kim, In-Seon; Nakamura, Tetsuro; Itoh, Mitsuru; Inaguma, Yoshiyuki**
Madelung constant of the tetragonal $K_2NiF_4$-type oxides.—73-08660
**Kim, In-Seon; Nakamura, Tetsuro; Itoh, Mitsuru**
Humidity-sensing effects of the layered oxides $SrO(LaScO_3)_n$ ($n$=1, 2, ∞).—73-07572; Humidity-sensing effects of the layered oxides $SrO(LaScO_3)_n$ ($n$=1, 2, ∞).—73-14969
**Kim, In-Seop** See Lee, Byung-Ha
**Kim, In-Sool** See Kim, B.-S.
**Kim, In-Sool; Kim, B.-S.; Jang, Yun-Sik**
Gas pressure sintering of $SiC_p$-$TiC_p$ composites.—73-13068
**Kim, In-Sup; Lee, Kyung-Hee; Lee, Byung-Ha**
Environmental influences on gas pressure sintering of $Si_3N_4$.—73-09120
**Kim, In-Tae** See Park, Seung-Eek
**Kim, In-Tae; Oh, Tae-Sung; Kim, Yoon-Ho**
Lattice distortion of $Ba(Zn_{1/3}Ta_{2/3})O_3$ with ordering of B-site cations.—73-03099
**Kim, J. G.** See Liu, H.
**Kim, J. S.; Cappelli, M. A.**
Model of diamond growth in low-pressure premixed flames.—73-13140
**Kim, J. S.; Lee, J. Y.; Swinnea, J. S.; Steinfink, H.; Reiff, W. M.; Lightfoot, P.**
Crystal structure and Mossbauer spectroscopy of $Y_2SrFeCuO_{6.5}$, a double-layer perovskite intergrowth phase.—73-02182
**Kim, J. S.; Marzouk, H. A.; Reucroft, P. J.; Robertson, J. D.; Hamrin, C. E., Jr.**
Effect of water vapor on the growth of aluminum oxide films by low-pressure chemical vapor deposition.—73-09101
**Kim, J.** See Buchanan, R. C.; Gallagher, M. C.; Sudhama, C.
**Kim, J.-B.** See Choi, B.-C.
**Kim, J.-E.** See Lee, Yang-Lae
**Kim, J.-G.** See Oh, Y.-J.
**Kim, J.-H.** See Jung, S.-T.; Jung, W.-H.
**Kim, J.-N.** See Choi, B.-C.; Kim, Jae-Hyung
**Kim, J.-S.** See Kim, T.-W.
**Kim, J.-W.; Choi, S.-C.; Lee, E.-S.**
Specificity of phase transitions of lead monoxide.—73-12687
**Kim, J.; Gallagher, M. C.; Willis, R. F.; Fu, Jian-Ming; Miller, D. L.**
Scanning tunneling microscope study of GaAs(001) surfaces grown by migration-enhanced epitaxy [MEE].—73-11430
**Kim, Jae-Hyung; Kim, Jeong-Bae; Lee, Kwang-Sei; Choi, B.-C.; Kim, J.-N.; Lee, S.-D.**
Impedance relaxation of $Pb_3Ge_3O_{11}$ single crystals.—73-05580; $Sr^{2+}$ doping effect on the phase transition in $Pb_3Ge_3O_{11}$ single crystals.—73-16599
**Kim, Jae-Jeong** See Lee, Eun-Gu
**Kim, Jang-Kyo; Zhou, Li-Min; Mai, Yiu-Wing**
Interfacial debonding and fiber pullout stresses: III. Interfacial properties of cement matrix composites.—73-06680
**Kim, Jang-Yup; Lim, Dae-Soon; Ahn, Hyo-Suk**
High-temperature wear of plasma-sprayed $ZrO_2$-$Y_2O_3$ coating.—73-17350
**Kim, Je-Young; Lee, Seong-Young; Choi, Jae-Hoon**
Preparation of carbon solid from dormant mesophase pitch without using a binder.—73-02948
**Kim, Jeong** See Hong, Young-Sik
**Kim, Jeong-Bae** See Kim, Jae-Hyung
**Kim, Jeong-Hyun** See Ahn, Byung-Chul
**Kim, Jeong-Joo** See Huh, Kang-Il; Lee, Joon-Hyung
**Kim, Jeong-Soo; Kim, Ik-Beom; Kang, Han-Chyul**
Low-temperature preparation of ultrafine $Fe_2O_3$ powder from organometallic precursors.—73-13123
**Kim, Jeong-Soo; Yoo, Jin-Beon; Jang, Dong-Hoon; Oh, D.-K.; Lee, Y.-T.**
Effects of pressure and temperature on epitaxial growth of InP on nonplanar substrates using OMVPE.—73-16753
**Kim, Jeong-Wook** See Jeon, Deok-Il
**Kim, Ji-Soon**
Effect of homogeneous mixing of sintering additives by coprecipitation method on mechanical properties of pressureless-sintered $Si_3N_4$.—73-09577; Homogeneous mixing of $Si_3N_4$ with sintering additives by coprecipitation method.—73-16820
**Kim, Jin-Ho** See Huh, Kang-Il
**Kim, Jin-Kwan** See Byun, Jae-Dong
**Kim, Jin-Young** See Miyashita, Masayori
**Kim, Jin-Young; Miyashita, Masayori; Uchida, Nozomu**
Change of internal/pore structure in alumina green body during initial sintering.—73-05701
**Kim, Jin-Young; Uchida, Nozomu; Uematsu, Keizo**
Effect of HIPing on defect and strength characteristics in Y-TZP.—73-02786; Effect of HIPing on defect and strength characteristics in Y-TZP.—73-13007
**Kim, Jong-Ho** See Namba, Seitaro
**Kim, Jong-Jip** See Yoon, Kyung-Jin
**Kim, Jong-Man** See Yoo, Kwang-Soo
**Kim, Joon-Han; Paik, Dong-Soo; Park, Chang-Yub**
Structural and dielectric properties of $PbTiO_3$ ferroelectric thin film prepared by sol-gel processing.—73-11620
**Kim, Joon-Hong; Oh, Tae-Sung; Lee, Mee-Sook; Park, Jae-Gwan; Kim, Yoon-Ho**
Effects of $Al_2O_3$ addition on the sinterability and ionic conductivity of Nasicon.—73-07308
**Kim, Ju-Jin; Lee, Hu-Jong**
Nonmagnetic hard gap in amorphous In/$InO_x$ films in the hopping regime.—73-16550
**Kim, Jun-Hak** See Hyun, Sang-Hoon
**Kim, Jung-Bae** See Jin, Byung-Moon
**Kim, Jung-Nam** See Jin, Byung-Moon
**Kim, Jung-Sik; Gaskell, David R.**
Stability diagram for the system $YBa_2Cu_3O_{7-x}$.—73-04808
**Kim, K. W.** See Kaneto, T.
**Kim, K.** See Park, H.-C.
**Kim, K.-H.** See Cha, K.-H.; Kim, S.-J.; Kim, Song-Han; Lee, J.-R.
**Kim, K.-J.** See Youm, H.-N.
**Kim, K.-T.** See Kwon, Y.-S.; Son, Gun-Suk
**Kim, K.-T.; Son, Gun-Suk; Suh, Jung**
Densification of aggregated alumina powder under cyclic compaction.—73-05733
**Kim, Keon** See Hong, Young-Sik; Kim, Si-Joong
**Kim, Ki-Nam; Choi, Si-Don; Wang, K. L.**
Si heterojunction diodes with a thin beta-SiC layer prepared with gas layer source molecular beam epitaxy.—73-04166
**Kim, Kun-Ho; Kim, S.-C.; Lee, J.-Y.; Nam, S.-T.; Lee, J.-J.; Choi, Chi-Kyu**
Structural and electrical properties of $^{28}Si^+$ and $^{40}Ar^+$ ion-implanted epitaxial $ReSi_2$ films grown on $n$-Si(100) substrates.—73-16317
**Kim, Kwang-Bum; Sadoway, Donald R.**
Electrical conductivity measurements of binary solutions of molten alkaline-earth fluorides.—73-00957
**Kim, Kwang-Ho** See Lee, Su-Weon; Yeom, Sun-Min
**Kim, Kwang-Ho; Kang, Yong-Gwan; Lee, Su-Weon**
Thermodynamical and experimental analyses of chemical vapor deposition of ATO from $SnCl_4$-$SbCl_3$-$H_2O$ gas mixture.—73-12722
**Kim, Kwang-Ho; Lee, Soo-Won; Shin, Dong-Won; Park, Chan-Gyung**
Effect of antimony addition on electrical and optical properties of tin oxide film.—73-08837
**Kim, Kwang-Jin; Yoshimura, Masahiro; Somiya, Shigeyuki**
Tentative phase diagram of the system $PbF_2$-$BiF_3$.—73-02516
**Kim, Kwang-Nam** See Ahn, Byung-Chul
**Kim, Kwang-Rae** See Ha, Ho
**Kim, Kyong-Yong** See Kim, Wang-Sup
**Kim, Kyu-Young** See Lee, Hong-Lim
**Kim, Kyum; Joo, Chi-Hong; Jang, Yoon-Sik; Soon, Young-Gook; Park, Hong-Chae**
Effect of seeding on preparation of $ZrO_2$/$Al_2O_3$ composite by sol-gel method.—73-13017
**Kim, Kyung-Moon** See Park, Han-Soo
**Kim, Kyung-Nam** See Kang, Sang-Kyu
**Kim, Kyung-Nam; Han, Sang-Mok; Kim, Dae-Soo**
Effects of grain size distribution on the breakdown voltage in ZnO varistors.—73-07471
**Kim, Kyung-Nam; Han, Sang-Mok**
Effect of $Zn_7Sb_2O_{22}$ content on grain growth and microstructure of ZnO varistor.—73-14859; Effects of spinel on the formation process of nonohmic ZnO ceramics.—73-04295
**Kim, Kyung-Yong** See Yoon, Sang-Ok
**Kim, M.-S.** See Kim, Seong-Il; Kim, T.-W.
**Kim, Min-Soo; Kim, Young-Wook; Han, Kyung-Sop; Park, Jeong-Hyun**
Nicalon-fiber-reinforced SiC composites via infiltration.—73-16881
**Kim, Min-Soo; Kim, Young-Wook; Lee, June-Gunn; Cheong, Deock-Soo**
Effect of interlayer thickness on mechanical properties of Nicalon-fiber-reinforced SiC composites.—73-13510
**Kim, Myung-Chul; Hur, Soo-Hyung; Park, Soon-Ja**
Influence on the grain-boundary interfacial trap levels in $(Ba_{0.76}Sr_{0.24})TiO_3$-based PTCR ceramics by oxidative annealing.—73-11275
**Kim, Myung-Chul; Park, Soon-Ja**
High-temperature electrical conductivity of perovskite $La_{0.98}Sr_{0.02}MnO_3$.—73-12809; Joining of 8 mol% YSZ solid electrolyte and perovskite $LaMnO_3$.—73-00989
**Kim, Myung-Jin; Matijevic, Egon**
Preparation of uniform submicrometer particles of calcium titanate and lead niobate by replacement reactions.—73-13210
**Kim, Nam-Heung** See Kim, Su-Nuk
**Kim, Nam-Il** See Jung, Chang-Ju
**Kim, Nam-Kyun; Kim, Doh-Yeon; Kranzmann, A.; Bischoff, E.; Kang, Suk-Joong L.**
Variations of aluminum concentration in 8′-SiAlON grains formed during liquid-phase sintering of $Si_3N_4$-$Al_2O_3$-$Nd_2O_3$.—73-06872
**Kim, Nam-Kyung** See Huh, Kang-Il
**Kim, R. Y.; Crasto, A. S.; Pagano, N. J.**
Fracture modes in initially cracked concentric cylinders.—73-17329
**Kim, S. J.** See Aruchamy, A.
**Kim, S.-B.** See Lee, J.-H.
**Kim, S.-C.** See Kim, Kun-Ho
**Kim, S.-H.** See Tai, W.-P.
**Kim, S.-I.** See Jeong, B.-S.; Park, S.-H.
**Kim, S.-J.; Kim, K.-H.; Oh, S.-J.; Kang, T.-K.; Kuk, I.-H.**
Effect of microstructural design on the electrical properties of $Y_2O_3$-stabilized $ZrO_2$.—73-12773
**Kim, S.-S.; Kang, Y.-M.; Baik, S.**
Effects of deposition parameters on sputter deposition of lead titanate thin films.—73-13030
**Kim, Sae-Ho** See Byun, Jae-Dong
**Kim, Sae-Hoon** See Dimitrov, Vesselin V.
**Kim, Sang-Dong** See Matsuo, Yohtaro
**Kim, Sang-Duck** See Cho, Hae-Suk
**Kim, Sang-Gi** See Yoo, Byueng-Su
**Kim, Sang-Ho** See Cho, Chang-Hyun
**Kim, Sang-Ho; Cho, Chang-Hyun; Kim, Dong-Won; No, K.-S.; Chun, J.-S.**
Effects of deposition temperature and annealing process on the superconducting properties of $YBa_2Cu_3O_{7-\delta}$ thin films prepared by metallorganic chemical vapor deposition.—73-15442
**Kim, Sang-Kyu; Tsurumi, Takaaki; Daimon, Masaki**
Carbonation of ettringite.—73-00030; Carbonation of jet cement pastes.—73-09837
**Kim, Sang-Sig** See Tuchman, Judah A.
**Kim, Sang-Sub** See Kang, Young-Min
**Kim, Sang-Sub; Baik, Sung-Gi**
Effects of CaO impurity on microstructural evolution during sintering of alumina.—73-02805; Rutherford backscattering and channeling studies of cleaved, polished, and annealed MgO(100) single crystals.—73-05475
**Kim, Sang-Sub; Kim, Sung-J.; Baik, Sung-Gi**
R-curve behavior in a gas-pressure-sintered silicon nitride.—73-13581
**Kim, Sang-Woo; Song, H.-S.; Jang, Sung-Do**
Fabrication of ceramic heat exchanger cores by doctor blade process.—73-05801
**Kim, Seong-Il** See Shih, Wei-Heng
**Kim, Seong-Il; Kim, Yong; Lee, Min-Suk; Kim, M.-S.; Min, S.-K.; Lee, C.-C.**
Hall mobility and temperature-dependent photoluminescence of carbon-doped GaAs.—73-14956
**Kim, Seong-Jin; Birnie, Dunbar P., III; Uhlmann, Donald R.**
Early-stage microstructure development in Bi-Sr-Ca-Cu-O glasses.—73-01525
**Kim, Seung-Goo** See Kim, Dae-Joon; Kim, Tae-Yun
**Kim, Seung-H.; Sinha, Shome N.**
ICP sintering of attrition-milled $Al_2O_3$-5 wt% Al precursor: effect of power input and gas pressure.—73-16829
**Kim, Seung-Jae** See Lee, Jae-Dong
**Kim, Seung-Jae; Kim, Dong-Ho; Kim, Tae-Ok**
Preparation of fine single-crystalline particles of ferroxplana, $Ba_2Zn_2Fe_{12}O_{22}$, from crystallization of glass.—73-10394
**Kim, Seung-Jae; Kim, Dong-Ho; Lee, Jae-Dong; Kim, Tae-Ok**
Preparation of fine single-crystalline particles of ferroxplana, $Ba_2Co_2Fe_{12}O_{22}$, from crystallization of glass.—73-09262
**Kim, Seung-Tae** See Rhee, Jhun
**Kim, Seung-Yun** See Yoon, Ki-Hyun
**Kim, Shi-Yul; Kim, Dong-Seop; Ahn, Byung-Tae; Im, H.-B.**
Structural, electrical, and optical properties of In-doped CdS thin films prepared by vacuum coevaporation.—73-07816
**Kim, Shin; Yoon, Tae-Kyung; Lee, Soo-Young; Park, Dong-Soo; Kim, Hai-Doo**
Microstructure and properties of niobium diboride particulate-reinforced silicon carbide composites.—73-09485
**Kim, Si-Joong** See Hong, Young-Sik
**Kim, Si-Joong; Kim, Keon; Bum, Park-Hyu**
Structure and electric properties of $(Ba_{1-x}Pb_x)TiO_3$ ceramics.—73-05497
**Kim, Song-Han; Kim, Hong-Seok; Lee, Sung-Han; Kim, K.-H.**
Superconductivity of the Ba-doped $Bi_2Pb_2Sr_2Ca_2Cu_3O_y$ system.—73-04816
**Kim, Soon-Hwan** See Choi, Byung-Hyun
**Kim, Soon-Tae** See Lee, Kil-Woo
**Kim, Su-Nuk** See Yoon, Man-Soon
**Kim, Su-Nuk; Yoon, Man-Soon; Im, Jong-In**
Fabrication of undoped $PbTiO_3$ ceramics via sol-gel processing.—73-05806
**Kim, Su-Nuk; Yoon, Man-Soon; Kim, Nam-Heung**
Effect of PbO on sintering of undoped $PbTiO_3$ ceramics prepared by sol-gel processing.—73-02791
**Kim, Suk-Young**
Advanced ceramics as cutting tool materials: I, An overview.—73-12312; Advanced ceramics as cutting tool materials: II, State of the art and developments.—73-12313
**Kim, Sung C.; Yu, Chris C.; Doan, Trung T.**
Process for depositing aluminum nitride (AlN) using nitrogen plasma sputtering.—73-04228
**Kim, Sung-Gyu; Lee, Hwa-Young; Oh, Jong-Kee**
Synthesis of kaolinite and transformation of halloysite by hydrothermal reaction.—73-09357
**Kim, Sung-J.** See Kim, Sang-Sub
**Kim, Sung-June** See Jeong, Chang-Oh
**Kim, Sung-Soo** See Choi, Kyung-Ku
**Kim, Sung-Tae** See Kim, Tae-Song
**Kim, Sung-Youl; Lee, Eung-Sang**
Effects of $PbTiO_3$ addition on dielectric properties and extent of PbO loss in Nd-doped $Pb(Mg_{1/3}Nb_{2/3})O_3$ system.—73-10940; Influence on dielectric properties and evaporation of PbO according to substituting $Nd^{3+}$ for $Pb^{2+}$ in $Pb(Mg_{1/3}Nd_{2/3}O_3)$ system.—73-08889
**Kim, T. A.** See Edelman, I. S.
**Kim, T.-W.** See Chung, I.-H.; Hwang, J.-S.; Yom, S.-S.; Yoon, Y.-S.
**Kim, T.-W.; Jung, M.; Chung, I.-H.; Lee, J.-H.; Park, H.-L.**
Properties of CdTe/InSb heterostructures grown by temperature gradient vapor transport deposition.—73-04455
**Kim, T.-W.; Jung, M.; Park, H.-L.; Na, H.-K.; Kim, J.-S.**
Structural and optical properties of $CdIn_2Te_4$ films on $p$-InSb(111) grown by temperature gradient vapor transport deposition.—73-01322
**Kim, T.-W.; Jung, M.; Yoon, Y.-S.; Kang, W.-N.; Shin, H.-S.; Yom, S.-S.**
Electrical and microstructural properties of $BaTiO_3$ thin films on $p$-Si substrates grown by MOCVD.—73-08847
**Kim, T.-W.; Kang, W.-N.; Yoon, Y.-S.; Yom, S.-S.; Lee, J.-Y.; Kim, Cha-Yeon**
Interfacial layer formation of the $Al_2O_3$/Si structures grown by low-pressure metallorganic chemical vapor deposition.—73-09187

**Kim, T.-W.; Kim, Y.; Kim, M.-S.; Kim, E.-K.; Min, S.-K.** Electric subbands in Si-delta-doped GaAs grown by MOCVD.—73-01141
**Kim, T.-W.; Park, H.-L.** Two valence states of Eu in an $SrS_2O_{1-x}$:Eu, phosphor.—73-08784
**Kim, T.-W.; Yoo, K.-H.; Ihm, G.; Noh, S.-K.; Lee, K.-S.** Electric subband studies in an $In_{0.53}Ga_{0.47}As/InP$ one-side-modulation-doped quantum well.—73-01140
**Kim, Tae-Hyun; Choi, S.-H.** Effect of additives on the strength characteristics of MDF cement composites.—73-09896
**Kim, Tae-Hyun; Choi, Sang-Huel** Effect of water-soluble polymer on the flexural strength and moisture sensitivity in MDF [macro-defect-free] cement composites.—73-03457; Microstructural characterization of MDF cement–SiC whisker composites.—73-06247
**Kim, Tae-Ok** See Kim, Seung-Jae; Lee, Jae-Dong
**Kim, Tae-Song; Kim, Sung-Tae; Kim, Chong-Hee** Effect of paste composition and particle size on the metallizing of alumina ceramics.—73-10222
**Kim, Tae-Song; Oh, Myung-Hwan; Kim, Chong-Hee** Structural properties of rf-magnetron-sputtered $Ba_{1-x}Sr_xTiO_3$ thin film.—73-13451
**Kim, Tae-Yun; Kim, Seung-Goo; Kim, Dae-Joon; Hyun, Sang-Hoon; Jung, Hyung-Jin** Characterization of screen-printed $YBa_2Cu_3O_x$ thick films.—73-15398
**Kim, W.-T.** See Lee, Yang-Lae
**Kim, W.-Y.** See Chung, I.-J.; Oh, C.-H.
**Kim, Wang-Sup** See Park, Jin-Chae
**Kim, Wang-Sup; Sun, Hyo-Nim; Kim, Kyong-Yong** TiN thin film by sol-gel.—73-06122
**Kim, Won-Baek** See No, Kwang-Soo; Shin, Woo-Suck
**Kim, Woo-Yeol** See Ahn, Byung-Chul
**Kim, Y. J.** See Moon, B. M.
**Kim, Y. K.** See Arghavani, R.; Rohde, S. L.
**Kim, Y. O.** See Jeon, D. Y.
**Kim, Y.** See Case, Eldon D.; Kim, T.-W.; Rouviere, J.-L.
**Kim, Y.-H.** See Cho, N.-H.; Park, Jae-Gwan
**Kim, Y.-S.** See Chung, I.-J.; Oh, C.-H.
**Kim, Y.-W.** See Cha, K.-H.; Park, H.-C.
**Kim, Y.; Case, Eldon D.; Gaynor, S.** Effect of surface-limited microcracks on the effective Young's modulus of ceramics: III, Experiments.—73-13513
**Kim, Yong** See Kim, Seong-Il
**Kim, Yong-Cheol** See Han, Seok-Kil
**Kim, Yong-Il; Izumi, Fujio** Structure refinements with a new version of the Rietveld refinement program RIETAN.—73-15851
**Kim, Yong-Wah** See Ackerman, William C.
**Kim, Yong-Wook** See Park, Yong-Wan
**Kim, Yoo-Taek; Lee, Ki-Gang; Kim, Dong-Won** Structure of the $\alpha$-$Al_2O_3(1\bar{1}00)$ surfaces.—73-16339
**Kim, Yoon-Ho** See Kim, In-Tae; Kim, Joon-Hong; Oh, Tae-Sung
**Kim, You-Song** See Heo, Jong; Kim, Choon-Gon
**Kim, Youn-J.** See Huang, Chao-M.
**Kim, Youn-Tae; Jun, Chi-Hoon; Chung, Sang-Koo** Effects of chlorine-based gettering on the electrical properties of rapid thermal oxidation/nitridation dielectric films.—73-07309
**Kim, Young-Ho** See Ahn, Jae-Min; Aoude, Farid Y.; Cho, Jae-Woo
**Kim, Young-Jung; Kim, Hwan** Reaction bonding of $ZrO_2$ and NiTi: reaction products' analyses on $ZrO_2$/NiTi bonding interface with AEM.—73-13890
**Kim, Young-Nam** See Park, Jin-Seong
**Kim, Young-Sig; Tressler, Richard E.** Kinetics of volatilization of $P_2O_5$ from sol-gel-derived phosphosilicate glass-ceramic powder.—73-00366
**Kim, Young-Suk** See Park, Ji-Yun
**Kim, Young-Wook** See Kim, Min-Soo
**Kim, Young-Wook; Lee, June-Gunn** Tape casting of silicon nitride.—73-06107
**Kim, Young-Wook; Song, Jin-Soo; Park, Sang-Whan; Lee, June-Gunn** Nicalon fiber-reinforced silicon carbide composites via polymer solution infiltration and chemical vapor infiltration.—73-09223
**Kim, Yun-Gi** See Bhan, Cheon-Su
**Kim, Yun-Soo** See Kyu, Seo-Moon
**Kimaev, A. E.; Korzhik, M. V.; Livshits, M. G.; Minkov, B. I.; Mishkel, Y. I.; Tarasov, A. A.** Laser characteristics of forsterite $Mg_2SiO_4$:Cr crystals.—73-02627
**Kimagai, Kazumasa** See Sakurai, Osamu
**Kimball, Foster M.** See Bailey, Richard E.
**Kimber, R. M.** See Patterson, M. C.
**Kimelfeld, Y. M.** See Bobrov, A. V.
**Kimerling, L. C.** See Kitagawa, H.
**Kimizuka, N.** See Grieser, Franz
**Kimizuka, Noboru** See Iida, Junji; Nakamura, M.
**Kimmel, K.** See Fuentes, Ricardo I.
**Kimock, Fred M.; Knapp, Bradley J.; Finke, Steven J.** Abrasion wear-resistant coated substrate product.—73-03902
**Kimoto, Shinya; Hirota, Ken; Yamaguchi, Osamu; Kume, Hideki; Inamura, Suguru; Miyamoto, Hiroki** Formation and sintering of yttria-doped tetragonal zirconia with 50 mol% alumina prepared by the hydrazine method.—73-13063
**Kimoto, Tunenobu** See Tomikawa, Tadashi
**Kimoto, Tunenobu; Tomikawa, Tadashi; Fujita, Nobuhiko** Diamond semiconductor device having a non-doped diamond layer formed between a BN substrate and an active diamond layer.—73-11521; Method of growing thin film.—73-05317
**Kimrey, Hal D.** See Janney, Mark A.; Kiggans, J. O.
**Kimrey, Harold D., Jr.** See Hoffman, Daniel J.
**Kimrey, Harold D., Jr.; Holcombe, Cressie E.; Dykes, Norman L.** Method of sintering [ceramic] materials with microwave radiation.—73-15772
**Kimura, Akio; Suga, Shigemasa; Matsushita, Tomohiro; Daimon, Hiroshi; Kaneko, Takejiro; Kanomata, Takeshi** Photoemission and absorption spectroscopy of $Mn_2Sb$, MnAlGe, $Mn_2As$, $Cr_2As$, and $Fe_2As$.—73-08699
**Kimura, Daisuke; Yamaki, Shyuichi** Piezoelectric actuator connected to flexible cables.—73-01444
**Kimura, Hiroshi** See Kirby, Kevin W.; Matsubara, Gensoh; Matsui, Toshiyuki
**Kimura, Hisanari** See Konishi, Ryosuke
**Kimura, Keiichi** See Sugimoto, Kenji
**Kimura, Keiichi; Tanaka, Hiroichi** Zeolite composite panel with humidity control property.—73-10193
**Kimura, Kohichi** See Shibata, Kenichi
**Kimura, Koji** See Takeuchi, Yukihisa
**Kimura, Kunio** See Ikeda, Masaki; Nakamura, Kenichi; Ono, Yukiyoshi
**Kimura, Kunio; Jinnai, Kazuhiko; Tateyama, Hiroshi** Micro-Shirasuballoons (hollow glass microspheres) from the milled Shirasu refined by hydrothermal treatment.—73-00662
**Kimura, Noboru** Double-layered ceramic heater.—73-15940
**Kimura, Nobuo** See Yoshida, Masahiro
**Kimura, Osamu** See Watanabe, Hidemi
**Kimura, S.** See Tamura, S.
**Kimura, S.; Hotta, A.; Oshawa, S.** Microstructural control of carbon fiber/carbon composites using high carbon yield pitches as matrix precursor.—73-13136
**Kimura, Shigeru; Ono, Haruhiko; Ikarashi, Taeko; Ishikawa, Tetsuya** Minute strain fields due to vacancy-type defects in a rapidly cooled Czochralski-grown silicon crystal.—73-17087
**Kimura, Shigeyuki** See Haneda, Hajime
**Kimura, Shigeyuki; Kitamura, Kenji** Growth of oxide crystals for optical applications.—73-05832; Growth of oxide crystals for optical applications.—73-13083
**Kimura, Shiushichi** See Igsawa, Shigenari; Kitakami, Koichi; Li, J.-X.; Matsuo, Yohtaro; Nishimura, Toshiyuki; Ohsawa, Shigenari; Suzuki, Yoshitaka; Tsuru, Yasuhiko; Yasuda, Kouichi
**Kimura, Shiushichi; Nishimura, Toshiyuki; Yasuda, Kouichi; Matsuo, Yohtaro** Forming of carbon powders by cyclic-CIP and analysis of their densification behavior.—73-16798
**Kimura, Shiushichi; Yasuda, Eiichi; Tanabe, Yasuhiro; Horizono, Hideki; Park, Sei-Min** Microstructural design of C-C composite.—73-05269
**Kimura, Shoichi** See Jovanovic, Zoran
**Kimura, T.; Ishida, H.; Yugo, S.; Saito, R.; Isshiki, H.; Ikoma, T.** Excitation and relaxation processes of impact excitation emission of $Er^{3+}$ ions in InP.—73-04337
**Kimura, Takahiro** See Yamada, Chikashi
**Kimura, Takao** See Shibata, Shuichi
**Kimura, Takuma** See Hayasaka, Toshiaki
**Kimura, Tomohiro** See Jono, Masahiro
**Kimura, Toshifumi** See Adachi, Sadao
**Kimura, Youichi** See Inao, Takaaki
**Kimura, Yuji** See Saito, Fumihiko
**Kimura, Yukihiro; Miyawaki, Nobuhiko; Kuroda, Masao** Integrated circuit package.—73-11023
**Kimura, Yukihiro; Tominaga, Sumihito; Kanbe, Rokuro** Method of producing sintered ceramic body.—73-04999
**Kimura, Yutaka** See Kaga, Takao; Obitsu, Masamichi
**Kimura, Yutaka; Minesita, Osamu; Haneishi, Yukihiko; Tanegashima, Osamu** Preparation of sintered zirconia body.—73-15953
**Kinase, Wataru** See Kuwata, Seiichi
**Kinbara, A.** See Kondo, Ichiharu; Nakano, T.; Niwa, T.; Tsuzuki, K.
**Kinch, M. A.** See Schiebel, R. A.; Tennant, William E.
**Kind, R.** See Korner, N.
**Kindall, Glen E.** Characteristics of good forehearth control.—73-14336
**Kinder, T. J.** See Bendavid, A.
**Kindl, Bruno** See Morgensen, Gurli
**Kindness, A.** See Atkins, M.; Yilmaz, V. T.
**Kindo, Koichi** See Date, Muneyuki
**Kindyak, A. S.** See Kindyak, V. V.
**Kindyak, V. V.; Kindyak, A. S.; Gremenok, V. F.; Bodnar, I. V.; Rud, Yu. V.; Medvedkin, G. A.** Optical constants of laser-deposited $CuGaSe_2$ films near the fundamental absorption edge.—73-11358
**Kineri, Tohru; Mori, Masami; Kadono, Kohei; Sakaguchi, Tori; Miya, Masaru; Wakabayashi, Hajimu** Preparation and optical properties of gold-dispersed $BaTiO_3$ thin films.—73-16574
**King, A. H.; Singh, Abha** Geometrical rationalization of the special properties of the 14° [001] grain boundary in $YBa_2Cu_3O_{7-\delta}$.—73-11772
**King, A. H.; Zhu, Y.-M.** Twin-corner disclinations in $YBa_2Cu_3O_{7-\delta}$.—73-04824
**King, Alan G.; Keswani, Santosh T.** Adiabatic molding of ceramics.—73-15705; Colloid mills: theory and experiment.—73-04906
**King, D. M.** See Dessau, D. S.; Shen, Z.-X.
**King, D. M.; Shen, Z.-X.; Dessau, D. S.; Wells, B. O.; Spicer, W. E.; Arko, A. J.** Fermi surface [FS] and electronic structure of $Nd_{2-x}Ce_xCuO_{4-\delta}$.—73-16152
**King, H. W.** See Payzant, E. A.
**King, J. C.** See Fowler, C. M.
**King, J. E.** See Downes, T. J.
**King, P. J.** See El-Abbar, A. A.; Kirk, A.
**King, P. J.; Kirk, A.; Bowley, R. M.; Benedict, K.; Lees, J. S.; Hioki, Y.** Scaling of the current-voltage characteristics of epitaxial high-$T_c$ thin films.—73-08193
**King, Paul L.** See Kim, Chang-Young
**King, Terence A.** Sol-gel glasses and composites for optics and optoelectronics.—73-03886
**King, Todd T.; Cooper, Reid F.** Ambient-temperature mechanical response of alumina-fluoromica laminates.—73-13492
**King, Wayne E.; Campbell, G. H.; Coombs, A. W.; Johnson, G. W.; Kelly, B. E.; Reitz, T. C.** Interface science of controlled metal/metal and metal/ceramic interfaces prepared using ultrahigh vacuum diffusion bonding.—73-00244
**King, Wayne E.; Campbell, G. H.; Stoner, S. L.; Wien, W. L.** Experimental observation of the failure mechanisms of metal/ceramic interfaces under mode I loading.—73-13835
**King-Smith, R. D.** See Liu, Feng
**Kingery, W. David** See Yokoi, H.
**Kingery, W. David** Influence of Japanese/American culture on technological innovation in advanced ceramic materials.—73-03397
**Kingma, Kathleen J.; Hemley, Russell J.; Mao, Ho-Kwang; Veblen, D. R.** New high-pressure transformation in $\alpha$-quartz.—73-16226
**Kingon, A. I.** See Auciello, O.; Lichtenwalner, D. J.; Van Zyl, A.
**Kingston, John J.** See Wellstood, Frederick C.
**Kingston, P. W.** See Bryden, R. H.; Caley, William F.
**Kinjo, Tsuneo; Maekawa, Shoji; Kobayashi, Tomoyuki** Development of carbon-carbon composites for primary structure and thermal protection system of space vehicles.—73-05265
**Kinneging, A. J.** See La Via, F.
**Kinney, David R.** See Chuang, I-S.
**Kinney, David R.; Chuang, I-S.; Maciel, Gary E.** Water and the silica surface as studied by variable-temperature high-resolution $^1H$ NMR.—73-06988
**Kinney, J. H.** See Breunig, T. M.
**Kinomura, Nobukazu; Hosoda, Masahiro; Kumada, Nobuhiro; Kojima, Hironao** Preparation of pyrochlore-type $Na_{0.39}Bi_{1.47}O_7$ containing $Bi^{5+}$ by low-temperature hydrothermal reaction.—73-08712; Preparation of pyrochlore-type $Na_{0.39}Bi_{1.47}O_7$ containing $Bi^{5+}$ by low-temperature hydrothermal reaction.—73-16276
**Kinoshita, Hiroaki; Sei, Tadanori; Tsuchiya, Toshio** Distribution and chemical states of ions around the interface between sol-gel-derived silicate films and substrates.—73-02775; Distribution and chemical states of ions around the interfaces between sol-gel-derived silicate films and substrates.—73-10365
**Kinoshita, Kazuhisa; Korenaga, Itsuo; Kawabata, Noritsugu; Himeno, Toshihiko; Okito, Kenichi** Properties of AE signal on machining with a surface grinder in glass and new ceramics.—73-02983; Properties of AE signal on machining with a surface grinder in glass and new ceramics.—73-13221
**Kinoshita, M.** See Kitamura, Naoyuki; Matsubara, Ichiro; Nowak, P.; Ueno, Kazuo
**Kinoshita, Makio** See Aizawa, Mamoru; Itatani, Kiyoshi; Kishioka, Akira; Miyamoto, Yutaka; Murata, Tsuyoshi
**Kinoshita, Makoto** See Matsubara, Ichiro
**Kinoshita, Masahiko** See Nishida, Toshihiko
**Kinoshita, Noriyasu** See Kohno, Kiyoshi
**Kinoshita, Satoshi; Ueki, Mitsuo; Suzuki, Hisashi** Creep characteristics of TiC-$Mo_2C$-Ni cermet sintered after nitrification in the course of raising temperature.—73-06763; Cutting performance of titanium-carbide-based cermet nitrified during the course of sintering.—73-13816
**Kinoshita, Toshiya; Wakabayashi, Toru; Kubo, Hiroshi** Equation which relates the real three-dimensional aspect ratio to the apparent cross-sectional aspect ratio.—73-03281
**Kinoshita, Yoshiki** See Kumashiro, Yoshimasa
**Kinosky, D.** See Qian, R.
**Kinouchi, Shinichi** See Umemura, Toshio
**Kinsman, Karin M.; McKittrick, Joanna; Sluzky, Esther; Hesse, Kenneth** Phase development and luminescence in chromium-doped yttrium aluminum garnet (YAG:Cr) phosphors.—73-16562
**Kinugasa, Hisashi** See Hashiguchi, Hideto
**Kinugawa, Kenichi** See Kadono, Kohei; Kitamura, Naoyuki
**Kip, D.; Fink, R.; Bartholomaus, T.; Kratzig, E.** Coupling of orthogonally polarized waves in $LiNbO_3$ optical waveguides.—73-07874
**Kipka, Annette; Luckscheiter, Berthold; Lutze, Werner** Melting of fly ashes and product properties.—73-10456
**Kipouros, George J.** See Caley, William F.
**Kipp, D. O.** See Lowe-Ma, C. K.
**Kippelen, B.** See Oberle, J.
**Kiprushenkova, G. V.** See Gulamova, D. D.
**Kirby, Kevin W.; Kimura, Hiroshi; Pastor, Ricardo C.** Chemical sensor for carbon monoxide detection.—73-04511
**Kirby, Peter J.** Measuring hot metals on the move.—73-12162
**Kirby, Robert E.; Wherry, David; Madden, Michael** Oxygen detection in thin silicon dioxide layer by low-energy X-ray fluorescence spectrometry.—73-16242
**Kirby, S. K.** See Ting, D. Z.-Y.
**Kirchain, Randolph** See Shin, Hyun-Ho
**Kirchartz, B.** See Kuhlmann, K.
**Kircher, J.** See Echegoin, P.; Humlicek, J.
**Kircher, J.; Gopalan, S.; Cardona, M.** Optical properties of the Y-Ba cuprates: mainly a band structure point of view.—73-11850
**Kircher, Ulrich** Emissions of selenium compounds of glass-melting furnaces and state of the art of selenium waste gas treatment.—73-14372; Recycling of filter dust from electrostatic precipitators in the glass industry.—73-10592

**Kirchhoff, Gunter**
Thermal shock fracture by laser irradiation.—73-05669
**Kirchner, P. D.** See Chang, S.; Eklund, E. A.; Raisanen, A.; Vaterlaus, A.; Vitomirov, I. M.; Warren, A. C.
**Kirchner, R. M.** See Bennett, J. M.
**Kireenko, V. P.** See Gusev, O. K.
**Kirichenko, A. Ya.** See Golubnichaya, G. V.
**Kirichenko, Yu. A.; Kozlov, S. M.; Komarevskii, O. S.**
Heat exchange during the boiling of helium on the surface of $YBa_2Cu_3O_7$ HTSC ceramics.—73-01567
**Kiriev, A.** See Portelles, J.
**Kirik, S. D.; Tsurgan, L. S.; Pervyshina, G. G.; Koryagina, T. I.; Kutvitskii, V. A.**
Determination of crystal structure of $Bi_2Cd_4O_7$ by powder roentgenography technique.—73-16107
**Kirilenko, V. I.** See Popov, O. N.
**Kirillov, A. P.; Kukush, A. L.; Bagrii, E. Ya.; Zavyalov, V. N.**
Feaiures of nonlinear deformation of concrete at high levels of compression.—73-13722
**Kirillov, B. F.** See Grebnik, V. G.
**Kirillov, L. P.** See Rudnykh, T. G.
**Kirillova, M. M.** See Nomerovannaya, L. V.
**Kirilova, S. I.; Moin, M. D.; Primachenko, V. E.; Svechnikov, S. V.; Chemobai, V. A.; Dubrov, I. N.**
Changes in the electronic properties of Si-$SiO_2$ system due to laser irradiation.—73-01093
**Kirilyuk, A. I.** See Ayache, C.
**Kiriyama, Seiji** See Nagae, Hajime
**Kirjukhin, V.**
Comparative quality characteristics of fused cast baddeleyite-corundum and corundum refractories.—73-14579
**Kirk, A.** See King, P. J.
**Kirk, A.; King, P. J.; Lees, J. S.; Zhang, M.; Roys, W. B.; Hioki, Y.**
Low magnetic field anomalies in the electrical dissipation of superconducting $YBa_2Cu_3O_7$:$YBaCuO_5$ composites.—73-04757
**Kirk, M. A.** See Frischherz, M. C.
**Kirk, N. B.; Wood, J. V.; Kellie, J. L. F.**
Glass polishing using cerium oxide produced via the sol-gel process.—73-14394
**Kirkbir, Fikret** See Wang, Shi-Ho
**Kirkbir, Fikret; Raychaudhuri, Satyabrata**
Sol-gel process for forming a germania-doped silica glass rod.—73-03969
**Kirkinskii, V. A.** See Kuryaeva, R. G.
**Kirkland, T. P.** See Wereszczak, A. A.
**Kirkpatrick, Kelly S.** See Cooper, E. A.
**Kirkpatrick, Kelly S.; Mason, Thomas O.; Balachandran, Uthamalingam; Poeppel, R. B.**
Impedance spectroscopy study of sintering in Bi-doped ZnO.—73-12600
**Kirkpatrick, R. James** See Cong, Xian-Dong; Fletcher, Joseph P.; Phillips, Brian J.; Thomas, Elizabeth S.
**Kirlin, Peter S.; Brown, Duncan W.; Gardiner, Robin A.**
Method of forming a superconducting oxide layer by MOCVD.—73-11970
**Kirsanova, E. A.** See Sham, P. I.
**Kirsch, Roland** See Cerna, Eva
**Kirsch, Roland; Strojsa, Josef**
Welding glass and its mechanical homogenization with noncooled metal Ni-Cr stirrers.—73-00721
**Kirsch, Roland**
History of optical glass production in Bohemia and Moravia.—73-06572
**Kirshnan, Kannan M.**
Magnetic thin films and nanostructures: anisotropy, microstructure, and their interrelationship.—73-06243
**Kirtley, J. R.; Washburn, S.; Scalapino, D. J.**
Linear conductance backgrounds in tunnel junctions.—73-08899
**Kiryu, Shogo; Shoji, Akira; Kohjiro, Satoshi; Kodaira, Shinji**
Stress in $NbC_xN_{1-x}$ films prepared by reactive rf magnetron sputtering.—73-14734
**Kiselev, A. A.** See Ivchenko, E. L.; Mezhogskikh, M. I.
**Kiselev, I. Yu.; Sil'vestrov, A. L.**
International comparison of laboratory results measuring heat conductivity of heat-insulating materials.—73-15808
**Kiselev, N. A.** See Basovich, A. J.
**Kiseleva, I. N.** See Ezerskaya, N. A.
**Kiseleva, N. N.; Kravchenko, N. V.**
Data banks on the properties of ternary inorganic compounds as a basis for computer construction of new materials.—73-13613
**Kiseleva, N. V.** See Slobodin, B. V.
**Kiselyova, Nadia N.**
Prediction of inorganic compounds: experiences and perspectives.—73-09741
**Kish, F. A.; Caracci, S. J.; Holonyak, N.; Hsieh, K. C.; Baker, J. E.; Maranowski, S. A.**
Properties and uses of $In_{0.5}(Al_xGa_{1-x})_{0.5}P$ and $Al_xGa_{1-x}As$ native oxides in heterostructure lasers.—73-11406
**Kishan, P.** See Baijal, J. S.
**Kishi, Kazuhiro** See Daimon, Masaki
**Kishi, Kazushi; Umebayashi, Seiki**
Change of surface grinding flaw of ß-SiAlON with oxidation and its influence on bending strength.—73-02739
**Kishi, Manabu**
Wide composition range of T*-phase compound $Pr_{1.6-x}Y_xSr_{0.4}CuO_y$ ($0 \le x \le 0.6$).—73-15669
**Kishi, T.** See Muranushi, Y.
**Kishi, Teruo** See Jang, Byung-Koog; Ohara, Yoshinobu; Tsuda, Hiroshi; Yamade, Yoshiaki
**Kishi, Teruo**
Fracture mechanics and mechanism of ceramic composites.—73-05819
**Kishi, Toshihide** See Funayama, Osamu
**Kishi, Y.** See Hattori, Takeo
**Kishida, Kazuo; Tatsumisago, Masahiro; Minami, Tsutomu**
Preparation of thick silica films by combined sol-gel and electrophoretic deposition methods.—73-14478
**Kishii, Toru**
Measurement of stress distribution in locally tempered glass cups.—73-10451; Principle and application of the Senarmont method—application technology of glass strain viewers: IV.—73-01925; Stress and strain in glass industry—application technology of strain viewers: V.—73-00549; Surface stress measurement of thermally tempered float glasses.—73-14508
**Kishimoto, Akira; Matsuzaki, Naosuke; Kudo, Tetsuichi**
Oxygen molecules stably caged in a uv-irradiated thin film from peroxo polytungstic acids.—73-05943
**Kishimoto, Akira; Sugimoto, H.; Nanba, T.; Kudo, Tetsuichi**
Structure of amorphous $Ta_2O_5$·$nH_2O$ derived from peroxo-polytantalate solution.—73-02463
**Kishimoto, Hidehiro** See Ueno, Akira
**Kishimoto, Hidehiro; Ueno, Akira; Kawamoto, Hiroshi**
Crack propagation behavior of sintered silicon nitride under cyclic load at elevated temperature (effect of stress ratio).—73-17261
**Kishimoto, Hidehiro; Ueno, Akira; Okawara, Seiji; Kawamoto, Hiroshi**
Crack propagation behavior of polycrystalline alumina under static and cyclic load.—73-09554
**Kishimoto, T.; Nemoto, H.; Hamanaka, K.; Imai, H.; Taniguchi, S.; Oikawa, M.**
Application of planar microlens arrays to liquid crystal devices.—73-14133
**Kishimoto, Yukinao** See Yasue, Tamotsu
**Kishino, Katsumi; Kikuchi, Akihiko; Nomura, I.; Kaneko, Yawara**
Gas source molecular beam epitaxial growth and characterization of 600–660-nm GaInP/AlInP double-heterostructure lasers.—73-14937
**Kishio, K.** See Ikuta, H.
**Kishioka, Akira** See Aizawa, Mamoru; Itatani, Kiyoshi; Miyamoto, Yutaka; Murata, Tsuyoshi
**Kishioka, Akira; Miyazawa, Yuki; Itatani, Kiyoshi; Howell, F. Scott; Kinoshita, Makio**
Preparation and properties of phosphate glasses and glass-ceramics containing large amounts of titanium: IV.—73-14472
**Kishore, K. Nanda; Muralidhar, M.; Babu, V. Hari**
Effect of $Ca_2CuO_3$ on the formation of (2223) phase in the Bi-Pb-Sr-Ca-Cu-O system.—73-01526
**Kisi, Erich H.** See Finlayson, Trevor R.; Hannink, Richard H. J.
**Kisiel, A.; Lee, P. M.; Burattini, E.; Dalba, G.; Fornasini, P.; Giriat, W.**
X-ray absorption near-edge structure analysis of CdFeTe: XANES experiment and theoretical LMTO calculations.—73-01365
**Kisilenko, N. G.** See Gryazina, Z. S.
**Kisliuk, A.** See Malinovskii, V. K.; Sokolov, A. P.
**Kislov, A. N.** See Kveder, V. V.
**Kislov, B. I.; Khristyuk, I. P.**
Milling kinetics of glass-ceramic–cement in a ball mill.—73-01799
**Kislov, B. I.; Vodop'yanov, L. V.**
Grinding bodies from silicon nitride for fine milling of ceramic materials.—73-09152
**Kislov, I. A.; Mitkevich, V. V.; Nesterenko, N. M.**
X-ray and optical study of $KSc(MoO_4)_2$ ferroelastic.—73-02542
**Kislov, V. A.** See Aronin, A. S.
**Kislyak, V.** See Shapilova, M.
**Kislyi, V. P.** See Bolgov, S. S.
**Kiss, Akos** See Speer, Dietrich
**Kiss, L. I.; Fall, B.; Charette, A.; Bui, R. T.**
Experimental study of the thermophysical properties of solids.—73-08869
**Kissane, James P.**
Apparatus for controlled supply of alumina.—73-15703
**Kistenmacher, T. J.** See Bryden, W. A.
**Kistenmacher, T. J.; Ecelberger, S. A.; Bryden, W. A.**
Structural and electrical properties of reactively sputtered InN thin films on AlN-buffered (00.1) sapphire substrates: dependence on buffer and film growth temperatures and thicknesses.—73-08971
**Kisu, T.** See Enpuku, K.
**Kisuki, Hiroyuki** See Sugano, Mikio
**Kita, Hideki** See Kawamura, H.
**Kita, Hideki; Ohsumi, Kazuo; Yamada, Toshiyuki**
Influence of composition and oxidation temperature on thermal conductivity of Si-Ti-O-N porous ceramics.—73-05582; Influence of composition and oxidation temperature on thermal conductivity of Si-Ti-O-N porous ceramics.—73-16515
**Kita, Hideki**
Dimensional change characteristics of ceramics produced by simultaneous nitriding of Si and Ti powders and its application to adiabatic engine parts.—73-05743; Dimensional change characteristics of ceramics produced by simultaneous nitriding of Si and Ti powders and its application to adiabatic engine parts.—73-12989; Reduction in thermal conductivity of reaction-bonded $Si_3N_4$ by addition of a binary compound: I. Fabrication and evaluation of $Al_2TiO_5$-added composite.—73-15971; Slidable ceramic member and method of manufacturing [the] same.—73-02140; Slidable ceramic member and method of manufacturing [the] same.—73-16019
**Kita, Yasushi** See Kawaguchi, Masayuki
**Kitabatake, M.** See Izumi, T.
**Kitabatake, Makoto; Deguchi, Masahiro; Hirao, Takashi**
Formation of semiconductor diamond.—73-15236; Simulations and experiments of SiC heteroepitaxial growth on Si(001) surface.—73-13255
**Kitabayashi, Hirohito** See Miyashita, Satoru
**Kitabayashi, Tetsuo** See Watanabe, Toshiya
**Kitaev, Yu. E.** See Bush, A. A.
**Kitagaki, Kazuhisa** See Yamashita, Kimihiro
**Kitagawa, H.** See Ren, F. Y. G.
**Kitagawa, H.; Kimerling, L. C.; Tanaka, S.**
Iron-related levels in *n*-type silicon studied by Hall effect and DLTS measurements.—73-15002
**Kitagawa, Hajime** See Ni, Bao-Rong
**Kitagawa, Hiroshi** See Terashima, Taichi
**Kitagawa, Kazuichi; Yamana, Kazuo; Nakamura, Sizuo; Kitagawa, Kazuo**
Synthesis of $La_{1-x}Sr_xMnO_3$ powder and its power generation property.—73-17039
**Kitagawa, Kazuo** See Kitagawa, Kazuichi
**Kitagawa, Manabu; Nishikawa, Hiroyuki; Ohki, Yoshimichi; Hama, Yoshimasa**
Various bonding forms of OH groups in hydrogen-treated silica.—73-06986
**Kitagawa, Takeshi** See Shibata, Shuichi
**Kitaguchi, Hitoshi** See Kumakura, Hiroaki
**Kitai, Adrian H.** See Carkner, Don; Huang, Ron
**Kitai, Tsuneo** See Nagai, Bin
**Kitajima, Kunio** See Kaneko, Yuji; Taruta, Seiichi
**Kitajima, Kunio; Miyake, Kazuyuki; Takusagawa, Nobuo**
Changes in swelling characteristics and structure of Na fluorine micas with Ga and Al substitutions.—73-02157
**Kitajima, M.** See Shinno, H.
**Kitajo, S.; Kanamori, M.**
Simulated optimum gate and encapsulant properties for a refractory gate GaAs metal-semiconductor field effect transistor during annealing.—73-11446
**Kitakami, Koichi** See Matsuo, Yohtaro
**Kitakami, Koichi; Matsuo, Yohtaro; Kimura, Shiushichi**
Screening diagram for nondestructive inspection.—73-06516
**Kitami, Takashi** See Mori, Hidetsugu
**Kitami, Y.** See Sasaki, T.
**Kitamura, A.** See Kawashima, Takeshi
**Kitamura, Akane** See Nagasoe, Atsumi
**Kitamura, Kazumasa** See Ito, Yoshiro
**Kitamura, Kenji** See Furukawa, Yasunori; Haneda, Hajime; Kimura, Shigeyuki
**Kitamura, Makoto** See Akimoto, Shigeru
**Kitamura, Naoyuki; Kinugawa, Kenichi; Matsuoka, Jun; Fukumi, Kohei; Kondoh, Isao; Kose, S.**
Process for producing rod glass having refractive index distribution.—73-03961
**Kitamura, Naoyuki; Toguchi, Yutaka; Funo, Shigeki; Yamashita, Hiroshi; Kinoshita, M.**
Refractive index of densified silica glass.—73-07071
**Kitamura, Tadashi** See Komori, Mochimitsu
**Kitamura, Takao** See Wada, Hideo
**Kitamura, Takao; Wada, Hideo; Ooike, Susumu**
Effect of polyacrylic hydrazide addition on properties of compact molded gypsum.—73-09914
**Kitamura, Takao**
Utilization of waste FRP as resources.—73-10189
**Kitamura, Tsutomu** See Nagahata, Tsutomu
**Kitano, Hirohisa** See Saitoh, Itaru
**Kitano, Masamichi** See Taimatsu, Hitoshi
**Kitao, M.; Akram, H.; Urabe, K.; Yamada, S.**
Properties of solid-state electrochromic cells using $Ta_2O_5$ as electrolyte.—73-14725
**Kitaoka, Satoshi** See Yamaguchi, Yoshimi
**Kitaoka, Satoshi; Tsuji, Toshihide; Katoh, Toshio; Yamaguchi, Yoshimi; Kashiwagi, Kazumi**
Tribological characteristics of SiC ceramics in high-temperature and high-pressure water.—73-13607
**Kitaoka, Satoshi; Tsuji, Toshihide; Katoh, Toshio; Yamaguchi, Yoshimi; Sato, Koji**
Tribological characteristics of $Si_3N_4$ ceramic in high-temperature and high-pressure water.—73-06545
**Kitazawa, K.** See Ikuta, H.
**Kitazawa, Koichi** See Kawasaki, Masashi
**Kito, T.** See Takeuchi, Genki
**Kito, Yasuhiro** See Furuya, Akira
**Kitoh, M.** See Kokaku, Y.
**Kitoh, Ryozo** See Fukuda, Koichi
**Kittaka, S.; Sasaki, T.; Fukuhara, Minoru**
Fourier transform infrared spectroscopy of $H_2O$ on the hydroxylated ZnO surface.—73-12588
**Kittaka, Toshihiko** See Hayashi, Seigo
**Kittel, T.** See Carl, M.
**Kityk, A. V.; Soprunyuk, V. P.; Vlokh, O. G.; Olekseyuk, I. D.; Piroga, S. A.**
Acoustic study *p-T* phase diagram of $Cs_2HgCl_4$ crystals.—73-16026
**Kityk, I. V.** See Dovgii, Ya. O.
**Kiuchi, Kazumasa** See Nagata, Hirotoshi
**Kivilahti, J. K.** See Kodentsov, A. A.
**Kivilahti, J.** See Paulasto, M.
**Kivits, C.** See Claridge, J. F.
**Kiwi, John; Thampi, K. Ravindranathan; Gratzel, Michael**
Methane dimerization through ion conductors (ß-$Al_2O_3$).—73-04138
**Kiwiet, N. J.** See Schoonman, J.
**Kiya, Tsutomu** See Sato, Yuichi
**Kiyohara, Masakatsu** See Yano, Toyohiko
**Kiyohara, Shohzoh** See Yoshikawa, Fumiaki
**Kiyokura, Takanori** See Sato, Masatoshi
**Kiyono, Hajime** See Unuma, Hidero
**Kiyoshige, Masanori** See Wada, Shigetaka
**Kizhin, V. N.** See Meleta, E. A.
**Kiziloglu, K.** See Hashemi, M. M.
**Kizilyalli, I. C.** See Roy, P. K.
**Kizzar, S.** See Palsule, C.
**Kjekshus, Arne** See Karen, Pavel
**Kjellsen, Knut O.; Detwiler, Rachel J.; Gjorv, Odd E.**
Development of microstructures in plain cement pastes hydrated at different temperatures.—73-00061
**Klaas, Helmut**
Movement joints in facing masonry.—73-03982

**Klacka, R. W.** See Headinger, M. H.
**Klacka, R. W.; Headinger, M. H.; Moschelle, W. R.; Farr, J. H.**
C/SiC turbine rotor development.—73-12414
**Klad'ko, V. P.** See Semenova, G. N.
**Klad'ko, V. P.; Kryshtab, T. G.; Kleinfel'd, Yu. S.; Semenova, G. N.; Khazan, L. S.**
Influence of reduction in the substrate thickness on the optical properties of epitaxial GaAs films (long-range effect).—73-07599
**Klad'ko, V. P.; Kryshtab, T. G.; Svitel'skii, A. V.; Semenova, G. N.**
Long-range effect in GaAs single crystals with different dislocation densities.—73-07639
**Kladnig, Wolfgang F.; Zenger, Manfred F.**
Preparation of fine-grained high-$\mu$ ferrites by spray-roasting nitrate solutions.—73-11669
**Kladnig, Wolfgang F.**
Industrial oxide raw materials.—73-01789
**Klages, C.-P.** See Lochel, B.; Weber, A.
**Klamut, J.** See Drulis, H.
**Klapka, A.** See Hogler, W.
**Klarsfeld, S.** See Langlais, C.
**Klaskova, Jana** See Travnicek, Zdenek
**Klasse, G.** See Verwey, J. W. M.
**Klauber, C.** See Low, I. M.
**Klauer, S.; Wohlecke, M.**
Incorporation of hydrogen in $TiO_2$ deduced from polarized Raman scattering.—73-08640; Local symmetry of hydrogen in cubic and tetragonal $SrTiO_3$ and $KTaO_3$:Li determined by polarized Raman scattering.—73-08657
**Klauser, Ruth; Oshima, Masaharu; Sugahara, Hirohiko; Murata, Y.**
Influence of an RbF interlayer on the Ge/GaAs interface properties.—73-01199
**Klausmeier-Brown, M. E.** See Eckstein, J. N.; Schultz, J. C.
**Kleandrov, T. N.** See Kazakov, V. N.
**Kleber, R.** See Schwerk, U.
**Klebsa, Vladimir**
Faculty of the Glass and Ceramic Machines of the Machine and Textile Institute [Liberec, Czech Republic].—73-15725
**Kleebe, Hans-Joachim** See Bruley, John; Cinibulk, Michael K.; Hoche, Thomas; Tanaka, Isao; Vetrano, J. S.
**Kleebe, Hans-Joachim; Cinibulk, Michael K.; Tanaka, Isao; Bruley, John; Cannon, R. M.; Clarke, D. R.**
High-resolution electron microscopy observations of grain-boundary films in silicon nitride ceramics.—73-06225
**Kleebe, Hans-Joachim; Cinibulk, Michael K.**
Transmission electron microscopy characterization of a ceria-fluxed silicon nitride.—73-03209
**Kleemann, W.** See Westphal, V.
**Klein, C. P. A. T.** See Wolke, J. C. G.
**Klein, Dieter** See Junge, Bernd
**Klein, H.** See Crucenau, E.
**Klein, J. D.; Yen, A.**
Profiling of Y-Ba-Cu-O radio frequency sputtering by optical emission spectroscopy.—73-01641
**Klein, K.** See Dreyhsig, J.
**Klein, Keith** See Schwartz, Ira C.
**Klein, L. C.** See Colson, S.; Szu, S.-P.; Van Weeren, Remco; Wakamatsu, H.; Wang, B.
**Klein, L.; Jacoby, E. R.; Wolfus, Y.; Yeshuran, Y.; Burlachkov, L.; Ya Shapiro, B.**
Flux-flop in high-temperature superconducting crystals with columnar defects.—73-04727
**Klein, M. V.** See Cooper, S. L.; Liu, Ran; Maksimov, A. A.
**Klein, M.** See Kukhtarev, N.
**Klein, N.; Tellmann, N.; Schulz, H.; Urban, K.; Wolf, S. A.; Kresin, V. Z.**
Evidence of two-gap *s*-wave superconductivity in $YBa_2Cu_3O_{7-\delta}$ from microwave surface impedance measurements.—73-11752
**Klein, O.** See Alloul, H.
**Klein, Werner**
Glazing against fire.—73-07135
**Kleiner, R.; Steinmeyer, F.; Kunkel, G.; Muller, P.**
Intrinsic Josephson effects in $Bi_2Sr_2CaCu_2O_8$ single crystals.—73-08113
**Kleiner, V. Z.** See Makarov, V. I.
**Kleinfel'd, Yu. S.** See Klad'ko, V. P.
**Kleinhammes, A.** See Hascicek, Yusuh S.
**Kleinke, M. U.** See Teschke, O.
**Kleinschmit, Peter** See Binder, Dieter; Kriechbaum, Gangolf
**Kleitz, M.** See Iharada, T.
**Klem, J. F.** See Kim, Dai-Sik
**Klem, J.** See Gilliland, G. D.
**Klemens, P. G.** See Xiao, T. D.
**Klemer, David P.; Chen, Chun-Yao; Shieh, Tsay-Jiu; Pujara, M.**
Design, fabrication, and characterization of a hot electron vacuum transistor.—73-11132
**Klemm, Hagen; Pezzotti, Giuseppe**
Fracture toughness and time-dependent strength behavior of low-doped silicon nitrides for applications at 1400°C.—73-06438
**Klemptner, L. J.** See Brzezinska, K.
**Klenner, M.** See Falter, C.
**Klepeis, J. E.; Mailhiot, C.; Van Schilfgaarde, M.; Methfessel, M.**
Role of ionicity in the determination of surface atomic geometries: GaP, ZnS, and CuCl(110) surfaces.—73-11424
**Klestchov, D.; Burmistrov, V.; Sheinkman, A.; Pletnev, R.**
Composition and structure of phases formed in the process of hydrated antimony pentoxide [HAP] thermolysis.—73-02170
**Kletskii, S. V.**
Spectral characteristics of variable-gap structures with a nonlinear composition profile.—73-01316
**Klett, Michael W.; Beer, Kenneth D.**
Chemical treating composition for glass fibers having emulsified epoxy with good stability and the treated glass fibers.—73-00729
**Kleweno, Douglas G.** See Solc, Jitka
**Kley, Gerd; Kunzendorf, Karin**
Emission properties of fused cast refractories in the ir region.—73-00812
**Kliava, J.** See Bals, A.
**Kliese, R.** See Hanbucken, M.
**Klima, Rolf** See Golder, Peter
**Klimakova, N. N; Osipov, E. B.; Osipova, N. A.; Tsvetkova, E. V.**
Role of the exchange interaction in piezospectroscopic properties of an exciton bound to an Sn acceptor in GaAs.—73-01307
**Klimashina, E. V.; Khabarova, A. I.**
Effect of gas-flame treatment on the structure and properties of the surface of doped quartz glass.—73-00614
**Klimczak, Gary W.** See Rostoker, William
**Klimek, L.** See Nowacki, J.
**Klimenko, V. A.** See Berezhinskii, L. I.
**Klimenko, V. I.; Muradyan, A. M.; Solov'ev, A. V.; Shmurak, S. Z.**
Electroluminescence [EL] and photoluminescence [PL] of ZnS crystals.—73-01150
**Klimenko, V. L.** See Vendik, O. G.
**Klimkovich, N. F.** See Kostyrya, Yu. F.
**Klimov, A. A.** See Ishchenko, S. S.
**Klimovich, O. S.** See Kriklivyi, D. M.
**Klinger, M. I.**
Soft atomic configurations, average order, and structural gross scale of transformations in glasses.—73-14083
**Klinger, R. E.** See Lehan, J. P.
**Klingshirn, C.** See Bogdanov, S. V.
**Klinkova, L. A.** See Gantmakher, V. F.
**Klinkova, L. A.; Barkovskii, N. V.**
Content of oxygen and bismuth(V) in the double oxides of barium and bismuth.—73-01511
**Klinkova, L. A.**
Mechanism of introduction of yttrium ions into barium cuprates, $Ba_2Cu_3O_y$.—73-01602
**Klinowski, Jacek** See Axon, Sean A.
**Klischat, Hans-Jurgen; Bartha, Peter**
Further development of magnesia spinel bricks with their own specific properties for lining the transition and sintering zones of rotary cement kilns.—73-04005
**Klischat, Hans-Jurgen; Hennicke, Hans-Walter; Leers, K.-J.**
Warm pressing as a forming process for ceramics: I, Literature survey.—73-01837; Warm pressing as a forming process for ceramics: II, Application.—73-00882
**Klissurska, Radosveta** See Reaney, Ian M.
**Klissurski, D.** See Dimitriev, Y.
**Klocek, Paul**
Method of improving the mechanical properties of semiconductor materials.—73-01378
**Klochan, V. A.** See Shemyakov, A. A.
**Klochkov, A. A.** See Valiev, U. V.
**Klochkov, A. P.** See Zaitsev, Yu. V.
**Klok, Richard J.** See Rue, Charles V.
**Klokova, N. E.** See Maksimov, B. A.
**Klokova, N. E.; Andrianov, V. I.; Red'ko, S. V.**
X-ray study of acentral modification of $Na_{4+x}FeP_2O_{8+3}F_{1-x}$.—73-02546
**Kloos, K.-H.** See Kunz, A.
**Klopper, T.** See Bressler, P. R.
**Kloss, Gunnar; Weidemuller, Christian**
Binding and plasticizing agent for preparing carbon-containing, refractory, ceramic materials, and material prepared therewith.—73-14633
**Kloss, Thomas** See Gerth, Kirsten
**Klouzek, Jaraoslav**
Kinetic study of refining by antimony.—73-14414
**Kluenkov, E. B.** See Basovich, A. J.
**Klug, Frederic J.; Venkataramani, Subramaniam; Lay, Kenneth W.**
Alumina, calcia, yttria sealing composition.—73-13913
**Klug, J.** See Heinz, E.
**Klug, J.; Nowack, A.; Jeitschko, W.**
Kondo-like anomalies in point-contact characteristics of ferromagnetic $EuFe_2P_2$.—73-07946
**Klug, J.; Winzer, K.**
Point-contact spectroscopy of $LaCeAl_2$ and $LaCeB_6$ alloys.—73-08704
**Klug, Thomas; Bornhoft; Bruckner, Rolf**
Alternating bending load behavior of unidirectionally fiber-reinforced glasses.—73-03774
**Klug, Thomas; Fleischer, Veronika; Bruckner, Rolf**
Thermal expansion behavior of fiber-reinforced DURAN glass.—73-07087
**Klug, Thomas; Reichert, Jutta; Bruckner, Rolf**
Contribution to the problem of tensile and bending test method for SiC-fiber-reinforced glass.—73-17256; Thermal shock behavior of SiC fiber-reinforced glasses.—73-10489
**Klyachin, V. V.; Gabulkhaev, R. L.**
Testing the beneficiation capacity of Vietnam sillimanite-kyanite ores.—73-01998
**Klyshevich, A. I.** See Zuev, V. V.
**Klyshevich, E. V.** See Voronova, I. D.
**Klyukanov, A. A.; Balmush, N. I.**
Absorption of ir radiation by an electron plasma in the case of scattering by impurities and plasmon-phonon excitations in semiconductors.—73-14765
**Knab, G. G.; Ulukhanov, I. T.; Konstantinova, A. F.**
Influence of temperature on microhardness and birefringence of $ZrO_2$-$Y_2O_3$ crystals.—73-02621
**Knall, J.** See Briggs, G. A. D.
**Knapp, Bradley J.** See Kimock, Fred M.
**Knapp, Vincent A.; Wittmer, Dale E.; Conover, Joseph J.; Miller, Charles W., Jr.**
Microwave plasma etching of $Si_3N_4$.—73-16870
**Knauf, N.** See Braunisch, W.
**Knauf, O.** See Hulsenberg, D.
**Knauss, L. A.** See Toulouse, J.
**Knazek, Milan**
Operational experiences of Skloobal, Ltd., Nemsova, with BDF equipment.—73-00674
**Knecht, J.** See Ranze, W.
**Knecht, Thomas A.** See Fenlon, Paul F.
**Kneebone, Ronald R.** See Arnold, Philip J., III
**Kneller, James F.; Cooper, David R.**
Method for preparing a ceramic oxide material.—73-05222
**Knemeyer, Friedel S.** See Slutz, David E.
**Knemeyer, Friedel S.; Slutz, David E.**
Method for producing flat CVD diamond film.—73-05314
**Knickerbocker, John U.; Perry, Charles H.; Wall, Donald R.**
Multilayer ceramic substrate with capped vias.—73-11038; Multilayer ceramic substrate with graded vias.—73-04223
**Knickerbocker, S. A.** See Kulkarni, A. K.
**Kniep, R.** See Boca, R.
**Kniffen, Margaret L.; Helms, C. R.**
Instability of $Ti_3Ga_x$ alloys with respect to GaAs at elevated temperatures.—73-07610
**Kniffin, M. L.** See Ristic, L.
**Knight, Jonathan P.; McRae, Gregory J.**
Combinatorial optimization approach to molecular design.—73-05711
**Knight, Kevin S.; Soar, Martin; Bonanos, Nicholas**
Crystal structure of gadolinium- and yttrium-doped barium cerate.—73-12561
**Knight, R.; Smith, R. W.**
Residual stress in thermally sprayed coatings.—73-09664
**Knights, Clive F.; Cook, John; Rickerby, David S.**
Silicon carbide filaments bearing a carbon layer and a titanium carbide or titanium boride layer.—73-02136
**Knipp, P. A.; Reinecke, T. L.**
Barrier-modulated semiconductor quantum wires.—73-11084
**Knipper, Magali** See Besnard, Marie-Madeleine
**Knobel, M.; Santos, D. R.; Torriani, I. L.**
Structural evolution of nanocrystalline $Fe_{73.5}Cu_1Nb_3Si_{13.5}B_9$.—73-15366
**Knobloch, O.** See Kupper, D.
**Knofel, Dietbert** See Jager, R. G.; Scholl, E.; Trautmann, I.
**Knop, A.** See Paloura, E. C.
**Knorr, E.** See Hogler, W.
**Knotek, Otto; Loffler, Frank; Beele, Wolfram; Kramer, G.**
Comparison of abrasion model test results and machining tests with PVD-coated indexable inserts.—73-06758
**Knotek, Otto; Loffler, Frank; Beele, Wolfram**
Structure and corrosion properties of PVD coatings in the system Si-Al-O-N.—73-06320
**Knotek, Otto; Prengel, H.-G.; Brand, J.**
Deposition of Ti(C,N) coatings by arc evaporation.—73-10214
**Knowles, James A.** See Slade, Robert C. T.
**Knowles, Kevin**
Ceramic matrix composites.—73-05158
**Knowlton, Glenn**
Superabrasive wheels in the toolroom.—73-15973
**Knox, R. D.; Dalal, V.; Moradi, B.; Chumanov, G.**
Amorphous and polycrystalline silicon films deposited by electron cyclotron resonance reactive plasma deposition.—73-09015
**Knozinger, Eric; Jacob, Karl-Heinz; Hofmann, Peter**
Adsorption of $H_2$ on highly dispersed MgO.—73-12533
**Knozinger, Helmut** See Beutel, Tilman
**Knudsen, Arne K.** See Sainz de Baranda, Pedro
**Knudsen, Arne K.; Guiton, Theresa A.; Beecroft, Laura L.**
Moisture-resistant aluminum nitride powder and methods of making and using.—73-05320
**Knudsen, Arne K.**
Increasing AlN thermal conductivity via predensification treatment.—73-12475
**Knudsen, N.** See Krogh Andersen, I. G.
**Knystautas, Emile J.** See Baazi, Tandjaoui
**Ko, F. K.** See El-Sherif, M. A.
**Ko, H.** See Amano, Jun
**Ko, H.-N.**
Effect of grain size on the cyclic fatigue behavior of sintered $Al_2O_3$ under rotary bending.—73-06381; Fatigue behavior of sintered $Al_2O_3$ under rotary bending and static fatigue.—73-17318; Fatigue behavior of sintered $Si_3N_4$ under rotary bending and static fatigue.—73-06415
**Ko, H.-W.** See Lee, Y.-H.
**Ko, Hneng-Nam**
Behavior of mirrorlike region of sintered $Si_3N_4$ under rotary bending and static fatigue.—73-06328
**Ko, Heung-Moon** See Kim, Chul-Sung
**Ko, Hsien-Wen** See Chen, Chia-Fu
**Ko, Il-Young; Choi, Seung-Chul; Kim, Hwan**
PTCR effect of semiconducting Zn-Ti-Ni-O ceramics.—73-11408
**Ko, Jae-Woong** See Kang, Suk-Won
**Ko, K. K.** See Pang, S. W.
**Ko, Kyung-Hyun** See Ahn, Jeong-Hwan
**Ko, P. L.; Wozniewski, A.; Zhou, P.-A.**
Wear-corrosion-resistant materials for mechanical components in harsh environments.—73-06878
**Ko, Soung-Man** See Eom, Tae-Hyoung
**Ko, W. F.** See Zhang, G. M.
**Ko, Wen-Song** See Hsu, Jen-Yan
**Ko, Y.-C.** See Hung, Y.-H.
**Ko, Young-Shin** See Choi, Sung-Jun; Kim, In-Ki
**Koba, Masaaki** See Hiroki, Nobuyoshi
**Koba, Masayoshi** See Fujimoto, Manabu; Kataoka, Shoei; Shintaku, Hidetaka
**Kobashi, Koji** See Inoue, Takayoshi
**Kobashi, Koji; Nishimura, Kozo; Miyauchi, Shigeaki; Kumagai, Kazuo; Katoh, Rie**
Diamond heterojunction diode.—73-11518
**Kobashi, Masahiro** See Tanaka, Kazuyoshi
**Kobayashi, A.** See Koike, Y.; Nakano, T.
**Kobayashi, Albert S.** See Takagi, Yoshio
**Kobayashi, Chihiro** See Aizawa, Masanobu

**Kobayashi, Fumiyuki** See Kodama, Hironori

**Kobayashi, H.** See Ishida, T.; Tuson, G. B.

**Kobayashi, H.; Ishida, T.; Nakamura, K.**
Properties of indium tin oxide films prepared by the electron beam evaporation method in relation to characteristics of indium tin oxide/silicon oxide/silicon junction solar cells.—73-12869

**Kobayashi, H.; Kogetsu, Y.; Ishida, T.; Nakato, Y.**
Increases in photovoltage of "indium tin oxide/silicon oxide/mat-textured *n*-silicon" junction solar cells by silicon preoxidation and annealing processes.—73-12813

**Kobayashi, H.; Richter, W.**
Design considerations and modeling of the glass melter combustion space for oxy-fuel firing.—73-15870

**Kobayashi, H.; Tuson, G. B.; Lauwers, E.**
$NO_x$ emissions from oxy-fuel-fired glass-melting furnaces.—73-01960

**Kobayashi, Hidehiko** See Kuramochi, Hideto; Mitamura, Takashi; Mori, Toshiyuki; Shimosaka, Kenichi

**Kobayashi, Hidehiko; Hiratsuka, Nobuyuki; Mitamura, Takashi**
Preparation of $Zn_xFe_{3-x}O_4$ fine powders by thermite method with zinc.—73-16943; Preparation of $Zn_xFe_{3-x}O_4$ fine powders by thermite method with Zn.—73-09273

**Kobayashi, Hidehiko; Katoh, Miyuki; Kamiyama, Yoshihide; Mitamura, Takashi**
Preparation of $ZrB_2$ fine powders using thermite method by reduction with Mg.—73-13212; Preparation of ZrN fine powders from $ZrO_2$ by reduction with Mg and their recovery.—73-05985

**Kobayashi, Hidehiko; Katoh, Miyuki; Kamiyama, Yoshihide**
Preparation of $ZrB_2$ fine powders using thermite method by reduction with Mg.—73-05984

**Kobayashi, Hidehiko; Kuramochi, Hideto; Ogino, Hiroyuki; Mori, Toshiyuki; Yamamura, Hiroshi; Mitamura, Takashi**
Grain-boundary conductivity of the system $Y_2O_3$-$Nb_2O_5$ composites.—73-00973; Grain-boundary conductivity of the system $Y_2O_3$-$Nb_2O_5$ composites.—73-12806

**Kobayashi, Hidehiko; Ogino, Hiroyuki; Mori, Toshiyuki; Yamamura, Hiroshi; Mitamura, Takashi**
Preparation of $Y_3NbO_7$ powders with excess oxygen vacancies and conductivity of the sintered bodies.—73-16942

**Kobayashi, Hidehiko; Shimosaka, Kenichi; Kamiyama, Yoshihide; Mitamura, Takashi**
Preparation and formation processes of HfC fine powders by Mg thermite method.—73-05962; Preparation and formation processes of HfC fine powders by Mg thermite method.—73-16909

**Kobayashi, Hidehiko; Shimosaka, Kenichi; Kaneda, Yoshihisa; Mitamura, Takashi**
Preparation and formation processes of ZrC fine powders by Mg thermite method.—73-05963; Preparation and formation processes of ZrC fine powders by Mg thermite method.—73-16910

**Kobayashi, Hidehiko; Shimosaka, Kenichi; Mitamura, Takashi**
Preparation and formation process of $HfB_2$ fine powders by Mg thermite method.—73-05961; Preparation and formation process of $HfB_2$ fine powders by Mg thermite method.—73-16908; Preparation of HfN fine powders using thermite method by reduction of Mg.—73-05974; Preparation of HfN fine powders using thermite method by reduction with Mg.—73-13189

**Kobayashi, Hidehiko; Terasaki, Toshihiro; Mori, Toshiyuki; Yamamura, Hiroshi; Mitamura, Takashi**
Preparation and thermal expansion behavior of excess $SiO_2$ pollucite powders.—73-02939; Preparation and thermal expansion behavior of excess $SiO_2$ pollucite powders.—73-13179; Thermal expansion characteristics of Li-replaced type pollucite ($Cs_{1-x}Li_xAlSi_2O_6$) powder.—73-02708

**Kobayashi, Hidehiko; Terasaki, Toshihiro; Mori, Toshiyuki**
Preparation and thermal expansion behavior of pollucite powders by sol-gel processing.—73-02940

**Kobayashi, Hideki; Kanbara, Hirohisa; Koga, Masanori; Kubodera, Kenichi**
Third-order nonlinear optical properties of $As_2S_3$ chalcogenide glass.—73-07091

**Kobayashi, Hiromichi** See Ushikoshi, Ryusuke

**Kobayashi, K.** See Fujiura, K.; Vandentop, G. J.

**Kobayashi, K.; Takebe, T.; Yamamoto, T.; Fujii, M.; Inai, M.; Lovell, D.**
Novel carrier confinement (*p-n-p* junctions) on (111)A GaAs substrates patterned with equilateral triangles.—73-04420

**Kobayashi, Katsuhiro; Senna, Mamoru; Bernhardt, Claus**
Pore size distribution of cast, compressed, and lightly sintered alumina with preliminary mechanical treatments.—73-13438

**Kobayashi, Kazuo** See Uchiyama, Yasuo

**Kobayashi, Kazuo; Sano, Hideaki; Maeda, Kazutoshi; Uchiyama, Yasuo**
Oxidation behavior of graphite/$B_4C$/SiC/$ZrB_2$ composite in dry and moist atmospheres.—73-13481

**Kobayashi, Kazuo; Sano, Hideaki; Maeda, Kazutoshi**
Oxidation behavior of graphite/$B_4C$/SiC/$ZrB_2$ composite in dry and moist atmospheres.—73-06312

**Kobayashi, Keiji** See Konishi, Ryosuke

**Kobayashi, Keizo; Miwa, Kenji; Takayanagi, Takeshi; Ohnaka, Itsuo**
Formation of Ti-Al-$ZrO_2$ film on the surface of mechanical alloying ball.—73-06794; Formation of Ti-Al-$ZrO_2$ film on the surface of mechanical alloying ball.—73-16794

**Kobayashi, Kenichi** See Ueno, Yoshiyasu

**Kobayashi, Kenkichiro** See Matsushima, Shigenori

**Kobayashi, Kenkichiro; Ishihara, Yozo; Matsushima, Shigenori; Okada, Genji**
Localization of carriers of Y-doped $CaCuO_2$ films prepared by an organometallic chemical vapor deposition method.—73-15535

**Kobayashi, Kenkichiro; Maeda, T.; Matsushima, Shigenori**
Optical and electronic properties of cobalt-doped zinc oxide films prepared by the sputtering method.—73-02650

**Kobayashi, Kenkichiro; Matsubara, Toshihiro; Matsushima, Shigenori; Okada, Genji**
Growth of ZnO films by low-pressure organometallic chemical vapor deposition.—73-10444

**Kobayashi, Kimio** See Ueno, Iwao

**Kobayashi, Kuniaki** See Ishii, Yoshiro

**Kobayashi, M.** See Agui, Akane; Grillo, D. C.; Han, J.; Horita, Susumu

**Kobayashi, M.; Kawamura, K.; Suzuki, K.**
High *Q*-factor triplate resonator with an inner conductor of melted silver.—73-10954

**Kobayashi, Makoto** See Sumita, Shigekazu

**Kobayashi, Masakazu** See Nurmikko, A. V.

**Kobayashi, Masaki** See Katsumura, Yuji

**Kobayashi, Michihiro** See Akimoto, Ryouichi

**Kobayashi, Mitsunori** See Moriguchi, Hideki

**Kobayashi, Morio** See Shintaku, Toshihiro

**Kobayashi, Naoya; Fukuhara, Minoru; Doi, Akira; Takada, Toshio; Kusano, Yoshihiro; Takada, Jun**
Formation of the high-$T_c$ phase in Bi-2223 system in various atmospheres—effect of $O_2$ partial pressure.—73-15482; Formation of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O system in various atmospheres.—73-01558

**Kobayashi, Nobuo** See Takatori, Kazumasa

**Kobayashi, S.** See Abu-Dayah, A.

**Kobayashi, T.** See Miyake, S.; Nakano, Kikuo; Sekikawa, Taro; Sueda, M.

**Kobayashi, T.; Takizawa, Hirotsugu; Endo, Tadashi; Sato, T.; Shimada, Masahiko; Taguchi, H.**
Metal-insulator transition and thermoelectric properties in the system $(R_{1-x}Ca_x)MnO_{3-\delta}$ (R=Tb, Ho, Y).—73-02643

**Kobayashi, Tadakazu** See Fujita, Nobuhiko

**Kobayashi, Tadashi** See Kawakami, Makoto

**Kobayashi, Tadayuki; Eto, Satoshi; Kato, Yoshihito; Usami, Kouichi; Goto, Toshinari**
Influence of sputtering conditions on the characteristics of superconducting Y-Ba-Cu-O films.—73-15515

**Kobayashi, Takayoshi** See Nomura, Shintaro

**Kobayashi, Takeshi** See Iwabuchi, Mamoru; Ohara, Tomoyuki

**Kobayashi, Tohru** See Shiomi, Haruhisa

**Kobayashi, Tomoyuki** See Kinjo, Tsuneo

**Kobayashi, Toshio; Uchikawa, Fusaoki; Nomura, Kenji; Fujiwara, Fumio; Matsuno, Shigeru; Morita, Masao**
Process for producing an oxide superconductor from alkoxides.—73-11994

**Kobayashi, Toshiro** See Yamauchi, Shinji

**Kobayashi, Toyohiko; Ono, Shozo**
Growth of diamond films by high rate thermal plasma CVD.—73-02845

**Kobayashi, Toyohiko**
Electrical resistivity of diamond films grown by thermal plasma CVD.—73-02604; Morphology of diamond in radio-frequency thermal plasma CVD.—73-03179

**Kobayashi, Tsuneya; Takemoto, Mitsuo**
Applications of porosity of plaster molds.—73-09822

**Kobayashi, Tsuneya**
Technology of Plaster of Paris production and exportation of plant.—73-13786

**Kobayashi, Yasuhiro** See Shimoo, Toshio

**Kobayashi, Yasuyoshi** See Hayashi, Shinsuke

**Kobayashi, Yoshikazu** See Moriyama, Minoru

**Kobayashi, Yoshinobu** See Kata, Keiichiro

**Kobayashi, Yoshio; Kakegawa, Yukihide; Kurokawa, Youichi; Suzuki, Kyoichi; Oka, Yasuo**
Photoluminescence of fine semiconductor (CdS, CdSe, Ge) particle-doped films prepared by a mutual counterdiffusion method and a sol-gel process.—73-04440; Photoluminescence of fine semiconductor (CdS, CdSe, Ge) particle-doped films prepared by a mutual counterdiffusion method and a sol-gel process.—73-11386

**Kobayashi, Yuichi; Kato, Etsuro**
Low-temperature fabrication of anorthite ceramics.—73-05899

**Kobayashi, Yuichi; Ohira, Osamu; Ohashi, Yasuo; Kato, Etsuro**
Bending strength and microstructure of commercial porcelains for tablewares.—73-03974; Vitrification of whiteware bodies in alumina–feldspar–kaolin system.—73-10906

**Kobayashi, Yuichi; Ohira, Osamu; Ohashi, Yasuo**
Vitrification of whiteware bodies in alumina-feldspar-kaolin system.—73-00927

**Kobayashi, Yuichi; Ohira, Osamu; Satoh, Tomohisa; Kato, Etsuro**
Effect of quartz on the sintering and bending strength of the porcelain bodies in quartz-feldspar-kaolin system.—73-17293; Strengthening of α-alumina-containing porcelain bodies by lamination with different compositions.—73-15933

**Kobe, Toshihiko** See Maeda, Masahito

**Kobeda, E.; Warnock, J. D.; Gambino, J. P.**
Diffusion barrier properties of TiN films for submicron silicon bipolar technologies.—73-11140

**Kobelev, A. P.** See Lifanov, F. A.

**Kobelev, N. P.** See Aronin, A. S.

**Koblischka, M. R.** See Schuster, T.

**Kobori, Hiromi; Ohyama, Tyuzi; Otsuka, Eizo**
Magnetic field dependence of polaron mass in CdTe.—73-01235

**Kobras, Udo** See Bittner, Hans-Georg

**Kobrinets, V. M.** See Prokopovich, I. E.

**Kobune, Masafumi** See Fujii, Satoshi; Mohri, Fumihiko

**Kobune, Masafumi; Sugie, Yosohiro; Fujii, Satoshi; Tsubakino, Harushige; Nakashima, Shigehiro**
Etching effect of substrate on crystallinity of oriented platinum thin film.—73-00230

**Koc, Rasit; Anderson, H. U.**
Strontium-doped La(Cr, Mn)$O_3$ for solid oxide fuel cells [SOFC's].—73-01027

**Kocarek, J.**
Calculation of physical decoloration at tank glass melting.—73-14333; Development of lead-free glasses for jewelry manufacture.—73-14349

**Koch, C.; Telle, H. R.**
Bridging THz frequency gaps in the near ir by coherent four-wave mixing in GaAlAs laser diodes.—73-01085

**Koch, F.** See Chu, J. H.

**Koch, M. W.** See Shank, S. M.

**Koch, M.; Heilmann, R.; Cundiff, S. T.; Feldmann, J.; Gobel, E. O.; Yakovlev, D. R.**
Excitonic quantum beats in CdTe/$Cd_{1-x}Mn_xTe$ quantum wells.—73-14900

**Koch, R. H.** See Dekker, C.

**Koch, S. W.** See Fluegel, B. D.; Sargent, M., III; Wang, Hai-Lin

**Koch, T. L.** See Tennant, D M.

**Koch, W.** See Boden, G.

**Kochanowski, Brian K.** See Schreiber, Henry D.

**Kocharyan, K.** See Arutyunyan, V. E.

**Kochelaeva, L. T.** See Shchetinin, N. M.

**Kochendorfer R.,** See Kun, Yu

**Kocher, Peter**
Chemical reactions during the manufacture of electrically fused refractories: I.—73-00786

**Kochereshko, V. P.** See Pozina, G. R.

**Kochev, I. V.** See Osipov, V. V.

**Kochina, I. I.** See Zaitseva, N. V.

**Kochnev, I. V.** See Sobolev, M. M.

**Kochubey, D. I.** See Menushenko, A. P.; Sorokina, S. L.

**Kock, A.** See Braunisch, W.

**Kocon, Waldemar W.; Shacham-Diamand, Y.; Frechet, Jean M. J.; Fahey, J.**
Process optimization of 200-nm-wide trenches in $SiO_2$ using a chemically amplified acid-catalyzed e-beam resist.—73-07353

**Koczak, Michael J.** See Elkind, Alexander; Mortensen, Andreas

**Koczak, Michael J.; Premkumar, M. K.**
Emerging technologies for the in situ production of MMC's.—73-06780

**Kodaira, Kohei** See Akazawa, Toshiyuki; Furusaki, Tsuyoshi; Hashimoto, Shin; Higuchi, Mikio; Takahashi, Junichi

**Kodaira, Naoki** See Ishikawa, Tatsuo

**Kodaira, Shinji** See Kiryu, Shogo

**Kodaira, Tetsuya** See Nozue, Yasuo

**Kodaira, Tetsuya; Nozue, Yasuo; Goto, Takenari**
Optical absorption spectra of sodium clusters incorporated into zeolite LTA.—73-16238

**Kodama, Hironori; Okamoto, Masahide; Suzuki, Hideo; Ogihara, Satoru; Moyoshi, Tadahiko; Kobayashi, Fumiyuki**
Method for producing multilayer ceramic body with convex side faces.—73-11032

**Kodama, Hironori**
Sintering behavior of arranged ceramic short-fiber-reinforced glass matrix composites.—73-14492

**Kodama, K.** See Meguro, T.

**Kodama, Katsumi** See Satoh, Kouichi

**Kodama, Katsumi; Nakasone, Sigeru**
AE properties of repeated bending load in mortar and concrete.—73-09808

**Kodama, M.; Hirashima, T.; Matsushita, T.**
Anomalous behavior of ultrasonic velocity in cesium borate glasses.—73-10418

**Kodama, M.**
Ultrasonic velocity in cesium borate glasses.—73-00571

**Kodama, Satoshi; Akazawa, Masamichi; Fujikura, Hajime; Hasegawa, H.**
Interface profile optimization in novel surface passivation scheme for InGaAs nanostructures using Si interface control layer.—73-07612

**Kodama, Tadashi** See Hirata, Yoshihiro

**Kodama, Tatsuya** See Nishizawa, Kenichi

**Kodama, Yasuharu** See Murayama, Norimitsu; Sakaguchi, Shuji; Wakai, Fumihiro

**Kodas, Toivo T.** See Chandler, Clive D.; Lyons, Shirley W.; Ott, Kevin C.

**Kodentsov, A. A.; Kivilahti, J. K.; Van Loo, F. J. J.; Peteves, Stathis D.**
Interphases in $Si_3N_4$/Ni-Cr alloy joints.—73-03611

**Kodess, B. N.; Butman, L. A.; Sambueva, S. R.**
Refinement of structural type of $Mo_2B_4$.—73-16291

**Kodintsev, I. M.; Trasatti, S.; Rubel, M.; Wieckowski, A.; Kaufher, N.**
X-ray photoelectron spectroscopy and electrochemical surface characterization of $IrO_2$+$RuO_2$ electrodes.—73-14741

**Koeberer, Gunther** See Herchenbach, Horst

**Koeberer, Gunther**
Ways and means of optimizing reciprocating grate coolers.—73-03558

**Koebrugge, Gerald W.; Winnubst, Louis; Burggraaf, Anthonie J.**
Thermal stability of nanostructured titania and titania-ceria ceramic powders prepared by the sol-gel process.—73-17057

**Koehler, T.** See Becia, P.

**Koestner, R.; Lopes, V.; Korenstein, R.; Oguz, S.; Kreismanis, V.; Ehsani, H.**
Reduced metal-insulator semiconductor tunneling in metallorganic chemical vapor deposition HgCdTe(111)Te films.—73-07766

**Koetke, J.; Kuck, S.; Petermann, K.; Huber, G.; Cerullo, G.; Danailov, M.**
Quasi-continuous wave laser operation of $Cr^{4+}$-doped $Y_2SiO_5$ at RT.—73-16581

**Kofstad, Per** See Velle, Ole Jacob

**Koga, Jyoji** See Kawamura, Kazuro

**Koga, Kazunori** See Kohsaka, Shoji; Mishima, Tsuneo

**Koga, Masanori** See Eguchi, Tadataka; Kobayashi, Hideki

**Koga, T.; Xu, J. H.; Moon, B. M.; Rao, K. V.**
YBaCuO films by pulsed laser deposition [PLD] and sputtering.—73-04827
**Koga, Tadashi** See Korenaga, Sadayoshi
**Kogan, V. E.** See Pronkin, A. A.
**Kogan, V. G.** See Gammel, P. L.; Song, Y.-Q.
**Koganezawa, Nobuyuki** See Aida, Toshiyuki; Arato, Toshiaki
**Kogelnik, Hans-Joachim** See Madan, Sanjeev
**Kogelschatz, Ulrich** See Esrom, Hilmer
**Kogetsu, Y.** See Kobayashi, H.
**Kogo, T.; Onishi, Masashi; Kanamori, Hiroo; Yokota, H.**
Characterization of fluoride glasses for single-mode optical fibers with large refractive index difference.—73-07000
**Kogo, Yutaka; Hatta, H.; Kagawa, Yutaka**
Fracture toughness of SiC-whisker/$ZrO_2$/$Al_2O_3$ triple-phase composites.—73-06441
**Koguchi, Makoto; Hirabayashi, Kazuto; Kokura, Kunio**
Microstructure of carbon layers deposited on optical fibers and hydrogen diffusion in the layers.—73-06311; Microstructure of carbon layers deposited on optical fibers and hydrogen diffusion in the layers.—73-17169
**Koguchi, Nobuyuki; Ishige, Keiko; Takahashi, Satoshi**
New selective molecular beam epitaxial growth method for direct formation of GaAs quantum dots.—73-11349
**Kogure, Toshihiro** See Matsuda, Atsunori
**Koh, Kee-Joon** See Hwang, Kyu-Hong
**Kohatsu, Tetsuya** See Tomiki, Tetsuhiko
**Kohayashi, Shuichi** See Tenya, Kenichi
**Kohgo, Takashi** See Onishi, Masashi
**Kohiki, Shigemi** See Nishitani, Mikihiko
**Kohiki, Shigemi; Nishitani, Mikihiko; Negami, Takayuki; Wada, T.**
Valence manipulation and homojunction diode fabrication of chalcopyrite structure Cu-In-Se thin films.—73-04508
**Kohiki, Shigemi; Sakai, Masahiro; Mizuno, Koichi; Hayashi, Shigenori; Enokihara, Akira; Setsune, Kentaro**
Many-body effects in X-ray photoemission and high-$T_c$ superconductivity of cuprate superconductors.—73-11826
**Kohjiro, Satoshi** See Kiryu, Shogo
**Kohl, M.** See Gombert, A.
**Kohler, David A.** See Tatarchuk, Bruce J.
**Kohler, Gunter** See Fischer, Bernd
**Kohler, K.** See Batke, E.
**Kohler, Manfred** See Volsgen, Fernando
**Kohler, Nicola; Ikuhara, Yuichi; Awaji, Hideo; Funatani, Kiyoshi**
High-temperature fracture mechanism of gas-pressure-sintered silicon nitride.—73-03307; High-temperature fracture mechanism of gas-pressure-sintered silicon nitride.—73-06453
**Kohli, J. T.; Condrate, Robert A., Sr.; Shelby, J. E.**
Raman and infrared spectra of rare-earth aluminosilicate glasses.—73-10395
**Kohli, J. T.; Shelby, J. E.; Frye, J. S.**
Structural investigation of yttrium aluminosilicate glasses using $^{29}Si$ and $^{27}Al$ magic angle spinning nuclear magnetic resonance.—73-00408
**Kohlstedt, David L.** See Versteeg, Vera A.
**Kohn, D. H.** See Stav, E.
**Kohn, Kay** See Tsujino, Hiroyuki
**Kohn, S. C.** See Gibbons, G.; Holland, D.
**Kohno, A.** See Yoshio, Tetsuo
**Kohno, Hiroshi** See Tanamoto, Tetsufumi
**Kohno, Kiyoshi** See Shima, Hiroshi
**Kohno, Kiyoshi; Fukuda, Eiji; Takeuchi, Masayuki; Yamada, Ryuzo**
Control of temperature rise of concrete using cooling aggregate and cooling water.—73-09869
**Kohno, Kiyoshi; Kinoshita, Noriyasu; Amoh, Kazuo; Kanazawa, Eiji**
Effect of mixture proportion on zero-slump concrete for artifical fish reef.—73-09913
**Kohno, M.** See Kokaku, Y.
**Kohno, Osamu** See Iijima, Y.
**Kohno, Osamu; Ikeno, Yoshimitsu; Sadakata, Nobuyuki; Sugimoto, Masaru; Nakagawa, Mikio**
Method for producing oxide superconducting composite wire.—73-11968
**Kohno, T.** See Miyake, S.
**Kohno, T.; Mutoh, A.; Kude, Y.; Sohda, Y.**
Potential qualities of pitch-based carbon fiber for high-temperature composites.—73-17410
**Kohno, Yoshiaki** See Wada, Nobuyuki
**Kohsaka, Shoji** See Mishima, Tsuneo
**Kohsaka, Shoji; Nakanishi, Masahito; Koga, Kazunori**
Enhancement of fracture toughness by residual stress in $Si_3N_4$ composites.—73-06404; Enhancement of fracture toughness by residual stress in $Si_3N_4$ composites.—73-13523
**Kohtoku, Yasuhiko** See Nishida, Akio
**Kohut, William**
Selection of materials and parameters for sanitary ware casting.—73-07272
**Kohzuki, Hidenori; Ishihara, Tsuguo; Okuno, Yasuo; Motoyama, Muneyuki**
Effects of self-bias voltage on formation of cBN film.—73-16126
**Koibuchi, Kiyoshi; Yamaguchi, Hiroyuki**
Utilization of granulated blast-furnace slag.—73-00204
**Koide, Norikatsu** See Manabe, Katsuhide
**Koidl, P.** See Fuchs, F.; Samlenski, R.
**Koike, Atsunori** See Hiroki, Nobuyoshi
**Koike, Michio** See Tanaka, Kyoji
**Koike, Shuichi; Nabatame, Toshihide; Hirabayashi, Izumi**
Preparation and transport properties of $TlBa_2Ca_2Cu_3O_y$ thin films by metallorganic deposition [MOD].—73-15591
**Koike, Y.** See Yokoya, Takayoshi
**Koike, Y.; Kobayashi, A.; Kawaguchi, T.; Kato, M.; Noji, T.; Ono, Y.**
Anomalous $x$ dependence of $T_c$ and possibility of low-temperature structural phase transition in $La_{2-x}Sr_xCuO_{0.99}M_{0.01}O_4$ (M=Ni, Zn, Ga).—73-11690
**Koinuma, Hideomi** See Kawai, Maki; Sato, K.
**Koishi, Masumi** See Matsuno, Takashi; Sadahirok, Yoshikazu
**Koishi, Masumi**
Interface chemistry of powders—adsorption, wetting, and dispersion.—73-16522
**Koiwa, Masaichi**
Fine ceramics and nondestructive testing.—73-01900; How small size defects in fine ceramic materials can we see by radiography.—73-01904
**Koizumi, Ken**
Nonlinear optics, fiber lasers, and microoptics: novel approach of new glasses for optoelectronic applications.—73-14236
**Koizumi, M.** See Ohyanagi, M.
**Kojima, Akira** See Furukawa, Shigeru
**Kojima, Akira; Hoshii, Shinsuke; Akaishi, T.**
High-temperature treatment of carbon fiber/ceramic composites prepared for borosiloxane.—73-13088
**Kojima, H.** See Suzuki, K.
**Kojima, Hironao** See Aomine, Nobutaka; Kinomura, Nobukazu; Matsuda, Masaaki
**Kojima, K.** See Suwa, H.
**Kojima, Kazuyoshi** See Takami, Tetsuya
**Kojima, Kunihiko; Mizukami, Fujio; Miyazaki, Mitsuharu**
Selective formation of thin-film iron garnet by complexing agent-assisted sol-gel processing.—73-11671
**Kojima, Masahiko; Kato, Hisao; Gatto, Mitsuru**
Blackening of tin oxide thin films heavily doped with antimony.—73-08814
**Kojima, Nobuaki** See Okamoto, Tamotsu
**Kojima, Norimichi** See Sato, Hirohiko; Terashima, Taichi
**Kojima, Seiji; Hamazaki, Shinichi; Tsukioka, Masayuki; Takashige, Masaaki**
Raman scattering study of $Ba_2NaNb_{5-x}$.
**Kojima, Shoichi; Minagawa, Kazuhiro; Saito, Tasuku; Kurachi, Tasuo; Kano, Haruyuki**
Process for preparing silicon carbide powder for use in semiconductor equipment.—73-15970
**Kojima, Shozo** See Wada, Nobuyuki
**Kojima, Toshinori; Matsukata, Masahiko; Ozawa, Eiichi; Friedt, Jean-Marie**
Process for the elaboration of powders uniformly coated with ultrafine silicon-base particles using chemical vapor decomposition in the presence of core powders.—73-12095
**Kojima, Yo** See Fukuzawa, Yasushi; Ochiai, Shouichi
**Kojima, Yoshiyuki** See Yasue, Tamotsu
**Kojima, Yoshiyuki; Kawanobe, Akio; Yasue, Tamotsu; Arai, Yasuo**
Synthesis of amorphous calcium carbonate and its crystallization.—73-17031; Synthesis of amorphous calcium carbonate and its crystallization.—73-17032
**Kojima, Yoshiyuki; Sadotomo, Akiko; Yasue, Tamotsu; Arai, Yasuo**
Control of crystal shape and modification of calcium carbonate prepared by precipitation from calcium hydrogen carbonate solution.—73-02754; Control of crystal shape and modification of calcium carbonate prepared by precipitation from calcium hydrogen carbonate solution.—73-12955
**Kojima, Yoshiyuki; Yasue, Tamotsu; Arai, Yasuo**
Preparation of reclaimed cement from waste concrete.—73-13764
**Kojo, Katsuhiko** See Nakahara, Yuichi
**Kokaji, A.** See Okada, Akira
**Kokaji, Akira** See Uchimura, Hiroshi
**Kokaji, Akira; Uchimura, Hiroshi; Kaji, Masaki**
Fracture strength of silicon nitride under biaxial stresses.—73-06436; Fracture strength of silicon nitride under biaxial stresses.—73-13536
**Kokaku, Y.; Kohno, M.; Fujimaki, S.; Kitoh, M.**
Effect of microstructure and hydrogen content on the characteristics of amorphous hydrogenated carbon protective coatings.—73-03137
**Kokhanovskii, S. I.** See Ilyinskaya, N. D.
**Kokhanovskii, S. I.; Makushenko, Yu. M.; Seisyan, R. P.; Efros, A. L.; Yazeva, T. V.; Abdullaev, M. A.**
Parameters of the energy band structure of epitaxial films in $In_{1-x}Ga_xAs/InP$ heterojunctions.—73-01270
**Kokin, V. A.** See Kotel'nikov, I. N.
**Kokini, Klod**
Transient thermal fracture of ceramic-to-metal interfaces.—73-03660
**Kokitsu, Mikako** See Itoh, Hinenobu
**Kokmeijer, E.** See Van Den Berg, P. H. J.
**Koksal, F.** See Ucun, F.
**Kokubo, Tadashi** See Donkai, N.; Ebisawa, Y.; Li, P.; Li, Pan-Jian; Ohtsuki, Chikara; anahashi, Masami; Yao, Takeshi
**Kokubo, Tadashi**
Novel bioactive materials derived from glasses.—73-14443; Recent progress in glass-based materials for biomedical applications.—73-00540
**Kokubu, Toshinori; Matsuyama, Tetsuo; Yamane, Masayuki**
Uranium adsorption capacity of $TiO_2$-$SiO_2$ porous glass-ceramics.—73-01758
**Kokura, Kunio** See Koguchi, Makoto
**Kokura, Satoshi** See Sato, Ichiya
**Kol'chenko, T. I.** See Kozlovskii, V. V.
**Kol'chenko, T. I.; Koyava, V. T.; Lomako, V. M.**
Diagnostics of GaAs films grown by atomic layer epitaxy.—73-11136
**Kol'tsov, G. I.; Makarov, V. V.**
Effects influencing the distribution profiles of implanted ions in crystalline semiconductor III-V targets after ion implantation.—73-01138
**Kol'tsov, S. I.; Kol'tsov, Yu. S.**
Effects of alkali-earth metal ion implantation into alumina surface layer on its acidic-basic properties.—73-16464
**Kol'tsov, Yu. S.** See Kol'tsov, S. I.
**Kol'tsova, T. N.** See Bondarenko, M. A.
**Kolar, D.** See Drazic, G.; Hrovat, M.; Makovec, Darko; Suvorov, D.
**Kolar, Petr; Martinec, Petr; Bens, Petr**
Methodological instructions for mercury porosimetry of classic sedimentary rocks.—73-01914
**Kolarik, Pavel** See Kovac, Miroslav
**Kolawa, E.** See Chen, J. S.
**Kolbas, R. M.** See Krishnankutty, S.; Yin, L.-W.; Zhang, Tong
**Kolbrecka, K.** See Borowiec, K.
**Kolchanova, N. M.** See Bogoslovskaya, A. B.
**Kolchina, G. P.** See Bublik, V. T.
**Koleda, V. V.** See Belyi, Ya. I.; Delyi, Ya. V.
**Kolega, M.** See Musil, J.
**Kolenda, J.** See Weinert, R.
**Kolesik, M.; Sobolev, B. P.**
Raman scattering study of the $Ba_{1-x}R_xF_{2+x}$ superionic conductors.—73-05466
**Kolesnichenko, K. A.; Korkin, S. Zh.; Kudzin, A. Yu.; Stolpakova, T. M.; Gontarenko, Y. V.**
Hopping conduction in $NaBi(MoO_4)_2$ crystals.—73-02617
**Kolesnik, S. P.** See Lashkarev, G. V.
**Kolesnikov, N. N.** See Bulaevskii, L. N.; Tamazyan, R. A.
**Kolesnikova, E. P.** See Ivzhenko, N. A.
**Kolesnikova, I. V.** See Rumyantsev, B. M.
**Kolesnikova, R. N.; Lyashenko, T. V.; Khrut'ba, V. A.**
Optimizing the manufacture of ceramic facing tiles (exchange of experience).—73-07266
**Kolesov, Yu.; Zaytseva, S.; Kolesova, A.**
Reducing the detrimental matter in glass in the course of glass melting.—73-14486
**Kolesova, A.** See Kolesov, Yu.
**Kolev, D. I.** See Atanassov, E. D.
**Kolin, N. G.** See Brudnyi, V. N.
**Kolkmeier, Helmut**
Firing technology in the heavy clay industry: II.—73-01950
**Kolkowski, Brian M.** See Cheng, J. Joseph
**Koller, A.**
Materials Science Monographs, Volume 80: Structure and Properties of Ceramics.—73-17532
**Koller, D.** See Mandrus, D.
**Kolluri, S. V.; Chandorkar, A. N.**
Effect of annealing on the surface and interface properties of indium oxide–silicon structures.—73-09445
**Kolmakova, N. P.** See Kazei, Z. A.
**Kolman, B.** See Brozek, V.; Dubsky, J.
**Kolman, B.; Forman, J.; Dubsky, J.; Chraska, P.**
Chemical homogeneity of plasma-sprayed materials.—73-09040
**Kolmogorov, Yu. N.** See Varaksin, A. N.
**Kolobkova, E. V.** See Chekhovskii, V. G.
**Kolobov, A. V.** See Bershtein, V. A.
**Kolobov, A. V.; Kostikov, Yu. P.; Lantratova, S. S.; Lyubin, V. M.**
Photostructural transformations in chalcogenide glassy semiconductor films by photoelectron spectroscopy.—73-01284
**Kolobov, A. V.; Lyubin, V. M.; Tagirdzhanov, M. A.**
Corona discharge-stimulated transverse diffusion of silver in glassy As-Se films.—73-00603
**Kolobov, A. V.; Lyubin, V. M.; Tikhomirov, V. K.**
Anisotropy induced by photoinduced alloying of vitreous $As_2Se_3$ by silver.—73-16409
**Kolobov, M. A.** See Lipson, A. G.
**Kolobova, V. I.** See Zlenko, V. Ya.
**Kolodziejczyk, M.** See Zahn, D. R. T.
**Kolodziejski, L. A.** See Ho, E.
**Kolohkov, V. P.** See Zhmyreva, I. A.
**Kolomatskii, A. S.; Ryapolov, V. D.**
Phase equilibria in the CaO-$Me_2O_3$-$CaCl_2$-$H_2O$ system.—73-02378
**Kolomeitsev, V. V.; Kolomeitseva, E. F.**
Method of estimating the limiting strain in cast refractories on crystallization and annealing.—73-01912; Theoretical experimental method for evaluating the limiting stressed state of cast-melted refractories on crystallization and annealing.—73-00879
**Kolomeitsev, V. V.; Krasnyi, B. L.; Rudakov, B. P.**
Structure and properties of ceramics of the system $Al_2O_3$-$ZrO_2$-$SiO_2$.—73-07224
**Kolomeitsev, V. V.; Rudakov, B. P.; Popov, O. N.**
Effect of microcoolers on the structure and properties of melt-cast baddeleyite-corundum refractories.—73-00802; Effect of microcoolors on the structure and properties of melt-cast baddeleyite-corundum refractories.—73-00803
**Kolomeitsev, V. V.; Volga, V. I.; Dergunov, K. N.; Platova, M. A.**
Temperature measurement with a carbon thermal indicator.—73-01931
**Kolomeitseva, E. F.** See Kolomeitsev, V. V.
**Kolomeytseva, E.** See Popov, O. N.
**Kolomoets, A. G.** See Dudnik, E. F.
**Kolos, Raymond M.; Burns, Paul C.**
Summary of the results of laboratory inspections conducted by the Cement and Concrete Reference Laboratory.—73-10173
**Kolos, Raymond M.**
Compressive strengths of hydraulic cements produced in the United States.—73-06640
**Kolosov, A. M.** See Alekseev, S. A.
**Kolosov, M. V.** See Khisina, N. P.
**Kolosova, E. V.** See Gorbenko, O. Yu
**Kolotii, O. D.; Blinkin, V. A.**
Magnetic structure of $Y_2BaCuO_5$.—73-15548
**Kolotov, O. S.** See Iorgov, Dimitr
**Kolsch, Peter** See Schultze, Dietrich
**Koltenbah, B. E. C.** See McKinley, J. T.
**Koltover, I.** See Qi, J.
**Koltun, P. S.; Derevianko, G. V.**
Calculation of the temperature and stress fields of the base-quartz tube during MCVD technology.—73-14334
**Kolynina, V. I.** See Kazakov, S. V.
**Kolyshkina, N. V.** See Gal'perina, M. K.

**Komabayashi, Masashi; Ido, Shunji**
Change of electrical properties of Co-doped and Cr-doped $FeSi_2$ thin films during amorphous-to-crystalline transformation.—73-01092; Change of electrical properties of Co-doped and Cr-doped $FeSi_2$ thin films during amorphous-to-crystalline transformation.—73-12749
**Komagata, K.** See Shiroyama, M.
**Komai, K.; Minoshima, K.; Ryoson, H.**
Tensile and fatigue fracture behavior and water–environment effects in an SiC-whisker/7075-aluminum composite.—73-03361
**Komai, Masao** See Takagi, Kenichi
**Komaki, Hisashi** See Hirokawa, Yuichi
**Komaki, Kunio** See Hirose, Yoichi; Murakawa, Masao
**Koman, Marian** See Fellner, Pavel
**Komar, V. A.** See Dutov, A. G.
**Komarenko, P.; Clark, David E.**
Microwave susceptor materials in the $(Mg_xNi_{1-x})O$ system for high-temperature use in air.—73-05174; Synthesis of $Ti_3SiC_2$-based materials using microwave-initiated SHS.—73-17046
**Komarevskii, O. S.** See Kirichenko, Yu. A.
**Komarneni, S.** See Majling, Jan; Malla, P. B.; Ravindranathan, P.; Shrivastava, O. P.
**Komarov, A. I.** See Girshtel, G. B.
**Komarov, G. N.** See Chausskaya, I. D.
**Komarov, V. F.** See Sakovich, G. V.
**Komarova, N. V.** See Nemilov, S. V.
**Komarova, N. V.; Nemilov, S. V.**
Viscosity of glasses of the systems $BaO-P_2O_5$, $SrO-P_2O_5$, and $PbO-P_2O_5$ in the temperature ranges of softening and annealing and their elastic properties.—73-00573
**Komasawa, Isa** See Hirai, Takayuki
**Komatowski, J.** See Rozwadowski, M.
**Komatsu, Keiro** See Kato, Tomoaki
**Komatsu, Masao; Mori, Hirotaro; Iwasaki, Katsuhiro**
Design of a hot tensile stage for an ultra-high-voltage electron microscope and its application to in situ deformation of sapphire at 1620 and 1720 K.—73-05036
**Komatsu, Michiyasu** See Asayama, Masahiro
**Komatsu, Shojiro; Moriyoshi, Yusuke; Kasamatsu, Mitsuo; Yamada, Kawakatsu**
Cubic boron nitride crystallites grown by laser-induced plasma CVD.—73-02758; Method of making hard boron nitride by a plasma CVD method employing beam irradiation.—73-12494
**Komatsu, Shuichi** See Okuwada, Kumi
**Komatsu, T.** See Nakamura, Shizuo
**Komatsu, Takahiro** See Kashihara, Seiichi
**Komatsu, Takayuki** See Kim, Hyun-Gyu; Nitta, A.; Sato, Ryuji
**Komatsu, Takayuki; Mohri, H.; Nakagawa, T.; Matusita, Kazumasa**
Optical absorption and Raman scattering spectra of Zn–S bonds in silicate glasses.—73-07057
**Komatsu, Takayuki; Sato, Ryuji; Kuken, Yusuke; Matusita, Kazumasa**
Kinetics of nonisothermal crystallization of $Bi_2Sr_2CaCu_2O_x$ glasses with different copper valence states.—73-00365
**Komatsu, Takayuki; Shioya, Kazuhide; Matusita, Kazumasa**
Fabrication of transparent tellurite glasses containing potassium niobate crystals by an incorporation method.—73-00625
**Komatsu, Takayuki; Tawarayama, Hiromasa; Matusita, Kazumasa**
Preparation and optical properties of transparent $TeO_2$-based glasses containing $BaTiO_3$ crystals.—73-03865; Preparation and optical properties of transparent $TeO_2$-based glasses containing $BaTiO_3$ crystals.—73-10472
**Komatsu, Toshiteru** See Nakamura, Shizuo
**Komatsu, Y.** See Watanabe, M.
**Komatsubara, Satoru; Isobe, Tetsuhiko; Senna, Mamoru**
Effect of preliminary mechanical treatment on the microhomogenization during heating of hydrous gels as precursors for lead titanate.—73-05767
**Komeno, J.** See Kikkawa, T.
**Komeya, Katsutoshi; Haruna, Y.; Meguro, Takeshi**
Oxidation behavior of the sintered $Si_3N_4$-$Y_2O_3$-$Al_2O_3$ system.—73-03226
**Komeya, Katsutoshi; Matsukaze, Noriyuki; Meguro, Takeshi**
Synthesis of AlN by direct nitridation of Al alloys.—73-17029
**Komeya, Katsutoshi; Meguro, Takeshi**
Composite with anisotropy in thermal conductivity by the combination of aluminum nitride and its polytypoids.—73-14685
**Komeya, Katsutoshi; Mitsuhashi, Etsuo; Meguro, Takeshi**
Synthesis of AlN powder by carbothermal reduction-nitridation method: effect of additives on reaction rate.—73-06088; 73-17030
**Komeya, Katsutoshi**
Progress in silicon nitride ceramics in Japan.—73-05272
**Kominami, Shinya** See Nishino, Toshikazu
**Komissarov, V. V.** See Kovtun, V. I.
**Komiyama, Hiroshi** See Egashira, Yasuyuki; Kundu, Debtosh
**Komiyama, S.** See Matsuda, Y.
**Komkov, N. A.** See Filina, L. V.
**Komlos, K.** See Vanis, M.
**Komma, Ottmar; Steidl, Juergen**
Dental ceramic material with a relatively low processing temperature.—73-12361
**Komolikov, Yu. I.** See Chusovitina, T. V.
**Komori, Hideki** See Ohzuku, Tsutomo
**Komori, Kiyotaka; Yamakawa, Seishiro; Yamamoto, Shigeru; Naka, Jun; Kukubo, Tadashi**
Glass-fiber-forming composition, glass fibers obtained from the composition, and substrate for circuit board including the glass fibers as reinforcing material.—73-10632
**Komori, Masaaki** See Atsumi, Kiminori
**Komori, Mochimitsu; Iwakuma, Masataka; Kitamura, Tadashi; Matsushita, Teruo; Takeo, Masakatsu**
Levitation pressure and stiffness of a high-$T_c$ superconducting bearing in field-cooling process.—73-01586
**Komorita, Hiroshi; Mizunoya, Nobuyuki; Matsumura, Kazuo; Ikeda, Kazuo; Naba, Takayuki; Tanaka, Tadashi**
Ceramic circuit board with a curved lead terminal.—73-14743
**Komorita, Kazunori** See Suzuki, Morio
**Komorita, Kazunori; Nishimura, Hideki; Yoshida, Akira**
Structural change due to thermal treatment and dielectric properties of anodic oxide films of bismuth.—73-08747
**Komorowski, P. G.; Argyropoulos, S. A.; Hancock, R. G. V.; Gulens, J.; Taylor, P.; Canaday, J. D.**
Characterization of protonically exchanged Nasicon.—73-02161
**Kompan, M. E.; Venus, G. B.**
$Eu^{3+}$ probe-ion spectroscopy in the superionic conductor $Na_5YSiO_4O_{12}$: effects due to the dynamics of fused sublattice.—73-10946; $Eu^{3+}$-ion probe spectroscopy in $Na_5YSiO_4$ at low temperatures.—73-08619
**Komratov, G. N.; Shul'ga, Yu. M.**
Removing fluorine from the surface of silicon nitride powder with chemical reagents.—73-02995
**Komukai, Yuto** See Ichikawa, Makihiko
**Komunjer, Ljepsa** See Cizmek, Ankica
**Komura, Osamu** See Matsui, Tatsuji
**Komura, Osamu; Matsunuma, Kenji; Yasuoka, Norio; Higuchi, Matsuo; Miyake, Masaya; Katayama, Tetsuya**
Composite bearing structure.—73-12452
**Komvopoulos, K.** See Feng, Z.
**Kon'kov, O. I.; Trapeznikova, I. N.; Vlasenko, M. P.; Terukov, E. I.; Violina, G. N.**
Effect of temperature annealing on properties of $\alpha$-$Si_{1-x}C_x$:H films ($0<x\leq1$).—73-16744
**Konagai, M.** See De la Olvera, M.; Okamoto, Tamotsu; Takemura, Yasushi
**Konagai, M.; Takemura, Yasushi; Yamasaki, Kaname; Takahashi, K.**
Self-limiting growth of zinc chalcogenides and their superlattices.—73-04476
**Konaicheva, N. V.; Buler, P. I.; Myakin, V. K.**
Aluminum alloy wetting by lead glasses with additives preventing lead reduction.—73-00434
**Konak, Karel** See Lezal, Dimitrij
**Konak, Karel; Lezal, Dimitrij; Mariani, Emil**
Electrical transport phenomena in $ZrF_4$-$BaF_2$-$LaF_3$-$AlF_3$ glasses.—73-07024
**Konakawa, Yasuhiro** See Nanko, Makoto
**Konczykowski, M.** See Chikumoto, N.
**Kondepudi, P. K.** See Hihara, L. H.
**Kondo, Akira**
Electrical conduction mechanism in recrystallized SiC.—73-02809; Electrical conduction mechanism in recrystallized SiC.—73-12787
**Kondo, Ichiharu; Yoneyama, Takao; Takenaka, O.; Kinbara, A.**
Formation of high adhesive and pure Pt layers on $TiO_2$.—73-10232
**Kondo, Kazuo** See Morikawa, Asao
**Kondo, Kenichi** See Hirai, Hisako
**Kondo, Kenichi; Hirai, Hisako**
New forms of carbons and nonequilibrium processing.—73-12638
**Kondo, Kenichi; Sawai, S.; Akaishi, M.; Yamaoka, S.**
Deformation behavior of shock-synthesized diamond powder under high pressures and high temperatures.—73-09058
**Kondo, M.** See Anayama, C.
**Kondo, Masahiro**
Laminated-type piezoelectric actuator.—73-04579
**Kondo, Michikazu**
$LiNbO_3$ waveguide devices.—73-04559; $LiNbO_3$ waveguide devices.—73-11587
**Kondo, Mitsuji; Onikata, Masanobu**
Modified bentonite.—73-05150
**Kondo, Nobuhiro; Ono, Hirokazu**
Method of processing photosensitive glass with sections of differing exposure energies and article.—73-14553
**Kondo, Ryoichi** See Ninomiya, Hideaki
**Kondo, Shigeo** See Tatsumisago, Masahiro
**Kondo, T.** See Aoki, K.
**Kondo, Toshio** See Matsushita, Isao
**Kondo, Wakichi** See Manabe, Takaaki
**Kondo, Yasuhiro** See Sato, Kenji
**Kondo, Yoshihiro** See Tsuyuki, Naomitsu
**Kondo, Yoshihito** See Kuzjukevics, Anatolijs; Nakahara, Masae
**Kondo, Yoshihito; Hashizuka, Yutaka; Nakahara, Masae; Yokota, Kozo**
Slip casting of alumina using porous alumina mold.—73-09331; Slip casting of alumina using porous alumina mold.—73-16998
**Kondo, Yoshihito; Tsukuda, Akira; Takada, Atsushi; Okada, Shojiro**
Grinding forces and elastic recovery in ceramic materials.—73-12807
**Kondo, Yoshiyuki** See Nakamura, Toshio
**Kondoh, Eiichi; Ohta, Tomohiro; Mitomo, Tohru; Ohtsuka, Kenichi**
Surface reaction kinetics of gas-phase diamond growth.—73-03031
**Kondoh, Eiichi; Tanaka, Kenji; Ohta, Tomohiro**
Homoepitaxial growth of diamond by an advanced hot-filament chemical vapor deposition method.—73-09162; Reactive-flow simulation of the hot-filament chemical vapor deposition of diamond.—73-13234
**Kondoh, Hisao** See Akiyama, Hajime
**Kondoh, Isao** See Kitamura, Naoyuki; Tamari, Nobuyuki
**Kondoh, Isao; Okayama, Hideto; Tanaka, Takahira; Tamari, Nobuyuki; Kose, S.**
Mechanical properties of spinel–silicon carbide whisker composites.—73-03337; Mechanical properties of spinel–silicon carbide whisker composites.—73-13566
**Kondoh, Isao; Tanaka, Takahiro; Tamari, Nobuyuki**
Sintering of zircon-silicon carbide whisker composites and their mechanical properties.—73-06521; Sintering of zircon-silicon carbide whisker composites and their mechanical properties.—73-17430; Usefulness of spark plasma sintering on densification and mechanical properties of alumina whisker/zirconia composites.—73-17069
**Kondoh, K.** See Takeshita, S.
**Kondoh, Shinji** See Shimoyama, Junichi
**Kondrasheva, E. F.** See Grum-Grzhimailo, O. S.
**Kondrat'ev, Yu. N.** See Eron'yan, M. A.; Khabibullaev, P. K.
**Kondrat'eva, O. G.** See Beguchev, V. P.
**Kondratova, T. N.** See Gusakov, G. M.
**Kondyrev, A. M.** See Chmel, A. E.
**Konecny, L.; Naqvi, S. J.**
Effect of different drying techniques on pore size distribution of blended cement mortars.—73-13707
**Koneshova, T. I.** See Nipan, G. D.
**Koneva, N. A.** See Ivanov, Yu. F.
**Konevecki, M. W.; Westra, K. L.; Sullivan, B. T.; Kormelson, K. E.; Brett, M. J.**
Optical constants of reactively sputtered NbN films.—73-16555
**Konevskii, V. S.** See Grinchenko, A. Yu.; Kvyatkovskii, S. F.
**Kong, J.; Cheng, B.-P.; Ge, Y. P.; Zhao, Z. G.; Sun, X. K.; Chuang, Y.-C.**
Thermal expansion anomalies of $YCo_xB$ compounds.—73-05656
**Kong, Jian-Min** See Ye, Qing
**Kong, Lin-Shu** See Shen, Bao-Gen; Sun, Ji-Jun
**Kong, Lin-Shu; Gong, Hua-Yang; Shen, Bao-Gen; Cao, Lei; Chen, Y.-L.**
Magnetic and Mossbauer effect study of $Er_2Fe_{17}C_2$.—73-07948
**Kong, Sun-Sik; Cho, Hae-Seok; Kim, Hyeong-Joon**
Effects of the substrate temperature on the properties of Ni-Zn-Cu ferrite thin films deposited by rf magnetron sputtering.—73-01457
**Kong, Xian-Log** See Fang, Liang
**Konig, W.** See Gajic, R.
**Konig, W.; Kammermeier, D.**
Performance of TiN-, Ti(C,N)-, and (Ti,Al)N-coated cutting tools.—73-10260
**Konig, W.; Neises, A.**
Wear mechanisms of ultrahard, nonmetallic cutting materials.—73-06551
**Konig, W.; Von Arciszewski, A.**
Grinding with continuous dressing (CD) for improved performance of ceramic-bonded fused alumina grinding wheels: I.—73-01787
**Konig, W.; Wagemann, A.**
Machining of ceramic components: process-technological potentials.—73-05904
**Konig, W.; Zaboklicki, A. K.**
Laser-assisted hot machining of ceramics and composite materials.—73-05891
**Konik, Z.; Stok, A.; Iwanciw, J.**
Examination of $12CaO·7Al_2O_3$ phase doped with magnesium, iron, and titanium oxides.—73-16144
**Koningstein, J. A.** See Simkin, D. J.
**Konishi, Hajime** See Shimono, Isao
**Konishi, Kunihiko** See Yoshida, Naomi
**Konishi, Masahiro; Nomura, Yoshiyuki; Mitsuki, Kuniharu; Kajino, Masao; Yoshida, Takashi; Sakakibara, Hiroto**
Glass bottle forming machine.—73-04974
**Konishi, Mikio**
High-purity and high-density SiC ceramics.—73-02081
**Konishi, Ryosuke; Aoki, Touru; Kimura, Hisanari; Kobayashi, Keiji**
Proposal of gas discrimination method by one sensor.—73-04456
**Konkel, W. H.** See Hamilton, W. J.; Johnson, S. M.
**Konnikov, S. G.** See Brunkov, P. N.
**Konnikov, S. G.; Melebaev, D.; Rud, Yu. V.**
Polarimetric effect in $GaP_xAs_{1-x}$ surface barrier structures.—73-11396
**Kono, Koji** See Kurata, K.
**Kono, Yasuhisa** See Sato, Mineo
**Kono, Yoshihito; Hashizuka, Yutaka; Nakahara, Masae; Yokota, Kozo; Ishizaki, Kozo**
Influence of combination of ball diameters and rotation speed on grinding performance of alumina by ball milling.—73-08345; Influence of combination of ball diameters and rotation speed on grinding performance of alumina by ball milling.—73-16835
**Kononov, Yu. S.; Parshikova, G. N.; Korneva, L. I.**
Silver chemical coating on ceramics.—73-00266
**Kononova, N. M.** See Chuprakov, V. F.
**Kononykhin, V. S.** See Artemova, K. K.
**Kononyuk, I. F.** See Makarenko, L. F.
**Konorov, P. P.** See Bota, S. A.
**Konorova, L. F.; Shkol'nikova, A. M.; Gudich, G. E.; Zhuravleva, Zh. A.**
Vitrification in the system Ge-Se-Cu and investigation of the physicochemical properties of glasses.—73-00425
**Konovalenko, S. I.** See Kalacheva, L. V.
**Konovalova, E. S.** See Alekseev, P. A.; Bat'ko, I.
**Konovalova, L. D.; Yurkov, L. F.; Pankova, N. A.**
Component evaporation from lead-bearing glasses.—73-00310
**Konovalova, L. D.; Yurkov, L. F.**
Microhardness as an indicator of the thermomechanical strength of the glass parts of TV picture tubes.—73-07049
**Konovalova, L. D.; Yurkov, N. A.; Pankova, N. A.**
Volatilization of components from lead-containing glass.—73-00719

**Konovskii, V. S.** See Aluker, E. D.
**Konstantinov, A. O.** See Vodakov, Yu. A.
**Konstantinov, A. O.**
Nature of point defects generated during diffusion of acceptor impurities in SiC.—73-09417
**Konstantinov, K.** See Ratcheva, T.
**Konstantinov, P. P.** See Alekseeva, G. T.
**Konstantinov, V. F.** See Chernyakhovskii, V. A.
**Konstantinova, A. F.** See Knab, G. G.; Krivandina, E. A.
**Konstantinova, A. F.; Ulukhanov, I. T.; Grechushnikov, B. N.**
Spectrophotometric technique of determination of optical parameters of hyrotropic crystals.—73-01930
**Konstantinova, E. A.** See Karyagin, S. N.
**Konstantinova, N. N.** See Averkieva, G. K.
**Konstantinova, N. N.; Magomedov, M. A.; Rud, V. Yu.; Rud, Yu. V.**
Optical-constant heterojunctions formed from $CuInSe_2$ films.—73-04431; Polarization photosensitivity of thin-film *p*-$CuInSe_2$-*n*-CdS structures.—73-07740
**Konstantinova, N. N.; Magomedov, M. A.; Rud, Yu. V.**
Photosensitivity of *n*-$Cd_{0.8}Zn_{0.2}$-*p*-$CuInSe_2$ heterojunctions.—73-11392
**Konstantinova, T. E.** See Alekseyenko, V. I.
**Konstantinovic, Jovan; Parette, Georges; Menelle, Alain**
Kinetics of the atoms of a unit cell $YBa_2Cu_3O_{6+\delta}$.—73-11812
**Konstantinovic, M. J.** See Gajic, R.
**Konsztowicz, K. J.** See Bryden, R. H.; Langlois, R.
**Konsztowicz, K. J.**
Acoustic emission [AE] amplitude analysis in crack growth studies during thermal shock of ceramics.—73-05527
**Kontoyannis, Christos G.; Carountzos, George**
Quantitative determination of the cubic-to-monoclinic phase transformation in fully stabilized zirconias by Raman spectroscopy.—73-16283
**Konuma, M.; Bauser, E.**
Water vapor controlling selective reactive ion etching of $SiO_2$/Si in $NF_3$ plasma.—73-07859
**Konuma, Masayuki** See Hamano, Kenya
**Konz, Flurin; Frenz, Martin; Romano, Valerio; Forrer, M.; Weber, H. P.; Kharovsky, A. V.**
Active and passive *Q*-switching of a 2.79-μm Er:Cr:YSGG laser.—73-12742
**Koo, B.-J.** See Lee, J.-H.
**Koo, C.-H.** See Chih, B.-C.; Lee, C.-S.
**Koo, H.-S.** See Chen, K.
**Koo, Horng-Show; Tu, George C.; Tseng, Tseung-Yuen**
Preparation and characterization of Tl-Ba-Ca-Cu-O superconducting films by spray pyrolysis and Tl-diffusion technique.—73-04788
**Kook, Lee-Jong; Hwan, Kim**
Spontaneous martensitic transformation at room temperature in 2Y-TZP powders.—73-09509
**Kool, T.** See Roy, P. K.
**Kool, T. W.** See Muller, K. A.
**Kopach, V. R.** See Boiko, B. T.
**Kopanskaya, F. Ya.** See Ivashchenko, A. I.
**Kopanski, Joseph J.; Lowney, Jeremiah R.; Novotny, D. B.; Seiler, D. G.; Simmons, Art; Ramsey, John**
High-spatial-resolution resistivity mapping applied to mercury cadmium telluride.—73-07565
**Kopelev, N. S.; Val'kovskii, M. D.; Popov, A. I.; Oskolok, K. V.**
Synthesis and properties of the cuprates of cesium and sodium.—73-02488
**Kopelev, N. S.; Val'kovskii, M. D.; Popov, A. I.**
Thermal decomposition of the cesium ferrate(VI).—73-12719
**Kopelev, Nikolai S.** See Chechersky, Vladimir
**Kopelevich, Y.; Gupta, A.; Esquinazi, P.**
Anomalous behavior of the flux line lattice of vibrating high-$T_c$ superconductors at 30 K in magnetic fields parallel to the $CuO_2$ planes.—73-15389
**Kopelevich, Ya. V.** See Zaitseva, N. V.
**Kopev, P. S.** See Alferov, Zh. I.
**Kopf, R. F.** See Ren, F.
**Kopf, R. F.; Herman, M. H.; Schnoes, M. L.; Colvard, C.**
Band offset determination in parabolic and triangular quantum wells of GaAs/AlGaAs and GaInAs/AlInAs.—73-11081
**Kopietz, Peter**
Magnetization and spin-wave velocities in $La_2CuO_4$.—73-07962
**Kopp, M.** See Esser, N.; Richter, W.
**Kopp, Otto C.** See Bamberger, Carlos E.
**Kopp, R. N.** See Jahanmir, Said
**Kopp, V. I.; Mochalov, I. V.**
Electronical and Raman two-photon resonances interference in KGW:Nd crystals.—73-02262
**Koppensteiner, E.; Springholz, G.; Hamberger, P.; Bauer, Gunther**
Molecular beam epitaxy of PbTe/EuTe superlattices and their structural investigation by X-ray diffraction using reciprocal space mapping.—73-11336
**Kopsansky, P.; Sargankova, I.; Svidron, V.; Mihalik, M.; Matas, S.; Timko, M.**
Composites of magnetic fluid with high-$T_c$ superconducting particles.—73-08007
**Koptelov, V. N.** See Andrievskikh, L. I.; Bocharov, L. D.; Kulebakin, V. G.; Romanovskii, L. B.
**Kopylov, N. A.** See Rabinovich, Eliezer M.
**Kopylov, V. B.** See Ignat'ev, A. S.
**Kopylova, M. G.; Vishnevskii, A. A.; Ilupin, I. P.**
Garnet with uvarovite content in chrome diopside decomposition structures.—73-05408
**Kopyshinskii, A.** See Bartnitskaya, N.; Belyi, M. U.
**Koradia, Pramod B.; Doddato, Carmine M.; Sherman, Daniel C.; Gerdes, William H.**
Catalyst carrier.—73-05192
**Korb, J. P.** See Smaihi, M.
**Korbutyak, D. V.** See Bercha, A. I.; Bobiitskii, Ya. V.
**Korchakov, V. G.** See Antonov, G. I.
**Korczak, Dariusz** See Malecki, Bronislaw
**Kordas, G.; Teepe, M. R.; Kenzer, D. S.; Moon, B.**
Processing of the Tl-Ca-Ba-Cu-O high-$T_c$ phase via the sol-gel route.—73-11878
**Kordas, G.**
EPR spectroscopy on sol-gel glasses.—73-10372; Multifrequency and Fourier transform electron paramagnetic resonance and electron spin echo spectroscopies for determination of the $T_1$ and $T_2$ spin-lattice relaxation times of the $E'_1$ center.—73-03742
**Kordesch, Martin E.** See Garcia, Adrian
**Kordulis, Christos** See Dalas, Evagelos
**Koregina, E. L.** See Zimin, S. P.
**Koren'kova, S. F.; Khlystov, A. I.; Sheina, T. V.**
Use of refractory concrete based on silicate-natrium composite binders.—73-13792
**Koren, G.** See Fisher, B.
**Korenaga, Itsuo** See Kinoshita, Kazuhisa
**Korenaga, Sadayoshi; Izumi, Junichi; Kani, Akira; Matsumoto, Shigeru; Koga, Tadashi**
Corrosion behavior of sliding materials in $NH_3$-$H_2O$ solutions at high temperature.—73-03217
**Korenivskii, V. N.** See Bykov, A. M.; Moon, B. M.
**Korenobu, Toshirou** See Yakushige, Noriyuki
**Korenstein, R.** See Koestner, R.
**Korenstein, R.; Hallock, P. H.; Lee, D. L.; Sullivan, E.; Gedridge, R. W.; Higa, K. T.**
Indium doping of HgCdTe grown by metallorganic chemical vapor deposition–direct alloy growth using triisopropylindium and diisopropyltellurium-triisopropylindium adduct.—73-11267
**Korenstein, R.; Madison, P.; Hallock, P. H.**
Growth of (111)CdTe on GaAs/Si and Si substrates for HgCdTe epitaxy.—73-07552
**Koretskaya, L. S.; Mikhnevich, A. S.; Gurinovich, L. M.**
Promising polymeric materials for the jacketing of glass pipes.—73-00690
**Korhonen, C. J.; Cortez, E. R.; Charest, B. A.**
Strength development of concrete cured at low temperature.—73-00193
**Korim, Tamas; Kotsis, Leventene**
Preparation of ceramic colors on a diopside base.—73-00921
**Koriyama, Shinichi** See Ikemachi, Takaaki; Maeda, Toshihiko
**Korkin, S. Zh.** See Kolesnichenko, K. A.
**Kormann, C.** See Arsov, L. D.
**Kormelson, K. E.** See Konevecki, M. W.
**Korn, Dietmar** See Kiessler, Gonde
**Korn, George C.** See Ruderer, Clifford G.
**Kornatowski, J.** See Schultze, Dietrich; Werner, Lutz
**Korneev, B. P.** See Kazantseva, S. I.
**Korneinko, I. V.** See Kvaratskheli, Yu. K.
**Korner, N.; Pfammatter, C.; Kind, R.**
Soft mode, "relaxor," and glassy-type dynamics in the solid solution $Rb_{1-x}(ND_4)_xD_2PO_4$.—73-16305
**Kornetov, V. N.** See Ognev, A. N.
**Korneva, L. I.** See Kononov, Yu. S.
**Korneyeva, S. S.** See Troyanchuk, I. O.
**Kornienko, A. B.** See Utenkov, A. F.
**Kornyakova, O. V.** See Ber, B. Ya.
**Korobeinikova, E. N.** See Akimov, B. A.
**Korol'kov, V. I.** See Abashkina, S. A.; Avrutin, E. A.
**Korolev, K. M.; Galkina, T. Yu.; Makarov, V. Yu.**
Features of the preparation and transport of concrete mixes in modern binders.—73-13723
**Korolev, N. E.; Mokienko, I. Yu.; Poletimov, A. E.; Shcheulin, A. S.**
Crystals with the fluorite structure: synthesis, additive coloring, and photochemistry of color centers [CC's]: I, Growth of activated crystals and efficiency of radiative formation of color centers.—73-02757
**Koroleva, L. I.; Sadykova, Sh. Z.; Pavlov, V. Yu.**
Peculiar behavior of carrier effective mass and lifetime in $CuCr_2S_{2.5}Se_{1.5}$ ferromagnetic semiconductor with strong *s-d* interband exchange.—73-15085
**Koropov, A. V.** See Biriukov, A. S.
**Kororezov, A. G.** See Ivanov, S. N.
**Koros, W. Y.** See Rezac, Mary E.
**Korostelin, Yu. V.; Nasibov, A. S.; Shapkin, P. V.**
Exciton piezospectroscopy of semiconductor solid solutions [SS] with sphalerite wurtzite structural phase transition.—73-01160
**Korotin, M. A.** See Anisimov, V. I.
**Korotkov, P. A.** See Berezhinskii, L. I.
**Korotkov, V. E.** See Tamazyan, R. A.
**Korovina, L. A.** See Darchuk, S. D.
**Korpel-Van Houten, K.** See Buijs, Maarten
**Korseinskaya, N. E.** See Kryukova, I. V.
**Korshunov, F. P.** See Radautsan, S. I.
**Korshunov, V. V.; Lebedev, M. V.**
Shift of exciton resonances in the intense pulsed excitation of a CdS crystal.—73-15160
**Korsunskaya, N. E.** See Baidullaeva, A.; Drozdova, I. A.; Embergenov, B.; Garyagdyev, G.
**Kortan, A. R.** See Fitzgerald, E. A.
**Kortbaoui, A.; Tagnit-Hamou, A.; Aitcin, Pierre-Claude**
Use of stainless steel slag in concrete.—73-03555
**Kortei, A. A.** See Kuznetsov, G. I.
**Kortov, V. S.** See Portnyagin, A. S.
**Koruderlieva, S.; Plachova, B.**
Influence of the basic compound chemical nature on the kinetics of γ-to-α-alumina conversion and the packaging of α-alumina.—73-16176
**Korushonkov, Yu. G.** See Aksenov, V. S.
**Korwin, D. M.; Lange, S. R.; Eaton, W. C.; Joseph, I.; Pye, L. D.**
Sintering behavior of glass in two geometric configurations.—73-14493
**Koryagina, T. I.** See Kirik, S. D.
**Koryakovskii, A. S.** See Dianov, E. M.
**Korytkova, E. N.; Nesterchuk, N. I.; Pivovarova, L. N.**
Superconductive La-Sr cuprate stability in NaF hydrothermal solutions at high temperature and pressure.—73-01677
**Koryttsev, S. V.** See Semenova, G. N.
**Korzen, Zbigniew**
Flow properties of fine-grained bulk materials in troughed chain conveyors: II, Vertical conveying.—73-01782; Problems of dedusting and cleaning of operation zones of working machines and conveying devices.—73-12057
**Korzhenevskii, A. L.** See Kamzina, L. S.
**Korzhik, M. V.** See Akhmadulin, I. Sh.; Baryshevsky, V. G.; Kimaev, A. E.
**Korzhik, M. V.; Livshits, M. G.; Meilman, M. L.; Minkov, B. I.; Pavlenko, V. B.**
Quenching of $Nd^{3+}$ ion luminescence by iron impurity ions in $Y_3Al_5O_{12}$ crystals.—73-02411
**Korzhuev, M. A.; Svechnikova, T. E.**
Ionic skin-effect in copper-doped $Bi_2Te_3$ single crystals.—73-16525
**Korzhyk, V.** See Borisov, Y.
**Kos, I.** See Miljak, M.
**Kosaka, S.** See Yamasaki, H.
**Kosakai, Mamoru** See Nishikawa, Tadahiro
**Kosanovic, Cleo** See Antonic, Tatjana
**Kosanovic, Cleo; Bronic, Josip; Subotic, Boris; Smit, I.; Stubicar, M.; Tonejc, A.**
Mechanochemistry of zeolites: I, Amorphization of zeolites A and X and synthetic mordenite by ball milling.—73-09204
**Kose, S.** See Kitamura, Naoyuki; Kondoh, Isao; Tamari, Nobuyuki; Ueno, Kazuo
**Kosec, M.** See Beltram, T.; Malic, B.; Orel, B.; Riscan, Jasenka
**Kosecky, Milan** See Eliasova, Maria
**Koseki, Kenji** See Horino, Kenji
**Koseki, Shiro; Ishitani, Akihiko**
Theoretical study on silicon nitride film growth: ab initio molecular orbital calculations.—73-13321
**Koselov, B. A.; Zakharchuk, N. F.; Vasilyeva, I. G.; Yudanova, L. I.; Kozeeva, L. P.; Gromilov, S. A.**
Effect of the substitution of Cu(I) by dopants on oxygen content and superconductivity in Y(123).—73-01533
**Kosenko, E. I.; Struzhko, V. L.; Shamrikov, V. M.; Malkiman, V. I.**
Effect of silicic acid gelation operating conditions on the production of silica gels having molecular sieve properties.—73-16740
**Koshcheeva, S. N.** See Fotiev, A. A.
**Koshchug, O. S.** See Aliev, G. N.
**Koshibae, Wataru** See Ohta, Yukinori
**Koshino, Nagaaki** See Kawarada, Motonobu
**Koshizuka, N.** See Ikeda, Kayuto; Matsushita, Teruo; Nakamura, N.
**Koshy, J.** See Paulose, K. V.
**Koshy, J.; Thomas, J. K.; Kurian, J.; Yadava, Y. P.; Damodaran, Alathoor D.**
Structural and superconducting properties of the $YBa_2Cu_3O_{7-\delta}$-$HfO_2$ system.—73-01665
**Koshy, J.; Warrier, P. R. S.; Yadava, Y. P.; Kumar, K. S.; Damodaran, Alathoor D.**
High-temperature superconductivity on $YBa_2Cu_3O_{7-\delta}$-$YBa_2SbO_6$ system by rapid quenching in air.—73-04736
**Kosichkin, Yu. V.** See Brazhkin, V. V.; Bryanov, D. I.; Demishev, S. V.
**Kosin, John A.** See Preston, Barry W.
**Kosinov, N. N.** See Panova, A. N.
**Kosinskaya, A. V.; Bogatyreva, Zh. D.**
Corrosion resistance in cast-stone materials.—73-03219; Corrosion resistance of stone cast materials.—73-03220
**Kosinskaya, A. V.; Shevel, V. N.; Bogatyreva, Zh. D.**
Radiation resistance in cast-stone materials.—73-02678
**Koskey, Jason** See Kumar, K. V.
**Kosmac, T.** See Malic, B.
**Kosmac, T.; Lahajnar, G.; Sepe, A.**
Proton NMR relaxation study of calcium aluminate [CA] hydration reactions.—73-03523
**Kosobokova, N. S.** See Mardirosova, I. V.
**Kosov, A. A.**
Superconducting correlations and ion dynamics in metal-oxide compounds.—73-08217
**Koss, Donald A.** See Trumbauer, Eric R.
**Koss, Donald A.; Hellmann, John R.; Kallas, M. Nabil**
Fiber pushout and interfacial shear in metal matrix composites.—73-06789
**Koss, V. A.; Ioffe, I. V.; Belkind, A.**
Computational model of reactive sputtering.—73-09046
**Kosslick, Hendrik; Richter, Manfred; Tuan, Vu-Anh; Fricke, R.; Storek, W.**
Physicochemical and catalytic properties of a silica-enriched zeolite ZSM-20.—73-08701
**Kossowsky, Nir**
Nanoparticulate drug delivery system.—73-16546
**Kostadinovic, A. M.** See Plecas, I. B.
**Kostenska, Irena; Chovancova, Marta; Demcak, Peter**
Sol-gel method for preparation of specific properties of coatings on alumina alloys with anodic oxidation.—73-03887
**Koster, H.** See Odler, Ivan
**Kostic, N.; Skenderovic, B.**
Possibility of making hydraulic binder by chemical activation of domestic ash and mixture of slag and domestic ash.—73-13761
**Kostikov, Yu. P.** See Gritsenko, V. A.; Kolobov, A. V.
**Kostin, A. A.** See Aleshkin, V. Ya.
**Kostorz, G.** See Heeb, B.
**Kostrubov, Yu. N.** See Nikolaev, A. V.
**Kostylev, S. A.** See Gorev, N. B.
**Kostylev, V. A.; Samokhvalov, A. A.; Chebotaev, N. M.**
Effect of electric field on magnetostatic wave attenuation in ferromagnetic semiconductor $HgCr_2Se_4$.—73-14848; Hall effect in ferromagnetic *n*-type semiconductor $HgCr_2Se_4$ in strong electric field.—73-14955

**Kostyreva, T. G.** See Petrov, S. A.

**Kostyrya, Yu. F.; Klimkovich, N. F.; Troshenkov, N. A.**
Refractory channel composition based on production waste from silicon carbide articles.—73-00854

**Kostyuchenko, V. Ya.** See Studenikin, S. A.

**Kostyuk, G. K.** See Burkat, T. M.

**Kostyunin, G. E.** See Plyatsko, S. V.

**Kosuda, Kosuke** See Lee, Soo-Young

**Kosuda, Tetsuo; Kamata, Yoshirou; Takizawa, Kinji**
Block gage and method of making ceramic material.—73-04960

**Kosuga, Shigeyoshi** See Shinbo, Yukio

**Kosuge, A.** See Qiu, Hong

**Kosuge, K.** See Imai, T.

**Kosuge, Katsunori; Tsunashima, Atsumu; Otsuka, Ryohei**
Dispersion of magadiite particles.—73-02240; Dispersion of magadiite particles.—73-13389

**Kosuge, Katsunori; Yamazaki, Atsushi; Tsunashima, Atsumu; Otsuka, Ryohei**
Dehydration and rehydration of magadiite and kenyaite.—73-12764; Hydrothermal synthesis of magadiite and kenyaite.—73-02855; Hydrothermal synthesis of magadiite and kenyaite.—73-13093

**Kosuge, Katsunori; Yamazaki, Atsushi; Tsunashima, Atsumu**
Dehydration and rehydration of magadiite and kenyaite.—73-02229

**Kosuge, Katsunori; Yoshihisa, Hamada; Otsuka, Ryohei**
Hydrothermal synthesis of kaolinite from serpentinite.—73-02854

**Kosuge, Keiichi** See Sakai, Etsuo

**Kosuge, Noriyuki**
Trend of Japanese patents on fine ceramics: III.—73-03409

**Kosugi, Naoki** See Hoshino, Hirokuni

**Kot, M.; Zdansky, K.**
Measurement of radiative and nonradiative recombination rate in InGaAsP-InP LED's.—73-01241

**Kotaka, Hiroaki; Hayashi, Shinsuke; Saito, Hajime**
Preparation of SiC powder by Wurtz-Fittig reaction.—73-13200; Preparation of SiC powder by Wurtz-Fitting reaction.—73-02966

**Kotaka, Hirohumi** See Nishizaka, Tsuyoshi

**Kotaka, I.** See Kawano, Kenji

**Kotaki, Masahiro; Akasaki, Isamu; Amano, Hiroshi**
Light-emitting semiconductor device using gallium nitride group compound.—73-11526

**Kotani, Akio** See Seino, Yasuhiro; Tanaka, Satoshi

**Kotani, Shoji** See Shimizu, Yoshio

**Kotani, Takao; Inoue, Masahiro; Niihara, Koichi**
Analytic procedure for evaluating grain-size and grain-aspect-ratio distribution in polycrystalline sintered bodies based on Monte Carlo simulation.—73-13372; Analytical procedure for evaluating grain-size and grain-aspect-ratio distribution in polycrystalline sintered bodies based on Monte Carlo simulation.—73-01883

**Kotek, Vladimir**
Ceramic DENOX catalysts for selective catalytic reduction of industrial emissions of nitrogen oxides.—73-15922; Ceramic materials in the system $MgO$-$SiO_2$-$Al_2O_3$-$ZrO_2$.—73-03777

**Kotel'nikov, I. N.; Kokin, V. A.; Medvedev, B. K.; Mokerov, V. G.; Rzhanov, Yu. A.; Anokhina, S. P.**
Characteristics and special features of the conductivity of surface δ-doped layers in GaAs with a variable density of 2-D electrons.—73-01095

**Kotel'nikov, O. E.** See Bykov, V. N.

**Kotel'nikova, L. A.** See Artemova, K. K.

**Kotelyanskii, I. M.** See Anisimkin, V. I.

**Kothari, Deepika** See Baijal, J. S.

**Kotlikov, E. N.**
Analysis of absorption in zinc selenide and fluoride mirrors and films.—73-02550

**Kotlinski, J.** See Misra, S. K.

**Koto, K.** See Ito, Yoshiaki

**Koto, Kichiro** See Moriga, Toshihiro

**Kotomin, Eugene A.** See Jacobs, Patrick W. M.

**Kotosonov, A. S.; Kuvshinnikov, S. V.; Samoilov, V. M.**
Structural features and Young's modulus of carbon fibers.—73-03359

**Kotov, G. I.** See Sysoev, B. I.

**Kotov, S. G.** See Molochko, A. P.; Solovei, N. P.

**Kotru, P. N.** See Raina, U.

**Kotsis, Leventene** See Korim, Tamas

**Kottas, Peter** See Svetik, Stefan

**Kottke, M.; Travis, Edward O.; Rogers, B. R.; Pintchovski, F.; Fiordalice, R.**
Ti/borophosphosilicate glass interfacial reactions and their effects on adhesion.—73-06866

**Kottke, Thomas** See Kecskes, Laszlo J.

**Kottnauer, Cenek A.; Lewis, Albert**
Electrode assembly for glass-melting furnace.—73-12249

**Kotur, B. Ya.; Bruvo, M.**
Crystal structure of $Sc_{1.2}Fe_4Si_{0.8}$.—73-02211

**Kotur, B. Ya.; Sikiritsa, M.**
Crystal structure of $Sc_6Co_{10}Si_{10}$.—73-02212

**Kotyuzhanskii, B.** See Sunil, D.

**Kotz, R.; Barbero, C.; Schnyder, B.; Haas, O.**
Spectroscopic ellipsometry of carbon electrodes during electrochemical activation.—73-15171

**Kotzian, Michael** See Schimmel, Gunther

**Kotzler, J.; Harti, M.; Jahn, L.**
Signature of linear (Bulaevskii-Ginzburg) domain walls near $T_c$ of Ba hexaferrite.—73-04650

**Kouassi, L. K.** See Scheid, E.

**Kouglya, M. V.** See Ioganson, A. K.; Ryzhik, A. B.

**Koukitu, Akinori** See Takahashi, Naoyuki

**Koumoto, Kunihito** See Hasegawa, Akira; Ito, Hidetaka; Nakahara, Hirohiko; Nakamura, Yoshinobu; Ohara, Yoshinobu; Seo, Won-Seon; Takeda, Shunji

**Koumoto, Kunihito; Seki, Tsutomu; Pai, Chul-Hoon; Yanagida, Hiroaki**
CVD synthesis and thermoelectric properties of boron carbide.—73-02760; CVD synthesis and thermoelectric properties of boron carbide.—73-12966

**Koumoto, Kunihito; Seo, Won-Seon; Pai, Chul-Hoon**
Nano/microstructure design for improving thermoelectric characteristics of porous silicon carbide.—73-13433

**Koumoto, Kunihito**
Thermoelectric properties of CVD boron carbide.—73-16637

**Kountz, Dennis J.; Pellicone, Frank M.**
Process for making superconducting Tl-Pb-Sr-Ca-Cu oxide films.—73-04865

**Koura, Nobuyuki** See Ito, Shigeru

**Koura, Toshiaki** See Du, Yong

**Kourtides, Demetrius A.; Churchward, Rex A.; Lowe, David M.**
Protective coating for ceramic materials.—73-12400

**Kourtides, Demetrius A.; Lowe, David M.**
Composite flexible blanket insulation.—73-12453; Improved composite flexible blanket insulation.—73-07215

**Koutsky, James A.** See Mitchell, Brian S.

**Koutsoukos, Petros O.** See Dalas, Evagelos; Dalpi, Maria

**Kouvatsos, Dimitrios N.; Huang, J. G.; Saikumar, V.; Macfarlane, P. J.; Jaccodine, Ralph J.**
$SiO_2$ film stress—thickness dependence, nonplanar oxidation, and fluorine-related effects.—73-02688

**Kouvatsos, Dimitrios N.; Kung, Ji-Ho; Hatalis, Miltiadis K.; Jaccodine, Ralph J.**
Fluorinated gate oxide films utilized in polysilicon thin-film transistors.—73-04103

**Kouvel, J. S.** See Goeckner, H. P.

**Kovac, J.** See Sargankova, I.

**Kovac, Miroslav; Havrda, Jiri; Kolarik, Pavel**
Method for determining the barodiffusion coefficient of liquid in ceramic suspension, describing its behavior on pouring into a porous form.—73-09208

**Kovac, Miroslav; Havrda, Jiri**
Characteristic concentrations of ceramic slips in slip-casting technology.—73-12016; Method for determining the effective diffusion coefficient of liquid in the system mold–body–suspension.—73-08412; Pouring of ceramic suspensions into porous molds.—73-12055

**Kovacic, Larry** See Brow, R. K.

**Kovacic, S. J.; Robinson, B. J.; Swoger, J. H.; Simmons, J. G.; Thompson, D. A.**
Molecular beam epitaxially grown InP/InGaAsP heterostructure for inversion-channel devices.—73-11331

**Kovacs, L.** See Zaldo, C.

**Kovacs, Ronald P.** See Yoon, Eui-Sik

**Koval'chenko, A. M.** See Osipova, I. I.

**Koval'chuk, Yu. V.** See Karpov, S. Yu.

**Kovalenko, A. S.; Druz, B. L.; Gusakova, E. I.; Tikhonova, L. P.**
Kinetic characteristics of the cadmium telluride single-crystal chemical polishing process in a bromine-hydrobromic acid solution.—73-15005

**Kovalenko, A. V.** See Berlov, P. A.; Mekekechko, A. V.

**Kovalenko, M. G.** See Sviridov, N. V.

**Kovalenko, V. F.** See Gorodnichenko, O. K.

**Kovalenko, V. P.** See Glushko, V. I.

**Kovalenko, V. S.** See Sokolova, M. N.

**Kovalev, A. S.** See Bogdan, M. M.

**Kovalev, A. V.** See Artem'ev, G. G.

**Kovalev, E.** See Ignatiev, M.

**Kovalev, G. V.** See Kruglik, A. I.

**Kovaleva, N. S.** See Britsis, D. I.

**Kovalevskaya, G. G.** See Meredov, M. M.; Slobodchikov, S. V.

**Kovalevskaya, G. G.; Meredov, M. M.; Russu, E. V.; Salikhov, K. M.; Slobodchikov, S. V.; Fetisova, V. M.**
Electrical and photoelectric properties of Pd-$p$-$p^+$-InP diode structures and changes in these properties in a hydrogen atmosphere.—73-07483

**Kovalevskaya, T. E.** See Bazovkin, V. M.

**Kovalevskii, A. A.**
Chemical vapor deposition of borophosphosilicate glass initiated by high-frequency discharge plasma.—73-00594

**Kovalgin, A. Yu.** See Alexandrov, S. E.; Belousov, V. V.

**Kovalisko, V. I.** See Bolesta, I. M.

**Kovalyuk, M. Z.** See Kul'bachinskii, V. V.

**Kovalyuk, Z. D.** See Koz'mik, I. D.; Kul'bachinskii, V. A.; Netyaga, V. V.

**Kovar, Desiderio; Readey, M. J.**
Role of grain size in strength variability of alumina.—73-13586

**Kovarskii, V. A.; Chebotar, V. N.**
Electron-phonon mechanism of broadening of optical absorption bands of quasi-zero-dimensional crystals.—73-07495

**Kovler, K. L.** See Zaitsev, Yu. V.

**Kovneristyi, Yu. K.** See Belousov, O. K.

**Kovtun, G. P.; Kravchenko, A. I.; Zhukov, A. I.; Sterlev, A. N.; Shcherban, A. P.**
Calculation of the temperature profiles in GaAs single crystals grown in a thin molten layer by the Kyropoulos method with liquid encapsulation.—73-14791

**Kovtun, R. N.** See Yafyasov, A. M.

**Kovtun, V. I.; Pavlovskii, M.; Komissarov, V. V.**
Shock compressibility of the sphalerite modification of boron nitride.—73-06036

**Kowada, Yoshiyuki; Adachi, Hirohiko; Minami, Tsutomu**
Electronic states of $SiO_2$-$M_xO_y$ ($M_xO_y$=$P_2O_5$, $TiO_2$, and $ZrO_2$) glasses.—73-13977

**Kowada, Yoshiyuki; Adachi, Hirohiko; Tatsumisago, Masahiro; Minami, Tsutomu**
Raman spectra of rapidly quenched lithium pyrophosphate glass at various temperatures.—73-06960

**Kowalik, R. W.** See Wang, S-W.

**Kowalski, Jocelyn A.** See Chitnis, Girish K.

**Kowbel, W.** See Vaidya, Uday K.

**Koya, Kazuo** See Edagawa, Noboru

**Koyago, Keita** See Kurihara, Kenro

**Koyama, Akira** See Sato, Shinji

**Koyama, F.** See Uchida, Takashi

**Koyama, Koichiro; Harada, Tomohiro**
Determination of standard Gibbs energies of formation of $FeWO_4$ and $Fe_2WO_6$ by electromotive force measurement.—73-02234

**Koyama, Koichiro; Morishita, Masao**
Preparation of rare-earth-oxide dispersion tungsten powder by spray dry method and its sintering.—73-09268

**Koyama, Kyuji** See Nakamura, Yoshinobu

**Koyama, Tadashi** See Arami, Yoshiro; Nishiyama, Akio

**Koyama, Takashi; Nishiyama, Akio; Niihara, Koichi**
Effect of a small amount of liquid-forming additives on the microstructure of $Al_2O_3$ ceramics.—73-16721

**Koyama, Takashi; Uchida, Susumu; Nishiyama, Akio**
Effect of microstructure on mechanical properties and cutting performance of $Al_2O_3$-Ti(C,N) ceramics.—73-06385; Effect of microstructure on mechanical properties and cutting performance of $Al_2O_3$-Ti(C,N) ceramics.—73-13511

**Koyanagi, Wataru** See Moriroto, Hiroaki

**Koyanagi, Yoshihiro** See Tsugeki, Keiichi

**Koyano, Mikio; Inoue, Masasi**
Sliding motion of CDW in quasi-2-D $\nu$-$Mo_4O_{11}$ crystal.—73-05638

**Koyano, Mikio; Ohara, Shigeo; Hara, Yoshiaki; Inoue, Masasi; Kido, Giyuu; Nakagawa, Yasuaki**
High-magnetic-field transport properties of η-$Mo_4O_{11}$ crystals.—73-09410

**Koyano, Tamotsu; Mizutani, Uichiro**
Method for producing iron-nitride powders.—73-16002

**Koyasu, Shigeji; Sagala, Djuniadi A.; Nambu, Shinji; Miyata, Hidenori; Hirahara, Seiichiro; Fujikawa, Nobuyoshi**
Dielectric ceramic composition for high-frequency use and dielectric material.—73-04202

**Koyata, H.** See Gartner, E. M.

**Koyava, V. T.** See Kol'chenko, T. I.

**Koz'mik, I. D.; Netyaga, V. V.; Bakhmatyuk, B. P.; Grigorchak, I. I.; Kovalyuk, Z. D.**
Characteristics and new capabilities of intercalated chalcogenide semiconductors.—73-07403

**Koz'min, P. A.** See Dembrovskii, S. A.

**Kozak, J.** See Wang, S. Z.

**Kozakov, A. T.; Nikol'skii, A. V.; Mazuritskii, M. I.; Dem'yanchenko, V. A.; Kulov, S. K.; Polyanskii, M. P.**
Comparative analysis of the state of surfaces of lead silicate glasses and microchannel films.—73-00309

**Kozakov, A. T.; Panchenko, E. M.; Nikol'skii, A. V.; Trusov, Y. A.; Pavlov, A. N.; Dem'yanchenko, V. A.**
Electrical state and surface composition of the $PbMg_{1/3}Nb_{2/3}O_3$ single crystal.—73-07886

**Kozanecki, Adrian**
Correlation of the location in crystal lattice and optical activity of the Yb impurity in III-V compounds.—73-04278

**Kozankiewicz, B.** See Borowiec, M. T.

**Kozawa, Takahiro**
Method of manufacturing gallium nitride semiconductor light-emitting device.—73-04525

**Kozdoba, V. I.** See Pilipchatin, L. D.

**Kozeeva, L. P.** See D'yakonov, V. P.; Koselov, B. A.

**Kozen, A.** See Kato, Kazutoshi

**Kozhanova, A. A.** See Bespalova, L. L.

**Kozhevnikov, M. Yu.** See Strukov, B. A.

**Kozhevnikova, N. M.** See Murzakhanova, I. I.

**Kozhukharov, V.** See Georgieva, I.; Samuneva, B.

**Kozhukharov, V.; Stoyanova, G.; Danova, D.**
Quantitative chemical analysis of borosilicate glasses by the inductively coupled plasma-atomic emission spectroscopy method.—73-03754

**Kozhukharov, V.; Trapalis, C.; Samuneva, B.; Hartmann, P.**
$^{31}P$ NMR study of the sol-gel process in the $SiO_2$-$P_2O_5$ system.—73-14065

**Kozhurkov, V. N.; Yarikhin, E. B.; Panfilov, A. M.**
Evaluation of the efficiency of refining molten metals by filtration.—73-04000

**Kozic, Z.** See Jokanovic, V.

**Kozii, O. I.** See Petrovskii, G. T.

**Kozik, Tomas; Trnovcova, Viera; Mariani, Emil**
Temperature dependence of the electric conductivity of unfired porcelain mixture.—73-10994

**Kozin, N. I.** See Zhukovets, V. F.

**Koziol, D. R.** See Ghosh, Syamal K.

**Koziol, Z.; Tarnawski, Z.; Franse, J. J. M.**
Remanent magnetization of $Bi_2Sr_2CaCu_2O_8$ single crystals [studied] by means of a Hall probe.—73-08188

**Kozlenko, E. L.** See Ovcharov, A. T.

**Kozlov, A. F.** See Boldyreva, G. V.

**Kozlov, G. V.** See Gorshunov, B. P.; Volkov, A. A.

**Kozlov, S. M.** See Kirichenko, Yu. A.

**Kozlov, V. I.** See Randoshkin, V. V.

**Kozlova, A. P.** See Strel'nikov, V. I.

**Kozlova, N. A.** See Grinberg, V. Ya.

**Kozlovskii, L. V.** See Tomil'tsev, E. A.

**Kozlovskii, V. A.** See Kurakbaeva, R. Kh.

**Kozlovskii, V. V.** See Didik, V. A.; Zakharenkov, L. F.

**Kozlovskii, V. V.; Kol'chenko, T. I.; Lomako, V. M.**
Influence of irradiation conditions on the defect formation processes in $n$-type GaAs.—73-01205

**Kozlovskii, V. V.; Zakharenkov, L. F.**
Compensation of the conductivity of $n$-type GaAs:Yb radiation defects.—73-14813

**Kozlowski, F.; Sauter, M.; Steiner, P.; Richter, A.; Sandmaier, H.; Lang, W.**
Electroluminescent performance of porous silicon.—73-16484

**Kozlowski, Theodore R.** See Kerko, David J.

**Kozma, Laszlo** See Paterson, A. W.

**Kozono, Yuzoo** See Kanke, Yoko

**Kozora, Joseph W.**
Method for monitoring the performance of a glass container forming machine.—73-15770
**Kozorezov, A. G.** See Ivanov, S. N.
**Kozub, G. M.** See Zarko, V. I.
**Kozub, V. I.** See Gal'perin, Yu. M.
**Kozuka, Hiromitsu** See Fujihara, S.; Hu, Li-Li; Jin, Ji-Sun; Sakka, Sumio
**Kozuka, Teruyuki** See Nakamura, Mamoru
**Kozuka, Yoshinari** See Imaeda, Minoru
**Kozyrev, A. B.** See Vendik, O. G.
**Kozyrev, N. V.** See Sakovich, G. V.
**Kozyrev, S. P.; Pyrkov, V. N.; Vodop'yanov, L. K.**
Features of vibrational spectrum rearrangement in semiconductor-semimetal CdTe-HgTe alloys. Lattice modes of Cd-Te and Hg-Te vibrations.—73-14919; Features of vibrational spectrum rearrangement in semiconductor-semimetal CdTe-HgTe alloys. Two-mode approximation.—73-14920; Lattice reflection spectrum of $Cd_{1-x}Hg_xTe$ alloys [0≤x≤0.8].—73-15012; Rearrangement of vibrational spectra of $Cd_{1-x}Zn_xTe$ semiconductor alloys [0≤x≤0.5].—73-15141
**Kozyukhin, S. A.; Dembrovskii, S. A.; Tzirlina, T. M.**
Nonmetallic glasses prepared by melt spinning method: glass formation, properties, anomalies.—73-14442
**Krachino, T. V.; Mittsev, M. A.**
Effect of heating on the characteristic loss spectra of the high-temperature superconductor $YBa_2Cu_3O_{7-x}$.—73-04701
**Kraciva, A. A.; Tautkas, S. A.; Barkauskas, Yu. K.**
Determination of zinc, cadmium, and lead during investigation of nonstoichiometry of chalcogenides of metals.—73-12129
**Kraevskii, S. L.** See Zyabnev, A. M.
**Kraidenov, V. F.; Itskevich, E. S.**
Anisotropy of thermopower and electric conductivity in single-crystal $EuBa_2Cu_3O$ at hydrostatic pressures up to 12 kbar.—73-07985
**Krainik, N. N.** See Salaev, F. M.
**Krainik, N. N.; Markova, L. A.; Karamyan, A. A.**
Polarization variations in lead magnesium niobate from dielectric constant measurements and Raman spectra.—73-16572
**Krajcovic, Jozef; Horvath, Ivan**
Thermally stable porous crystals from montmorillonite: I, Preparation and properties of Al and Zr pillared montmorillonites.—73-13324
**Krajewski, A.** See Azzoni, C. B.; Ravaglioli, A.
**Krajewski, J. J.** See Cava, R. J.; Takagi, H.
**Kral, M. V.; Davidson, J. L.; Wert, J. J.**
Erosion resistance of diamond coatings.—73-06783
**Kramarchuk, G. G.** See Arutyunyan, V. E.; Barilo, S. N.
**Kramer, A.** See Kulic, M. L.
**Kramer, Carl; Schulz, Dieter**
Electrical heating of glass-toughening furnaces.—73-12217
**Kramer, Carl**
Quenching system for single-pane safety glass.—73-10589
**Kramer, Fritz W.**
Analysis of gases evolved by AZS refractories and by refractory/glass melt reactions. Techniques and results. Contribution to the bubble-forming mechanism of AZS material.—73-10697; Contribution to basicity of technical glass melts in relation to redox equilibria and gas solubilities.—73-00602
**Kramer, G.** See Knotek, Otto
**Kramer, Jerry**
How to implement microingredient batching.—73-08342
**Kramer, K.; Meyer, G.; Fischer, P.; Hewat, A. W.; Gudel, H. U.**
Neutron diffraction investigation of magnetic phase transitions to long-range antiferromagnetic ordering in the free-electron praseodymium halides $Pr_2X_5$ (X=Br, I).—73-02343
**Kramer, M. J.** See Allenspach, P.
**Kramer, M. J.; McCallum, R. W.; Magulies, L.; Arrasmith, S. R.; Holesinger, T. G.**
Techniques for texturing ceramic superconductors from an amorphous precursor.—73-11931
**Kramer, Martin; Hoffmann, M. J.; Petzow, Gunter**
Grain growth studies of silicon nitride dispersed in an oxynitride glass.—73-00349
**Kramer, Thomas M.** See Luther, Erik P.
**Kramer, Thomas M.; Lange, Fred F.**
Rheology and particle packing of chem- and phys-adsorbed, alkylated silicon nitride powders.—73-09306
**Kranendonk, Winfried G. T.; Sinnema, Sido**
Evaluation of tests for measuring the strength of ceramic tubes.—73-17310
**Kranjcec, M.** See Dubcek, P.
**Kranold, R.** See Lembke, U.; Samuneva, B.; Walter, C.
**Kranold, R.; Lembke, U.; Walter, G.**
Optical glasses [investigated] by small-angle X-ray scattering (SAXS).—73-14060
**Kranzmann, A.** See Kim, Nam-Kyun
**Krashkevich, David G.**
Vanadium- and copper-containing glasses for use as filters for light sources intended for use with night vision devices.—73-00765
**Krasil'nikov, A. S.; Mamsurova, L. G.; Trusevich, N. G.**
Transport critical currents in ultrafine-grained high-temperature superconductors.—73-08263
**Krasil'nikov, V. S.** See Vdovin, V. I.
**Krasil'nikova, N. A.** See Pavlushkina, T. K.
**Krasinkova, M. V.; Moizhes, B. Ya.**
Superconductors with quasi-localized pairs: bismuthates and $A^{IV}B^{VI}$ semiconductors doped by $III^B$ metals.—73-01681
**Krasinski, Jerzy S.** See Radzewicz, Czeslaw
**Krasnoshchekov, M. M.** See Bykov, I. I.
**Krasnosvobodtsev, S. I.** See Sidorov, M. V.; Vasil'ev, A. L.
**Krasnov, A. N.; Vaksman, Yu. F.; Purtov, Yu. N.; Serdyuk, V. V.**
Attainment of *p*-type conduction in ZnSe single crystals.—73-04249
**Krasnov, A. N.; Vaksman, Yu. F.; Purtov, Yu. N.**
Electrical properties of *p*-type ZnSe single crystals.—73-08050
**Krasnova, T. V.** See Sokol, I. V.
**Krasnyi, B. L.** See Kolomeitsev, V. V.
**Kratochvil, W.; Irons, G.; Czapiewski, R.**
Evolving technology of high-energy plasma spraying.—73-08336
**Kratzig, E.** See Buse, E.; Kip, D.; Sochava, S.; Van Olfen, U.
**Kraus, J.** See Baricco, M.; Schuller, C.
**Kraus, M.** See Bauer, P.
**Krause, H.-J.** See Daum, W.
**Krause, Ralph F., Jr.** See Wiederhorn, Sheldon M.
**Krause, Ralph F., Jr.**
Flat and rising *R*-curves for elliptical surface cracks from indentation and superposed flexure.—73-06423
**Krause, T. R.; Helt, J. E.**
Applications of microwave radiation in environmental remediation technologies.—73-06556
**Krause, Werner**
Process for the preparation of silicon nitride having a small crystallite size.—73-02130; Process for the preparation of spherical amorphous silicon nitride.—73-02131
**Krauss, A. R.** See Auciello, O.; Chen, L. M.
**Krauss, A. R.; Rangaswamy, M.; Lin, Y.; Gruen, D. M.; Schultz, J. A.; Schmidt, Howard K.**
Ion-beam-based characterization of multicomponent oxide thin films and thin-film-layered structures.—73-05882
**Kraut, E. A.** See Waldrop, J. R.
**Kravchenko, A. I.** See Kovtun, G. P.
**Kravchenko, I.** See Olevsky, E.
**Kravchenko, N. V.** See Kiseleva, N. N.
**Kravchenko, T. B.** See Bel'tyukova, S. V.
**Kravchenko, V. B.; Lebedeva, Z. M.; Sobolev, A. T.**
Determination of the basic composition of microsamples of $Bi_{12}GeO_{20}$ crystals.—73-02235
**Kravchenko, V. M.** See Aksel'rod, E. I.
**Kravchenko, V. V.** See Fedorova, R. A.
**Kravchenko, V. V.; Sigaryov, S. E.**
Structural features of the superionic phase transition in $Na_3Fe_2(PO_4)_3$.—73-08750
**Kravchuk, L. V.**
Thermal fatigue of engineering ceramics.—73-05660
**Kravetskii, I. V.; Kulyuk, L. L.; Strumban, E. E.; Talanov, V. M.; Tezlevan, V. E.; Shutov, D. A.**
Isostructural phase transition in semiconducting $CdIn_2S_4$ spinel.—73-15003
**Krawczyk, Robert J.; Matthews, James F.; Norman, Louis J.**
Method of reclaiming glass from articles formed of leaded glass.—73-00749
**Krebs, J. J.** See Wagner, R. J.
**Krebs, J. J.; Lind, D. M.; Berry, S. D.**
Ferromagnetic resonance and spin anisotropy in iron oxide thin films and iron oxide/nickel oxide superlattices.—73-04612
**Krebs, P.** See Hanni, W.
**Krecikij, Krzysztof** See Gustaw, Krystyna
**Kregzde, V.** See Babonas, G.-J.
**Kreidl, N. J.** See Denesuk, M.; Goktas, A. A.
**Kreidler, Eric R.; Park, Hee-Dong**
Activity of NiO in (Ni,Mg)O solid solutions.—73-16027
**Kreines, N. M.** See Ayache, C.
**Kreisberg, V. A.; Danchevskaya, M. N.**
Gases in glass [investigated] by kinetic mass spectrometry.—73-15801
**Kreiselmeyer, G.** See Bauer, P.; Busch, R.
**Kreismanis, V.** See Elliott, J.; Koestner, R.
**Kreitsberga, V. Z.; Chekhovskii, V. G.; Sizonenko, A. P.; Keishs, Yu. Ya.; Redala, S. E.; Pauksh, P. G.**
Ir absorption spectra of lead aluminoborate glasses.—73-00507
**Krejci, A.** See Rosa, J.
**Krejci, Jiri** See Hlavac, Jan
**Krekels, T.** See Milat, O.
**Krell, Andreas** See Schneider, D.
**Krell, Andreas; Blank, Paul**
$Al_2O_3$ and $ZrO_2$ composites with high-TiC contents fabricated by tailoring oxide powders.—73-09012; TiC-strengthened $Al_2O_3$ by powder tailoring and doping procedures.—73-06120; TiC-strengthened $Al_2O_3$ by powder tailoring and doping procedures.—73-09378
**Krell, Andreas**
Features of notch preparation for fracture toughness measurements in partially stabilized zirconia.—73-05047
**Kreller, F.** See Ambree, P.
**Kremkova, G. N.** See Gladkaya, I. S.
**Kremser, C.** See Voronova, I. D.
**Krenn, H.** See Springholz, G.
**Kreshchuk, A. M.** See Bystrov, S. D.
**Kreshchuk, A. M.; Novikov, S. V.; Savel'ev, I. G.**
Low-temperature mobility of a 2-D electron gas and the quality of a heterojunction in InGaAs/InP heterostructures grown by LPE.—73-01233
**Kresin, V. Z.** See Klein, N.
**Kress, W.** See Fontana, M. D.
**Kretzschmar, C.; Otschik, P.; Jaenicke-Ressler, K.; Schlafer, D.**
Reaction between ruthenium dioxide and aluminum nitride in resistor pastes.—73-14727
**Kreutz, E. W.** See Voss, A.
**Krevet, R.; Twardowski, A.; Von Ortenberg, M.; Mac, W.; Demianiuk, M.**
Laser FIR magnetospectroscopy of $Zn_{1-x}Cr_xSe$.—73-15006
**Krichevtsov, B. B.; Pisarev, R. V.; Selitskii, A. G.**
Effect of an electric field on the magnetization processes in $Y_3Fe_5O_{12}$.—73-04604
**Kriechbaum, Gangolf; Kleinschmit, Peter; Peuckert, Doris**
Zirconium oxide powder, process for its preparation and its use.—73-05256
**Kriechbaum, M.** See Springholz, G.
**Krieger, M.; Sigg, H.; Reinhart, F. K.**
Elastic constant $C_{11}$ of $Al_xGa_{1-x}As$ determined by near-ir Brillouin scattering.—73-14865
**Kriegesmann, Jochen**
Principles of processing for technical ceramics: II.—73-12056; Processing phenomena for recrystallized silicon carbide.—73-02980
**Kriegsmann, G. A.; Varatharajah, P.**
Formation of hot spots in microwave-heated ceramic rods.—73-05813
**Krigman, L. I.** See Chernyakhovskii, V. A.
**Kriklivyi, D. M.; Petrovskaya, N. A.; Klimovich, O. S.**
Controlling stage of the calcium phosphate (tertiary) with natural gas reduction process.—73-16069
**Krinchik, G. S.** See Gan'shina, E. A.
**Kriner, Richard W.** See Hamling, Jerry W.
**Krishna Murthy, G. G.; Sawada, Y.; Elliott, J. F.**
Reduction of FeO dissolved in $CaO-SiO_2-Al_2O_3$ slags by Fe-C droplets.—73-17234
**Krishna, M. Ghanashyam** See Al-Robaee, Mansour S.
**Krishna, M. Ghanashyam; Kanakaraju, S.; Rao, K. Narasimha; Mohan, S.**
Effects of thermal annealing on the properties of zirconia films prepared by ion-assisted deposition.—73-13036
**Krishnadev, M. R.** See Garneau, J.-F.
**Krishnagopalan, Gopal A.** See Tatarchuk, Bruce J.
**Krishnakumar, Subramania** See Esener, Sadik C.
**Krishnamoorthy, P. R.; Seetharamu, S.; Sampathkumaran, P.**
Influence of the mass flux and impact angle of the abrasive on the erosion resistance of materials used in pulverized fuel blends and other components in thermal power stations.—73-09622
**Krishnamoothy, S.** See Kantha Rao, V. V. L.
**Krishnamurthy, M.** See Miller, M. S.
**Krishnamurthy, Mohan** See Chang, Ying-Lan
**Krishnamurthy, Mohan; Lorke, A.; Wassermeier, M.; Williams, D. R. M.; Petroff, P. M.**
Molecular beam epitaxial growth mechanisms of (Al,Ga)As on vicinal GaAs surfaces: self-organization and step bunching.—73-11326
**Krishnamurthy, R.** See Annamalai, V. E.; Gowri, S.; Ponraj, R.; Santhanakrishnan, G.; Sornakumar, T.
**Krishnamurthy, Vikram** See Helms, C. R.
**Krishnan, N. A.; Gore, V. K.; Khadilkar, S. A.**
Trace element balances in kiln system of a few Indian cement plants.—73-10183
**Krishnan, R.** See Gadenne, M.
**Krishnan, R.; Fievaris, N. K.**
Magnetic anisotropy of Co/Pt multilayers on MgO(100) substrates.—73-05592
**Krishnan, R.**
Surface anisotropy in amorphous Tb-Fe/$Al_2O_3$ multilayers.—73-15371
**Krishnan, S.** See Fowler, B.; Lian, S.; Vipulanandan, C.
**Krishnankutty, S.; Kolbas, R. M.; Khan, M. A.; Kuznia, J. N.; Van Hove, J. M.; Olson, D. T.**
Optical characterization of AlGaN-GaN-AlGaN quantum wells.—73-16553; Photoluminescence characterization of AlGaN-GaN pseudomorphic quantum wells and calculation of strain-induced band gap shifts.—73-15095
**Krishnaraj, S.** See Sankar, Jagannathan
**Krishnarao, R. V.**
Formation of SiC whiskers from rice husk silica–carbon black mixture: effect of preheat treatment.—73-09141
**Krishnaswamy, S. Visvanathan; Weinert, Robert W.; Adam, John D.; Walker, John M.**
Lateral field FBAR.—73-01442
**Krishtopov, S. V.** See Smirnov, B. I.
**Krist, Kevin** See Liu, Mei-Lin
**Kristen, Klaus; Scheidler, Herwig**
Temperature sensor or temperature sensor arrangement made from glass-ceramic and bonding film resistors.—73-04535
**Kristensen, N.** See Ljungcrantz, H.
**Kristof, Eva; Juhasz, A. Zoltan; Vassanyi, Istvan**
Effect of mechanical treatment on the crystal structure and thermal behavior of kaolinite.—73-12575
**Kristoffel, N.** See Rubin, P.
**Kristofik, J.** See Hinomaz, P.; Hubik, P.
**Kritsalis, P.; Merlin, V.; Coudurier, L.; Eustathopoulos, N.**
Effect of Cr on interfacial interaction and wetting mechanisms in Ni alloy/alumina systems.—73-13825
**Kritskaya, V. E.** See Pirogova, G. N.
**Krivaiite, G.** See Kavalyauskas, Yu. I.
**Krivandina, E. A.** See Radaev, S. F.
**Krivandina, E. A.; Bystrova, A. A.; Sobolev, B. P.; Konstantinova, A. F.; Ulukhanov, I. T.; Glushkova, T. M.**
Growth and some properties of $Na_{0.5-x}R_{0.5+x}F_{2+2x}$ single crystals (R=Y, Dy–Lu; *x*=0.1 and 0.15) with fluorite structure.—73-16501
**Krivda, A. A.** See Novak, I. I.
**Kriven, S. I.; Mazur, Yu. I.; Tarasov, G. G.; Shevchenko, N. V.**
Far-ir transmission spectra of $Hg_{1-x-y}Cd_yMn_xTe$.—73-16146; Infrared reflection spectra of HgCdMnTe multicomponent solid solutions.—73-14990
**Kriven, Waltraud M.** See Cherian, I. K.; Gulgun, Mehmet A.; Hou, Tien-I; Huang, Chao-M.; Lewis, Jennifer A.; Xu, You-Ren
**Krivinosov, E. V.** See Grinchenko, A. Yu.
**Krivobodrov, V. S.** See Novak, I. I.
**Krivoborodov, Yu. R.** See Albats, B. S.; Kaprielov, S. S.; Kuznetsova, Tamara V.; Osokin, A. P.
**Krivoborodov, Yu. R.; Samchenko, S. V.**
Sulfate-bearing solid solution of calcium aluminates and ferrites.—73-13783
**Krivolapchuk, V. V.** See Akimov, A. V.
**Krivolapov, N. N.** See Budishevskii, V. S.
**Krivonosov, E. V.** See Kvyatkovskii, S. F.
**Krivoruchko, V. N.** See Doroshev, V. D.

**Krivoruchko, V. N.; Shestakov, A. A.; Yablonskii, D. A.**
Magnetic structure and resonance properties of $Nd_{22}CuO_4$.—73-08662

**Krivoshei, G. S.** See Grigor'ev, O. N.

**Krivulya, V. A.** See Atkarskaya, A. B.

**Kriz, Ronald D.** See Prosser, W. H.

**Krockel, O.** See Schulle, Wolfgang

**Kroeger, D. M.** See Kim, Dae-Joon

**Kroemer, Herbert** See Bolognesi, C. R.; Miller, M. S.; Nguyen, Chanh

**Kroemer, Herbert; Nguyen, Chanh; Brar, Berinder**
Are there Tamm-state donors at the InAs-AlSb quantum well interface.—73-07383

**Kroemer, Herbert**
Semiconductor heterojunctions at the Conference on the Physics and Chemistry of Semiconductor Interfaces: a device physicist's perspective.—73-11443

**Krogbeumker, H.**
Storage and metering of moist desulfogypsum at the Phoenix cement works.—73-10163

**Kroger, Harald** See Reichert, Karlheinz

**Krogh Andersen, E.** See Krogh Andersen, I. G.

**Krogh Andersen, I. G.; Krogh Andersen, E.; Knudsen, N.; Skou, E.**
Preparation and ac/dc conductivity of tin-zeolite-Y materials.—73-01012

**Krok, F.; Bogusz, W.; Kurek, P.; Wasiucionek, M.; Jakubowski, W.; Dygas, J.**
Influence of preparation procedure on some physical properties of BICUVOX $[Bi_2V_{0.9}Cu_{0.1}O_{5.35}]$.—73-13099

**Krokhmal, A. P.** See Boiko, S. I.

**Krol, Denise M.** See DiGiovanni, David J.; Varma, Chandra M.

**Krol, Denise M.**
Photoinduced nonlinear optical phenomena in glasses and optical fibers.—73-00527

**Kromp, K.** See Peterlik, H.

**Kronmuller, H.** See Schuster, T.

**Kropke, I.** See Freitag, I.; Golla, D.

**Krost, A.** See Bohrer, J.; Grundmann, M.; Rossow, U.; Zahn, D. R. T.

**Krot, V. V.; Zorya, L. N.; Orlova, O. D.; Panasyuk, G. P.; Lazarev, V. B.; Vinogradov, E. E.**
Production of amorphous silicon dioxide from hexafluorosilicic acid.—73-14481

**Krotikov, V. A.** See Filina, L. V.

**Krotz, P.** See McKechnie, T. N.

**Kroutil, J.** See Lostak, P.

**Krstic, V. D.** See El-Sherik, A. M.; Thompson, I.

**Kruchina, Sandor**
Measurement of thickness and heat conductivity of fibrous thermal insulators.—73-01910

**Krueger, C. W.** See Wang, C. A.

**Krueger, E. E.** See Tobin, S. P.

**Krueger, Susan** See Smith, Peter A.

**Kruger, Richard A.**
Future of fly ash in the ceramic industry.—73-12273

**Kruglik, A. I.** See Vasil'ev, V. N.

**Kruglik, A. I.; Vasil'ev, A. D.; Grankina, V. A.; Kovalev, G. V.**
Crystal structure of $Cs_3CdBr_5$ and $(NH_4)_{2.34}Rb_{0.66}ZnBr_5$.—73-16083

**Kruglik, A. I.; Vasil'ev, A. D.; Grankina, V. A.**
Crystal structure of $Rb_4CdBr_6$ and $Rb_4CdCl_6$.—73-16093

**Krukhmaleva, A. V.** See Popov, V. A.

**Krukhmaleva, G. P.** See Bagaiskov, Yu. S.

**Krumhansl, J. L.**
Accelerated testing of cements in brines.—73-03432

**Krumpelt, Michael; Bloom, Ira D.; Pullockaran, Jose D.; Myles, Kevin M.**
Ionic conductors for solid oxide fuel cells.—73-01055

**Krupa, A. A.** See Kuprienko, P. I.

**Krupanidhi, S. B.** See Belsick, J. R.; Fox, G. R.; Hu, H.; Joshi, P. C.; Kushida, Keiko; Maffei, N.; Trolier-McKinstry, S.

**Krupanidhi, S. B.; Roy, Della M.; Maffei, N.; Peng, C. J.**
Pulsed excimer laser deposition of ferroelectric thin films.—73-11607

**Krupanidhi, S. B.**
Ferroelectric thin films and device applications.—73-04553

**Krupke, W. F.** See DeLoach, Laura D.; Payne, Stephen A.

**Krupnikov, E. S.; Abutalybov, G. I.**
Phase transitions in $TlGaS_2$ layered crystal.—73-16267

**Krupnikov, E. S.; Aliev, F. Yu.; Orudzhev, R. G.**
Phase transitions sequence in ß-$TlInS_2$ layered crystal.—73-16268

**Krus, D., Jr.; Hoffman, R. W.**
Finite element studies of tensile testing on thin-film multilayers.—73-13532

**Krus, D., Jr.; Mearini, G. T.; Chaffee, K.; Hoffman, R. W.**
Three-dimensional finite element analysis of thin-film stresses using ALGOR personal-computer-based software.—73-01934

**Kruschke, D.** See Isard, J. O.

**Kruse, Carsten; Finnis, Michael W.; Milman, Victor Y.; Payne, Michael C.; De Vita, Alessandro; Gillan, Michael J.**
First-principles calculations for niobium atoms on a sapphire [(0001)] surface.—73-05401

**Kruse, Paul W., Jr.**
Thin film pyroelectric imaging array.—73-11644

**Kruse, T.** See Albrecht, W.

**Krusell, Wilbur C.** See Hitchens, William R.

**Krusin-Elbaum, L.; Civale, L.; Vinokur, V. M.; Holtzberg, F.**
Phase diagram of the vortex-solid phase in Y-Ba-Cu-O crystals: a crossover from single-vortex (1-D) to collective (3-D) pinning regimes.—73-08162

**Krutyholowa, M. W.** See Chen, Ning-Wei

**Krutyholowa, M. W.; Chen, Ning-Wei; Haun, M. J.; Brog, T. K.; Wirth, D. G.; Sibold, J. D.**
Crystallization behavior of $BaO-Al_2O_3-SiO_2$ intergranular glass compositions in alumina ceramics.—73-08590

**Kruzelecky, R. V.** See Qiu, C.

**Kruzina, T. V.** See Sinii, I. G.

**Kryder, M. H.** See Azevedo, Antonio; Lekawat, L.

**Krylov, A. V.; Barinov, Sergej M.; Ivanov, D. A.; Mindlina, N. A.; Parilak, L.; Dusza, J.**
Influence of SiC whisker size on the mechanical properties of reinforced alumina.—73-09621

**Krylov, B. A.; Li, A. I.**
Effect of electric current on concrete hardening.—73-13708

**Krylov, I. A.** See Safonov, V. V.

**Krylov, I. P.** See Baklanov, K. A.

**Krylov, V. A.** See Gamants, E. M.

**Krylov, V. N.; Khrenov, V. I.; Pavlov, A. N.; Tussen, M. B.**
Use of diopsides of various mineralogical compositions in silicate production technology.—73-15914

**Krylova, A. V.** See Ageeva, I. V.

**Krylova, G. S.** See Simanova, S. A.

**Krynetskii, I. B.** See Zoubkova, Ya.

**Kryshtab, T. G.** See Klad'ko, V. P.; Semenova, G. N.

**Kryuchenko, Yu. V.** See Bercha, A. I.

**Kryuchkov, V. A.** See Galakhov, A. V.; Ivanova, L. P.

**Kryuchkov, Yu. N.**
Analysis of the sedimentation curve obtained during express-analysis of the dispersion (granulometric composition) of refractory powders.—73-00774; Hydrodynamic parameters of porous structure of molds for slip casting.—73-06228; Hydrodynamic parameters of the porous structure of molds in slip casting.—73-08343; Methods of plotting curves for sedimentation in centrifugal fields.—73-08415; Optimization of design of equipment for firing.—73-01962; Optimizing the design of kiln furniture arrangements.—73-01964; Optimizing the production process of ceramic products according to the slip casting technology.—73-01808; Physical nature of the slip casting process in porous molds.—73-01809; Polycapillary model of a porous medium for analyzing filtration processes in ceramics.—73-03182; Polycapillary model of porous media for analysis of filtration processes in ceramic materials.—73-02927; Structural features of lattices formed during the crystallization of a dispersed phase.—73-08749; Structural parameters of macroporous glasses.—73-07080

**Kryukova, G. N.** See Plyasova, L. M.

**Kryukova, I. V.; Teplitskii, V. A.; Shul'ga, E. P.; Dzhumaev, B. R.; Korseinskaya, N. E.**
Influence of the excess pressure of the vapors of the components on the ensemble of point defects in CdS crystals.—73-06162

**Ktitorov, S. A.** See Zaitsev, V. K.

**Ktitorov, S. A.; Petrov, Yu. V.; Shalaev, B. N.; Sherstinov, V. S.**
Fluctuation effects in the vicinity of the second critical field in high-$T_c$ superconductors.—73-01554

**Ktitorov, V. I.** See Gorima, J.

**Ku, J.-K.** See Han, K.-H.

**Kuang, An-Xiang** See Cheng, Yuan-Fa; Zhuo, Tao-Shen

**Kuatbaev, K. K.** See Kurakbaeva, R. Kh.

**Kuban, B.; Aydin, E.**
Influence of sodium chloride on the corrosion and exudation of fused cast refractories.—73-14597

**Kubasek, M.** See Musil, J.

**Kubat-Martin, Kimberly A.** See Hults, William L.

**Kubby, J. A.; Greene, W. J.**
Comparison of the geometric structure and electron reflectivity of A/B-NiSi$_2$/Si(111) and U/F-Si(111)-7×7 interfaces.—73-08825

**Kubecek, V.; Takagi, Y.; Yoshihara, K.; Reali, G. C.**
Lithium triborate picosecond optical parametric oscillator.—73-05588

**Kubeckova, Marta** See Matejec, Vlastimil

**Kubeckova, Marta; Sedlar, Miroslav; Matejec, Vlastmil**
Characterization of sol-gel-derived coatings on optical fibers.—73-12940

**Kuberkar, D. G.** See Bichile, G. K.

**Kubler, J.** See Fett, Theo

**Kubler, Jakob J.** See Quinn, George D.

**Kubo, Fuminobu; Hino, Hiroyuki; Shibata, Tsutomu**
Dental refractory model materials.—73-12362

**Kubo, Hiroshi** See Kinoshita, Toshiya

**Kubo, Hiroyuki** See Sato, Bunryo

**Kubo, Hiroyuki; Nomura, Takeshi; Tanaka, Hiroe; Yogo, Nobukazu; Sato, Bunryo**
Glass molding process and molding apparatus for the same.—73-03921

**Kubo, Katsushi** See Kanematsu, Wataru; Mabuchi, Mamoru; Yamauchi, Yukihiko

**Kubo, Koichi** See Sugii, Nobuyuki

**Kubo, Shugo** See Suzuki, Minoru; Tanabe, Keiichi

**Kubo, Yasunori; Asano, Setsuro; Harima, Hisatomo; Yanase, Akira**
Electronic structure and the Fermi surfaces of antiferromagnetic $NdB_6$.—73-02259

**Kubo, Yoshimi** See Manako, Takashi

**Kubo, Yukio** See Fukui, Takehisa; Ikuhara, Yuichi; Michishita, Kazuo; Shimizu, Noriyuki; Yanagisawa, Masaaki

**Kubo, Yukio; Michishita, Kazuo; Shimizu, Noriyuki; Higashida, Yutaka; Yokoyama, Hisanori; Hayami, Yumi**
Preparation of an Ag-doped Bi-Sr-Ca-Cu-O bulk sample by the floating zone method.—73-01637

**Kubo, Yukio**
Oxide superconducting materials at JFCC—sample preparation by floating melting zone method and their microstructural analysis.—73-11857

**Kubodera, Kenichi** See Kobayashi, Hideki

**Kubota, Hiroshi** See Ando, Yoichi; Yoshimura, Kazuyoshi

**Kubota, Hiroyasu; Simoyama, Yoshihide; Fujiwara, Hiromi**
Experimental study on workability and self-compacting property of high fluidized concrete.—73-09960

**Kubota, Yoshitaka** See Ashizuka, Masahiro

**Kubota, Yoshitaka; Ashizuka, Masahiro; Hokazono, Hideki**
Elastic modulus and fracture toughness of $CeO_2$-containing tetragonal zirconia polycrystals.—73-17302

**Kubota, Yoshitaka; Yamamoto, Shigemi; Mori, Toshiyuki; Yamamura, Hiroshi; Mitamura, Takashi**
Changes of microstructure and high-temperature strength of ceramic composite in the mullite-$ZrO_2$-$Al_2O_3$ system using an in situ reaction between synthetic zircon and $Al_2O_3$.—73-17244; Microstructural changes and mechanical properties of mullite-$ZrO_2$ and mullite-$ZrO_2$-$Al_2O_3$ composites prepared using in situ reaction between synthetic zircon and alumina.—73-17399

**Kubovy, Alois**
Model of electric conductivity of thick-film resistors: I, Piezoresistivity.—73-10975; Model of electric conductivity of thick-film resistors: II, Simple computer model.—73-10976

**Kuboyama, Keiichi; Hara, Kazuhiro; Okabe, Hirotake; Matsushige, Kazumi**
pH dependence on the formation process of tungsten oxide gel.—73-02917

**Kucera, J.; Auerbeck, Jiri; Dusatko, Petr**
30 years of scale modeling in SVUS—Glass Institute Hradec Kralove.—73-00715

**Kucharczyk, Robert; Stesicka, Maria**
Finite superlattice with the embedded quantum well.—73-07529

**Kucharski, M.** See Ip, S. W.

**Kucher, Eberhard**
From grinding device to roll turning machine—economic servicing of roller shells.—73-04923

**Kucherenko, S. S.** See Butusov, D. M.

**Kuchinskii, S. A.** See Zhilin, A. A.

**Kuchinskii, S. A.; Sukhanov, V. I.; Khazova, M. V.; Dotsenko, A. V.**
Effective optical constants of porous glass.—73-00469

**Kuchinsky, S. A.; Nikonorov, N. V.; Panysheva, V. V.; Sarvin, V. V.; Tunimanova, I. V.**
Properties of volume phase holograms on polychromatic glasses.—73-00536

**Kuchta, H.-D.**
Refractory lining of waste incineration plants.—73-10765

**Kuck, S.** See Koetke, J.

**Kudaka, Katsuya; Iizumi, Kiyokata; Tokugawa, Yoko; Takeda, Shuichi; Okumura, Takuji; Sasaki, Hiroshi**
Aggregate particles produced during pyrolysis of PTC barium titanate precursor synthesized by the oxalate method.—73-17107

**Kude, Y.** See Kohno, T.

**Kudesia, R.; McHale, A. E.; Condrate, Robert A., Sr.; Snyder, R. L.**
Microwave characteristics and far-infrared reflection spectra of zirconium tin titanate dielectrics.—73-10973

**Kudesia, R.; Snyder, R. L.; Condrate,, Robert A., Sr.; Michale, A. E.**
Structural study of $Zr_{0.8}Sn_{0.2}TiO_4$.—73-05496

**Kudin, G. I.** See Ivzhenko, N. A.

**Kudinov, E. K.** See Shelykh, A. I.

**Kudinov, V. I.** See Ayache, C.

**Kudo, Haruhiko** See Dan, Koji

**Kudo, K.** See Miyake, Yasunari

**Kudo, M.** See Hikita, Tokihisa

**Kudo, Takanari** See Ishihara, Tatsumi

**Kudo, Tetsuichi** See Kishimoto, Akira; Nanba, T.

**Kudou, Yoshihiko; Yamazaki, Akira**
Low-cost α-calcium sulfate hemihydrate manufacturing process.—73-10029

**Kudoyarova, V. K.; Aivazov, A. A.; Budaguan, B. B.; Filatova, I. V.**
Thermal stability of a-SiN$_x$:H [x≤0.4] films.—73-05673

**Kudra, T.; Raghavan, G. S. V.; Van de Voort, F. R.**
Microwave heating characteristics of rutile.—73-02645

**Kudryashov, N. A.** See Butusov, D. M.

**Kudryavtsev, I. A.** See Gurevich, S. A

**Kudryavtsev, I. N.** See Anders, E. E.

**Kudryavtsev, I. V.** See Dyumin, A. N.

**Kudryavtsev, V. A.** See Grebenshchikov, L. T.

**Kudryavtsev, Yu. A.; Novikov, E. B.; Stus, N. M.; Chaikina, E. I.**
Sulfide passivation of InAs surface.—73-07820

**Kudryavtsev, Yu. V.** See Dubovik, Ya.

**Kudryavtseva, E. A.** See Radautsan, S. I.

**Kudryavtseva, G. P.** See Apollonov, V. N.

**Kudyakov, V. Ya.** See Shardakov, N. T.

**Kudzin, A. Yu.** See Bunina, L. K.; Dubinskaya, O. F.; Kolesnichenko, K. A.; Trubitsyn, M. P.; Volnyanskii, M. D.

**Kudzin, A. Yu.; Sokolyanskii, G. Kh.; Yudin, A. S.**
Effect of electric field stimulation on the optical and photoelectric properties of $Bi_{12}SiO_{20}$.—73-02579

**Kuech, T. F.** See Gilliland, G. D.; Vahala, Kerry J.

**Kuech, T. F.; Potemski, R.; Cardone, F.; Scilla, G.**
Quantitative oxygen measurements in OMVPE $Al_xGa_{1-x}As$ grown by methyl precursors.—73-15129

**Kuehne, A.** See Arato, P.

**Kuga, Tatsuhiko** See Hojo, Junichi

**Kuga, Yoshikazu** See Endoh, Shigehisa

**Kugawa, Shuichi** See Kanezo, Katsumi

**Kugel, G. E.** See Fontana, M. D.

**Kugimiya, Koichi** See Fujimaru, Takuya

**Kugimiya, Koichi**
Science and technology in composite materials—nanostructure-controlled magnetic materials.—73-04647

**Kugimoto, Junichi** See Yamamura, Takemi

**Kuhl, Detlef** See Bottcher, E. Holger

**Kuhl, K.** See Lang, W.

**Kuhlmann, K.** See Wischers, G.

**Kuhlmann, K.; Kirchartz, B.; Rechenberg, W.**
Sampling of trace constituents in the clean gas coming from rotary cement kilns.—73-00187

**Kuhlmann, U.; Werheit, H.**
Microstructure of boron carbide.—73-06257

**Kuhlmann-Wilsdorf, D.** See Gao, Chao

**Kuhn, H.** See Schuster, T.

**Kuhn, T.** See Lohner, A.

**Kuhn, W.** See Stanzl, H.
**Kuhn, Wolfgang**
Method for increasing chemical resistance of porcelain enamels, especially titanium porcelain enamels: I.—73-10252; Method for increasing chemical resistance of porcelain enamels, especially titanium porcelain enamels: II.—73-10253
**Kuhne, Arnd; Oberacker, Rainer; Grathwohl, Georg**
Role of sintering parameters on microstructure development and mechanical properties of sinter/HIP silicon nitride.—73-06026
**Kuhnen, C. A.; Dos Santos, A. V.**
Calculated electronic structure of $SnFe_3N$.—73-05363
**Kuibira, Akira** See Iwamoto, Yuji; Nishioka, Takao
**Kuiper, Pieter; Searle, Barry G.; Rudolf, Petra; Tjeng, L. H.; Chen, C. T.**
X-ray magnetic dichroism of antiferromagnet $Fe_2O_3$: the orientation of magnetic moments observed by Fe 2*p* X-ray absorption spectroscopy.—73-15376
**Kuisma, S.** See Saarinen, K.
**Kuji, Toshiro** See Harada, Tetsuji
**Kuk, L.-H.** See Kim, S.-J.
**Kuken, Yusuke** See Komatsu, Takayuki; Sato, Ryuji
**Kukhtarev, N.; Chen, Bu-Su; Venkateswarlu, Putcha; Salamo, G.; Klein, M.**
Reflection holographic gratings in [111] but $Bi_{12}TiO_{20}$ crystal for real-time interferometry.—73-12875
**Kukimoto, H.** See Ishizaki, Nobuo
**Kukizaki, Masato** See Nakashima, Tadao
**Kukla, Reiner** See Beister, Gunter
**Kukla, Reiner; Bahr, M.; Beisswenger, Siegfried; Fritsche, W. E.; Lubbehusen, M.**
High-rate sputtering of metals and metal oxides with a moving plasma zone.—73-05842
**Kuklina, E. S.** See Nozik, Yu. Z.
**Kukovitskii, E. F.** See Drulis, H.
**Kukubo, Tadashi** See Komori, Kiyotaka
**Kukush, A. I.** See Kirillov, A. P.
**Kukushkin, I. V.; Pulsford, N. J.; Von Klitzing, V.; Haug, R. J.; Ploog, K.; Timofeev, V. B.**
Wigner solid vs incompressible Laughlin liquid: phase diagram derived from time-resolved photoluminescence.—73-08791
**Kukushkin, S. A.** See Belyaev, A. P.
**Kukushkin, S. A.; Osipov, A. V.**
Microscopic theory of epitaxial film growth on vicinal surfaces.—73-05912
**Kul'bachinskii, V. A.** See Vardapetyan, R. P.
**Kul'bachinskii, V. A.; Azou, S. A.; Kovalyuk, Z. D.; Pyriya, M. N.; Skipidarov, S. Y.**
Effect of intercalation by metal atoms on energy spectrum of $Bi_2Te_3$.—73-01134
**Kul'bachinskii, V. V.; Kovalyuk, M. Z.; Pyriya, M. N.**
Influence of intercalation of Li and Ba on the electrical properties of InSe.—73-14982
**Kul'buzhev, B. S.; Zaitsev, S. M.; Durnev, Yu. I.**
X-ray study of $TlGaSe_2$ and $TlInS_2$.—73-01367
**Kulac, Ibrahim** See Ullrich, Bruno
**Kulakov, M. P.** See Tamazyan, R. A.
**Kulakova, L. D.** See Bagaiskov, Yu. S.
**Kulakowska-Pawlak, B.; Zyrnicki, W.**
Spectroscopic investigations into plasma used for nitriding processes of steel and titanium.—73-06856
**Kulbachinskii, V. A.** See Chudinov, S. M.
**Kulbekov, M. K.**
Diffusion kinetics theory of parallel solid-phase processes at fuel containing ceramics burning.—73-15715; Research and modeling of carbon combustion diffusion kinetics during burning of fuel-containing ceramics under commercial production conditions.—73-15753
**Kulebakin, V. G.; Koptelov, V. N.; Bocharov, L. D.**
Effect of mechanical activation of basic refractories and mixes on sintering.—73-14587
**Kuleshov, N. V.** See Demchuk, M. I.
**Kulibekov, A.** See Alekperov, O. Z.
**Kulibekov, A.; Fischer, R.; Allkhverdiev, K.; Haarer, D.**
Two-photon absorption of ps laser pulses in layered GeS.—73-11493
**Kulic, M. L.; Kramer, A.; Schotte, K. D.**
Importance of electromagnetic pinning in high-$T_c$ superconductors with long defects.—73-11794
**Kulik, A. S.** See Antonov, G. I.; Kamenetskii, Yu. L.
**Kulikov, A. I.**
Advantages of mold passivation.—73-00586
**Kulikov, G. S.** See Gafarov, S. F.
**Kulikov, M. A.** See Bush, A. A.
**Kulikov, V. B.** See Gorbylev, V. A.
**Kulikova, O. V.; Kulyuk, L. L.; Popov, S. M.**
Chromium ion luminescence in semiconducting spinel $CdIn_2S_4$:Cr.—73-14807
**Kulikovskii, V. Yu.** See Dan'ko, V. A.
**Kulinkin, B. S.** See Vasil'ev, M. I.
**Kulish, U. M.**
Liquid phase epitaxy of layers of $A^{III}B^{V}$ compounds at two-dimensional nucleation on {111} planes.—73-01230
**Kulkami, G. U.** See Rao, C. N. R.
**Kulkarni, A. K.; Knickerbocker, S. A.**
Electrical, optical, and chemical properties of indium-tin oxidized films grown by sequential electron beam deposition of indium and tin.—73-12792
**Kulkarni, A. R.** See Gupta, S. M.; Kharat, D. K.
**Kulkarni, Nagraj; Moudgil, Brij M.; Bhardwaj, Mahesh**
Ultrasonic characterization of green and sintered ceramics: I, Time domain.—73-12206; Ultrasonic characterization of green and sintered ceramics: II, Frequency domain.—73-15858
**Kulkarni, R. A.** See Pradip,
**Kulkarni, R. G.** See Bichile, G. K.; Joshi, H. H.; Mohan, H.; Patil, H. D.; Trivedi, Bimal S.
**Kulkarni, Sudhakar; Bayard, Michel**
Indium tin oxide films radio frequency sputtered from specially formulated high-density indium tin oxide targets.—73-02863
**Kulkova, S. E.; Kaichikhin, V. V.; Muryzhnikova, O. N.**
Positrons in $ZrO_2$.—73-02673
**Kullberg, M. L.** See Wu, W.
**Kulnis, W. J., Jr.** See Mallik, R. R.
**Kulov, S. K.** See Kozakov, A. T.
**Kulysov, N. A.** See Ezerskaya, N. A.
**Kulyuk, L. L.** See Kravetskii, I. V.; Kulikova, O. V.
**Kumada, Nobuhiro** See Kinomura, Nobukazu
**Kumagai, H.** See Ehara, T.
**Kumagai, K.** See Tokura, Y.
**Kumagai, Kazuo** See Inoue, Takayoshi; Kobashi, Koji
**Kumagai, Kenichi** See Watanabe, Isao
**Kumagai, Masao** See Cho, Woo-Seok; Kawasaki, Masashi; Majima, A.; Uekusa, Shinichiro
**Kumagai, Masato** See Messing, Gary L.
**Kumagai, Mikio** See Ikeda, Yasuhisa
**Kumagai, T.** See Manabe, Takaaki
**Kumakawa, Akinaga; Niino, M.**
Thermal fatigue characteristics of functionally gradient materials [FGM's] for aerospace applications.—73-03653
**Kumakura, H.; Sasaki, M.; Suzuki, D.**
Low-$NO_x$ combustor for automotive ceramic gas turbine—reliability assurance.—73-08535
**Kumakura, Hiroaki; Kitaguchi, Hitoshi; Togano, Kazumasa; Maeda, H.; Shimoyama, Junichi; Okayasu, S.**
Effect of high-energy ion irradiation and electron irradiation on textured $Bi_2Sr_2CaCu_2O_x$—180-MeV $Cu^{11+}$ and $Bi^{11+}$ irradiations and 3-MeV electron irradiation.—73-08032
**Kumakura, Hiroaki; Ye, Jin-Hua; Shimoyama, Junichi; Kitaguchi, Hitoshi; Togano, Kazumasa**
Preparation of Ag-I intercalated $Bi_2Sr_2CaCu_2O_y$ superconductor.—73-15593
**Kumakura, Masashi** See Onodera, Takaki
**Kumar, Anil** See Kumar, S.; Singh, S. P.
**Kumar, Anil; Pelty, Larry P.**
High-strength tungsten carbide material for use in earth-boring bits.—73-10317
**Kumar, Anil; Singh, S. P.**
Oxygen-ion activity and its influence on redox equilibria in a ternary soda-lime-silica glass system.—73-10390
**Kumar, Binod** See Chen, Christina H.
**Kumar, Binod; Chen, Christina H.**
Effect of melting atmosphere on properties of a glass in the $CaO-P_2O_5-Fe_2O_3$ system.—73-03835
**Kumar, Binod; Das, Kamal K.**
Effect of electromagnetic radiation on alternating current losses in high-$T_c$ superconductors.—73-08030
**Kumar, D.** See Jha, S. R.; Parkash, Om; Pinto, R.
**Kumar, Deepak**
Thermoelectric power of high-$T_c$ superconductors: superconducting fluctuations and the marginal Fermi-liquid hypothesis.—73-15655
**Kumar, Jalajakumari** See Kumar, Krishnankutty-Nair P.
**Kumar, K. S.** See Koshy, J.
**Kumar, K. V.** See Allor, Richard L.; Jahanmir, Said
**Kumar, K. V.; Ishikawa, Tadayuki; Koskey, Jason**
Superabrasives for grinding alloys.—73-03416
**Kumar, Krishnankutty-Nair P.; Keizer, Klaas; Burggraaf, Anthonie J.; Okubo, T.; Nagamoto, H.**
Synthesis and textural properties of unsupported and supported rutile ($TiO_2$) membranes.—73-09351; Textural evolution and phase transformation in titania membranes: II, Supported membranes.—73-16368
**Kumar, Krishnankutty-Nair P.; Keizer, Klaas; Burggraaf, Anthonie J.**
Textural evolution and phase transformation in titania membranes: I, Unsupported membranes.—73-16367; Textural stability of titania–alumina composite membranes.—73-09517
**Kumar, Krishnankutty-Nair P.; Kumar, Jalajakumari; Keizer, Klaas**
Effect of peptization on densification and phase-transformation behavior of sol-gel-derived nanostructured titania.—73-09083
**Kumar, N. Deepak** See Kamalasanan, M. N.
**Kumar, P.** See Hingorani, S.
**Kumar, P.; Pillai, V.; Shah, D. O.**
Preparation of $YBa_2Cu_3O_{7-x}$ superconductor by oxalate coprecipitation.—73-01640; Preparation of $YBa_2Cu_4O_8$ superconductor from oxalate precursor under ambient pressure.—73-04792
**Kumar, Ravi** See Pinto, R.
**Kumar, S.; Arora, R.; Kumar, Anil**
Space-charge-limited conduction in a-$Ge_{22}Se_{68}M_{10}$ (M=Cd, In, Pb, Te).—73-04485; Space-charge-limited conduction in a-$Se_{100-x}Te_x$.—73-11448
**Kumar, Sampath H.** See Meshri, Dayal T.
**Kumar, Satander** See Seehra, S. S.
**Kumar, Shailendra; Roy, S. B.; Pradhan, A. K.; Chaddah, P.; Prasad, Ram; Soni, N. C.**
Second harmonic generation as a sensitive technique for estimation $H_{c1}$ of high-$T_c$ materials.—73-01655
**Kumar, Sunil; Chopra, D. R.; Smith, Gregory C.**
Photoemission study of low pressure chemical vapor deposited and reactively sputtered titanium nitride in W/TiN/Si.—73-07721
**Kumar, Suresh; Messing, Gary L.**
Metallorganic resin derived barium titanate: II, Kinetics of $BaTiO_3$ formation.—73-16214
**Kumar, V.** See Folkard, M. A.
**Kumar, Vikram** See Balasubramanian, Sathya; Ghosh, Subhasis
**Kumar, Vipan; Chari, K. S.; Agnihotri, O. P.**
Silicon oxynitride films deposited by mercury photosensitization chemical vapor deposition.—73-16987
**Kumar, Y.** See Dwivedi, B. P.
**Kumara Warrier, Krishna Gopa** See Varma, Hari Krishna
**Kumaria, S.; Singh, R. N.**
Influence of interfacial shear strength on matrix properties and crack-fiber interactions in ceramic matrix composites.—73-09620
**Kumasaka, Noriyuki** See Tomishima, Hiroshi
**Kumashiro, Yoshimasa; Kinoshita, Yoshiki; Takaoka, Yoichi; Murasawa, Sadao**
Low-temperature preparation of $TiO_2$ thin films by plasma-enhanced chemical vapor deposition.—73-05901
**Kumashiro, Yoshimasa; Kinoshita, Yoshiki; Takaoka, Yoichi; Murasawa, Sadao**
Low-temperature preparation of $TiO_2$ thin films by plasma-enhanced chemical vapor deposition.—73-16853
**Kumazawa, H.; Cho, H.-M.; Sada, E.**
Hydrothermal synthesis of barium ferrite fine particles from goethite.—73-13092
**Kumazawa, H.; Otsuki, H.; Sada, E.**
Preparation of monosized spherical titania fine particles by controlled hydrolysis of titanium tetraethoxide in ethanol.—73-09267
**Kumazawa, Takeshi** See Nakamura, Kazuo
**Kumazawa, Takeshi; Ohta, Shigetoshi; Nagaoka, Takaaki; Yasuoka, M.; Kanzaki, Shuzo**
Influence of powder characteristics on sinterability and mechanical properties of silica-alumina ceramics (74 wt% $Al_2O_3$).—73-02871
**Kume, Atsushi** See Kanamori, Yasuo
**Kume, Hideki** See Ishida, Koji; Kimoto, Shinya; Yamakata, Koji
**Kume, M.** See Imafuji, Osamu
**Kume, Michiya; Tanabe, Yoshio; Tanihata, Kimiaki**
Nitriding of titanium surface by the self-propagating high-temperature synthesis.—73-10258
**Kume, Shoichi** See Ohtaka, Osamu
**Kumon, Yasuhiro** See Wada, Shigetaka
**Kumpan, V. P.** See Bubelo, V. V.
**Kumta, Prashant N.** See Sriram, Mandyam A.
**Kumuduni, Wanniarachchi K. A.; Nakayama, Yasushi; Nakata, Yoshiki; Okada, Tatsuo; Maeda, Mitsuo**
Transport of YO molecules produced by ArF laser ablation of $YBa_2Cu_3O_{7-\delta}$ in ambient oxygen gas.—73-11939
**Kumzerov, Yu. A.** See Bogomolov, V. N.
**Kumzerov, Yu. A.; Levchenko, M. E.; Romanov, S. G.; Suvorov, A. V.**
Detection of optical radiation with bismuth-containing high-$T_c$ films.—73-01518
**Kun, Yu; Dollhopf, V.; Kochendorfer R.**
CVD SiC/Al composites produced by a vacuum suction casting process.—73-00216
**Kunchur, Milind N.; Christen, David K.; Phillips, Julia M.**
Free flux flow at high dissipation levels in $YBa_2Cu_3O_{7-\delta}$ epitaxial films.—73-15485
**Kundrotas, V.; Chesna, A.; Dargys, A.**
Photoluminescence intensity control by impurity and exciton avalanche breakdown transients in *n*-GaAs.—73-15097
**Kundu, D.** See De, G.
**Kundu, D.; Roy, S. K.**
Spectrophotometric determination of copper in glass after extraction of copper dithizonate on polyurethane foam.—73-06971
**Kundu, Debtosh; Honma, Itaru; Osawa, Toshio; Komiyama, Hiroshi**
Preparation and optical nonlinear property of sol-gel-derived Cu-$SiO_2$ thin films.—73-09250
**Kundu, Manisha** See Mahamuni, Shailaja
**Kunes, Karel; Spicak, Karel**
New pearl mills.—73-04934
**Kuneva, M.** See Ziling, C.
**Kung, H.** See Hirvonen, J.-P.
**Kung, Ji-Ho** See Kouvatsos, Dimitrios N.
**Kung, Ji-Ho; Hatalis, Miltiadis K.; Kanicki, Jerzy**
Performance of polycrystalline silicon thin-film transistors [TFT's] with double-layer gate dielectric.—73-05610
**Kung, Pang-Jen; McHenry, M.; Maley, M.**
Enhanced critical magnetization currents of hot-pressed $YBa_2Cu_3O_{6+x}$ through partial-melting post-oxygenation.—73-04716
**Kung, Pang-Jen; Muenchausen, Ross E.**
Growth and characterization of laser-deposited superconducting Bi-Sr-Ca-Cu-O thin films.—73-08090
**Kunii**
Point-contact spectroscopy of $La_{1-x}Ce_xB_6$.—73-08703
**Kunimori, K.** See Imai, F.
**Kunin, D. G.** See Ametov, S. A.
**Kuninishi, Kenji** See Nukui, Hideki
**Kuninishi, Kenji; Nukui, Hideki; Yamashita, Suminari; Uchida, Kiyohiko**
Production of hume concrete pipes using cements [with] adjusted particle size distribution.—73-10104
**Kunishige, Hiroshi** See Dan, Koji
**Kunitake, T.** See Grieser, Franz
**Kunitsugu, Shinsuke** See Matsushima, Shigenori
**Kunka, Marilyn K.** See MacZura, George
**Kunkel, G.** See Kleiner, R.
**Kunkle, A. C.** See White, G. Norman
**Kuno, Hideaki** See Carroll, Alan F.
**Kuntsevich, S. P.** See Sorokina, T. P.
**Kuntz, Matthias** See Bauer, Hans J.
**Kuntz, Robert R.** See Lin, Lu-Fei
**Kunz, A.; Matthes, B.; Kloos, K.-H.**
Application of TiN-coated bushings in the standard method for indicating the wear characteristics of hydraulic fluids in vane pumps.—73-06739
**Kunzelmann, K. H.; Hickel, R.**
Machinability of different dental materials for CAD/CAM systems.—73-06471
**Kunzendorf, Karin** See Kley, Gerd
**Kuo, Arthur T.; Choudhury, Ratan; Hata, William**
Reliability study of TiN/AlCu/TiN interconnect in submicron CMOS process.—73-04469
**Kuo, C. T.; Kwor, R.; Jones, K. M.**
Sputtered $HfO_2$ thin films on silicon.—73-07357
**Kuo, Chau-Hong; Choi, Calvin; Maracas, G. N.; Steimle, Timothy C.**
Measurement of indium desorption activation energy from InP layers by laser-induced fluorescence [LIF].—73-11308

**Kuo, Cheng-Tzu** See Chuang, Shih-Cheng
**Kuo, Chu-Kun** See Tan, Aichun
**Kuo, Chu-Kun; Tan, Aichun; Nicholson, Patrick S.**
Electrical conductivity and mixed alkali effect in $K^+/Rb^+$ β˝-$Al_2O_3$ ceramics.—73-00956; Impedance analysis as a tool for designing β˝-alumina microstructures.—73-00978
**Kuo, Dong-H.** See Huang, Chao-M.
**Kuo, J. M.** See Fitzgerald, E. A.; Lothian, J. R.
**Kuo, J. M.; Chan, Y.-J.**
Cryogenic and high-temperature operation of $Al_{0.52}In_{0.48}P/In_{0.2}Ga_{0.8}As$ high electron mobility transistors [HEMT's].—73-11127
**Kuo, J. M.; Fitzgerald, E. A.; Xie, Y.-H.; Silverman, P. J.**
Gas source molecular beam epitaxy of InGaP and GaAs on strained-relaxed $Ge_xSi_{1-x}/Si$.—73-11219
**Kuo, J. M.**
Gas source molecular beam epitaxial growth and device applications in $In_{0.5}Ga_{0.5}P$ and $In_{0.5}Al_{0.5}P$ heterostructures.—73-14938
**Kuo, K.-H.** See Wang, Y.-G.
**Kuo, Lewis J. H.** See Ruka, Roswell J.
**Kuo, P. K.** See Wu, Z. L.
**Kuo, P.-C.; Yao, Y.-D.; Tzang, W.-I.**
Magnetic properties of $BaFe_{12-2x}Co_xSn_xO_{19}$ prepared by coprecipitation annealing.—73-04621
**Kuo, T. C.** See Arghavani, R.
**Kuo, T. C.; Wang, K. L.; Arghavani, R.; George, T.; Lin, T. L.**
Interface stoichiometry dependence of the Schottky barrier height of CoGa and GaAs.—73-07615
**Kupcak, Jaroslav; Malis, Ales**
Use of oxygen probes in the study of thermodynamic properties of the system $Na_2O$-$SiO_2$ and the effect of electron conductivity of solid electrolyte on emf of the concentration cell.—73-12727
**Kupchak, V. N.** See Freik, D. M.
**Kuper, C. G.** See Fisher, B.
**Kupfer, M.** See Fluck, D.
**Kupferberg, L.** See Pan, N.
**Kupkova, M.**
Porosity dependence of material elastic moduli.—73-12864
**Kupper, D.** See Rose, D.; Schmitz, T.
**Kupper, D.; Knobloch, O.**
Finish grinding of cement with POLYCOM twin roll press: I, Investigation of mixtures of clinker meal and sulfate-containing agents.—73-00091
**Kupperman, David S.** See Singh, Dileep
**Kuppusami, P.; Sundararaman, D.; Raghunathan, V. S.**
Comparative study of plasma nitriding behavior of a type 316 stainless steel and a microalloyed steel.—73-06757; 73-13810
**Kuppusami, P.; Terrance, A. L. E.; Sundararaman, D.**
Kinetics of growth of plasma nitrided layers on a titanium-modified stainless steel.—73-13856; Kinetics of growth of plasma-nitrided layers on a titanium-modified stainless steel.—73-06813
**Kuprienko, P. I.; Krupa, A. A.; Paleichuk, V. S.**
Physicochemical properties of ferrite powder modified by iron hydroxide.—73-05948
**Kupriyanov, M. F.** See Bokov, A. A.
**Kurachi, Tasuo** See Kojima, Shoichi
**Kurajica, S.** See Tkalcec, E.
**Kurakbaeva, R. Kh.** See Dorfman, Ya. A.
**Kurakbaeva, R. Kh.; Dorfman, Ya. A.; Polimbetova, G. S.; Shokorova, L. A.; Kuatbaev, K. K.; Kozlovskii, V. A.**
Mechanochemical oxidation of calcium phosphide traces by combined and free oxygen in electrothermophosphorus slag.—73-16863
**Kurakevich, L. A.; Stefanyuk, I. V.; Khodskii, L. G.**
Increasing the stability of enamel slips for composite coatings.—73-06807
**Kuramasu, K.** See Saito, Shinji
**Kuramochi, Hideto** See Kobayashi, Hidehiko
**Kuramochi, Hideto; Kobayashi, Hidehiko; Mori, Toshiyuki; Yamamura, Hiroshi; Mitamura, T.**
Preparation of tazheranite powders by solid-phase reaction and conductivity of sintered bodies.—73-13207; 73-02972
**Kuramochi, Hideto; Nagata, Hiroya; Yamamura, Hiroshi**
Conductivity of $ZrO_2$-$Y_2O_3$-$In_2O_3$ ceramics.—73-16424; Conductivity of $ZrO_2$-$Y_2O_3$-$In_2O_3$ ceramics.—73-16425
**Kuramoto, Nobuyuki** See Taniguchi, Hitofumi
**Kurashina, Yukinobu** See Kanazuka, Yasuo; Nanba, Yasutoshi
**Kurata, K.; Matsui, T.; Kono, Koji**
Oxidizing prevention of MgO-C bricks for converter.—73-00833
**Kurata, K.; Matsui, T.; Nakai, Masato; Fukunaga, Shinichi**
Prevention of continuous casting submerged nozzle clogging.—73-00841
**Kurata, K.; Matsui, T.; Sakaki, Sumio**
Castable lining technique to bottom of teeming ladle.—73-14578
**Kurayoshi, Kazuyoshi** See Morioka, Toshimichi
**Kurbanov, A. M.** See Vlasov, A. S.
**Kurbanov, K. R.** See Grigor'ev, N. N.
**Kurbatova, I. I.** See Putlyaev, I. E.
**Kurbatova, L. A.** See Popov, V. A.
**Kurbatskii, M. N.** See Dolgopolov, V. M.
**Kurbus, B.** See Gabrovsek, R.
**Kurdowski, Wieslaw** See Su, Mu-Zhen
**Kurdowski, Wieslaw; Deja, Jan**
Formation of $C_3S$ [tricalcium silicate] in the mixtures containing different silicate raw materials.—73-09968
**Kurdowski, Wieslaw; Wieja, Krystyna**
Microscopy of portland cement clinker.—73-10046
**Kurdowski, Wieslaw**
East European cement industry: looking for investment and modernization.—73-03453
**Kurdyumov, A. V.** See Britun, V. F.
**Kurdyumov, A. V.; Solozhenko, V. L.; Zelyavsky, W. B.; Petrusha, I. A.**
Structural aspect of wurtzite boron nitride phase stabilization.—73-12694
**Kurek, P.** See Krok, F.
**Kuriakose, A. K.** See Canaday, J. D.; Chehab, S. F.
**Kuriakose, A. K.; Wheat, T. A.; Llewellyn, R. J.**
Abrasive wear rates of certain ceramics and cermets relative to their microhardness and fracture toughness.—73-09540
**Kurian, J.** See Koshy, J.
**Kuribayashi, Hideyuki; Ota, Rikuo; Fukunaga, Jiro; Taguchi, T.**
Role of external additives on the surface crystallization of multicomponent nonalkali glasses.—73-00396; Crystallization behavior of multicomponent nonalkali silicate glasses.—73-03718
**Kuribayashi, Kiyoshi** See Monji, Hideto
**Kurihara, Kazuaki** See Kawarada, Motonobu
**Kurihara, Kenro; Ryou, Mitsuo; Fujii, Koichiro; Sasagawa, Harukuni; Koyago, Keita; Taniguchi, Tadayuki**
Blast furnace life prolongation through taphole relining at No. 1 BF in Kure Works [Japan].—73-14575
**Kurihara, Tooru** See Sugihara, Fumihito
**Kuriki, A.** See Okada, Kiyoshi
**Kurilkin, V. V.; Bogatov, Yu. E.; Molodkin, A. K.**
Interaction of the titanates of the rare-earth elements ($LnTiO_3$) with sulfur.—73-02297
**Kurilo, N. V.**
Service of iron ladles with a monolithic lining.—73-00859
**Kurilova, L. Ya.** See Uzberg, L. V.
**Kurishita, Hiroaki** See Ikuhara, Yuichi
**Kurisu, Yasushi** See Jackson, John E.
**Kurita, T.** See Kanbara, Kunihiko
**Kuriyagawa, T.; Syoji, K.; Zhou, L.**
Precision form truing and dressing for aspheric ceramic mirror grinding.—73-04942
**Kuriyama, Kazuyoshi**
Electronic properties of activated carbon fibers.—73-12796
**Kuriyama, Michiya** See Yamagata, Shigeru
**Kuriyama, Nobuya** See Tabuchi, Heiji
**Kurkin, M. I.** See Bogdanova, Kh. G.
**Kurkin, V. P.** See Khabibullaev, P. K.
**Kurkjian, Charles R.** See Gupta, Prabhat K.; Inniss, Daryl; Rondinella, Vincenzo V.
**Kurmaev, E. Z.** See Butorin, S. M.
**Kurmanguzhina, L. K.; Marov, I. N.; Evtikova, G. P.; Fakeev, A. A.**
Coprecipitation of copper(II) on hydrated zirconium oxide.—73-13813
**Kurnosov, V. S.** See Kachur, I. S.
**Kuroda, H.** See Tsukamoto, Yuji
**Kuroda, Kazuo** See Okamura, Hideko
**Kuroda, Kazuyuki** See Sugahara, Yoshiyuki
**Kuroda, Kazuyuki; Ogawa, Makoto; Yanagisawa, Tsuneo; Kato, Chuzo**
Layered inorganic-organic nanocomposites: application to photofunctional materials and conversion to inorganic microporous materials.—73-05895
**Kuroda, Kenichi** See Takami, Tetsuya
**Kuroda, Kotaro** See Eguchi, Tadataka
**Kuroda, Masao** See Kimura, Yukihiro
**Kuroi, Tokio** See Aoto, Sho
**Kuroi, Tokio; Matsumura, Kimio**
Problematic points of testing for chloride ion content in sea sand for concrete.—73-10095
**Kurokawa, Youichi** See Kobayashi, Yoshio
**Kuroki, H.** See Makita, T.
**Kuroki, Hidenori** See Tashima, Shunzo
**Kuroki, Kazuhiko** See Takahashi, Hisakazu
**Kuromitsu, Yoshirou; Wang, Sea-Fue; Yoshikawa, Shoko; Newnham, Robert E.**
Evolution of interfacial microstructure between barium titanate and binary glasses.—73-06218; Interaction between barium titanate and binary glasses.—73-05880
**Kuromitsu, Yoshirou; Yoshida, Hideaki; Ohno, Shinji; Masuda, Hirohisa; Takebe, Hiromichi; Morinaga, Kenji**
Oxidation of sintered aluminum nitride by oxygen and water vapor.—73-03228; Oxidation of sintered aluminum nitride by oxygen and water vapor.—73-13485
**Kurosawa, Masaji** See Take, Shigeo
**Kuroshima, Hiroshi** See Nakayama, Susumu
**Kuroshima, Sadanori** See Tanigaki, Katsumi
**Kurotaki, T.** See Nishi, Y.
**Kurpas, P.** See Reinhardt, F.
**Kursch, R.** See Lang, M.
**Kurskaya, I. N.** See Vikulin, V. V.
**Kurtz, Anthony D.** See Shor, Joseph S.
**Kurtz, Anthony D.; Shor, Joseph S.**
Pressure transducer utilizing diamond piezoresistive sensors and silicon carbide force collector.—73-11639
**Kurtz, S. R.** See Barbour, J. C.
**Kurumada, A.** See Sato, Sennosuka
**Kurushima, Toyokazu** See Harada, Ryusuke
**Kurushima, Toyokazu; Ishizaki, Kozo; Hamasaki, Toyohiro**
Effects of grain-boundary phases on the corrosion of ß-SiAlON in molten copper oxide.—73-00810; Evaluation of grain-boundary phases of ß-SiAlON by cryogenic specific heat measurements.—73-03143
**Kurushima, Toyokazu; Ishizaki, Kozo**
Bending strength changes of fiber-dispersed porous $ZrO_2$ ceramics during repeating thermal shock tests.—73-06332; Bending strength changes of fiber-dispersed porous $ZrO_2$ ceramics during repeating thermal shock tests.—73-17240; Influence of sintering behavior on mechanical properties and thermal shock resistance at temperature difference of 600 K of fiber-dispersed $ZrO_2$ ceramics.—73-17361; Reactions of copper and copper oxides with nitride ceramics (AlN, SiAlON, $Si_3N_4$) and oxide additives ($Al_2O_3$, $Y_2O_3$, $SiO_2$, MgO).—73-03230; Reactions of copper and copper oxides with nitride ceramics (AlN, SiAlON, $Si_3N_4$) and their oxide additive ($Al_2O_3$, $Y_2O_3$, $SiO_2$, MgO).—73-13232
**Kuryaeva, R. G.; Kirkinskii, V. A.**
Raman scattering spectra of and phase transitions in $AgAsS_2$ under pressure.—73-01296
**Kuryleva, E. F.** See Smirnova, E. I.
**Kurz, H.** See Albrecht, W.; Bakker, H. J.; Barth, R.; Dekorsy, T.; Stephens, D. J.; Zettler, J.-T.
**Kusak, R.** See Goworek, J.
**Kusaka, Tadaoki; Suzuki, Yoshihiko; Yotsuya, Tsutomu; Ogawa, Soichi; Miyake, Shuji; Aoyama, Takahiro**
Temperature sensor having a temperature correction in itself.—73-04818
**Kusaka, Teiji** See Kanamaru, Moriyoshi
**Kusakabe, Katsuki** See Okubo, T.; Tsugeki, Keiichi
**Kusano, E.**
Modeling of time-dependent process changes and hysteresis in $Ti-O_2$ reactive sputtering.—73-09214
**Kusano, H.** See Gonzalez Oliver, C. J. R.
**Kusano, Yoshihiro** See Endo, Kazuyo; Kobayashi, Naoya; Takada, Jun
**Kusano, Yoshihiro; Nanba, Tokuro; Takada, Jun; Ikeda, Yasunori; Takano, Mikio; Takeda, Yasuo**
Phases and their relation in $BiO_{1.5}$-$SrO(SrCO_3)$-CuO system at 720°C.—73-16270
**Kusano, Yoshihiro; Niinae, Toshinobu; Nanba, Tokuro; Takada, Jun; Ikeda, Yasunori; Takano, Mikio**
Chemical and mechanical stability of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O system: IV, Formation of the high-$T_c$ phase in amorphous powder prepared by mechanical grinding.—73-01505
**Kusevic, I.; Babic, E.; Prester, M.; Dou, S. X.; Liu, H. K.**
Differential resistance and critical current distribution in Ag-clad $(BiPb)_2Sr_2Ca_2Cu_3O_{10+y}$ tape.—73-15418
**Kushel, M. I.** See Oleinik, G. I.
**Kushida, Keiko; Udayakumar, K. R.; Krupanidhi, S. B.; Cross, L. Eric**
Origin of orientation in sol-gel-derived lead titanate films[—correction].—73-15274
**Kushida, Toshimoto** See Fried, Daniel
**Kushitani, Hideki; Nishizawa, Manabu; Nakao, Yasumasa**
Alkali-free glass.—73-00725
**Kushkov, V. D.; Mel'nikov, A. V.; Zaslavskii, A. M.**
Synthesis and structure of cerium titanates in films.—73-02491
**Kushkov, V. D.; Zverlin, A. V.; Zaslavskii, A. M.**
Synthesis and structure of the rare-earth titanates, $R_2TiO_5$, in films.—73-13457
**Kushnerenko, S. M.** See Trefilov, V. I.
**Kusko, Bruce H.** See Shackelford, James F.
**Kustas, F. M.; Misra, M. S.; Wei, R.; Wilbur, P. J.**
Diamondlike carbon [DLC] coatings on Ti-6Al-4V.—73-06769
**Kuster, Hans-Werner; Lacoste, Jean-Pierre; Vanaschen, Luc**
Continuous furnace for heating glass panes to bending and/or toughening temperature.—73-12248
**Kustova, L. V.** See Chausskaya, I. D.
**Kusuhara, Toshi** See Beppu, Henry
**Kusuki, T.** See Sakaue, H.
**Kusumoto, Junichi** See Aratani, Shinichi
**Kusumoto, Keiji; Sekiya, Tadashi; Murase, Yoshio**
Preparation of barium titanate particles by crystallization of glass.—73-02945
**Kusumoto, Keiji; Sekiya, Tadashi**
Preparation of lead titanate particles by crystallization of glass.—73-09264
**Kusunoki, M.** See Ikuhara, Yuichi
**Kusy, R. P.** See Saunders, C. R.
**Kusz, B.** See Gazda, M.; Murawski, L.
**Kuszyk, Jack A.; Biel, John P.**
Aluminum nitride refractory materials and methods for making the same.—73-15976
**Kutekhov, N. V.** See Ivanov-Omskii, V. I.
**Kutney, Steve G.** See Byrne, Christine J.
**Kutsenko, A. B.** See Il'inskii, A. V.
**Kutsev, S. V.** See Galakhov, A. V.
**Kutsiya, A. A.** See Artemova, K. K.
**Kutt, W.** See Dekorsy, T.
**Kutty, T. R. N.** See Ravi, V.
**Kutty, T. R. N.; Ravi, V.**
Varistors based on *n*-$BaTiO_3$ ceramics.—73-07857
**Kutukov, V. I.** See Sirota, N. N.
**Kutvitskii, V. A.** See Kirik, S. D.
**Kutvitskii, V. A.; Chernyshova, L. M.; Bobkova, M. V.**
X-ray fluorescent analysis of oxide compounds with the langasite structure.—73-08460
**Kutzendorfer, Jaroslav** See Sedmidubsky, David
**Kuvshinnikov, S. V.** See Kotosonov, A. S.
**Kuvshinova, K. A.; Yakubovskaya, N. Yu.; Grigoryan, E. S.**
EPR and magnetostatic studies of low-temperature annealing of ceramics.—73-07252; Process of low-temperature annealing of ceramics [studied] by the method of electron paramagnetic resonance and magnetostatics.—73-05994
**Kuwabara, H.** See Tatsuoka, H.
**Kuwabara, K.; Ohno, M.; Sugiyama, K.**
All-solid-state electrochromic device: I, Electrophoretic deposition film of proton conductive solid electrolyte.—73-00932; All-solid-state electrochromic device: II, Characterization of transition metal oxide thin films for counterelectrodes.—73-00933
**Kuwabara, Makoto** See Goda, Koji; Ohshima, Kenji
**Kuwabara, Makoto; Ikeda, Kazunari**
Conductive properties in β˝-alumina ceramics by complex impedance analysis.—73-00941
**Kuwae, Ryosho** See Kanai, Hideyuki
**Kuwajima, Hidegi; Sumiya, Keiji; Shimoda, Shuichiro; Ashizawa, Toranosuke; Ishihara, Minoru; Yamana, Shozo**
Oxide superconductor Bi-Sr-Ca-Mg-Ba-Cu-O.—73-01727
**Kuwamura, Masahiro** See Nakamura, Makoto
**Kuwashima, Takayuki** See Fujishiro, Hiroyuki
**Kuwata, Seiichi; Kinase, Wataru**
Role of 2-D electron-hole lattice system in modulated structure of high-$T_c$ superconductor $Bi_{2-x}Pb_xSr_2CaCu_2O_{8+\delta}$.—73-15614
**Kuwata, Takashi** See Morita, Noboru
**Kuwayama, Hiroshi**
Roller hearth continuous furnace.—73-05140
**Kuyan, S. V.** See Zlenko, V. Ya.
**Kuypers, S.** See Hendrix, W.

**Kuypers, S.; Van Landuyt, J.**
Electron microscopy study of incommensurate intergrowth structures "$MTS_3$."—73-06214
**Kuz'ma, M. S.** See Virt, I. S.
**Kuz'ma, Yu. B.** See Babizhetskii, V. S.; Gubich, I. B.; Il'nitskaya, O. N.
**Kuz'ma, Yu. B.; Zavalii, P. Yu.; Gubich, I. B.**
New type of $Ho_2Ni_{10}B_5$ boride structure.—73-02355
**Kuz'micheva, G. M.; Tarasova, T. N.**
Three methods of describing the structure of superconducting and nonsuperconducting phases with perovskite-like structure.—73-02526
**Kuz'min, A. Yu.** See Stefanovskii, S. V.
**Kuz'min, Michael D.; Tishin, Alexander M.**
$DyAlO_3$: a more promising refrigerant than $Dy_3Al_5O_{12}$.—73-01455
**Kuze, Hiroaki; Tachikawa, Maki; Onae, Atsushi**
Deceleration of magnetic dipoles interacting with $YBa_2Cu_3O_x$ superconductors.—73-01514
**Kuzel, H.-J.** See Poellmann, H.
**Kuzel, H.-J.; Poellmann, H.**
Hydration of $C_3A$ in the presence of $Ca(OH)_2$, $CaSO_4{\cdot}2H_2O$, and $CaCO_3$.—73-00105
**Kuzenkova, M. A.; Shevchenko, O. A.; Fesenko, I. P.**
Structural characteristics of $(AlN+Y_2O_3)$ ceramics.—73-13450
**Kuzik, L. A.** See Alieva, E. V.
**Kuzjukevics, Anatolijs; Ishizaki, Kozo; Grabis, Janis; Millers, Talis; Kondo, Yoshihito**
Hot-pressing of TiN-alumina composites.—73-16822
**Kuzmin, A.** See Balerna, A.
**Kuzmin, A.; Purans, J.; Sazonov, A.; Stefanovskii, S. V.**
EXAFS of Cs $L_3$-edge in sodium borosilicate and aluminum phosphate glasses.—73-13984
**Kuznetov, P.** See Permogorov, S.
**Kuznetsov, A. A.** See Berezkina, L. G.
**Kuznetsov, G. I.** See Borisovskii, E. S.; Noskov, E. S.; Vezikova, R. M.
**Kuznetsov, G. I.; Kortel, A. A.; Borisov, V. G.; Akselrod, L. M.; Pivinskii, Y. Y.**
New kinds of refractories for ferrous metallurgy.—73-10746
**Kuznetsov, G. I.; Ladariya, O. V.; Borisovskii, E. S.**
Production of magnesia from dolomitized waste products.—73-15912
**Kuznetsov, M. V.; Zhuravlev, M. V.; Shalayeva, E. V.; Gubanov, V. A.**
Influence of the deposition parameters on the composition, structure, and X-ray photoelectron spectroscopy spectra of Ti-N films.—73-13103
**Kuznetsov, V. A.** See Lipson, A. G.; Nabakhtiani, G. N.
**Kuznetsov, V. D.** See Vardapetyan, R. P.
**Kuznetsov, V. L.** See Pesin, L. A.
**Kuznetsov, V. S.; Bochkareva, L. V.**
Mechanism for the flow of the current in thin-film single-crystal *p-n* junctions based on PbS.—73-11312
**Kuznetsov, V. V.** See Davarashvili, O. I.
**Kuznetsov, V. V.; Stus, N. M.; Talalakin, G. N.; Rubtsov, E. E.**
Interface interaction and heteroepitaxy in InPAsSb system.—73-16185
**Kuznetsov, V. Ya.; Gusev, A. I.; Chuklanova, E. B.**
Crystal structure of $(NH_4)_3Zr_2F_9SO_4{\cdot}2H_2O$ and its potassium analog.—73-02186
**Kuznetsov, V. Ya.; Rogachev, D. L.; Gusev, A. I.**
Crystal structure of $K_3ZrOH(SO_4)_3{\cdot}2H_2O$.—73-02197
**Kuznetsova, G. N.; Shakina, T. V.**
Influence of structural-chemical features of silicate glasses on the effect of gaseous leaching.—73-14009
**Kuznetsova, G. V.** See Simanova, S. A.
**Kuznetsova, N. M.** See Popov, V. A.
**Kuznetsova, T. A.** See Shitova, L. A.; Sorokin, I. N.
**Kuznetsova, Tamara V.** See Ahluwalia, S. C.; Bocharov, N. A.; Johansen, Vagn
**Kuznetsova, Tamara V.; Krivoborodov, Yu. R.; Samchenko, S. V.**
Interaction of structure and properties of sulfoferritic and sulfoaluminoferritic clinker melts.—73-13744
**Kuznetsova, Tamara V.; Mityushin, V. V.; Nikonova, Nadia S.**
Blended cements containing granulated slags from ferrochrome production.—73-13683
**Kuznetsova, Tamara V.; Osokin, A. P.; Akimov, V. G.**
Structure and properties of low-CaO contained clinker.—73-10168
**Kuznia, J. N.** See Krishnankutty, S.; Van Hove, J. M.
**Kuznia, J. N.; Khan, M. A.; Olson, D. T.**
Influence of buffer layers on the deposition of high-quality single-crystal GaN over sapphire substrates.—73-02866
**Kuzuh, S. G.** See Danilov, E. B.
**Kuzuma, M.** See Wal, A.
**Kvam, E. P.** See Yen, H.
**Kvaratskheli, Yu. K.; Korneinko, I. V.**
X-ray fluorescence analysis of piezoceramic materials based on PZT.—73-15302
**Kvardakov, A. M.; Mikhailova, A. Ya.; Nipan, G. D.**
Processes of magnetron dusting of films of yttrium-barium ceramics of composition 123, 247, and 124.—73-11875
**Kvardakov, V. V.; Somenkov, V. A.**
Neutron diffraction study of excitation and damping of magnetoelastic vibrations in $FeBO_3$ crystal.—73-01476
**Kvashnin, G. M.** See Sorokina, T. P.
**Kvasman, N. M.** See Kamenetskii, Yu. L.
**Kveder, V. V.; Kislov, A. N.; Shul'gin, B. V.**
[Low frequency and] microwave absorption by high-$T_c$ ceramics in magnetic field.—73-01589
**Kvon, Z. D.** See Budantsev, M. V.
**Kvon, Z. D.** See Gusev, G. M.
**Kvyatkovskaya, K. K.** See Grum-Grzhimailo, O. S.
**Kvyatkovskii, A. V.** See Sokolov, A. N.
**Kvyatkovskii, O. V.** See Sokolov, A. N.
**Kvyatkovskii, S. F.; Konevskii, V. S.; Krivonosov, E. V.;**
**Litvinov, L. A.; Podus, L. P.; Tarasenko, L. M.**
Unit cell parameter of annealed strontium titanate single crystals.—73-02533
**Kwan, P.; Vittoria, Carmine**
Propagation characteristics of a ferrite image guide.—73-04640
**Kwan, S.-I.** See Lee, S.-M.
**Kwan, Stephen** See Grutzeck, Michael W.; LaRosa, Judith L.
**Kwan, Stephen; Grutzeck, Michael W.**
Hydration of alite at different pH's.—73-09986
**Kway, W. L.** See DeLoach, Laura D.; Payne, Stephen A.
**Kwei, G. H.** See Ganguli, A. K.
**Kwei, G. H.; Lawson, A. C.; Billings, S. J. L.; Cheong, S. W.**
Structures of the ferroelectric phases of barium titanate.—73-01435
**Kweon, C.-O.** See Cho, H.-S.
**Kwo, J.** See Chang, A. M.; Chen, C. T.; Takagi, H.
**Kwo, J.**
Growth and properties of high-$T_c$ films in $Y_1Ba_2Cu_3O_{7-x}$ perovskite by molecular beam epitaxy.—73-01561
**Kwok, Hoi S.** See Zheng, J. P.
**Kwok, Hoi S.**
Formation of atomic beams and dynamics of in situ superconducting film growth by pulsed laser deposition.—73-11769
**Kwok, R. W. M.** See Huang, L. J.
**Kwok, R. W. M.; Lau, W. M.; Landheer, D.; Ingrey, S.**
Electrical and chemical stability of Al/SiN$_x$/InP metal-insulator-semiconductor diodes with gas-phase polysulfide exposure on InP.—73-07480; Surface charge spectroscopy—a novel surface science technique for measuring surface state distributions on semiconductors.—73-12200
**Kwok, S. H.; Grahn, H. T.; Ploog, K.; Merlin, R.**
Giant electropleochroism in GaAs-(Al,Ga)As heterostructures: the quantum-well Pockels' effect.—73-07547
**Kwok, W. K.; Fleshler, S.; Welp, U.; Vinokur, V. M.; Downey, J.; Crabtree, G. W.**
Vortex lattice melting in untwinned and twinned single crystals of $YBa_2Cu_3O_{7-\delta}$.—73-08275
**Kwok, W.** See Landheer, D.
**Kwon, C.** See Li, Qi; Venkatesan, T.; Xi, X.-X.
**Kwon, Kee-Won; Kang, Chang-Seok; Park, Tai-Su; Sun, Yong-Bin; Sandler, N. P.; Tribula, Dana**
Low-temperature tantalum pentoxide thin films.—73-04130
**Kwon, Kyoung-Il** See Cho, S.-B.; Choi, Kyung-Ku
**Kwon, O.** See Lee, W.-C.
**Kwon, Soon-Joo** See Shin, Hyung-Sup
**Kwon, Y.-S.; Kim, K.-T.**
Analysis for creep densification and grain growth of ceramic powder compacts.—73-09543
**Kwon, Young-Jin; Kamada, Eiji; Hama, Yukio**
Effect of various factors on the compressive strength and frost resistance of mortar using blast-furnace slag.—73-09925
**Kwon, Young-Se** See Cho, Gyu-Seog
**Kwong, D. L.** See Lo, G. Q.; Richardson, J. T.
**Kwor, R.** See Huffman, Maria; Kuo, C. T.
**Kyarner, T.; Dolgov, S. A.; Fel'dbakh, E.; Savikhin, F. A.; Meriloo, I.**
Effect of [irradiation] by subthreshold energy electrons on microwave absorption and luminescence of copper-free $Ba_{1-x}K_xBiO_3$ superconductors.—73-15424
**Kyazym-Zade, A. G.; Akhmedov, A. A.; Khalilov, S. Kh.; Samedov, E. S.; Atakishev, S. M.**
Percolation theory and concentrated phase transition of ε-γ type in $GaS_xSe_{1-x}$ solid solutions.—73-16244
**Kyono, C. S.** See Giodana, A.
**Kyono, C. S.; Tadayon, Bijan; Twigg, M. E.; Giordana, A.; Simons, David S.; Fatemi, M.**
Diode structures from amorphous low-temperature [LT] GaAs.—73-14835
**Kyotani, Takashi; Sonube, Naohiro; Tomita, Akira**
Carbonization of polyfurfuryl alcohol prepared between the lamellae of saponite.—73-12933
**Kyoto, Michihisa** See Ishikawa, Shinji
**Kyoto, Michihisa; Ohoga, Y.; Ishikawa, Shinji; Ishiguro, Yoichi**
Characterization of fluorine-doped silica glasses.—73-06887
**Kyu, Seo-Moon; Kim, Yun-Soo**
Diamond film synthesis by MWCVD and its application to cutting tools.—73-16708
**Kyuma, Kazuo**
Neural computers and networks based on nonlinear optical devices.—73-06583
**Kyung-Soo, S.; Senegas, J.; Reau, J. M.; Hagenmuller, P.**
Diffusion and clustering in the $Cd_{1-x}Bi_xF_{2+x}$ solid solution: a fluorine NMR study.—73-03090
**L'Haridon, H.** See Barriere, A. S.; D'Avitaya, F. Arnaud; Favennec, P. N.; Kechouane, M.
**L'Heritier, P.** See Vincent, H.
**L'vin, V. E.** See Syrbu, N. N.
**L'vova, T. V.** See Berkovits, V. L.; Bessolov, V. N.
**La Caer, G.** See Matteazzi, P.
**La Course, W. C.** See Pye, L. D.
**La Torre, Guy; Hench, Larry L.**
Bioactive glass interfacial reactions [analyzed] using Fourier transform infrared reflection spectroscopy.—73-06885
**La Via, F.; Reader, A. H.; Duchateau, J. P. W. B.; Naburg, E. P.; Oostra, D. J.; Kinneging, A. J.**
Epitaxial $CoSi_2$ formation on Si(001) from an amorphous $Co_{75}W_{25}$ sputtered layer.—73-05789
**La Violette, Randall A.** See Stump, David M.
**Laakso, Tapio; Vehmas, Jukka H.; Lehto, Esko O.**
Method for bending and tempering a glass sheet.—73-00740
**Laaziz, Y.** See Bennouna, A.
**Labas, Vladimir; Minarik, Stanislav; Ozvoldova, Miroslava**
Properties investigation of ceramics based on $ZrO_2$.—73-06503
**Labbe, P.; Ledesert, M.; Caignaert, V.; Raveau, B.**
Structural peculiarities of two layered cuprates, $NdSrCuO_{3.5}$ and $Nd_{1.8}Sr_{1.2}Cu_2O_{6.5}$.—73-02450
**Labdi, S.; Megtert, S.; Raffy, H.**
Superconducting fluctuation study above $T_c$ of Bi(Pb)-Sr-Ca-Cu-O thin films made by sputtering.—73-08218
**Labeau, M.** See Tiburcio-Silver, A.
**Labeau, M.; Rey, P.; Deschanvres, J. L.; Joubert, J. C.; Delabouglise, G.**
Thin films of high-resistivity zinc oxide produced by a modified CVD method.—73-07367
**Labeyrie, M.** See Vincent, H.
**Laborde, O.; Souletie, B.; Martinez, J. C.; Borges, H.; Beille, J.; Capponi, J. J.**
Pressure effect, anisotropic transport properties, and irreversibility line of $Pb_2Sr_2Y_{1-x}Ca_xCu_3O_8$ crystals.—73-04794
**Laborde, Pascale** See Grateau, Luc
**Labossier, W. H.** See Hoke, W. E.
**Labrie, D.; Wang, X.; Dubowski, J. J.**
Excited quantum states in $CdTe$-$Cd_{1-x}Mn_xTe$ multiple quantum wells and superlattices grown by pulsed laser evaporation and epitaxy.—73-07516
**Labrincha, J. A.; Frade, Jorge R.; Marques, F. M.**
$La_2Zr_2O_7$ formed at ceramic electrode/YSZ contacts.—73-07332
**Labrozzi, Enzo**
Casting from the beginning up to present-day technology.—73-08324
**Labrugere, Christine** See Prouhet, Stephane
**Lacefield, William R., Jr.** See Taylor, Timothy E.
**Lacelle, C.** See Roth, A. P.; Sudersena Rao, T.
**Lach, J.** See Pearsall, T. P.
**Lachman, Irwin M.** See Addiego, William P.
**Lachman, O.** See Dziembaj, R.
**Lachowski, E. E.** See Atkins, M.; Zhang, Wen-Bang
**Lackey, Homer B.**
Factors affecting use of calcium chloride in concrete.—73-06654
**Lackey, W. J.; Hanigofsky, J. A.; Beckloff, B. N.**
Economical SiC fiber tow via CVD.—73-16719
**Lacorre, P.** See Garcia-Munoz, J. L.
**Lacorre, P.; Torrance, J. B.; Pannetier, J.; Nazzal, A. I.; Wang, P. W.; Huang, T. C.**
Synthesis, crystal structure, and properties of metallic $PrNiO_3$: comparison with metallic $NdNiO_3$ and semiconducting $SmNiO_3$.—73-02700
**Lacorro, P.** See Torrance, J. B.
**Lacoste, Jean-Pierre** See Andersson, Kjell; Kuster, Hans-Werner
**Lacoste, Marc; Laxague, Michel; Thebault, Jacques**
Process for antioxidation protection of a material of which at least a surface is made of a ceramic formed from a silicon compound, and a material obtained by said process.—73-16010
**LaCount, Dale F.** See Gleixner, Richard A.
**Lacovara, P.** See Wall, K. F.
**Laczka, M.** See Dziembaj, R.
**Laczka, M.; Ciecinska, M.; Bialota, J.**
Synthesis, structure, and properties of sol-gel glasses of the systems: $SiO_2$-$P_2O_5$, $SiO_2$-$P_2O_5$-$Al_2O_3$, $SiO_2$-$P_2O_5$-$Na_2O$.—73-14514
**Laczka, M.; Stoch, L.; Gorecki, J.**
Bismuth- and lead-containing silicate glasses as materials for microchannel multipliers.—73-14137
**Lada, W.** See Deptula, A.
**Ladariya, O. V.** See Kuznetsov, G. I.
**Ladbrooke, P. H.** See Woodham, R. G.
**Ladle Ristow, M.** See Chen, J. C.
**Ladnorg, Uwe**
Operational raw material control during clay mining.—73-12291
**Laenen, R.** See Wolfrum, K.
**Laenger, Fritz**
Designing an extruder with allowance for the properties of ceramic extrusion compounds: III.—73-12021; Designing an extruder with allowance for the properties of ceramic extrusion compounds: IVb.—73-12125; Designing an extruder with allowance for the properties of ceramic extrusion compounds: Va.—73-12126; Laboratory measurement extruder—experimental equipment for the design of ceramic extruders.—73-12156
**Lafait, J.** See Bichri, A.
**Lafayette, William M.** See Brosch, Eric J.
**LaFemina, John P.** See Bowler, Ann M.
**Laforce, R.** See Johnson, F. G.
**Lagadas, M.** See Calamiotou, M.
**Lagally, M. G.** See Ebert, P.; Heller, E. J.
**Lage, H.** See Cingolani, R.
**Lagergren, E.** See Malghan, Subhas G.
**Lagerlof, K. Peter D.** See Buzniak, Jan J.; Unal, Ozer
**Lagerlof, K. Peter D.; Heuer, Arthur H.; Castaing, Jacques; Riviere, J. P.; Mitchell, Terence E.**
Slip and twinning in sapphire ($\alpha$-$Al_2O_3$).—73-05639
**Lagier, J. P.** See Fievet, F.
**Laguillaume, C. B. A.** See Boujdaria, K.; Maaref, M.
**Lagunova, T. S.** See Baranov, A. N.
**Lagutin, A. S.** See Druzhinin, V. V.
**Lagutin, A. S.**
Dynamic magnetic phase diagrams of a magnetic material with strong anisotropy.—73-07932
**Lahajnar, G.** See Kosmac, T.
**Laheurte, J. P.** See Eggenkamp, M. E. W.
**Lahiri, S. K.** See Das, S.; Ray, S. K.
**Lahri, Rajeeva** See Gadepally, Kamesh
**Lai, Chun-Hung** See Lu, Yuh-Yih
**Lai, Chun-Hung; Lu, Yuh-Yih; Tseng, Tseung-Yuen**
Calculations and modeling of grain-boundary acceptor states for $(Ba,Pb)TiO_3$ positive temperature coefficient ceramics.—73-07397

**Lai, Chun-Hung; Tseng, Tseung-Yuen**
Resistivity and permittivity for (Ba,Pb)$TiO_3$ PTCR ceramics.—73-15285
**Lai, K. R.; Tien, Tseng-Ying**
Optimization of silicon nitride ceramics.—73-06497
**Lai, Mi-Cheng; Lin, Ming-Cherng; Tuan, W.-H.**
Effect of specimen number on the determination of the characteristic strength and Weibull modulus of ceramics—an experimental study.—73-15792
**Lai, P.-T.** See Fleischer, S.
**Lai, S. C.** See Goodhue, W. D.
**Lai, Yeong-Lin** See Chang, Edward Y.
**Lai, Zuo-Mou** See Hu, Zhi-Xin
**Lala, Joseph R., Jr.** See Clark, David E.; Devlin, David J.
**Laidani, N.; Bonelli, M.; Miotello, A.; Guzman, L.; Calliari, L.; Elena, M.**
Chemical and compositional changes induced by $N^+$ implantation in amorphous SiC films.—73-08575
**Laidani, N.; Capelletti, R.; Elena, M.; Guzman, L.; Mariotto, G.; Miotello, A.**
Spectroscopic characterization of thermally treated carbon-rich $Si_{1-x}C_x$ films.—73-02439
**Laiho, R.** See Rogacki, K.
**Laine, Norman R.; Rudesill, John A.; Cheng, Wu-Cheng**
Silica bayerite/eta alumina.—73-12402
**Laine, Richard M.** See Kansal, Pallavi; Zhang, Zhi-Fan
**Laine, Richard M.; Bickmore, Clint R.; Waldner, Kurt F.; Mueller, Brian L.; Estry, Hal W.**
Mg-Si-Al-O-N glasses prepared by nitriding cordierite powders derived from polymer precursors.—73-03857
**Laine, T.** See Makinen, J.
**Laird, R.** See Belkind, A.
**Laisaar, A.** See Niilisk, A.
**Laishley, E. J.; Bryant, R. D.; Wassink, B.**
Microbial mediated attack on portland cement concrete by elemental sulfur.—73-10044
**Lakdawala, Vishnu K.** See Thomas, Lucy M.
**Lake, M. L.** See Guth, J. R.; Ting, Jyh-Ming
**Lakomaa, E.-L.** See Haukka, S.
**Lakshman, S. V. J.** See Rao, A. Srinivasa
**Lakshmi, R. P. V.** See Rani, V. K. M.
**Lakshmi, R. P. V.; Venugopal, R.; Reddy, D. R.; Reddy, B. K.**
Preparation and characterization of Mn-doped sprayed *p*-$CuInS_2$ films.—73-07742
**Lakshmikantha, Medamaranahally; Sekhar, Jainagesh A.**
Analytical modeling of the propagation of a thermal reaction front in condensed systems.—73-05692; Analytical modeling of the propagation of thermal reaction front in condensed systems—correction.—73-12918
**Lakshminarasimham, P. S.** See Gopalakrishnan, P. S.
**Lakshmiraghavan, S.** See Kasiviswanathan, S.
**Lal, K. B.** See Rao, S. V. S.
**Lal, Manohar; Goyal, Navdeep; Vohra, Anil**
Photoelectric properties of $CuInSe_2$.—73-05613
**Lal, R.** See Choksi, A. J.; Singh, A. P.; Topkar, Anita
**Lal, R.; Joshi, S. K.**
Can Anderson-Luttinger liquid theory be considered relevant to cuprate superconductors.—73-01498
**Lalande, F.; Carchano, H.; Pourcin, J.**
Characterization of S incorporation in $GaAs_{1-x}S_x$ by ir spectroscopy.—73-06197
**Lalart, Denis** See Delvar, Gerard; Iatrides, Jean-Yves
**Lalauze, Rene; Pijolat, Christophe; Patissier, Bruno**
Contribution of semiconductive materials to gas detection.—73-05031
**Laleko, V. A.; Ershova, N. Yu.; Dragan, I. I.**
Mechanism of electrical breakdown in anodic tantalum oxide.—73-16539
**Lalji, Bashir** See Sheriff, Ali
**Lallemand, Michel** See Le Dez, Vital
**Lalykin, N. V.** See Shabanov, A. G.; Shitova, L. A.; Shutov, A. I.
**Lam, C.-C.** See Cui, C.-G.
**Lam, D. J.** See Chang, H. L. M.; Ellis, Donald E.; Fang, Yue; Gao, Y.
**Lam, David C. C.; Lange, Fred F.; Evans, Anthony G.**
Mechanical properties of partially dense alumina produced from powder compacts.—73-17388
**Lam, David C. C.; Lange, Fred F.**
Microstructural observations on constrained densification of alumina powder containing a periodic array of sapphire fibers.—73-13421
**Lam, David C. C.; Nakagawa, Mitsuo**
Packing of particles: I, Packing behavior of monosized spheres in cylinders.—73-16892; Packing of particles: I, Packing behavior of monosized spheres in cylinders.—73-16893; Packing of particles: II, Effect of extra pore volume on packing density of mixtures of monosized spheres.—73-16894; Packing of particles: III, Effect of particle size distribution shape on composite packing density of bimodal mixtures.—73-16895
**Lam, Khin-Yong** See Zhang, Jin-Min
**Lam, Khin-Yong; Zhang, Jin-Min**
Transformation twinning in monoclinic zirconia particles.—73-16385
**Lam, Yee-Loy; Loehr, John P.; Singh, J.**
Comparison of steady-state and transient characteristics of lattice-matched and strained InGaAs-AlGaAs (on GaAs) and InGaAs-AlInAs (on InP) quantum-well lasers.—73-01107; Effect of strain on the high-speed modulation of GaAs- and InP-based quantum well lasers.—73-14857
**Lamarche, A.-M.; Willsher, A.; Chen, L.; Lamarche, G.; Woolley, J. C.**
Crystal structures of $I_2$-Mn-IV-$VI_4$ [I=Cu, Ag; IV=Si, Ge, Sn; and VI=S, Se, Te] compounds.—73-02221
**Lamarche, G.** See Lamarche, A.-M.
**Lamas, A. G.** See Nunes, F.
**LaMastro, Robert A.; Kauser, Dennis E.**
Low-expansion USP type I amber glass.—73-03939
**Lamb, Robert N.** See Mar, Leong G.
**Lambard, J.; Poignant, H.**
$U^{3+}$-doped bulk and fiber fluoride glasses.—73-06985
**Lambert, J. D.** See Hill, W. F.
**Lambert, M.** See Ripoche, G.
**Lambert, Paul; Gelinas, Claude; Champagne, Blaise; Cave, Julian**
Alloy for HTSC composite conductors made of Au-Ag-Pd.—73-04829
**Lambert, Paul; Marple, B. R.; Arsenault, B.**
Laser surface modification of $Al_2O_3$-based ceramics.—73-09190
**Lambin, P.; Senet, P.; Castiaux, A.; Philippe, L.**
Surface dielectric response function of optical phonons in an ionic-crystal film.—73-07361
**Lambrecht, W. R. L.; Amador, C.; Segall, B.**
"Wrong" bond interactions at inversion domain boundaries in GaAs.—73-07863
**Lambropoulos, John C.; Hwang, S.-S.**
Thermal properties of thin films.—73-05661
**Lambropoulos, John C.**
Toughening and crack tip shielding in brittle materials by residually stressed thin films.—73-03369
**Lameko, E. V.** See Boiko, R. M.
**Lamerant, J. M.** See Papirer, Eugene
**Lammer, G.** See Loschner, H.
**Lamon, Jacques** See Aubard, Xavier
**Lamon, Jacques**
Probabilistic failure predictions in ceramics and ceramic matrix fiber-reinforced composites.—73-17416; Thermal shock behavior of ceramics: probabilistic predictions of failure and damage.—73-05665
**Lamothe, Paul J.** See Jackson, Larry L.
**Lamouroux, Franck; Camus, Gerald; Thebault, Jacques**
Kinetics and mechanisms of oxidation of 2D woven C/SiC composites: I, Experiemental approach.—73-17225
**Lamouroux, Franck; Naslain, R.; Jouin, Jean-Marie**
Kinetics and mechanisms of oxidation of 2D woven C/SiC composites: II, Theoretical approach.—73-17226
**Lampe, T.; Eisenberg, S.; Laudien, G.**
Compound layer formation during plasma nitriding and plasma nitrocarburizing.—73-16682
**Lampner, D. B.** See DeRose, J. A.
**Lan, Guo-Xiang** See Lin, Yuan-Kun
**Lan, Luo; Montenero, A.; Gnappi, G.; Dradi, E.**
$^{29}Si$ NMR study of the hydrolysis and condensation of EPOXS [an epoxysilane] sol-gel solution.—73-14082
**Lan, Ren-Jie** See Zhang, Ming-Qian
**Lan, X.-H.** See Deng, Min
**Lana, S. L.** See Seddon, A. B.
**Lanagan, M. T.** See Goretta, K. C.; Wu, W.
**Lanckbeen, Alain** See Diko, Pave
**Land, Cecil E.** See Butler, Michael A.
**Landa, G.; Caries, R.; Renucci, J. B.**
Dynamical properties of $Ga_{1-x}In_xAs$ solid solutions: influence of local distortion effects.—73-04286
**Landa, K. A.** See Landa, L. M.
**Landa, K. A.; Landa, L. M.**
Post-ion-exchange reactions in glass.—73-14074
**Landa, L. M.** See Landa, K. A.
**Landa, L. M.; Landa, K. A.**
Crystalloides and polymorphism in glasses.—73-13956
**Landa-Canovas, Angel R.** See Hansen, Staffan
**Lander, G. H.** See Hayden, S. M.
**Landesman, J. P.** See Foulon, Y.; Larive, M.
**Landesman, J. P.; Garcia, J. C.; Massies, J.; Jezequel, G.; Maurel, P.; Hirtz, J. P.**
GaInAs/InP and GaInP/GaAs(100) interfaces: an ultraviolet photoelectron spectroscopy study.—73-07543
**Landgren, G.** See Van Berlo, W. H.
**Landheer, D.** See Halliday, D. P.; Kwok, R. W. M.; McGreer, K. A.; Ye, F.
**Landheer, D.; Bardwell, J. A.; Sproule, I.; Scott Thomas, J.; Kwok, W.; Lau, W. M.**
Reduced interface densities for remote microwave plasma silicon nitride.—73-09299
**Landheer, D.; Skinner, N. G.; Jackman, T. E.; Thompson, D. A.; Simmons, J. G.; Stevanovic, D. V.**
Growth and characterization of silicon nitride films produced by remote microwave plasma chemical vapor deposition.—73-02843
**Landi, E.** See Graziani, T.
**Landingham, Richard L.**
Dense high-temperature ceramic oxide superconductors.—73-04834
**Landini, Barbara E.; Agahi, Farid; Lau, Kei-May**
Optimization of undoped GaAs by low-pressure OMVPE using trimethylgallium.—73-11365
**Landis, Geoffrey A.**
New approaches for a solar-pumped GaAs laser.—73-04416
**Landis, W. J.** See Siperko, L. M.
**Landon, Thomas E.** See Coleman, Nancy A.
**Landreau, J.** See Blez, Monique
**Landreth, B. D.** See Leventouri, Theodora
**Landry, Christopher C.; Cheatham, Linda K.; MacInnes, Andrew N.**
Preparation of $(Al_2O_3)_x(SiO_2)_y$ thin films using $[Al(OSiEt_3)_3]_2$ as a single-source precursor.—73-09252
**Landstrass, M. I.** See Pan, L. S.
**Landwehr, G.** See Pozina, G. R.; Yakovlev, D. R.
**Lane, D. W.; Coath, J. A.; Rogers, K. D.; Hunnikin, B. J.; Beldon, H. S.**
Optical properties and structure of thermally evaporated tin oxide films.—73-12848
**Lane, E.** See Lothian, J. R.; Pearton, S. J.
**Lang, Christoph** See Gauss, S.
**Lang, Christoph; Becker, Winfried; Budesheim, Carsten**
Process for producing a high-temperature superconductor containing bismuth, strontium, calcium, and copper.—73-01733
**Lang, E.**
Retention of radioactive and toxic liquids [in a cementitious matrix].—73-03531
**Lang, H. P.** See Haefke, H.
**Lang, M.; Kursch, R.; Grauel, A.; Geibel, C.; Steglich, F.; Rietschel, H.**
Lattice instabilities in cuprate superconductors: a possible limiting mechanism for $T_c$.—73-08122
**Lang, P. T.** See Nebosis, R. S.
**Lang, W.** See Kozlowski, F.
**Lang, W.; Muck, G.; Rose, E.; Bausells, J.; Kuhl, K.; Moldovan, N.**
Stress compensation techniques in thin layers applied to silicon micromachining.—73-06070
**Langan, Brian W.** See Grifford, Peter M.; Yogendran, V.
**Langdon, Terence G.** See Chokshi, Atul H.; Gu, Wei-Zhong; Ma, Yan
**Langdon, Terence G.**
Role of grain boundaries in high-temperature deformation.—73-09666; Superplastic-like flow in ceramics: recent developments and potential applications.—73-08525
**Lange, Bernd** See Bartel, Ulrich
**Lange, David A.** See Shah, Surendra P.
**Lange, David A.; Shah, Surendra P.**
Fracture behavior of microfiber-reinforced mortars.—73-03472
**Lange, David A.; Sun, Guo-Kuang; Bloom, R.**
Fracture of microfiber-reinforced DSP [densified small particle] materials.—73-09972
**Lange, Fred F.** See Balmer, Mari Lou; Chang, Jeanne C.; Folsom, Craig A.; Golden, Steve J.; Heintz, Jean-Marc; Kramer, Thomas M.; Lam, David C. C.; Luther, Erik P.; Marshall, David B.; Tu, W. C.; Velamakanni, Bhaskar V.
**Lange, Horst** See Brink, Reinhold
**Lange, J.** See Forster, A.
**Lange, M. D.** See Sporken, R.
**Lange, S. R.** See Korwin, D. M.
**Langenohl, Mark C.**
Silicon carbide refractory composition and products.—73-14641
**Langer, Dietrich W.; Li, Ya-Bo; Fang, Xiao-Ming; Coon, Victoria**
MOCVD growth and properties of erbium-doped GaAs.—73-04408
**Langer, J. M.** See Peaker, A. R.
**Langer, Jerzy M.** See Ryskin, A. I.
**Langer, Roger L.**
Catalytic converter having a metallic monolith mounted by a heat-insulating mat of refractory ceramic fibers.—73-05196
**Langer, V.** See Wang, S. Z.
**Langford, J. I.** See Ash, J. E.; Rand, M.
**Langford, S. C.** See Dickinson, J. T.; Webb, R. L.
**Langhammer, Hans T.** See Felgner, Karl-Heinz
**Langhans, Klaus; Roeder, Erwin**
Manufacture of short-fiber-reinforced glasses by extrusion and examinations regarding their structure and mechanical properties.—73-10562
**Langheinrich, W.** See Barth, R.
**Langlais, C.; Guilbert, G.; Banner, D.; Klarsfeld, S.**
Influence of the chemical composition of glass on heat transfer through glass fiber insulations in relation to their morphology and temperature of use.—73-00504
**Langlais, F.** See Fedou, R.
**Langlet, M.; Walz, D.; Marage, P.; Joubert, J. C.**
Glass and ceramic thin films deposited by an ultrasonically assisted sol-gel technique.—73-13075
**Langlet, M.; Walz, D.; Marage, P.**
$SiO_2$ thin films deposited by a new sol-gel technique.—73-10600
**Langley, Neal R.** See Freeman, Harvey A.
**Langlois, Conrad J., Jr.** See Lum, Genevieve S.
**Langlois, Conrad J., Jr.; Lum, Genevieve S.**
Preceramic composition and ceramic product.—73-05237
**Langlois, R.; Konsztowicz, K. J.**
Toughening in zirconia-toughened alumina composites with nontransforming zirconia.—73-03371
**Langouche, G.** See Dekoster, J.
**Lanin, A. G.** See Britun, V. F.
**Lanin, A. G.**
Thermal shock resistance and fracture of ceramic materials.—73-05671
**Lankes, S.** See Naumov, A.
**Lankford, James** See Bose, Animesh
**Lannoo, M.** See Albanesi, E. A.
**Lannoo, M.; Delerue, C.**
Theory of rare-earth impurities in semiconductors.—73-04497
**Lannutti, John J.** See Park, Eun-Sung; Phillips, David H.
**Lansari, Y.** See Hoffman, C. A.; Ren, J.
**Lansari, Y.; Cook, J. W., Jr.; Schetzina, J. F.**
Growth of HgSe and $Hg_{1-x}Cd_xSe$ thin films by molecular beam epitaxy.—73-11234
**Lantratova, S. S.** See Kolobov, A. V.
**Lanzavecchia, Giuseppe**
Materials and development.—73-09729
**Laor, A.; Zevin, L.; Pelleg, J.; Croitoru, N.**
Anisotropy in residual strains and the lattice parameter of reactive sputter-deposited ZrN films.—73-16031
**Laor, U.** See Steiner, Bruce
**Lapeyre, G. J.** See Evans, D. A.; Schaefer, J. A.
**Lapides, I. L.; Lustenberg, E. E.**
Mathematical model of cationic order in structures of band and layered silicates.—73-02325
**Lapidus, M. A.** See Amkhanitskii, G. Ya.
**Lapidus, M. A.; Rogunov, V. A.**
Monolithic wall structures of porous concrete based on gypsum-containing materials.—73-00147
**Lapin, Yu. K.; Mikhailov, M. D.; Ananichev, V. A.**
Crystallization of glasses in the As-Se and Tl-As-Se system during heating.—73-00605
**Lapin, Yu. K.; Mikhailov, M. D.**
Computation of the critical speed of heating glass.—73-14338
**Lapinskas, S.** See Tornau, E. A.

**Lapp, Josef C.** See Borrelli, Nicholas F.; Dumbaugh, William H., Jr.; Kerko, David J.
**Lappalainen, R.** See Hirvonen, J.-P.
**Lappalainen, R.; Pannikkat, A.; Raj, Rishi**
Enhancement of tensile ductility in nanograin superplastic ceramics through control of interface chemistry.—73-03280
**Lappe, J. J.** See Spaeth, J. M.
**Lappe, Vern**
How noncontact thermometers measure glass temperature.—73-12145
**Laqua, W.** See Lerch, M.
**Lara-Curzio, Edgar** See Coffer, C. G.; Jenkins, Michael G.
**Lara-Curzio, Edgar; Ferber, Mattison K.; Lowden, Richard A.**
Effect of fiber coating thickness on the interfacial properties of a continuous fiber ceramic matrix composite.—73-17285
**Lara-Curzio, Edgar; Ferber, Mattison K.**
Considerations for modeling the creep behavior of composite materials.—73-17255
**Lara-Curzio, Edgar; Sternstein, Sandord S.**
Thermoelastic analysis of composite CVD SiC fibers.—73-03367
**Lara-Curzio, Edgar; Sternstein, Sanford S.; Hubbard, Camden R.; Cavin, O. Burt; Porter, Wallace D.**
High-temperature structural stability of chemically vapor deposited silicon carbide filaments.—73-16507
**Laraia, Vincent J.** See Dickerson, Robert M.
**Larbalestier, D. C.** See Edelman, H. S.
**Larbi, J. A.** See Su, Z.
**Larbot, A.; Bali, H.; Rafiq, M.**
Elaboration and characterization of lead perovskites from colloidal solution.—73-13039
**Larbot, M.** See Guillemet, C.
**Lareau, R. T.** See Lin, Chi-Hsien
**Large, A. C.** See Hanna, D. C.
**Larionov, V. R.** See Kazantsev, A. B.
**Larionova, V. A.** See Germanenko, A. V.
**Larive, M.; Nagle, J.; Landesman, J. P.; Marcadet, X.; Mottret, C.; Bois, P.**
In situ core-level photoelectron spectroscopy study of indium segregation at GaInAs/GaAs heterojunctions grown by molecular beam epitaxy.—73-11262
**Lariviere, Richard L.** See Senter, Howard J.
**Larker, H. T.** See Bjorklund, H.
**Larkin, John J.** See Hart, D. W.
**Larkin, M. I.** See Chechersky, Vladimir
**Larkin, Matthew P.** See Yavuz, Bulent O.
**Larkins, E. C.** See Ralston, John D.
**LaRoche, E. Allen, Jr.**
Self-supporting ceramic articles having shape-replicated surfaces.—73-05011
**Larocque, C. A. B.** See Harvey, K. B.
**LaRosa, Judith L.; Kwan, Stephen; Grutzeck, Michael W.**
Factors influencing the crystallization of tobermorite from CSH gel.—73-03469
**Larose, Sylvain; Dubreuil, Alain; Pelton, Arthur D.**
Solid electrolyte probes for magnesium, calcium, and strontium in molten aluminum.—73-04171
**Larouche, D.** See Legoux, J. G.
**Larrard, Francois; Belloc, Albert**
Are small aggregates really better for making high-strength concrete.—73-06627
**Larsen, D. C.; Godard, H. T.; Stewart, R. L.; Chyung, K.; Linsey, G. D.; Murphy, D. S.**
BSG-doped CMC's for thermal durability.—73-10500
**Larsen, D. M.** See Goodhue, W. D.; Mueller, E. R.
**Larsen, Donald E., Jr.** See Rosenthal, Dan G.
**Larsen, J.** See Clausen, Thomas
**Larsen-Basse, Jorn**
Effect of atmospheric humidity on the dynamic fracture strength of SiC abrasives.—73-06606
**Larson, Bruce W.; Grimes, Amy M.; Willadsen, Michael C.**
Quality inspection of incoming raw materials.—73-15747
**Larson, Edward W.; Gould, Thomas H.**
Glass batch charger having seals which prevents accumulation of batch.—73-04973
**Larson, Jay M.** See Dennis, Roger D.
**Larson, W. C.** See Strenkowski, J. S.
**Larsson, Anders** See Hagberg, Mats
**Larsson, M. I.; Hansson, G. V.**
Method to calculate substrate temperature during intermittent radiant heating in vacyum.—73-05067
**Larsson, Peter**
Emission control technology from Sweden.—73-15724
**Laryushin, A. I.** See Gusakov, G. M.
**Las, W. C.; Dolet, N.; Dordor, P.; Bonnet, J. P.**
Influence of additives on the electrical properties of dense $SnO_2$-based ceramics.—73-12814
**LaSalvia, J. C.** See Meyers, M. A.
**Lascialfari, A.** See Chou, F. C.
**Lasday, Stanley B.; Neville, David I., Jr.; Peschler, William J.**
Function and advantageous uses of protective refractory coatings.—73-04004
**Lasday, Stanley B.**
Ceramic/ceramic composite components advance furnace systems and processes.—73-05261; Plasma-activated sintering [PAS] combined with resistance heating provides new method for densifying powdered metals and ceramics in minutes.—73-05951; Production of ceramic matrix composites by CVI and DMO [directed metal oxidation] for industrial heating industry.—73-06001
**Lashchenova, T. N.** See Lifanov, F. A.
**Lashkarev, G. V.; Brodovoi, A. V.; Mirets, A. L.; Kolesnik, S. P.; Zykov, G. A.; Nikitin, M. S.**
Low-temperature magnetic properties of pure and In-doped $Cd_{0.2}Hg_{0.8}Te$ [CMT] single crystals.—73-11298
**Lashkarev, G. V.; Brodovoi, A. V.; Mirets, A. L.; Mityanskii, I. P.; Kolesnik, S. P.**
Magnetic properties of layered $Li_xTiS_2$ compounds.—73-01470
**Lashkarev, G. V.; Brodovoi, A. V.; Mirets, A. L.; Zlomanov, V. P.; Malevannaya, O. I.**
Magnetic susceptibility of $Pb_{1-x}Mn_xTe$ solid solutions.—73-15030
**Lashkarev, G. V.; Brodovoi, A. V.; Mirets, A. L.; Zykov, G. A.**
Electronic state of In impurities in narrow-gap semiconductors $Pb_{0.82}Sn_{0.18}Te$ and $Cd_{0.2}Hg_{0.8}Te$.—73-07499
**Lashkarev, G. V.; Brodovoi, A. V.; Radchenko, M. V.; Mirets, A. L.; Parenskaya, E. S.; Nikitin, M. S.**
Electrical, thermoelectric, and magnetic properties of In-doped $Cd_{0.2}Hg_{0.8}Te$.—73-07487
**Lasia, A.** See Dumont, H.
**Lasjaunias, J. C.; Ravex, A.; Vandorpe, M.; Hunklinger, S.**
Density of low energy states in vitreous silica: specific heat and thermal conductivity down to 25 mK.—73-14151
**Laskaris, Evangelos T.** See Herd, Kenneth G.
**Laskowski, E. J.** See D'Asaro, L. D.
**Laskowski, J. S.** See Subramanian, S.
**Lasocha, W.** See Hodorowicz, S. A.
**Lassiter, Perry B.; Messina, David J.**
Pumpable ceramic fiber composition.—73-04039
**Lassri, H.** See Gadenne, M.
**Latiolais, Paul** See Chambers, Ben
**LaTorre, G. P.** See Zhong, Ji-Pin
**Latroche, M.** See Mazumdar, Chandan
**Latse, L. A.** See Silin, A. R.
**Latussek, V.** See Schuller, C.
**Lau, E.-H.** See Zhang, D.-H.
**Lau, James C.; Lui, Kenneth; Malmgren, Richard P.**
Single crystal diamond wafer fabrication.—73-11547
**Lau, John W.** See Cameron, Craig P.
**Lau, Kei May; Xu, Wei**
Optically pumped submillimeter wave semiconductor lasers.—73-01267
**Lau, Kei-May** See Landini, Barbara E.
**Lau, Sa-Kwing** See McMurtry, Carl H.
**Lau, W. M.** See Chang, W. H.; Huang, L. J.; Kwok, R. W. M.; Landheer, D.; Williston, L. R.
**Lau, W. M.; Jin, S.; Wu, X.-W.; Ingrey, S.**
Type inversion of sulfide-treated *p*-InP.—73-01358
**Lau, W.-S.** See Yue, T.-M.
**Laubacher, D. B.** See Holstein, W. L.
**Laubereau, A.** See Heinz, P.; Wolfrum, K.
**Laubschat C.,** See Lopez, M. F.
**Laude, L. D.** See Galindo, H.
**Lauder, R. D.; Carter, J. N.; Hanna, D. C.; Tropper, A. C.; Pask, H. M.; Davey, S. T.**
Efficient amplification in the first telecommunications window.—73-07021
**Laudien, G.** See Lampe, T.
**Lauer, James L.; Vlcek, Brian L.; Sargent, Bradly L.**
Wear reduction by pyrolytic carbon on tribosurfaces.—73-09697
**Lauf, R. J.; Bible, D. W.; Maddox, S. R.; Everleigh, C. A.; Espinosa, R. J.; Johnson, A. C.**
Materials processing using a variable-frequency microwave furnace.—73-05120
**Lauf, R. J.; DeVan, J. H.**
Evaluation of ceramic insulators for lithium electrochemical reduction cells.—73-00965
**Lauhoff, H.; Beumer, B.**
Heavy-duty bucket elevators—a historical review with current state of development.—73-12034
**Lauhoff, H.**
Two-way transport on curved conveyor belt system.—73-01835
**Laul, Virgil** See Schmidt, Walter
**Launay, J. C.** See Ennouri, A.
**Launay, Jean-Claude** See Delaye, Philippe; Jarasiunas, Kestutis
**Laurant, J. M.** See Rotger, A.
**Laurencearu, Serge** See Iatrides, Jean-Yves
**Laurent, A.** See Montero, I.; Rano, L.
**Laurent, C.** See Devaux, X.
**Laurent, C.; Rousset, A.; Vereist, M.; Kannan, K. R.; Raju, A. R.; Rao, C. N. R.**
Reduction behavior of $Fe^{3+}/Al_2O_3$ obtained from the mixed oxalate precursor and the formation of the $Fe^0$-$Al_2O_3$ metal-ceramic composite.—73-05472
**Laurent, Y.** See Merle, Therese; Reau, J. M.
**Lauret, H.** See Scotti, C.
**Lauret, N.** See Hassen, A.
**Laurich, B. K.** See Yang, K.
**Laurie, Angus B.** See Flowers, Michael C.
**Laurie, J.** See Russell-Floyd, R. S.
**Laurie, J.; Bagnall, C. M.; Harris, B.**
Colloidal suspensions for the preparation of ceramics by a freeze-casting route.—73-12948
**Lauron-Pernot, H.; Luck, F.; Popa, J. M.**
Methylbutenol: a new and simple diagnostic tool for acidic and basic sites of solids.—73-01915
**Lauten, Frederick S.; Rankin, Janet; Sheldon, Brian W.**
Nucleation and growth of CVD polycrystalline $Si_3N_4$ films at low temperatures.—73-05937
**Lauter, H.** See Llewellyn, P. L.
**Lauterbach, C.** See Bauer, J. C.
**Lauwers, E.** See Kobayashi, H.; Tuson, G. B.
**Lauwers, E.; Reul-Heeren, W.**
Industrial experience with 100% oxy-fuel-fired furnaces.—73-15879
**Lauwers, E.; Tasco, Abilio**
Use of oxygen in regenerative furnaces.—73-12244
**Lavagna, M.** See Grempel, D. R.
**Laval, J. P.** See El Omari, M.
**Laval, J. P.**
Structural study of fluorozirconates recrystallizing from fluoride glasses ($LnZr_2F_{11}$, $BaNaZr_3F_{11}$, $BBaZr_2F_{10}$): a key for glass structure models.—73-06974
**Lavallard, P.** See Baranov, P. G.
**Lavalley, J. C.** See Busca, Guido; Waqif, Mohamed
**Lavat, A. E.; Trezza, M.; Baran, E. J.**
Comparative infrared spectroscopic study of electronic superconductors of the type $Ln_{2-x}M_x^{IV}CuO_{4-y}$.—73-08003
**Laverko, E. M.** See Polyakov, S. M.
**Lavernia, E. J.** See Wu, Y.
**Laville, Henri**
Ceramic capacitors, actual situation, and tendencies.—73-00936
**Lavin, Philip A.; Nicoll, John**
Coating of components with final impregnation with chromia or phosphate forming compound.—73-12353
**Lavina, Jean** See Dupin, Thierry
**Lavoie, C.** See Johnson, S. R.; Pinnington, T.; Zeng, A.
**Lavrenko, V. A.; Tikush, V. L.; Shchur, D. V.**
Microgravimetric plasmochemical apparatus.—73-01916
**Lavrenova, E. A.** See Garshin, A. P.
**Lavrentyev, A. I.** See Rokhlin, S. I.
**Lavrov, B. A.** See Fedotov, A. O.
**Lavrova, E. O.** See Mosin, Yu. M.
**Lavrovskaya, N. A.** See Boyarskaya, Yu. S.
**Lavrukhin, V. P.** See Turbin, V. S.
**Law, Chung K.** See Makino, Atsushi
**Lawandy, Nabil M.**
Optically encoded phase-matched second harmonic generation device and self-frequency doubling laser material using semiconductor microcrystallite-doped glasses.—73-04528
**Lawler, Justin F.** See Lunney, James G.
**Lawless, William N.** See Gupta, Tapan K.
**Lawn, Brian R.** See Guiberteau, Fernando; Padture, Nitin P.; Readey, M. J.; Wan, Kai-Tak
**Lawrence, C. D.**
Influence of binder type on sulfate resistance.—73-10004
**Lawrence, C. W.** See Briggs, G. A. D.
**Lawrence, C. W.; Briggs, G. A. D.; Scruby, C. B.; Davies, J. R. R.**
Acoustic microscopy of ceramic fiber composites: I, Glass-matrix composites.—73-09431
**Lawrence, C. W.; Briggs, G. A. D.; Scruby, C. B.**
Acoustic microscopy of ceramic fiber composites: II, Glass-ceramic-matrix composites.—73-09432
**Lawrence, S. H.** See Hoff, H. A.
**Laws, A. D.** See Dharani, L. R.
**Lawson, A. C.** See Kwei, G. H.
**Lawson, Simon C.; Kanda, Hisao; Sekita, Masami**
New nickel-related optical absorption in high-pressure synthetic diamond.—73-08925
**Lawson, Simon C.; Kanda, Hisao**
Annealing study of nickel point defects in high-pressure synthetic diamond.—73-03076
**Lawson, Simon; Smith, Paul A.**
New technique for monitoring aging in yttria–tetragonal zirconia polycrystals.—73-01919
**Lawson, T. A.** See Benbow, John J.
**Lawton, Carl W.; Shields, Christopher S.**
Biomimetic process for preparing magnetite fibers.—73-04591
**Lawton, John M.** See Jackson, Peter J.
**Lawton, S. A.** See Axelbaum, R. L.
**Laxague, Michel** See Lacoste, Marc
**Laxmi Narsaiah, E.; Subba Rao, U. V.; Pena, O.**
Annealing effects on $T_c$ in $Bi_2Sr_2Ca_{0.9}Y_{0.1}Cu_2O_{8+\delta}$ system.—73-01493; Oxidizing-reducing effects in yttrium-doped $Bi_2Sr_2CaCu_2O_{8+\delta}$ (Bi-2212) superconductor.—73-01624
**Laxmi, S.; Ailavadi, A. K.; Ali, M. M.**
Activators for accelerated calcination.—73-09804
**Laxmi, S.; Mohan, Lata; Sharma, P. S.**
Development of aluminobelitic colored clinkers.—73-09889
**Lay, Kenneth W.** See Klug, Frederic J.
**Lay, Uwe W.** See Greenwald, Anton C.
**Layadi, N.** See Yakovlev, V.
**Layadi, N.; Cabarrocas, P. R. I.; Yakovlev, V.; Drevillon, B.**
Real-time ellipsometry [study] of the growth of amorphous and microcrystalline silicon thin films combining glow discharge decomposition and uv light irradiation.—73-17191
**Lazar, D. P.** See Pavel, E.
**Lazarev, B. G.; Lazareva, L. S.; Chupikov, A. A.**
Threshold magnetic field effect in $YBa_2Cu_3O_{7-x}$ single crystals.—73-08260
**Lazarev, V. B.** See Izotov, Alexander D.; Krot, V. V.; Nipan, G. D.; Sanygin, V. P.; Zhalilov, N. S.
**Lazareva, L. S.** See Lazarev, B. G.
**Lazarz, N. M.** See Ehrlich, S. N.
**Lazukov, V. N.** See Alekseev, P. A.
**Lazzari, C.** See Nobili, Maurizio
**Lazzari, J. L.** See Tronc, P.
**Lazzari, P.** See Ardizzone, S.
**Le Berre, M.** See Jean-Jean, P.
**Le Cabec, P.** See Poignant, H.
**Le Cleach, A.** See Gillet, P.
**Le Cleach, X.**
Photoconductivity transient measurements on III-V semiconducting layers using a microwave technique.—73-04436
**Le Comber, Peter G.** See Masaki, Yuichi
**Le Coq, X.** See Colin, S.
**Le Deit, C.** See Lebullenger, R.
**Le Dez, Vital; Huclin, Jean Christophe; Lallemand, Michel**
Directional emissivities of semitransparent media: cases of dihedron, infinite cylinder, and cone.—73-07012
**Le Flohic, M.** See Allain, J. Y.
**Le Fur, Y.; Aleonard, S.**
Structural relations between monoclinic and orthorhombic fluorite-related superstructures $Mo_{0.5-x}Ln_{0.5+x}F_{2+2x}$ single and twinned phases.—73-02453
**Le Gressus, C.** See Fayeulle, S.; Gong, H.; Oh, K.-H.
**Le Loarer, Jean-Luc** See Chopin, Thierry
**Le Mellot, J.** See Poignant, H.
**Le, Chuan** See Lou, Kai-Jun
**Le, Fu-Xin** See Ou-Yang, Xiao-Sheng
**Le, H. Q.** See Goodhue, W. D.

**Le, Hui-Rong** See Huang, Yong
**Le, Kim-Chi T.** See Herrington, Tommy L.
**Leach, C.** See Fletcher, P. R.
**Leach, D. H.; Thomsen, C.; Cardona, M.; Mihaly, L.; Kendziora, C.**
Self-energy effects of the $B_{1g}$ phonon in $Bi_2Sr_2CaCu_2O_8$.—73-15617
**Leal Ferreira, G. F.** See Lepienski, C. M.
**Leal-Gonzalez, Juan** See Aguirre-Villafana, Juan-Lauro
**Leandri, David J.** See Muralidhar, S. K.
**Leatherman, G. L.** See Toutanji, H. A.
**LeBay, Thomas A.** See Eriksson, Ronny
**Lebed, B. M.; Nikiforov, A. V.; Yakovlev, S. V.; Yakovlev, I. A.**
Spin wave scattering by magnetic vortex lattice in high-$T_c$ superconductor-ferrite film structure.—73-15627
**Lebedev, A. A.** See Anikin, M. M.
**Lebedev, A. I.; Sluchinskaya, I. A.**
New arguments for off-center position of tin atoms in $Pb_{1-x}Sn_xTe_{1-y}Se_y$ and $Pb_{1-x}Sn_xTe_{1-y}S_y$.—73-16548
**Lebedev, E. A.** See Kazakova, L. P.
**Lebedev, M. V.** See Bessolov, V. N.; Korshunov, V. V.
**Lebedev, S. P.** See Volkov, A. A.
**Lebedev, V. F.** See Dianov, E. M.
**Lebedev, V. M.** See Dyumin, A. N.
**Lebedeva, E. L.; Zanadvorov, P. N.; Gabrielyan, V. T.**
Optical breakdown of lithium niobate crystals doped with ions of transition elements.—73-04562
**Lebedeva, N. N.; Orbukh, V. I.; Zeinally, A. Kh.**
Visualization of electrical inhomogeneities in semiinsulating GaAs.—73-11507
**Lebedeva, N. N.**
Radiation- and thermally induced defects in $SrTiO_3$.—73-16583
**Lebedeva, Z. M.** See Kravchenko, V. B.
**Lebedkova, V. A.** See Demidovich, B. K.
**Leberre, C.** See Saarinen, K.
**Lebescoop, P.** See Atabek, R.
**Leblanc, R.** See Nagamori, M.
**Lebon, S.; Marignan, J.; Appell, J.**
Titania gels: aggregation and gelation kinetics.—73-13326
**Lebullenger, R.; Benjaballah, S.; Le Deit, C.; Poulain, M.**
Systematic substitutions in ZBLA and ZBLAN glasses.—73-07083
**Lebyodkin, M. A.** See Bobrov, V. S.
**Lecante, J.** See Gota, S.
**Lecante, P.** See Mosset, A.
**Leccabue, F.; Watts, B. E.; Fiovani, D.; Testa, A. M.; Alvarez, J.; Sagredo, V.**
Crystal growth and magnetic characterization of $Zn_{1-x}Mn_xCr_2O_4$ ($x$=0–1] single crystals.—73-07930
**Lechert, H.; Kacirek, H.**
Kinetics of nucleation of X zeolites.—73-08655
**Lechter, William L.; Osofsky, Michael S.; Skelton, Earl F.; Toth, Louis E.**
High-$T_c$ copper-oxide superconductors comprising Tl-Sr-Ca-Cu-O.—73-11955
**Lecky, R. C. G.** See Zhang, X. D.
**Leclaire, A.** See Benabbas, A.; Benhamada, L.; Costentin, G.
**Leclerc, Norbert** See Pfleiderer, Christoph
**Leclercq, D.** See Belot, V.
**Leclercq, J. L.** See Tronc, P.
**Leclercq, J. L.; Grunberg, P.; Boissier, G.; Fouillant, C.; Sadik, S.; Martin, P.**
Characterization below threshold of GaInAsSb/GaAlAsSb double-heterostructure lasers emitting near 2.37 μm.—73-14797
**Leclercq-Prlat, Marie-Noelle** See Bialopiotrowicz, Tomasz
**Lecloux, Andre J.** See Pirard, Jean-Paul
**Lecloux, Andre J.; Francois, Eric; Mohsine, Abdelkrim; Noville, Francis; Pirard, Jean-Paul**
Texture evolution of zirconium oxide xerogels prepared by sol-gel process.—73-13319
**LeCompte, J. P.** See Helali, D.
**Lecomte, A.** See Fabre, A.; Guinebretiere, R.; Vesteghem, H.
**Lecomte, J.** See Soret, J. C.
**Lecours, A.; Izquierdo, R.; Tabbal, M.; Meunier, M.; Yelon, A.**
Laser-induced deposition of tungsten on GaAs from $WF_6$.—73-11291
**Lecourtier, J.** See Masse, S.
**Ledbetter, H.** See Balzar, D.
**Ledentsov, N. N.** See Alferov, Zh. I.
**Ledesert, M.** See Labbe, P.
**Ledneva, T. M.** See Moskvin, A. S.
**Ledvij, M.** See Gammel, P. L.; Song, Y.-Q.
**Lee Keun-Jin,** See Iguchi, Eisuke
**Lee, B-S.; Lee, J.**
Effect of physical properties of glass on the TCR of $RuO_2$ thick-film resistors for hybrid integrated circuits (HIC's).—73-14697
**Lee, B. I.** See Park, S.-B.
**Lee, B. W.** See Allenspach, P.; Clinton, T. W.
**Lee, B.-T.** See Pezzotti, Giuseppe
**Lee, Bill**
Essential need for good housekeeping.—73-10527
**Lee, Byeong-Chan** See Oh, Tae-Sung
**Lee, Byung-Ha** See Cho, Jae-Woo; Chun, Seong-Yong; Kim, In-Sup; Lee, Kyung-Hee
**Lee, Byung-Ha; Kim, In-Seop; Lee, Kyung-Hee**
Mechanical and tribological properties of α-SiAlON/SiC whisker composites.—73-17378
**Lee, Byung-Ha; Lee, Kyung-Hee; Lee, Hun-Sik; Chun, Seong-Yong**
Synthesis of $Ba_2Ti_9O_{20}$ by coprecipitation process and the effect of $ZrO_2$ addition.—73-17033
**Lee, Byung-Ha; Lee, Kyung-Hee; Yun, S.-H.**
Preparation of fine-particle $(PbCa)ZrO_3$ for resonator.—73-10983
**Lee, Byung-Ha; Lee, Kyung-Hee; Yun, Young-Ho; Son, Sang-Chul; Yoo, Kwang-Soo**
Effect of $Bi_2O_3$ on dielectric properties and temperature characteristics of $[BaTiO_3]_{0.9}$+[$BaZrO_3$, $SnO_2$, $La_2O_3$, $ZrO_2]_{0.1}$.—73-10935
**Lee, C.-C.** See Kim, Seong-Il
**Lee, C.-H.** See Goh, T.-N.; Takemura, Yasushi; Teng, S.-P.
**Lee, C.-H.; Liu, S.-H.**
Effect of mercury uv photolysis on vapor deposition of $SnO_2$.—73-13008
**Lee, C.-H.; Wu, C.-T.; Pueng, C.-Y.**
AlN thin films prepared by plasma-enhanced chemical vapor deposition.—73-12911
**Lee, C.-L.** See Wu, S.-L.
**Lee, C.-S.; Koo, C.-H.; Wei, W.-J.**
Processing and microstructure of postsintered reaction-bonded silicon nitride.—73-05996
**Lee, C.-S.; Lii, K.-H.**
Synthesis and characterization of $KV_3P_4O_{16}$: a new mixed-valence vanadium (III,IV,IV) diphosphate.—73-02476
**Lee, C.-Y.** See Chen, C.-C.
**Lee, Chae-Hyun; Kim, Chong-Hee**
Pressureless sintering and related reaction phenomena of $Al_2O_3$-doped $B_4C$.—73-05992
**Lee, Chaipyng** See Chen, Hsi-Kuei
**Lee, Chang-Bong** See Oh, Tae-Sung
**Lee, Charles** See Olowplafe, J. O.
**Lee, Cheng-Kuo; Lin, I-Nan; Hu, Chen-Ti**
Evolution of microstructure and V-shaped positive temperature coefficient of resistivity of $(Pb_{0.6}Sr_{0.4})TiO_3$ materials.—73-07513
**Lee, Cheol-Jin; Sung, Yung-Kwon**
Characterization of TiN/$TiSi_2$ bilayer for application to ULSI.—73-08819
**Lee, Chin C.; Wang, Chen-Yu; Chen, Yi-Chia; Matijasevic, Goran**
Joining technique using multilayer lead-indium-gold composite deposited in high vacuum.—73-01226
**Lee, Choong-Sub** See Kim, Chul-Sung
**Lee, Chui-Wee; Chen, Xin-Hua; Zamadics, Maggie; Kevan, T.**
Anionic coordination involvement in solid-state ion-exchanged CuH-SAPO-$n$ ($n$=5, 11, and 34) molecular sieves.—73-12535
**Lee, Chun-Shoo** See Chuang, Shih-Cheng
**Lee, Chung-Kook; Speyer, Robert F.; Spratt, Geoffrey W. D.**
Synthesis of nanosized barium ferrite particles using an inorganic dispersing phase.—73-04659
**Lee, D. L.** See Korenstein, R.
**Lee, D.** See Becker, P. C.; Feldman, R. D.
**Lee, D.-H.** See Yoon, Ki-Hyun
**Lee, Dong-A.** See Kim, Goo-Dae
**Lee, Dong-A.; Kim, Goo-Dae; Kim, Hyun-Min**
Properties of ORMOSIL with adding organic silane in TEOS system: I.—73-06272; Properties of ORMOSIL with adding organic silanol in TEOS system: II.—73-09285
**Lee, Dong-Heun** See Jung, Hyung-Jin
**Lee, Dong-Jo** See Shul, Yong-Gun
**Lee, Doo-Won** See Hyung, Kyung-Woo
**Lee, Duk-Dong** See Chung, Wan-Young
**Lee, E. H.** See Yoo, Byueng-Su
**Lee, E.-C.** See Son, S.-H.
**Lee, E.-S.** See Kim, J.-W.
**Lee, Eun-Bok; Lee, Hong-Lim; Cho, Duk-Ho; Park, Won-Chul**
Effect of yttria and ceria on mechanical properties and oxidation behaviors of α-SiAlON ceramics.—73-17296
**Lee, Eun-Gu; Kim, Jae-Jeong**
Microstructure and grain growth of polycrystalline silicon deposited using silane and disilane.—73-06253
**Lee, Eung-Sang** See Choi, D.-M.; Jeon, Deok-Il; Kim, Hyeong-Tae; Kim, Sung-Youl; Lee, Moon-Hwan; Oh, C.-S.; You, Jae-Keun
**Lee, Eung-Sang; Kim, Dae-Weon**
Dielectric properties in the $Pb(Fe_{1/2}Nb_{1/2})O_3$-$Pb(Fe_{2/3}W_{1/3})O_3$ system modified with $MnO_2$.—73-02571
**Lee, Eung-Sang; Park, Hyun; Kim, Dong-Hwan**
Sintering characteristics in LAS ($Li_2O$-$Al_2O_3$-$SiO_2$) system.—73-06055
**Lee, Farn-Jeng; Bowman, Keith J.**
Texture development via grain rotation in β-silicon nitride.—73-09373
**Lee, G. H.** See Su, Chao-Chin
**Lee, G. R.** See Campbell, S. A.
**Lee, G.-Y.** See Je, Jung-Ho
**Lee, H. G.** See Luo, J. S.
**Lee, H. G.; Fischer, R. J.; Zydzik, G. J.; Cho, A. Y.**
Dry etching of GaAs and AlGaAs by $Cl_2$ in molecular beam epitaxy system.—73-11147
**Lee, H. H.-D.**
Influence of slip casting and dry pressing on structure evolution of alumina compacts.—73-05874
**Lee, H. J.; Zubeck, R.; Hollars, D.; Lee, J. K.; Smallen, M.; Chao, A.**
Material properties and tribological performance of hydrogenated sputter carbon overcoat on rigid disk.—73-17375
**Lee, H. S.** See Meyyappan, M.; McLane, G. F.; Raghuraman, R.
**Lee, H.-C.** See Hur, Nam-H.
**Lee, H.-D.** See Jeon, G.
**Lee, H.-G.** See Yoo, K.-H.
**Lee, H.-H.** See Cho, H.-S.
**Lee, H.-J.** See Jeong, B.-S.
**Lee, Hae-Wook** See Kim, Chang-Eun
**Lee, Hae-Yong; Kim, Ho-Gi**
Role of gas-phase nucleation in the preparation of $TiO_2$ films by chemical vapor deposition.—73-09307
**Lee, Han-Joo** See Park, Jeong-Hyun
**Lee, Hee-Cheol** See Ha, Ho
**Lee, Hee-Gyoun; Lim, Dae-Ho; Song, Myoung-Youp; Park, Jong-Hyun; Won, Dong-Yeon; Hong, Gye-Won**
Effects of melt composition on the growth behavior of 211 particles in the Y-Ba-Cu-O system.—73-15444
**Lee, Hee-Hyung** See Jung, Hyung-Jin
**Lee, Heon-Soo** See Son, Myung-Mo
**Lee, Ho-Pil** See Kim, Cheol-Young
**Lee, Ho-Soon** See Lee, Hong-Lim
**Lee, Ho-Yong; Kang, Suk-Joong L.; Yoon, Duk-Yong**
Coherency strain energy and the direction of chemically induced grain-boundary migration in $Al_2O_3$-$Cr_2O_3$ and $Al_2O_3$-$Fe_2O_3$.—73-09439
**Lee, Ho-Young** See Jeon, Yoo-Chan
**Lee, Hong-Lim** See Kim, Dae-Joon; Lee, Eun-Bok; Lim, Hun-Jin; Song, Tae-Ho
**Lee, Hong-Lim; Hahn, Bong-Seok**
Thermal fatigue life prediction of alumina by finite difference model.—73-08989
**Lee, Hong-Lim; Kim, Kyu-Young**
Synthesis and properties of $Al_2O_3$-SiC composites from alkoxides: I, Synthesis of dispersed type $Al_2O_3$-SiC composite powders.—73-09347; Synthesis and properties of $Al_2O_3$-SiC composites from alkoxides: II, Synthesis of coated $Al_2O_3$-SiC composite powders.—73-09348; Synthesis and properties of $Al_2O_3$-SiC composites from alkoxides: III, Effect of composite powder type on the sintering characteristics and properties of $Al_2O_3$-SiC composites.—73-09349
**Lee, Hong-Lim; Lee, Ho-Soon**
Preparation of $Al_2O_3$-$TiO_2$ nanocomposite powders.—73-09254
**Lee, Hong-Lim; Lee, Hyung-Min**
Preparation and mechanical properties of 3Y-TZP/SiC composites.—73-13174
**Lee, Howard H.-D.**
Mold release agent for ceramic molds used in ceramic slip-casting processes.—73-12089
**Lee, Hu-Jong** See Kim, Ju-Jin
**Lee, Huei-Long** See Chan, Sammy Lap-Ip
**Lee, Huei-Long; Lu, Wun-Hwa; Chan, Sammy Lap-Ip**
Abrasive wear of sintered aluminum alloy and its composite containing SiC particles.—73-03559
**Lee, Hun-Sik** See Lee, Byung-Ha
**Lee, Hwa-Sun** See Park, Jeong-Hyun
**Lee, Hwa-Young** See Kim, Sung-Gyu
**Lee, Hwan-Chul** See Kim, Dong-Gook
**Lee, Hyun-Im** See Kim, Goo-Dae; Yoon, Ki-Hyun
**Lee, Hyun-Kwuon** See Park, Jeong-Hyun
**Lee, Hyung-Bock** See Cho, Duk-Ho
**Lee, Hyung-Bock; Cho, Duk-Ho; Jang, Jun-Won**
Sintering properties of $TiB_2$-TiC composite by self-propagating high-temp. synthesis method.—73-06059
**Lee, Hyung-Bock; Cho, Duk-Ho; Park, Sung; Lee, Jea-Won**
Synthesis and mechanical properties of $B_4C$ by self-propagating high-temperature synthesis chemical furnace.—73-13294
**Lee, Hyung-Bock; Shin, Dong-Jin; Yo, Chul-Hyun**
Synthesis and characterization of Ti-B-C system ceramics prepared by self-propagating high-temperature synthesis method.—73-06080
**Lee, Hyung-Jik**
Rapid heating of ultrafine $Si_3N_4$ powder compacts under controlled thermograms.—73-09290
**Lee, Hyung-Min** See Lee, Hong-Lim
**Lee, In-Ja** See Jeong, Hong-Sik
**Lee, J. J.** See Dey, S.K.
**Lee, J. K.** See Lee, H. J.
**Lee, J. Y. M.** See Yeh, M.-H.
**Lee, J. Y.** See Kim, J. S.
**Lee, J. Y.; Swinnea, J. S.; Steinfink, H.**
Quaternary oxide phases $Ln_{4-x}Au_{4+x}Co_{2+y}Al_{2-y}O_{15}$: the structure of $Nd_{1.43}Ba_{4.42}Co_{2.23}Al_{1.77}O_{15}$ and $Y_3Sr_6Co_{2.08}Al_{1.92}O_{15}$.—73-02409
**Lee, J.** See Lee, B-S.; Lin, J.
**Lee, J.-E.** See Chung, M.-S.
**Lee, J.-H.** See Jeong, B.-S.; Kim, T.-W.
**Lee, J.-H.; Kim, S.-B.; Koo, B.-J.; Chung, I.-H.; Jung, M.; Park, H.-L.**
Elastic strain effect dependence on the energy band gaps and the lattice parameters in CdTe epitaxial layers GaAs(100) substrates grown by hot-wall epitaxy.—73-04300
**Lee, J.-I.** See Yom, S.-S.; Kim, Kun-Ho
**Lee, J.-K.; Kim, Hwan**
Monoclinic-to-tetragonal transformation and crack healing by annealing in aged 2Y-TZP ceramics.—73-17176
**Lee, J.-M.** See Hwang, I.-S.; Youm, H.-N.
**Lee, J.-R.; Kim, K.-H.; Cho, S.-J.**
Low-temperature deposition of TiN on steel substrate by plasma-assisted CVD.—73-06815
**Lee, J.-S.** See Park, Jong-Wan
**Lee, J.-W.** See Daniel, I. M.
**Lee, J.-Y.** See Kim, Kun-Ho; Kim, T.-W.; Park, S.-W.
**Lee, Jack C.** See Maiti, Bikas
**Lee, Jae D.** See Petrak, Daniel R.
**Lee, Jae-Chun; Rhee, Kang-In; Yu, Hyo-Shin**
Preparation of high-purity zinc oxalate powder by the precipitation stripping method.—73-13191
**Lee, Jae-Dong** See Kim, Seung-Jae
**Lee, Jae-Dong; Kim, Seung-Jae; Lee, Seung-Ho; Kim, Tae-Ok**
Microstructure and magnetic properties of polycrystalline $Y_3Fe_5O_{12}$.—73-15349
**Lee, Jae-Ho** See Yoon, Tae-Ill
**Lee, Jae-Suk** See Shul, Yong-Gun
**Lee, Jae-Sun** See Giles, N. C.
**Lee, Jae-Young** See Kim, Byoung-Ho
**Lee, Jai-Young** See Kim, Dong-Gook
**Lee, Jea-Won** See Lee, Hyung-Bock
**Lee, Jeon-Kook** See Ahn, Ki-Cheol; Cho, N.-H.; Jung, Hyung-Jin

**Lee, Jeong-Hyung; Kim, Bok-Hee; Choi, Eui-Suck; Hwang, Jai-Suk**
Y-TZP fine powder preparation by ultrasonic spray pyrolysis.—73-09386
**Lee, Jeong-Yong** See Hong, Soon-Ku
**Lee, Ji-Hyun** See Hyun, Sang-Hoon
**Lee, Ji-Ung** See Yang, Yi-Feng
**Lee, Jong-Gil** See Rhee, Jhun
**Lee, Jong-Heun; Park, Soon-Ja**
Crystal structure of $TiO_2$-$SnO_2$ fine powders prepared by coprecipitation.—73-12565
**Lee, Jong-Ho; Chang, Pok-Kie**
Comparative study of microstructure and fracture behavior in reaction-bonded alumina.—73-03127
**Lee, Jong-Ho; Lee, Yong-Keun; Choi, Se-Young**
Preparation and properties of Na-Ca-Si-O-N system oxynitride glasses.—73-07162
**Lee, Jong-Hyen** See Park, Soon-Tae
**Lee, Jong-Kook; Yang, Gwon-Seung**
Isothermal phase transformation behaviors in $Al_2O_3$-coated Y-TZP powders.—73-12618
**Lee, Jong-Won; Mayo, William E.; Tsakalakos, Thomas**
Elastic and plastic contributions to X-ray line broadening of InGaAsP/InP heterostructures.—73-11175
**Lee, Jong-Yong** See Yoon, Y.-S.
**Lee, Joo-Wan** See Jeong, Soo-Jong
**Lee, Joon-Hyung** See Park, Seh-Jin
**Lee, Joon-Hyung; Kim, Jeong-Joo; Cho, Sang-Hee**
Role of porosity on PTCR characteristics of semiconducting [Y-doped] $BaTiO_3$ ceramics.—73-11425
**Lee, Joong-Yoon** See Kim, Byung-Ick
**Lee, Joseph Ya-Min** See Yu, Chang-Feng
**Lee, June-Gunn** See Kim, Min-Soo; Kim, Young-Wook
**Lee, K. F.** See Jeon, D. Y.
**Lee, K. H.** See Higman, T. K.
**Lee, K. H.; Campbell, S. A.**
Kinetics of the oxide charge trapping and breakdown in ultrathin silicon dioxide.—73-02626
**Lee, K. J.** See Boskovic, S.
**Lee, K.-C.; Yoo, Han-Ill**
Microstructure evolution in sintered CoO under electric fields.—73-13429
**Lee, K.-H.** See Lim, A.-R.
**Lee, K.-H.**
Commissioning of a 2.5 million ton per year clinker production line in [S.] Korea.—73-00042
**Lee, K.-S.** See Kim, T.-W.
**Lee, Kang N.; Miller, Robert A.**
Long-term durability of mullite-coated silicon-based ceramics.—73-17227
**Lee, Kang-N.; Miller, Robert A.; Jacobson, Nathan S.**
Development of thermal shock resistant mullite coatings on silicon carbide.—73-08528
**Lee, Kel-Jin; Park, Gwang-Seo; Amatuni, L. E.; Constantinian, K. Y.**
Microwave properties of high-$T_c$ $Y_1Ba_2Cu_3O_y$ superconducting bridges on $Y_2BaCuO_5$ substrates.—73-08136
**Lee, Keith** See Tan, Gen-Lin
**Lee, Keun-Haeng** See Yoon, Ki-Hyun
**Lee, Keun-Heon** See Kim, Byong-Ho
**Lee, Keun-Heon; Kim, Byong-Ho; Lim, Dae-Soon**
Synthesis and characterization of cordierite glass-ceramics for low firing temperature substrate: II, Properties of cordierite glass-ceramics containing $CeO_2$.—73-10992; Synthesis and characterization of cordierite glass-ceramics for low-firing-temperature substrate: I, Crystallization and shrinkage behavior of MgO-$Al_2O_3$-$SiO_2$ glass powders.—73-00709
**Lee, Keun-Jin** See Iguchi, Eisuke
**Lee, Keun-Jin; Iguchi, Akira; Iguchi, Eisuke**
Polaronic conduction of electrons in α-$Mn_3O_4$ slightly doped with Li.—73-12862
**Lee, Ki-Gang** See Kim, Yoo-Taek
**Lee, Kie-Jin; Song, In-Sang; Park, Gwang-Seo**
Preparation of $Bi_2Sr_2CaCu_2O_y$ films on alumina substrates with a $CuAl_2O_4$ buffer layer.—73-08176
**Lee, Kil-Woo; Kim, Soon-Tae**
Cutting characteristic of ceramics.—73-12965
**Lee, Kwang-Sei** See Kim, Jae-Hyung
**Lee, Kyeong-Bock; Park, Choon-Mahn; Noh, Hyun-Sik; Kim, Chul-Koo; Nahm, Kyun**
Suppression of superconductivity in the $Er_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$ system.—73-15641
**Lee, Kyu-Mann** See Cho, Sung-R.
**Lee, Kyu-Mann; Jang, Hyun-M.; Yoo, Beoung-D.**
Stabilization of perovskite phase and enhanced DPT [diffuse phase transition] characteristics of $Pb(Zn, Mg)_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ ceramics by the addition of excess constituent oxides.—73-16315
**Lee, Kyung M.** See Jang, Se A.
**Lee, Kyung-Hee** See Cho, Jae-Woo; Chun, Seong-Yong; Kim, In-Sup; Lee, Byung-Ha
**Lee, Kyung-Hee; Lee, Byung-Ha; Hur, W. D.; Hwang, W.-Y.**
Formation reaction of Mn-Zn ferrite by wet process.—73-09144
**Lee, Liang-Chih** See Kao, Chin-Hai
**Lee, M. B.** See Fanning, T.
**Lee, M.** See Schroeder, John
**Lee, M.-Y.** See Jeong, Hong-Sik
**Lee, Mark; Solin, S. A.**
Band structure and disorder effects on electron localization in semiconductor superlattices.—73-04254
**Lee, Mee-Sook** See Kim, Joon-Hong
**Lee, Min-Suk** See Kim, Seong-Il
**Lee, Ming-Tung** See Huang, Jow-Lay
**Lee, Moon-Hwan; Choi, Sung-Churl; Lee, Eung-Sang**
Thermomechanical properties and microstructures of ZTA-$Al_2O_3$ whisker composites.—73-13605
**Lee, Nam-Yang** See Uchino, Kenji
**Lee, Owen W.** See Stinson, Michael C.
**Lee, P. M.** See Kisiel, A.
**Lee, R. H.** See Ajayi, O. O.
**Lee, R. J.** See Clark, B. A.
**Lee, S. B.; Pincenti, J. C.; Cocco, A.; Naylor, D. L.**
Electronic and optical properties of room-temperature sputter-deposited indium tin oxide.—73-16487
**Lee, S. L.** See Mook, H. A.; Yethiraj, M.
**Lee, S. L.; Zimmermann, P.; Keller, H.; Warden, M.; Savic, I. M.; Schauwecker, R.**
Evidence for flux-lattice melting and a dimensional crossover in single-crystal $Bi_{2.15}Sr_{1.85}CaCu_2O_{8+\delta}$ from muon spin rotation studies.—73-11751
**Lee, S. S.; Stinchcomb, Wayne W.**
Damage mechanisms of cross-ply Nicalon/CAS-II laminates under cyclic tension.—73-17271
**Lee, S. T.** See Hung, L. S.
**Lee, S.** See Ma, Z.
**Lee, S.-D.** See Kim, Jae-Hyung
**Lee, S.-H.** See Han, K.-H.
**Lee, S.-K.** See Oh, C.-H.
**Lee, S.-M.** See Baik, S.
**Lee, S.-M.; Lim, S.-M.; Kwan, S.-I.; Jeong, Y.-H.**
Effect of the bias field on the thermal conductivity of $KH_2PO_4$ near $T_c$.—73-16462
**Lee, Sandra S.** See Wu, Albert T.
**Lee, Sang-Gul** See Shin, Hyung-Sup
**Lee, Sang-Hak; Yoon, Eui-Park**
Growth of $LiNbO_3$ crystals by Czochralski technique.—73-04554
**Lee, Sang-Ho** See Piciacchio, Alan
**Lee, Sang-Jin** See Park, Jeong-Hyun
**Lee, Sang-Ki; Tatsumisago, Masahiro; Minami, Tsutomu**
Transformation–range viscosity and thermal property of sodium silicate glasses.—73-14300; Transformation-range viscosities and thermal properties of AgI-based superionic glasses.—73-14301
**Lee, Sang-Suk** See Seong, Dae-Jin
**Lee, Sang-Wan; Kim, Hyo-Joon; Kim, Eui-Hoon**
Control of permanent shrinking of recycled castable refractories from waste refractories of $Al_2O_3$-$SiO_2$.—73-00791
**Lee, Seok-Keun** See Ikeda, Masaki; Mizutani, Nobuyasu
**Lee, Seok-Keun; Ikeda, Masaki; Mizutani, Nobuyasu**
Influence of alcoholic solvents on the formation of monodispersed particles by hydrolysis of zirconium tetra-*n*-butoxide.—73-05862
**Lee, Seok-Keun; Shinozaki, Kazuo; Mitzutani, Nobuyasu**
Effect of mixed solvent on the formation of monodispersed $Al_2O_3$ powders by hydrolysis of aluminum sec-butoxide [$ABu^s$].—73-16732; Effect of mixed solvent on the formation of monodispersed $Al_2O_3$ powders by hydrolysis of aluminum sec-butoxide.—73-05763; Effect of stabilizing agents on synthesis of monodispersed $Al_2O_3$ powders by hydrolysis of aluminum sec-butoxide.—73-02796; Effect of stabilizing agents on synthesis of monodispersed $Al_2O_3$ powders by hydrolysis of aluminum sec-butoxide.—73-13019
**Lee, Seong-Young** See Kim, Je-Young
**Lee, Seoung-Ho; So, Myoung-Gi**
Characteristics of thin nitrided oxides prepared by an in situ process.—73-16667
**Lee, Seung-Bun** See Choi, Sung-Il
**Lee, Seung-Ho** See Lee, Jae-Dong
**Lee, Seung-Kun; Kim, Chong-Hee**
Effects of α-SiC versus β-SiC starting powders on microstructure and fracture toughness of SiC sintered with $Al_2O_3$-$Y_2O_3$ additives.—73-13024
**Lee, Seung-Kyou** See Kim, Chang-Eun
**Lee, Shinn-Yih** See Hirata, Yoshihiro
**Lee, Si-Chen** See Lin, Kang-Cheng
**Lee, Sing-H.** See Esener, Sadik C.
**Lee, Soo-Won** See Kim, Kwang-Ho
**Lee, Soo-Young** See Kim, Shin
**Lee, Soo-Young; Kosuda, Kosuke; Tsutsumi, Masayuki; Mitsuhashi, Takefumi; Nozaki, Hiroshi; Horiuchi, Shigeo**
Structural study on fluorine-doped Bi(Pb)-Sr-Ca-Cu-O superconductors.—73-01669; Structural study on fluorine-doped Bi(Pb)-Sr-Ca-Cu-O superconductors.—73-11906
**Lee, Steve**
Continuous casting plant for graphitized alumina refractories.—73-03994
**Lee, Su-Weon** See Kim, Kwang-Ho
**Lee, Su-Weon; Kim, Kwang-Ho**
Electrical and optical properties of Sb-doped $SnO_2$ films prepared by chemical vapor deposition.—73-05555
**Lee, Sun-S.; Park, Seung-M.; Chong, Paul J.**
Single-phase deposition of α-gallium nitride by a laser-induced transport process.—73-06047
**Lee, Sun-Woo; Mazurowski, J.; O'Brien, W. L.; Dong, Q. Y.; Jia, J. J.; Callcott, T. A.**
Structural homogeneity of boron carbide thin films fabricated using plasma-enhanced chemical vapor deposition from $B_2H_6$-$CH_4$.—73-12698
**Lee, Sun-Woo; Mazurowski, J.; Ramseyer, G.**
Characterization of boron carbide thin films fabricated by plasma-enhanced chemical vapor deposition from boranes.—73-12751
**Lee, Sung-Han** See Kim, Song-Han
**Lee, Sung-Ho; Chae, Kwang-Pyo; Hong, Seok-Won; Lee, Y.-H.**
Mossbauer study of $Y_{3-x}Fe_{5+x}O_{12}$ and $Y_{3-x}In_xFe_5O_{12}$ ($x$=0, 0.18, 0.33) system.—73-08673
**Lee, Sung-Ho; Choi, Seung-H.; Chung, Jin-K.**
Crystallographic and magnetic properties of $5(Fe_2O_3)$-$3(Al_2O_3)$-$(Ga_2O_3)$-(SiO) by Mossbauer effect.—73-04599
**Lee, Sung-Ik** See Han, K.-H.
**Lee, Sung-Soo; Itoh, Hideaki; Iwahara, Hiroyasu**
Fine-grained coating of vapor-grown diamond on metallic wire substrate.—73-13837
**Lee, Sung-Soo; Itoh, Hideaki; Shimura, Sadanori; Iwahara, Hiroyasu**
Distribution and morphology of diamond deposited on wire substrate by microwave plasma CVD.—73-13821
**Lee, T.-D.** See Na, J.-G.
**Lee, T.-H.** See Liew, J.-H.
**Lee, T.-K.** See Lee, Y.-S.
**Lee, T.-L.** See Wu, S.-L.
**Lee, Tae-Keun** See Jang, Jin-Wook
**Lee, Tony C.; Schmitkons, Thomas A.**
Miniature gas sensor.—73-04526; Miniature gas sensor.—73-11535
**Lee, W. C.** See Chen, M.; Cooper, S. L.; Liu, Ran; Safar, H.; Wollman, D. A.; Yu, R. C.
**Lee, W. E.** See James, P. F.
**Lee, W. Y.** See Martens, J. S.
**Lee, W.-C.; Kwon, O.; Kang, C.-S.**
Interface structures and bonding strength of $Si_3N_4$/304 stainless steel joints.—73-03606
**Lee, W.-H.** See Chen, K.
**Lee, W.-J.** See Case, Eldon D.
**Lee, W.-K.; Machino, T.; Sugihara, Tadashi**
Low-pressure and -temperature deposition of transparent conductive indium tin oxide (ITO) films by the face target sputtering (FTS) process.—73-05897
**Lee, Wen Y.** See Ahn, Byung T.
**Lee, Won-Hyuk; Hosono, Hideo; Abe, Yoshihiro**
Superconducting $Bi_2Sr_2Ca_1Cu_2O_x$ ceramics prepared via melt quenching.—73-15633
**Lee, Won-Jun** See Suh, Im-Choon
**Lee, Woo-Sung** See Park, Jin-Seong
**Lee, Woon-Hwa** See Kim, Chul-Sung
**Lee, Wu-Il** See Chung, Su-Tae
**Lee, Y. J.; Yarar, B.; Trefny, J. U.**
Synthesis of Y-Ba-Cu-O superconductors using organometallic precursors.—73-08242
**Lee, Y.-B.** See Lee, Sung-Ho; Park, H.-C.
**Lee, Y.-H.; Wu, Y.-S.; Tsai, M.-S.; Ko, H.-W.; Wung, T.-Y.**
Properties of diamond film by chemical vapor deposition.—73-09284
**Lee, Y.-M.; Berry, R. A.**
Quasi-one-dimensional analysis of the two-phase flow in a de Laval spray coating nozzle and exit plume.—73-09288
**Lee, Y.-P.** See Jeong, J.-I.
**Lee, Y.-S.** See Park, Y.-S.
**Lee, Y.-S.; Park, Y.-H.; Lee, T.-K.**
Diamond synthesis by acetylene flame.—73-12986
**Lee, Y.-T.** See Kim, Jeong-Soo
**Lee, Yang-Lae; Kim, Chang-Dae; Lim, Han-Jo; Park, H.-Y.; Kim, J.-E.; Kim, W.-T.**
Optical absorption of $Co^{2+}$ ions in $HgGa_{2-x}In_xSe_4$ solid solution.—73-07702
**Lee, Ye-Seung** See Park, Jin-Seong
**Lee, Yeh-Chi; Wei, Wen-Cheng**
Dispersion and high-pressure filtration of zircon/alumina composite slurry.—73-05745
**Lee, Yih-Shing** See Yen, Ann-Jeng
**Lee, Yong-Keun** See Lee, Jong-Ho; Yoon, Tae-Ill
**Lee, Yong-Min** See Cho, Tae-Hwan
**Leekina, M. M.** See Moskvin, A. S.
**Leelaprute, S.** See Suryanarayanan, R.
**Leers, K.-J.** See Klischat, Hans-Jurgen
**Lees, J. S.** See Bickley, R. I.; King, P. J.; Kirk, A.
**Lees, J.** See El-Abbar, A. A.
**Lefebvre, D.** See Schille, J. P.
**Lefebvre, I.** See Albanesi, E. A.
**Lefebvre, P.** See Christol, P.
**Lefevre-Seguin, V.** See Collot, L.
**Lefkow, A. R.** See Wang, Y.
**Leflem, G.** See Alami, M.; Boutinaud, P.
**Legein, C.; Buzare, J. Y.; Jacoboni, C.**
EPR structural investigations of transition metal fluoride glasses (TMFG).—73-06912
**Leggett, A. J.** See Wollman, D. A.
**Leggieri, G.** See D'Anna, F.; Mihailescu, I. N.
**Legoshin, G. M.**
Efficiency in glass quenching.—73-00620; Performance criterion for glass heat treatment.—73-00678; Quenching diagram of glass.—73-07166
**LeGoues, B. A.** See Powell, A. R.
**Legoux, J. G.; Dallaire, S.; Larouche, D.; Guillet, A.**
Performance of a copper-based composite coating for steel casting applications.—73-06837
**Legoux, J. G.; Dallaire, S.**
Copper-$TiB_2$ coatings obtained by plasma spraying reactive micropellets.—73-06761
**Legros, N.** See Gauvin, R.
**Legros, R.** See Gillot, B.
**Lehan, J. P.; Sargent, R. B.; Klinger, R. E.**
High-rate aluminum oxide deposition by Meta Mode reactive sputtering.—73-13087
**Lehman, Arno** See Ilg, Matthias
**Lehman, R. L.**
Low-temperature crack healing in heavy metal fluoride glass.—73-14218
**Lehmann, Annemarie**
Information about the microcrystalline structure from the ir reflection spectra of thin uv optical films: $NdF_3$ and $MgF_2$.—73-08641
**Lehmann, Joachim** See Hucke, Hans-Dieter
**Lehoczky, Sandor L.** See Gillier, Donald C.
**Lehto, Esko O.** See Laakso, Tapio
**Lehto, Jukka** See Harjula, Risto
**Lehuede, P.** See Chopinet, M.-H.
**Lei, C.** See Rogers, T. J.
**Lei, Jih-Fen**
Protective coats for high-temperature strain gages.—73-13888
**Lei, T.-C.** See Ge, Q.-L.; Lin, G.-Y.; Zhu, W.-Z.
**Lei, T.-F.** See Wu, S.-L.
**Lei, T.; Ludwig, K. F., Jr.; Moustakas, Theodore D.**
Heteroepitaxy, polymorphism, and faulting in GaN thin films on silicon and sapphire substrates.—73-13086
**Lei, Tien-Shou** See Kao, Chin-Hai
**Leibenguth, R. E.** See Wiesenfeld, Jay M.
**Leiberich, A.** See Robertson, A., Jr.

**Leiderer, P.** See Bechinger, C.

**Leiderer, P.; Boneberg, J.; Brull, P.; Bujok, V.; Herminghaus, S.**
Nucleation and growth of a flux instability in superconducting $YBa_2Cu_3O_{7-\delta}$ films.—73-15569

**Leigh, M.** See O'Reilly, K. P. J.

**Leighton, R. A.** See Whitaker, A.

**Leisching, P.** See Lohner, A.

**Leissler, George** See Miller, Robert A.

**Leissner, J.; Fuchs, D. R.**
Glass sensor study to estimate the corrosive stesses at the stained glass windows of Santa Maria del Mar, Barcelona[, Spain].—73-13669

**Leistiko, Otto** See Clausen, Thomas

**Leitenstorfer, A.** See Lohner, A.

**Leith, Y. P.** See Pilon, L. P.

**Leiva, E.** See Avalle, L.

**Lejbl, Ladislav** See Rybarikova, Ludmila

**Lejda, W.** See Stoch, A.

**Lejeune, M.** See Bossler, F.

**Lejus, A. M.** See Gourlaouen, V.

**Lek, A.-W.** See Zhang, D.-H.

**Lekawat, L.; Spratt, Geoffrey W. D.; Kryder, M. H.**
Erasure and noise study in barium ferrite tape media.—73-04610

**Leksono, M.** See Shinar, R.

**Lele, P. G.** See Gore, V. K.; Khadilkar, S. A.

**Lelechenko, V. P.** See Vovk, O. V.

**Lelikov, Yu. S.; Rebane, Yu. T.; Ruvimov, S. S.**
Classification of dislocation-related luminescence lines on silicon.—73-17073

**Lelogeais, M.** See Ignat, M.

**Lemaitre, Jacques** See Chen, Zhien-Chi

**Lemanov, V. V.** See Zaitseva, N. V.

**Lembke, U.** See Kranold, R.

**Lembke, U.; Bruckner, Rolf; Kranold, R.; Bohlmann, K.**
Phase separation and crystallization in glasses [investigated] by means of small-angle scattering with varying contrast.—73-14068

**Lemelson, Jerome**
Ball and roller bearings and bearing components.—73-12447

**Lemeshko, V. V.; Obukhovskii, V. V.; Stoyanov, A. V.**
Photoproduction of needlelike domains in lithium niobate crystals.—73-17181

**Lemoine, F.; Grevey, D. F.; Vastra-Bobin, I.; Vannes, A. B.**
Laser-cladding cross-section modeling obtained by metallic powder spraying into an Nd:YAG laser beam.—73-15007

**Lemonias, P. J.** See Hoke, W. E.

**Lemons, Jack E.**
Biomaterials for dental surgical implants.—73-15919

**Lemos, V.; Inoko, C. K.; Cerdeira, F.; Ritter, T.; Weinstein, B. A.**
Pressure-induced resonant Raman scattering in an $In_xGa_{1-x}As/GaAs$ strained-layer superlattice.—73-11403

**Lemperiere, G.** See Cavaleiro, A.

**Lenagard, N.** See Suryanarayanan, R.

**Lenchyshyn, L. C.** See Sturm, J. C.

**Lengauer, Christian L.** See Gutzov, Stoyan

**Lengel, G.; Wilkins, R.; Brown, G.; Weimer, M.**
Tunneling microscopy of point defects on GaAs(110).—73-11490

**Lengeler, Bruno** See Huppauff, Martin

**Lenglet, M.** See Guillamet, R.; Hannoyer, B.

**Lenhart, Armin** See Wischnat, Volker

**Lenk, Reinhard**
Hot casting of pressureless-sintered silicon carbide ceramics—the method.—73-05846

**Lennard, W. N.** See Huang, L. J.

**Lenoe, E. M.; Beyers, J. N.**
Tensile strength of chemical vapor deposited silicon carbide fibers.—73-06537

**Lentes, F.-T.; Becker, H.-J.**
Automatic detection of small inclusions in samples of optical glass.—73-01763

**Lentine, A. L.** See D'Asaro, L. D.

**Leo, G.** See Pasimeni, L.

**Leo, G.; Drenten, R. R.; Jongerius, M. J.**
Cherenkov second harmonic generation in multilayer waveguide structures.—73-01395

**Leo, K.** See Stephens, D. J.; Zettler, J.-T.

**Leofanti, G.** See Zecchina, A.

**Leon, B.** See Fernandez, D.; Gonzalez, P.

**Leon, M.** See Diaz, R.

**Leon, M.; Merino, J. M.; Martin de Vidales, J. L.**
Comparative study of the crystal structure of synthesized $CuGa_{1-x}In_xTe_2$ compounds.—73-16058

**Leon, R.** See Dreszer, P.; Yu, Kin-Man

**Leonard, D.** See Pond, K.; Wang, X.-S.

**Leonard, John F.**
Method of wet coating a ceramic substrate with a liquid suspension of metallic particles and binder applying similar dry metallic particles onto the wet surface, then drying and heat treating the article.—73-13920

**Leonard, M.** See Gong, J. R.

**Leonard, S. R.; Snyder, B. S.; Brewer, L.; Stacy, A. M.**
Structure determination [by powder XRD] of two new ternary oxides: $Ti_3PdO$ and $Ti_4Pd_2O$.—73-02460

**Leone, Edgar A.** See Van Weeren, Remco

**Leone, S. R.** See Campos, Francis X.

**Leonelli, C.** See Barbieri, Luisa; Corradi, Anna Bonamartini

**Leonelli, R.** See Amtout, A.; Tao, Y.

**Leong, J. Y.** See Pavelescu, C.

**Leong, W. Y.** See Nayar, V.

**Leong, Y. K.; Healy, Thomas W.; Boger, D. V.**
Surface chemistry and rheology of $ZrO_2$ suspensions containing polyacrylate: effects of molecular weight [MW] and $ZrO_2$ surface area.—73-09345

**Leonov, V. G.** See Afonina, G. A.; Mosin, Yu. M.

**Leonov, V. G.; Mosin, Yu. M.**
Structure evolution in thermoplastic slips based on aluminum nitride.—73-17014

**Leonyuk, L. I.; Pedyash, M. V.; Petrov, D. M.**
Single-particle tunneling in BiPbSrCaCuO (2:2:1:2 and 2:2:2:3 phases).—73-08197

**Leonyuk, L. I.; Rakhimov, H. T.; Sethupathi, K.**
Resonance structure in *I-V* characteristics of break junctions based on Bi-Sr-Ca-Cu-O:Pb.—73-08190

**Leonyuk, L.** See Babonas, G.-J.; Dagys, R.

**LePage, Y.; Bordet, P.; Marezio, M.**
Valence ordering in $V_2O_3$ below 120 K.—73-02534

**Lepienski, C. M.; Giacometti, J. A.; Leal Ferreira, G. F.;**

**Freire, F. L., Jr.; Achete, C. A.**
Electric field distribution and near-surface modification in soda-lime glass submitted to a dc potential.—73-07023

**Lepore, M.** See Cingolani, R.; Tommasi, R.

**Lepoutre, F.**
Thermal and electronic diffusion close to a grain boundary.—73-08449

**Leppa-Aho, J.; Valkonen, J.**
Crystal structure of neodymium and europium chromate heptahydrate: synthesis, infrared spectra, and thermal behavior of lanthanoid chromate heptahydrates, $[Ln_2(CrO_4)_3(H_2O)_5]\cdot 2H_2O$ (Ln=La, Pr, Nd, Sm, Eu, Gd).—73-02203

**Leppavuol, S.** See Zhang, Hong-Xue

**Leppert, Juergen; Rossner, Wolfgang**
Method for producing a scintillator ceramic.—73-12378

**Lepre, Anne** See Bensted, John

**Leray, J. L.** See Herve, D.

**Lerch, Bradley A.; Halford, Gary R.**
Fully reversed fatigue of a Ti MMC.—73-10234

**Lerch, M.; Boysen, H.; Neder, R.; Frey, F.; Laqua, W.**
Neutron scattering investigation of the high-temperature phase transition in $NiTiO_3$.—73-12636

**Leriche, A.** See Thierry, B.

**Lerinman, N. K.** See Tsidil'kovskii, I. M.

**Lerma, J. R.; Marquez, H.; Rincon, J. M.**
Fabrication and characterization of optical waveguides in glass by diffusion of silver films.—73-14184

**Leroux, G.** See Maaref, M.

**Leroux, Roland; Thurk, Jurgen; Muller, Vera**
Process for producing decorated glass-ceramic articles with treatment with an acid prior to decorating and devitrifying.—73-03428

**Lesage, Jean-Luc** See Petitcollin, Jean-Marc

**Lesher, H. D.** See Newkirk, Marc S.

**Lesher, H. D.; Dwivedi, Ratnesh K.; Goldberg, Perry B.**
Methods of producing ceramic and ceramic composite bodies.—73-05000

**Lesher, H. D.; Kennedy, Christopher R.; White, Danny R.; Urquhart, Andrew W.**
Method of making ceramic composites.—73-00289

**Leshina, V. A.** See Solov'ev, V. I.

**Leskela, Markku** See Ritala, Mikko

**Lesko, John** See Elahi, Mehran

**Lespade, Pierre** See Fabre, A.

**Lespade, Pierre; Guette, Alain; Menessier, Erik; Pailler, Rene**
Heat treatment method for silicon- and carbon-containing ceramic fibers and fibers of the same kind with a laminated structure.—73-01856

**Lessar, Joseph F.** See Taylor, William J.

**Lessard, M.; Chaallal, O.; Aitcin, Pierre-Claude**
Testing high-strength concrete compressive strength.—73-13788

**Lessard, Roger A.** See Islam, D.

**Lessor, D. L.; Duke, C. B.; Kahn, A.; Ford, W. K.**
Ionicity dependence of surface bond lengths on the (110) cleavage faces of isoelectronic zinc blende structure compound semiconductors: GaP, ZnS, and CuCl.—73-08649

**Lester, C. N.** See Hill, W. F.

**Lester, George R.**
Catalyst for destruction of organohalogen compounds.—73-12342

**Lester, L.** See Ballingall, J. M.; Gupta, S.

**Lester, S. D.** See Houng, Yu-Min

**Lesuer, D. R.** See Syn, C. K.

**Letemps, Bernard; Mauri, Cesar**
Process and device for the production of curved glass sheets.—73-00755

**Lethiecq, M.** See Feuillard, G.

**Letho, J. J. Z.** See Guyomard, D.

**Letourneux, J. P.** See Bayoux, J. P.

**Letov, A. N.** See Utenkov, A. F.

**Lettau, C.** See Wendel, M.

**Leture, Phillipe J. A. M.; Dauger, Alain; Prassas, Michel**
Ultrathin zircon coating and membrane.—73-12407

**Leuchtner, R. E.; Grabowski, K. S.; Chrisey, D. B.; Horwitz, J. S.**
Filament-assisted pulsed laser deposition of epitaxial $PbZr_xTi_{1-x}O_3$ films: morphological and electrical characterization.—73-11579

**Leung, Eddie M.** See Bailey, Richard E.

**Leung, O. S.** See Reimanis, Ivar E.

**Leung, Roger Y.** See Gonczy, Stephen T.; Yu, S. H.

**Leung, Roger Y.; Gonczy, Stephen T.; Shum, Ming S.; Zupancic, Joseph J.**
Carbon-containing black glass monoliths.—73-14535

**Leung, Roger Y.; Gonczy, Stephen T.; Shum, Ming S.**
Carbon-containing black glass monoliths.—73-00728

**Leung, Roger Y.; Gonczy, Stephen T.; Yuhas, Donald E.; Groppi, David P.**
Fiber-reinforced glass composite for protecting polymeric substrates.—73-00731

**Leung, Roger Y.; Gonczy, Stephen T.**
Ceramic fiber-reinforced silicon carboxide composite with adjustable dielectric properties.—73-14681

**Leung, Roger Y.; Nebo, Jon F.; Gonczy, Stephen T.**
Silicon oxycarbonitride by pyrolysis of polycyclosiloxanes in ammonia.—73-14559

**Leung, Roger Y.; Sikonia, John G.; Gonczy, Stephen T.**
Black glass-ceramic from rapid pyrolysis in oxygen-containing atmospheres.—73-03905

**Leung, Roger Y.; Stranford, Gerald T.; Gonczy, Stephen T.**
High-flexural-strength ceramic fiber-reinforced silicon carboxide composite.—73-03931

**Leung, Roger Y.; Weyeneth, Bryan A.**
Coating for protecting a carbon-carbon composite from oxidative degradation.—73-03913

**Leung, Roger Y.**
Silicon carboxide fibers.—73-03966

**Leusmann, H.-U.**
Optimization of firing technology in a tunnel kiln for firing super-duty refractories by direct automatic control of the oxygen content.—73-10749

**Leuwerink, Theo H. P.** See Den Exter, Peter

**Lev, L. C.; Argon, A. S.**
Development of oxide coatings for matching oxide fiber–oxide matrix composites.—73-16706

**Lev, Ovadia** See Glezer, Victor

**Levanovich, V. N.** See Antonenko, V. I.

**Levashov, E. A.** See Padyukov, K. L.

**Levashov, E. A.; Bogatov, Yu. V.; Rogachev, A. S.**
Regularities of structure formation of synthetic hard tool materials at SHS compaction.—73-13894

**Levasseur, A.** See Berger, R.; Menetrier, M.; Rao, K. J.; Shastry, M. C. R.

**Levchenko, G. G.** See D'yakonov, V. P.; Fita, I. M.

**Levchenko, G. G.; Pashchenko, A. V.; D'yakonov, V. P.**
Superconducting state of $GdBa_2Cu_3O_{6+\delta}$ single crystals ($\delta$=0.56; 0.75).—73-08224

**Levchenko, L. V.** See Sinyaev, V. A.

**Levchenko, M. E.** See Kumzerov, Yu. A.

**Leve, A.** See Poignant, H.

**Levedakis, Dimitris A.** See Raupp, Gregory B.

**Levelut, A.** See Doussineau, F.

**Levenson, L. L.** See Huffman, Maria

**Levenson, L. L.; Stan, M. A.; Bhasin, Kul B.**
Properties of large area $ErBa_2Cu_3O_{7-\delta}$ thin films deposited by ionized cluster beams.—73-01642

**Levenspiel, Octave** See Jovanovic, Zoran

**Leventouri, Theodora; Medina, F. D.; Landreth, B. D.**
Effect of partially oriented precursors in the melt-textured growth of $YBa_2Cu_3O_{6+\delta}$.—73-08035

**Levet, J. C.** See Saint-Paul, M.

**Levi, Carlos G.** See Balmer, Mari Lou; Mackin, T. J.

**Levi-Setti, R.** See Soni, K. K.

**Levien, Robin**
Novel ceramic design techniques, craft, and computers.—73-03424

**Levin, A. A.**
Crystal structure of holmium aluminate, $HoAlO_3$.—73-16084

**Levin, A. N.** See Udovenko, A. A.

**Levin, E. M.; Pustovit, A. V.; Sinyushko, V. G.; Bodak, O. I.; Stets, I. N.**
Magnetism and electron transport properties of mixed valence $CeMn_{2-x}Si_{2+x}$ crystals [$(0.1\le x\le 0.25)$].—73-16533

**Levin, M.; Karisson, B.**
Fatigue behavior of a Saffil-reinforced aluminum alloy (AA6061).—73-03287

**Levin, S. V.** See Balankin, A. S.

**Levine, B. F.** See Zussman, A.

**Levine, Stanley R.** See Bansal, Narottam P.

**Levinshtein, M. E.** See D'yakonova, N. V.; Gusinskii, G. M.

**Levinson, Lionel M.; Hirano, Shinichi**
Ceramic Transactions, Volume 41: Grain Boundaries and Interfacial Phenomena in Electronic Ceramics.—73-17521

**Levinson, Lionel M.; Schultz, William N.**
Cryogenic behavior of ZnO varistors.—73-11128

**Levinson, Y. B.** See Smith, G. O.

**Levit, A. D.** See Georgobiani, A. N.

**Levitin, L. Ya.** See Pankova, N. A.; Savina, I. M.

**Levitin, R. Z.** See Hadjiiskii, Yu. A.; Zoubkova, Ya.

**Levitskii, I. A.** See Dyatlova, E. M.

**Levkoff, J.** See Robertson, A., Jr.

**Levoni, Gilda**
Structure of the Italian ceramic machinery industry.—73-17504

**Levshin, N. L.; Poroikov, S. Yu.**
Effect of local coulomb fields on semiconductor-metal phase transition in $VO_2$ films.—73-01135

**Levy, A.** See Falck, J. P.

**Levy, D. H.; Gleason, K. K.**
Detection of hydrogen in bulk and thin-film silicon dioxide by hydrogen nuclear magnetic resonance.—73-06204

**Levy, F.** See Taguchi, I.; Tang, H.

**Levy, M.** See Scotti, C.

**Levy, R.** See Netiksis, V.

**Lewandowski, John J.** See Hunt, Warren H., Jr.; Rigney, Joseph D.

**Lewandowski-Kanas, Anna** See Rajczyk, Krystyna

**Leweringhaus, Manfred; Benke, Laszlo; Kemp, Ottfried**
Process and device for shaping a gob.—73-00754

**Lewinsohn, Charles A.** See Strait, S. Jared

**Lewinsohn, Charles A.; Bakis, Charles E.; Tressler, Richard E.**
Microstructural influences on the creep behavior of CVD silicon carbide monofilaments.—73-09479

**Lewinsohn, L. A.**
Hybrid whisker-fiber-reinforced glass-matrix composites with improved transverse toughness.—73-10447

**Lewis, Albert** See Kottnauer, Cenek A.

**Lewis, B. G.** See Moukwa, M.

**Lewis, Jennifer A.; Boyer, Michelle; Bentz, Dale P.**
Binder distribution in macro-defect-free cements: relation between percolative properties and moisture absorption kinetics—correction.—73-06628; Binder distribution in macro-defect-free cements: relation between percolative properties and moisture absorption kinetics.—73-03437

**Lewis, Jennifer A.; Cima, Michael J.; Rhine, Wendell E.**
Direct observation of preceramic and organic binder decomposition in 2-D model microstructure.—73-13388
**Lewis, Jennifer A.; Kriven, Waltraud M.**
Microstructure–property relationships in macrodefect-free cement.—73-06689
**Lewis, M. H.** See Pharaoh, M. W.; Razzell, A. G.
**Lewis, M. H.; Daniel, A. M.; Chamberlain, A.**
Microstructure-property relationships in silicate-matrix composites.—73-03175
**Lewis, M. H.**
SiAlON's and silicon nitrides: microstructural design and performance.—73-06281
**Lewis, Martin H.**
Environmental regulations of the manufacture and use of cement-based products.—73-03466
**Lewis, Michele A.; Fischer, Donald F.; Smith, Londa J.**
Salt-occluded zeolites as an immobilization matrix for chloride waste salt.—73-01757
**Lewis, N. J.** See Bulat, E. S.
**Lewis, R. J.**
Total quality.—73-10610
**Lewis, W. A.** See Johnson, A. C.
**Lewkebandara, Tilak S.** See Winter, Charles H.
**Lewoncyuk, S.** See Beaurepaire, E.
**Lex, Don**
In-line ratiometric turbidimeters are highly accurate, easy to use.—73-05057
**Leyland, A.; Stevenson, P. R.; Matthews, A.**
Tribological performance of plasma-treated and -coated surfaces.—73-10293
**Leysen, R.** See Weyten, H
**Lezal, Dimitrij** See Konak, Karel
**Lezal, Dimitrij; Kasik, Ivan; Petrovska, B.; Pospisilova, M.**
Fibers for energy power delivery and chemical sensors.—73-14187
**Lezal, Dimitrij; Konak, Karel; Mariani, Emil**
Electric and dielectric properties of $ZrF_4$-$BaF_2$-$LaF_3$ glass.—73-10434
**Li Zhan-Cheng,** See Cui, Si-Cong
**Li, A. I.** See Krylov, B. A.
**Li, Ai-Kang** See Fu, Chen-Tsu
**Li, B. R.** See Zhang, J. L.
**Li, B.** See Li, J.
**Li, B.-S.** See Shi, J.-L.
**Li, Bao-Qi; Holloway, Paul H.**
Regrowth of GaAs at the Au-Ge-Ga/GaAs interface under an As flux.—73-01301
**Li, Bao-Shun** See Guo, Jing-Kun
**Li, C. W.** See Marrero, Madelyn
**Li, C. Y.** See Wilson, M. T.
**Li, C.** See Chen, J.; Fowler, B.; Lian, S.; Moncorge, Richard
**Li, C.-H.** See Lii, K.-H.
**Li, C.-S.** See Yang, F.-L.
**Li, Ce-Lei**
Present state, tendency, and future of utilization of fly ash in China.—73-08498
**Li, Cheng-Chung** See Kim, Hong-Koo
**Li, Cheng-Fu** See Sun, Yang
**Li, Chi-Tang** See Freeman, Harvey A.
**Li, Chien-Wei; Gasdaska, Charles J.; Goldacker, Jeffrey; Lui, Siu-Ching**
Damage resistance of in situ reinforced [ISR] silicon nitride.—73-06367
**Li, Ching-Hsien; Mancini, Karen; Robinson, Gilbert C.**
Inproved casting slip properties with extended particle size distribution and change in deflocculation.—73-08344; Improved casting slip properties.—73-15730
**Li, Chou-H.**
Ceramic bonding method.—73-00279
**Li, D.** See Chen, Ming-Y.
**Li, Da-Pong** See Sun, Shu-Zhen
**Li, De-Xin** See Ling, Qi-Fen
**Li, De-Yu; O'Conner, Brian H.; Chen, Qi-Tao; Zadnik, Marjan G.**
Quantitative powder X-ray diffractometry phase analysis of silicon nitride materials by a multiline, mean-normalized-intensity [MNI] method.—73-16284
**Li, Dien; Bancroft, G. M.; Kasrai, Masoud; Fleet, M. E.; Feng, X. H.; Tan, K. H.**
High-resolution Si *K*- and *L* 2, 3-edge XANES of α-quartz and stishovite.—73-16167
**Li, Dong; Chung, Yip-Wah; Wong, Ming-Show; Sproul, W. D.**
Nanoindentation studies of ultrahigh strength carbon nitride thin films.—73-08923
**Li, E. Herbert; Weiss, Bernard L.**
Analytical solution of subbands and absorption coefficients of AlGaAs-GaAs hyperbolic quantum wells.—73-14771
**Li, F.** See Susa, M.
**Li, F.-S.** See Sun, Ji-Jun
**Li, Fan-Qing** See Wu, Wen-Bin
**Li, Fei-Liu** See Zhang, Xi-Nian
**Li, Feng-Ying** See Manghnani, M. H.
**Li, G** See Chen, J.
**Li, Gan-Sheng** See Zhuang, Jian
**Li, Guang-Hui** See Yang, Xing-Hua
**Li, Guang-Ming; Nogami, Masayuki; Abe, Yoshihiro**
Preparation by a sol-gel process of borosilicate glasses containing microcrystals of tellurium and zinc telluride.—73-14473
**Li, Guang-Ping** See Chen, Lu-Bin
**Li, Gui-Cai**
High whiteness opalescent glaze for once-fired stoneware.—73-10853
**Li, Gui-Jun** See Li, Yi-Jie
**Li, Gui-Lan; Zhou, Guo-Sheng**
Factors influencing fluidity of hot injection molding slips.—73-12028
**Li, Guo-Dong** See Ling, Qi-Fen
**Li, Guo-Yi** See Li, Jun-Suo
**Li, Guo-Zhen** See Guo, Yan-Yi; Yang, Yu
**Li, H. P.; Sekhar, Jainagesh A.**
Processing maps for the micropyretic synthesis of structural composites and intermetallics.—73-05997
**Li, H. S.** See Givord, D.
**Li, H. S.; Karunasiri, R. P. G.; Chen, Y. W.; Wang, K. L.**
Electron intersubband normal incidence absorption in InGaAs/GaAs quantum wells.—73-11185
**Li, H. Y.** See Acar, Y. B.
**Li, H.-M.** See Zhang, D.-H.
**Li, Hai-Hong** See Sun, Zhi-Jian
**Li, Hai-Ping** See Gao, Xiao-Hui
**Li, Han-Liang** See Shen, Ding-Kun
**Li, He-Yi; Gale, Robert J.**
Hydraulic and electroosmotic flow through silica capillaries.—73-08882
**Li, Heng-De** See He, Xiao-Ming
**Li, Hong-Shuo** See Cadogan, J. M.
**Li, Hong-Shuo; Cadogan, J. M.**
Origin of the anomalous temperature dependence of the Nd sublattice magnetization in $Nd_2Fe_{14}B$.—73-01478
**Li, Hong-Shuo; Cadogan, J. M.**
Variation of crystal-field coefficients with carbon content in the $Sm_2Fe_{17}C_{3-\delta}$ series of compounds.—73-09005
**Li, Hong-Xin; Davis, Mark E.**
Further studies on aluminophosphate molecular sieves: I. $AlPO_4$-$H_2$: a hydrated aluminophosphate molecular sieve.—73-12593
**Li, Hong; Suematsu, Hisayuki; Iseki, Takayoshi; Bradt, Richard C.**
Microhardness anisotropy and the indentation load/size effect in MgO·x$Al_2O_3$ single crystals.—73-02644
**Li, Hua** See Chambers, S. A.
**Li, J. F.; Bhalla, Amar S.; Gross, L. E.**
Temperature sensitvity of the optical constants of $BiVO_4$.—73-02703
**Li, J. G.**
Kinetics of wetting and spreading of Cu-Ti alloys on alumina and glassy carbon substrates.—73-03613
**Li, J. P.** See Steckl, A. J.
**Li, J. P.; Yih, P. H.; Steckl, A. J.**
Thickness determination of SiC-on-Si thin films by anisotropic reactive ion etching and preferential wet etching.—73-04179
**Li, J.** See Li, Yi-Jie; Xiong, Guang-Cheng; Zhu, J.-S.
**Li, J.-H.** See Gao, Q.-J.; Ning, X.-G.
**Li, J.-N.** See Chuang, Y.-C.
**Li, J.-W.; Su, Y.-K.; Yokoyama, M.**
Constructions and optical characteristics of multicolor or full-color ACTFEL display devices.—73-16427
**Li, J.-X.; Matsuo, Yohtaro; Kimura, Shiushichi**
Composition and microstructure of CVD-C, SiC coating on SiC fiber.—73-03128; Improvement of thermal stability of SiC fiber by CVD-C, SiC coating.—73-02861; Role of fiber coating on SiC fiber-reinforced alumina composite.—73-05631; Role of fiber coating on SiC fiber-reinforced alumina composite.—73-13585
**Li, J.; Li, B.; Wen, J.-K.; Wang, H.-F.**
Sensitization of $Nd^{3+}$ luminescence by $Cr^{3+}$ in NdMgO:$LiNbO_3$ crystals.—73-05637
**Li, Jia-Rong** See Li, Xing-Jiao
**Li, Jia-Sheng** See Wang, Lei-Ming
**Li, Jia-Zhi** See Bao, Zhi-Qin; Shen, Ju-Yun; Zou, Xue-Lu
**Li, Jia; Zhang, Zhan; Ma, Li-Ying**
Preparation and characterization of polycrystalline diamond films and epitaxial diamond films.—73-05958
**Li, Jian** See Wang, Dong-Fang
**Li, Jian-Bao** See Huang, Yong
**Li, Jian-Fei** See Liu, Yu
**Li, Jian-Gou** See Hermansson, Leif
**Li, Jian-Guo**
Wettability of SiC by liquid Sn and binary Sn-Si alloys.—73-03664; Wetting of titanium carbide by molten metals.—73-03666; Wetting, adhesion, and electronic structure of metal/ceramic interfaces: a comparison with metal-semiconductor Schottky contacts.—73-03667
**Li, Jian-Hua** See Dong, Ming-Li
**Li, Jian-Min**
Opalescent glaze of raw material for stoneware.—73-10873
**Li, Jian-Ping** See Yang, Wan-Ming
**Li, Jian-Qi; Yada, Keiji; Zhou, Xing-Jiang; Li, Lin; Zhao, Zhong-Xian**
Atomic ordering in an infinite-layer compound $Sr_{0.85}Nd_{0.15}CuO_2$ studied by transmission electron microscopy.—73-15394
**Li, Jian-Qi; Zhu, W.-J.; Zhao, Zhong-Xian; Yin, D.-L.**
Incommensurable modulated structure in $YSr_2Cu_{2.5}B_{0.5}O_y$.—73-04742
**Li, Jian-Quan** See Xu, Wen-Yang
**Li, Jian-Quan; Liu, Guang-Huan; Xu, Wen-Yang; Ma, Q.-A.**
Zeolite synthesis in the system pentaerythritol-$Na_2SO_4$-$Na_2O$-$SiO_2$-$Al_2O_3$-$CH_3OH$.—73-06136
**Li, Jie** See Gao, Xiao-Hui; Xiong, Guang-Cheng
**Li, Jie-Fang** See Viehland, Dwight
**Li, Jin-Min; Guo, Li-Hui; Zhang, Gong-Li**
Calculation of heterojunction conduction band for a field-assisted InP/InGaAsP/InP semiconductor photocathode.—73-11089
**Li, Jing-Feng; Kawasaki, Akira; Watanabe, Ryuzo**
Effect of ball-milling time for powder mixing of the thermomechanical properties of SiC-AlN system ceramics.—73-05753
**Li, Jing-Feng; Nishio, Noriyuki**
Effect of purity on the erosion of sintered alumina.—73-09579
**Li, Jing-Wei** See Yi, H.-R.
**Li, Jun-Lin** See Li, Li
**Li, Jun-Suo; Xu, Xue-Ying; Li, Guo-Yi**
MgO-MgO·$Al_2O_3$-C brick.—73-10743
**Li, K.-H.** See Tsai, C.
**Li, Kai-Zuo**
Development of black glazes based on Fe-Mn system.—73-07242
**Li, Kin; Johnson, Joseph E.; Aker, Bruce W.**
High-responsivity $YBa_2Cu_3O_{7-\delta}$ microbolometers with fast response times.—73-01569
**Li, L. K.; Hsu, Y.; Wang, W. I.**
Molecular beam epitaxial growth of InSb on GaAs and Si for infrared detector applications.—73-11330
**Li, L.** See Wu, X.
**Li, L.; Guo, L.; Zheng, Y.; Chen, Z.**
Development of artificial biological glass-ceramic bones.—73-14348
**Li, L.; Pistoia, G.**
Secondary Li cells: I. A comparison of the behavior of cathodes based on pure and lithiated manganese oxides.—73-04163; Secondary Li cells: II. Characteristics of lithiated manganese oxides synthesized from $LiNO_3$ and $MnO_2$.—73-04164
**Li, Lai-Feng; Jin, Duo; Zhan, Xi-Han**
$J_c$ behavior and the distribution of 211 particles in melt texture growth (MTG) YBCO.—73-04751
**Li, Li** See Peeters, Jozef
**Li, Li-Neng; Lian, Le-Ming; Hu, Song-Tao**
Dynamic simulation of drying process of perforated clay brick.—73-07190
**Li, Li; Li, Jun-Lin; Miao, Ping**
Fabrication of quality magnesite-chrome brick.—73-04001
**Li, Lin** See Li, Jian-Qi
**Li, Liu-Sheng; Chen, Qiu-Ping; Kang, Huai-Yun**
Development of glazed fly ash tile.—73-10818
**Li, Long-Tu** See Wu, Zhong-Lin
**Li, M.** See Eckert, J.; Hu, Y. Z.; Ji, Yang-Yang
**Li, M.-F.** See Feng, Y.-P.
**Li, M.; Hu, Y. Z.; Wall, J.; Conrad, K.; Irene, E. A.**
Ellipsometry investigation of nucleation and growth of electron cyclotron resonance [ECR] plasma deposited silicon films.—73-07502
**Li, Miao-Chun** See Zhao, Ji-Zen
**Li, Min-Jun** See Liu, Wen-Chuan
**Li, Ming-Hua** See Liu, Jin-Song
**Li, Ming-Hua; Jia, Xiao-Lin; Qiang, Liang-Shen**
Characteristics of holographic memory and phase conjugate of Ce:Fe:$LiNbO_3$ crystal.—73-02557
**Li, Ming-Qiang** See Hao, Shi-Ming
**Li, Nan-Sheng**
Manufacture of sintered fly ash aggregate using sludge.—73-08497
**Li, Nan; Geng, Xiao-Mei**
Sintering of high-purity magnesite and influence of CaO.—73-13266
**Li, Nan; Ke, Chang-Ming**
Compressibility and sintering of aggregated MgO-CaO powder and the influences of adhesion of fine particles to the surface of aggregate.—73-16683
**Li, Ning-Fang; Dai, Ying; Zhou, Yi**
High-temperature oxidation resistance of SiC whisker-reinforced AlN composite.—73-06308
**Li, P.; Ohtsuki, C.; Kokubo, Tadashi; Nakanishi, Kazuki; Soga, Naohiro; Nakamura, T.**
Process of formation of bonelike apatite layer on silica gel.—73-06270
**Li, P.; Yang, Q.; Zhang, F.**
Effect of residual glassy phase in a bioactive glass-ceramic on the formation of its surface apatite layer in vitro.—73-00332
**Li, Pan-Jian; Kangasniem, Ilkka; De Groot, Klaas; Kokubo, Tadashi**
Bonelike hydroxyapatite induction by a gel-derived titania on a titanium substrate.—73-06740
**Li, Pei-Quan; Liu, Chang-Fa; Su, Mu-Zhen**
Research and application of composite mineralizer in rotary kiln.—73-10139
**Li, Ping; Chen, I-Wei; Penner-Hahn, James E.**
Effect of dopants on zirconia stabilization—an X-ray absorption study: I. Trivalent dopants.—73-05384; Effect of dopants on zirconia stabilization—an X-ray absorption study: II. Tetravalent dopants.—73-08605; Effect of dopants on zirconia stabilization—an X-ray absorption study: III. Charge-compensating dopants.—73-08606
**Li, Q.** See Chen, Kun-Ji; Tesanovic, Zlatko; Walkerhorst, A.; Xi, X.-X.
**Li, Qi** See Venkatesan, T.; Zheng, Jian-Guo
**Li, Qi; Kwon, C.; Xi, X.-X.; Bhattacharya, S.; Walkenhorst, A.; Venkatesan, T.**
Effects of dimensional crossover on flux pinning in model high-$T_c$ superconductor $YBa_2Cu_3O_7/(Pr_xY_{1-x})$- $Ba_2Cu_3O_{7-\delta}$ superlattices.—73-08043
**Li, Qin-Hai; Chen, Nai-Hong; Wang, Ke**
Juanying rock-based fine porcelain fired in low-temperature reducing flame.—73-10862
**Li, Qin-Yun** See Lu, Ya-Feng
**Li, Qing-Guo** See Xu, Bing
**Li, Qing-San; Fang, Rong-Chuan; Ma, Yu-Rong**
Optical absorption and photoluminescence of unhydrogenated amorphous carbon films.—73-05600
**Li, Qing-Xing** See Wu, Qi
**Li, Qing-You** See Huang, Run-Sheng
**Li, Qu** See Hua, Yi-Min
**Li, Rong-Hui** See Zhong, Jing-Chang
**Li, Rong-Sheng; Wen, Rui-Wu; Zhang, Wu-Yang; Quan, W.**
Preparation of highly exchanged LaHZSM-5 zeolite.—73-09263
**Li, Rong-Xiang** See Shen, De-Jiu
**Li, Ru-Chun** See Wang, Qian-Ping
**Li, Ru-Kang; Zhu, Ying-Jie; Xu, Cheng; Chen, Z.-Y.; Qian, Y.-T.; Fan, C.-G.**
Formation of a new series of 1222 layered cuprates $MSr_2(LnR)_2Cu_2O_y$ [M=Ti, Nb, Ta; Ln=Pr, Nd; R=Ce, Th].—73-02276

**Li, Rui-Feng; Xu, Wen-Yang; Wang, Jing-Zhong**
Nonaqueous synthesis: iron aluminosilicates with the ZSM-48 structure.—73-13152
**Li, Rui-Hua** See Deng, Pei-Zhen
**Li, S. C.** See Murarka, S. P.
**Li, S. C.; Murarka, S. P.; Guo, X. S.**
Water-related capacitance-voltage recovery effect in low-temperature-annealed chemical-vapor-deposited phosphosilicate (*P* glass) films.—73-10493
**Li, S. C.; Murarka, S. P.**
Electrical characteristics and hydrogen concentration of chemical-vapor-deposited silicon dioxide films: effect of water treatment.—73-12785
**Li, S. H.; Smith, S. R.; Bhattacharya, P. K.; Chung, S. W.; Mitchell, W. C.**
Deep-level transient spectroscopy and admittance spectroscopy of $Si_{1-x}Ge_xSi$ grown by gas-source molecular beam epitaxy.—73-11131
**Li, S. S.** See Ho, Pin
**Li, S.-J.** See Li, Xi
**Li, Shao-Ping** See Li, Xing-Jiao
**Li, Shen**
Dynamic spectral study of CdS in room temperature thermooptical nonlinearity.—73-11150
**Li, Shi-Pu** See Wang, Guo-Mei
**Li, T.** See Alshawa, A. K.
**Li, Tian-Ling**
Heat expansion of spodumene porcelain.—73-10852; Lithium glaze with low thermal expansion.—73-07263; Phase charge of spodumene and its function to reduce sintering shrinkage.—73-12652; Spodumene porcelain bodies with low thermal expansion.—73-10899
**Li, Ting-Kai** See Brown, Jesse J.; Shen, Zhi-Jian
**Li, Ting-Shou; Zhong, Xiang-Chong**
Thermal shock resistance of zirconia corundum mullite–silicon carbide (ZCM-SiC) composites.—73-07226
**Li, Tzuen-Ren** See Lin, Jen-Fin
**Li, Victor C.** See Hashida, Toshiyuki
**Li, Victor C.; Hashida, Toshiyuki**
Engineering ductile fracture in brittle matrix composites.—73-09590
**Li, Wang-Pei; Niou, C.-S.; Murr, L. E.**
Transport critical current densities in shock-loaded and thermally processed $YBa_2Cu_3O_7$.—73-01699
**Li, Wei-Dong** See Bao, Man-Ling
**Li, Wen-Chao** See Wang, Jin-Shu
**Li, Wen-Chao; Wang, Jian; Peng, Qiang**
Physical chemistry analysis of Jun glaze.—73-10880
**Li, Wen-Zhi** See He, Xiao-Ming
**Li, X. S.; Low, M.**
Evaluation of zirconia-toughened alumina tool inserts during machining of high-strength steel.—73-17313
**Li, X.** See Chuang, Y.-C.; Lin, D. L.; Xu, Z. R.
**Li, X.-Z.** See Templeton, T. L.
**Li, X.; Wang, W. I.; Cho, A. Y.; Sivco, D. L.**
Amphoteric doping of Si in InAlAs/InGaAs/InP(311)A heterostructures grown by molecular beam epitaxy.—73-11065
**Li, X.; Zhang, H.; Guan, J.**
Synthesis of nanocrystalline materials of composite oxides based on $BaTiO_3$ by using stearic acid-sol method.—73-17042
**Li, Xi; Zhang, Heng-Bin; Zhao, Mu-Yu; Li, S.-J.; Xu, B.-K.**
Preparation of nanocrystalline $LaFeO_3$ using a stearic acid-sol method.—73-13197
**Li, Xian-Min** See Zhou, Lei
**Li, Xiang-Min; Rigaud, Michel**
Anisotropy of the properties of magnesia-graphite refractories.—73-07196
**Li, Xiang-Ting** See Cai, Jie
**Li, Xiao-Chun** See Harrison, Carole C.
**Li, Xiao-Guang** See Meng, Jian; Wu, Wen-Bin; Xiang, Xin-Yu
**Li, Xiao-Mei; Liu, Li-Zhong; Henrich, Victor E.**
Resonant photoemission determination of the valence electronic structure of $Cr_2O_3$.—73-08723
**Li, Xiao-Ming; Shen, Hong-Guo**
Mullite-based kiln furniture materials.—73-07219
**Li, Xiao-Ming**
Development of corundum brick with low $SiO_2$ content and its applications.—73-14585
**Li, Xing-Jiao; Zheng, Fang; Zheng, Qi-Guang; Li, Jia-Rong; Li, Zai-Guang; Li, Shao-Ping**
Aluminum tungsten oxide ceramics synthesized by a high-power cw $CO_2$ laser.—73-09014; Microstructure and properties of aluminum tungsten oxide ceramics synthesized by a high-power cw $CO_2$ laser.—73-17162
**Li, Y. F.** See Chen, Z. Y.; Sheng, Zheng-Zhi
**Li, Y. Q.** See Wu, Hui
**Li, Y. Z.** See Patrin, J. C.
**Li, Y.** See Cao, Gou-Hui; Hashemi, M. M.
**Li, Y.-Z.** See Zhuang, Wei-Hua
**Li, Ya-Bo** See Langer, Dietrich W.
**Li, Ya-Li; Liang, Yong; Zheng, Fen; Hu, Zhuang-Qi**
Carbon dioxide laser synthesis of ultrafine silicon carbide powders from diethoxydimethylsilane.—73-12929
**Li, Yan-Bing; Zhao, Hui-Ling**
Application of CPD coating to drying cars.—73-12107
**Li, Yang-Hua** See Feng, Hao
**Li, Yi-Jie** See Ren, Cong-Xin
**Li, Yi-Jie; Xiong, Guang-Cheng; Gan, Zi-Zhao; Ren, Cong-Xin; Chen, Guo-Liang; Zou, Shi-Chang**
Superconducting characteristics of epitaxial growth analyses of $YBa_2Cu_3O_{7-\delta}$ thin films by direct current magnetron sputtering.—73-11914
**Li, Yi-Jie; Xiong, Guang-Cheng; Li, Gui-Jun; Li, J.; Gan, Zi-Zhao**
Heteroepitaxial growth of MgO films by dual ion beam sputtering.—73-16813
**Li, Yi-Jie; Xiong, Guang-Cheng; Lian, G.-J.; Li, J.; Gan, Z.-H.**
Epitaxial growth of MgO thin films on silicon by dual ion beam sputtering [DIBS].—73-02815
**Li, Yi; Kawa, P. M.; Youdelis, W. V.; Chao, Benjamin S.; Yamauchi, Hisao**
Preparation and characterization of radio-frequency-sputtered $Ba_2Si_2TiO_8$ thin films.—73-07911
**Li, Yi; Youdelis, W. V.; Chao, Benjamin S.; Yamauchi, Hisao**
Effect of substrate temperature on the orientations of radio-frequency-sputtered $Ba_2Si_2TiO_8$ thin films.—73-16743; Effect of substrate texture on orientations of rf sputtered $Ba_2Si_2TiO_8$ [BST] thin films.—73-01405
**Li, Ying** See He, Dai-Ying
**Li, Ying-Jeng James; Monteith, Jennifer; Whittingham, M. Stanley**
Crystallization of $AgTi_2(PO_4)_3$ and related compounds close to ambient conditions.—73-05723
**Li, Ying-Sing; Lu, Wei-Jie; Collins, W. E.**
Raman spectroscopic study on $ZrO_2$-$TiO_2$ using $MoO_3$ as molecular probe.—73-02416
**Li, Ying; Yu, Li-Da; He, Dai-Ying**
Synthesis of and research on $Nd_2O_3$-$Fe_2O_3$-$Al_2O_3$ ceramic pigments.—73-10901
**Li, Yong** See Chen, Zhao-You; Liu, Shen-Sheng
**Li, Yong-Hong; Huang, Jin-Lin; Lieber, Charles M.**
Temperature dependence of the energy gap in $Bi_2Sr_2CaCu_2O_8$ superconductors by high-resolution EELS.—73-08247
**Li, Yong-Nian; Sun, Jun-Tao**
Relationship of emissivity of refractories to temperature and wavelength.—73-04019
**Li, Yong; Chen, Zhao-You**
Magnesite chrome refractories and its usage in nickel converter.—73-14601
**Li, You-Nan** See Hong, Shen-Rong
**Li, Yu-Fang** See Xin, Ying
**Li, Yu-Fen** See Qian, Shi-Xiong
**Li, Yu-Lin** See Zhao, Ming-Jun
**Li, Yu-Shu; Wang, Zheng-Ping; Du, Wei-Fang**
Nondestructive detection of acoustic emission for ceramics.—73-15825
**Li, Yu-Shu; Wang, Zheng-Ping**
Effects of mineralizer on sintering of alumina.—73-13033
**Li, Yu-Shu**
Mullite corundum ceramic material with broadening sintering temperature range.—73-13143
**Li, Yuan** See Dai, Jian-Guo
**Li, Yuan-Qiang** See Xu, Jie
**Li, Yue-Zhu** See Rowcfliff, David J.
**Li, Z. Y.** See Skanthakumar, S.; Sumarlin, I. W.
**Li, Z.** See Fang, Yue
**Li, Z.-S.; Hou, X.-Y.; Cai, W.-Z.; Wang, W.; Zhang, M.; Dong, G.-S.**
Sulfurized passivation of GaAs(100) surfaces.—73-04175
**Li, Z.; Mallener, W.; Fuerst, L.; Stover, D.; Scherberich, F.-D.**
Plasma-sprayed perovskite of the composition $La_{1-x}Sr_xMnO_{3-\delta}$: phase analysis and electrical conductivity.—73-07351
**Li, Z.; Ye, G.**
Bonding and recent progress of monolithic refractories.—73-10703
**Li, Zai-Geng** See Zhang, Lu-Ming
**Li, Zai-Geng; Ye, Guo-Tian**
Energy savings and the features of unshaped refractories.—73-14590
**Li, Zai-Guang** See Hao, Jian-Hua; Li, Xing-Jiao; Liu, Da-Ming
**Li, Zhao-Hui; Giese, Ross F.; Van Oss, Carel J.; Kerch, Helen M.; Burdette, Harold E.**
Wicking technique for determination of pore size in ceramic materials.—73-15861
**Li, Zhen-Hua; Fan, Qi-Kang; Qiu, Wen-Fa**
Gain-switching dynamics of laser diode array (LDA) end-pumped Nd:YAG lasers.—73-11218
**Li, Zhen-Xian** See Wu, Qi
**Li, Zhong-He** See Zhou, Hai-Li
**Li, Zhong-Ya** See Sun, Yang
**Li, Zhuang; Bradt, Richard C.**
Thermally induced micromechanical stresses in ceramic/ceramic composites.—73-05678
**Li, Zi-Sheng** See Qian, Zheng-Hong
**Lian, G.-J.** See Chen, J.; Li, Yi-Jie; Xiong, Guang-Cheng
**Lian, Hui-Zhen**
Effect of structure and composition on reactivity of zeolite-tuff used as blending material of portland cement.—73-13711
**Lian, Le-Ming** See Li, Li-Neng
**Lian, S.** See Fowler, B.
**Lian, S.; Fowler, B.; Krishnan, S.; Jung, L.; Li, C.; Manna, I.**
Photoenhanced chemical vapor deposition: system design consideration.—73-16898
**Lian, Ying-Wu** See Yang, Chang-Xi; Ye, Pei-Xian
**Lian, Zhong-Jun** See Tang, Shao-Qiu
**Liang, B. W.** See Chen, W. M.; Dreszer, P.
**Liang, Dah-Ben; Keshavan, Madapusi K.**
Rock bit with cobalt alloy cemented tungsten carbide inserts.—73-10346
**Liang, H.** See Jahanmir, Said
**Liang, Han-Bin K.** See Wilson, S. R.
**Liang, Jing-Kui; Zhang, Yu-Ling; Fang, Xing**
$Bi_2O_3$-$Sb_2O_3$ binary system.—73-11694
**Liang, Kai-Ming; Gu, Kou-Fen**
Transformation driving force for indentation cracking in zirconia ceramics.—73-03372
**Liang, Pei-Hui** See Shen, Qi-Min
**Liang, Qing-Shan; Yan, Kai-Fang**
Application of wear-resistant nonmetal lining to extruder barrel.—73-12109
**Liang, R. X.** See Hardy, W. N.
**Liang, R.** See Bonn, D. A.; Homes, C. C.
**Liang, S. X.; Devereux, O. F.**
Grinding of ceramic materials: a model for energy consumption and force transformation.—73-05827
**Liang, S.** See Gurary, A.; Ray-Chaudhuri, A. K.
**Liang, W. Y.** See Loram, J. W.
**Liang, Wen-Fan** See Gan, Chang-Cheng
**Liang, Yong** See Li, Ya-Li
**Liang, Zhi-Lin; Tao, Xin-Xia; Chen, Lu-Bin**
Development of high-performance $Al_2O_3$-C castable.—73-10719
**Liao, H. M.; Sodhi, R.; Coyle, Thomas W.**
Surface composition of AlN powders studied by X-ray photoelectron spectroscopy and Bremestrahlung-excited Auger electron spectroscopy.—73-16345
**Liao, I-Chi**
Method of fabricating a nitride capped MOSFET for integrated circuits.—73-01375; Nitride capped MOSFET for integrated circuits.—73-14756
**Liao, Jie-Hau; Cheng, Sheng-Long; Chen, Jiann-Horng**
Temperature characteristics of $(Pb,Sr,Ba)[(Zr, Ti)(Mn, Sb)]O_3$ piezoceramics.—73-15292
**Liao, Jin-Dai**
Development of ceramic lining materials for granulated blast-furnace slag systems.—73-10717
**Liao, Ke-Jun** See Wang, Wan-Lu
**Liao, Kin** See Elahi, Mehran; George, Eric R.
**Liao, Kin; Elahi, Mehran; Reifsnider, Kenneth L.; Goettler, R.**
Characterization of ceramic matrix composite tubes at ambient and elevated temperatures.—73-17246
**Liao, Wen-Ming; Tanaka, Nobuyuki; Shintani, Hideaki**
Bonding of porous machinable ceramic with castable glass-ceramic by the melt infiltration technique for dental applications.—73-12926
**Liao, Xin** See Chen, Zhi-Yuan
**Liao, Yan-Shun**
Modification of design of dog house in end port glass tank furnace.—73-03859
**Liaw, B. Y.** See Stacy, T.
**Liaw, Bor Yann; Raistrick, Ian D.; Huggins, Robert A.**
Thermodynamic and structural considerations of insertion reactions in lithium vanadium bronze structures.—73-02524
**Liaw, Hang M.** See De Fresart, Edouard D.
**Liaw, Ken-Whie** See Meen, Teen-Hang
**Liaw, P. K.; Saxena, A.; Schaefer, J.**
Predicting the life of high-temperature structural components in power plants.—73-13579
**Liaw, Y. K.** See McKechnie, T. N.
**Libbrecht, S.** See Gao, Z. X.
**Libera, S.** See Di Pietro, E.
**Liberman, A. B.** See Bashkirov, Sh. Sh.
**Liberman, V. S.** See Dooghin, A. V.
**Libezny, Milan** See Ohlidal, Ivan
**Licholit, I. L.** See Vlasov, Yu. G.
**Licht, C.** See Marillet, J.
**Lichtenberg, F.** See Williams, T.
**Lichtenberg, F.; Mannhart, Jochen D.; Schlom, Darrell**
Superconducting circuit elements with metallic substrate and method for manufacturing the same.—73-04872
**Lichtenthal, S. M.** See Stockman, S. A.
**Lichtenwalner, D. J.** See Auciello, O.
**Lichtenwalner, D. J.; Auciello, O.; Dat, R.; Kingon, A. I.**
Ablated flux characteristics during pulsed laser ablation deposition of multicomponent oxides.—73-12907
**Licini, J. C.** See Spector, M.
**Licoppe, C.** See Debauche, C.
**Lideikos, T.; Naudzhius, K.; Treideris, G.**
Epitaxial GaAs and InGaAs picosecond photoresistors grown by low-temperature metallorganic chemical vapor deposition technique.—73-04321
**Liden, Carl** See Andersson, Kjell
**Lidorenko, N. S.; Dashevskii, Z. M.; Ashmontas, S.**
Thermo-emf in semiconducting structures of lead chalcogenides under irradiation of short laser pulses.—73-04498
**Lieb, K. P.** See Wiarda, D.
**Lieber, Charles M.** See Li, Yong-Hong
**Liebermann, R. C.** See Liu, X.
**Liebig, H.; Staude, U.; Kiessling, B.**
Optical measurement of gob weight.—73-12052
**Liehr, M.** See Offenberg, M.
**Lierke, Rosemarie**
It was the turning wheel, and not the lathe—mold pressing and mold turning of hot glass in ancient glass vessel production.—73-09787
**Liesert, B. J. Heijmink** See Gregorkiewicz, T.
**Lieszkovszky, L.** See Basford, James A.
**Lieu, G. Z.** See McHugh, J. J.
**Lievens, Jan L.; Mortier, W. J.; Chad, Kuei-Jung**
Cation site energies for high-silica FAU-type zeolites.—73-12544
**Lievens, Jan L.; Verduijn, Johannes P.; Bons, Anton-Jan P.; Mortier, W. J.**
Cation site energies in dehydrated hexagonal faujasite (EMT).—73-12545
**Liew, J.-H.; Shui, Y.-G.; Lee, T.-H.**
Cathode performance of ACF/acetylene black hybrid electrodes for phosphoric acid fuel cell.—73-10919
**Lifanov, F. A.; Stefanovskii, S. V.; Kobelev, A. P.**
Crucible-type induction furnace for melting glass.—73-01945
**Lifanov, F. A.; Stefanovskii, S. V.; Lashchenova, T. N.**
Use of local clays for vitrification of radioactive wastes.—73-01759
**Lifanov, F. A.; Stefanovskii, S. V.; Tsveshko, O. N.**
Immobilization of radioactive ash in glass.—73-01747; Immobilization of radioactive wastes in glass.—73-01748
**Lifanov, F.** See Stefanovskii, S. V.
**Lifanov, I. I.** See Orentlikchr, L. P.
**Lifshits, E.** See Shevyakova, E. P.; Tenne, R.
**Ligeon, E.** See Hamoudi, A.

**Ligero, R. A.; Casas-Ruiz, M.; Vazquez, J.; Jimenez-Garay, R.**
Crystallization processes and glass-forming ability of a set of glassy alloys in the As-Se-Te system.—73-06899
**Lightfoot, P.** See Kim, J. S.
**Lightfoot, P.; Hriljac, J. A.; Pei, S.; Zheng, Y.; Mitchell, A. W.; Richards, D. R.**
$BaBiO_{2.5}$: a new bismuth oxide with a layered structure.—73-02147
**Lii, K.-H.** See Lee, C.-S.
**Lii, K.-H.; Chueh, B.-R.**
Synthesis and crystal structure of a new antimony(III) molybdate: $LiSbMo_2O_8$.—73-02479
**Lii, K.-H.; Li, C.-H.; Cheng, C.-Y.; Wang, S.-L.**
Hydrothermal synthesis, structure, and magnetic properties of a new polymorph of lithium vanadyl(IV) orthophosphate: ß-$LiVOPO_4$.—73-02288
**Lii, K.-H.; Tsai, H.-J.**
Hydrothermal synthesis and characterization of vanadyl(IV) hydrogen phosphate, $K_2(VO)_3(HPO_4)_4$.—73-02285; Synthesis and crystal structure of $Zn_2VO(PO_4)_2$, a vanadyl(IV) orthophosphate containing a dimer of edge-sharing $ZnO_5$ square pyramids.—73-02484
**Likholetov, Y. V.** See Hollman, E. K.
**Likhomanova, N. A.; Toropov, Yu. S.; Tretnikova, M. G.**
Exploring the feasibility of producing $CeO_2$-SrO-based solid electrolytes.—73-00968
**Likonen, J.** See Hirvonen, J.-P.; Makipaa, M.
**Lile, D.** See Barth, W.
**Liles, D. C.** See Gummow, R. J.
**Liliental-Weber, Z.** See Jager, N. D.; Lin, X. W.; Namavar, Fereydoon; Piotrowska, A.; Werner, P.; Zakharov, N. D.
**Liliental-Weber, Z.; Chen, Y.; Werner, P.; Zakharov, N. D.; Swider, W.; Washburn, J.**
Interfacial defects and morphology of InGaAs epitaxial layers grown on tilted GaAs substrates.—73-11283
**Liliental-Weber, Z.; Cheng, H. J.; Gupta, S.; Whitaker, J.; Nichols, K.; Smith, F. W.**
Structure and carrier lifetime in LT [low-temperature] GaAs.—73-15184
**Liliental-Weber, Z.; Yu, Kin-Man; Washburn, J.; Look, D. C.**
Anomalies in annealed LT [low-temperature] GaAs samples.—73-14775
**Lilov, S. K.; Yanchev, I. Y.**
Concentration distribution of SiC vapor in the crystal growth zone.—73-12953; Peculiarities of SiC crystal growth under diffusion/mechanism of vapor transfer.—73-09234
**Lilov, S. K.**
Determination of native defect concentrations and deviation from stoichiometry in silicon carbide.—73-06151; Equilibrium processes in the gas phase during silicon carbide sublimation.—73-12582
**Lim, A.-R.; Lee, K.-H.; Choh, S.-H.**
Domain wall of ferroelastic $BiVO_4$ studied by TEM.—73-03133
**Lim, Byung-C.** See Jang, Hyun-M.
**Lim, Chang-Duk** See Park, Seok-Kyun
**Lim, Dae-Ho** See Lee, Hee-Gyoun
**Lim, Dae-Soon** See Kim, Byong-Ho; Kim, Jang-Yup; Lee, Keun-Heon
**Lim, F. W.** See Low, I. M.
**Lim, Gwang-Il** See Kim, Chang-Eun
**Lim, H.** See Kim, C.-H.
**Lim, Han-Jo** See Lee, Yang-Lae
**Lim, Hun-Jin; Lee, Hong-Lim**
Interfacial characterization of ß-SiAlON powder prepared from Hadong kaolin.—73-03157
**Lim, S.-M.** See Lee, S.-M.
**Lim, S.; Ryu, J. H.; Wager, J. F.; Casas, L. M.**
Inhomogeneous dielectrics grown by plasma-enhanced chemical vapor deposition.—73-10963
**Lim, W.-Y.; Hida, M.; Sakakibara, A.; Takemoto, Y.; Yokomizo, S.**
Structural stability and mechanochemical activity of titanium nitride prepared by mechanical alloying [MA].—73-09343
**Lim, Y. S.** See Park, S.-B.
**Lim, Yong-Moo; Chang, Pok-Kie**
Pore structure of hardened alumina cement paste by water vapor sorption.—73-06696
**Lima, M. M. R. A.** See Monteiro, R. C. C.
**Limaye, Santosh** See Harshe, Girish
**Limbaugh, Nile** See Hileman, Kenneth R.
**Limin, C.; Yuanhuo, X.; Changchun, G. E.**
High-performance of new ST-type $Si_3N_4$ ceramic inserts with nonoxide additives.—73-08532
**Limmer, G.** See Russel, Christian
**Limmer, Randy A.** See Brosch, Eric J.
**Limoge, Y.** See Delaye, J. M.
**Limonov, M. F.** See Bush, A. A.; Goncharuk, I. N.
**Lin'kov, I. Yu.** See Estropov, V. V.
**Lin'kov, I. Yu.; Morozenko, Ya. V.**
Ultraviolet luminescence emitted by a single crystal of SiC-6H.—73-01361
**Lin, Bing-Xiong** See Tang, You-Qi
**Lin, Bor-Wen; Liu, Dean-Mo**
Improved mechanical properties of $Cr_3C_2$ using particulate SiC reinforcement.—73-09615
**Lin, Bor-Wen; Yano, Toyohiko; Iseki, Takayoshi**
High-temperature toughening mechanism in SiC/TiC composites.—73-05267; High-temperature toughening mechanism in SiC/TiC composites.—73-13547
**Lin, C. F.; Mohney, S. E.; Chang, Y. Austin**
Phase equilibria in the Pt-In-P system.—73-12654
**Lin, C. K.; Berndt, C. C.**
Microhardness variations in thermally sprayed coatings.—73-09647
**Lin, C. T.** See Carrington, A.
**Lin, C.-A.** See Chiao, Y.-S.
**Lin, C.-C.** See Huang, T.-S.
**Lin, C.-K. J.** See Jenkins, Michael G.
**Lin, C.-M.** See Lin, J.-N.
**Lin, Chen-Fu; Qian, Sheng-Wei; Yu, Bing**
Preparation of superfine fiber by vacuum arc plasma jet method.—73-05982
**Lin, Chen-Li** See Wang, Hsin-Fu
**Lin, Chi-Hsien; Wachtman, John B.; Sigel, George H., Jr.; Pfeffer, R. L.; Monahan, T. P.; Lareau, R. T.**
Hydrogen in rf reactive magnetron-sputtered silicon nitride films.—73-05849
**Lin, Chih-Kuang Jack; Jenkins, Michael G.; Ferber, Mattison K.**
Evaluation of tensile static, dynamic, and cyclic fatigue behavior for a HIPed silicon nitride at elevated temperatures.—73-06408
**Lin, Chin; Lu, Guo; Liu, Zun-Xiao; Zhang, Y.-F.**
Superconductivity and antiferromagnetic ordering in $(Gd,R)_{1.85}Ce_{0.15}CuO_4$ with R=Pr and Sm.—73-04812
**Lin, Ching-Yi** See Hwang, Chii-Shyang
**Lin, Chun-I** See Chen, Hsi-Kuei
**Lin, D. L.; Li, X.; Liu, Z. D.**
Internal explosion in laser ablation of superconducting targets.—73-11810
**Lin, D.-L.** See Lin, L.-B.
**Lin, Fang-Hui; Peng, Jia-Hui; Peng, Zhi-Hui**
Properties and structure of cementing materials from gypsum and fluidized furnace slag.—73-06703
**Lin, Feng-Ying** See Zhao, Zhi-Hong
**Lin, G.-C.** See Weng, C.-C.
**Lin, G.-Y.; Lei, T.-C.; Zhou, Y.; Wang, S.-X.**
Mechanical properties of $Al_2O_3$ and $Al_2O_3$+$ZrO_2$ ceramics reinforced by SiC whiskers.—73-09633; Microstructure and mechanical properties of SiC whisker-reinforced $ZrO_2$-6 mol% $Y_2O_3$ composites.—73-13424
**Lin, H. T.** See Becher, Paul F.; Rich, D. H.
**Lin, H. T.; Becher, Paul F.; Ferber, Mattison K.**
Improvement of tensile creep displacement measurements.—73-17352
**Lin, Hao-Hsiung** See Chen, Mu-Kuen
**Lin, He** See Rost, Timothy A.
**Lin, Hung-Tser** See Kao, Yao-Huang
**Lin, I-Nan** See Lee, Cheng-Kuo; Shaw, Jin-Chen; Tsai, T.-D.; Yeh, M.-H.; Yu, Chang-Feng
**Lin, J. G.; Xue, Y. Y.; Chu, C. W.; Cao, X. W.; Ho, J. C.**
Pressure effect on the superconducting transition temperature of $Dy_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$.—73-04793
**Lin, J. T.** See Chen, Da-Wun; Hwang, Ming-Yi
**Lin, J. Y.; Dissanayake, A.; Jiang, H. X.**
DX centers in $Al_{0.34}Ga_{0.66}As$ amorphous thin films.—73-14845
**Lin, J.-N.; Lin, C.-M.; Kao, C.-C.; Chang, W.-C.**
Electrical properties and degradation phenomena of glass-doped ZnO chip varistors.—73-07486
**Lin, J.-S.** See Su, Y.-L.
**Lin, J.; Chen, W.; Banerjee, S.; Lee, J.; Magee, C.**
Cobalt disilicide as dopant diffusion source for polysilicon gates in MOS devices.—73-04271
**Lin, Jane-Chyi; Cherng, Chian-Lii; Wang, Chien-Min**
Composition for making multilayer ceramic substrates and dielectric materials with low firing temperature.—73-01048
**Lin, Jen-Fin; Li, Tzuen-Ren**
Friction and wear mechanisms of multilayered plasma-sprayed ceramic coatings.—73-09604
**Lin, Jia-Ling; Wolfe, J. P.**
Bose-Einstein condensation of paraexcitons in stressed $Cu_2O$.—73-16415
**Lin, Jiu-Nun** See Wu, Tai-Bor
**Lin, Jun-Fan** See Zhang, Li-Feng
**Lin, K. W.** See Pan, Wu-Yi
**Lin, Kang-Cheng; Lee, Si-Chen**
Structural and optical properties of a-$SiN_x$:H prepared by plasma-enhanced chemical vapor deposition.—73-12882
**Lin, Kun-Chuan** See Chang, Edward Y.
**Lin, L.-B.; Mo, S.-D.; Lin, D.-L.**
Electronic structure of rutile ($TiO_2$).—73-13394
**Lin, Li-Huang** See Xu, Bing
**Lin, Li-Qing** See Gao, Yuan-Kai
**Lin, Liang-Zhen** See Xiao, Li-Ye
**Lin, Lu-Fei; Kuntz, Robert R.**
Photocatalytic hydrogenation of acetylene by molybdenum-sulfur complexes supported on $TiO_2$.—73-16563
**Lin, M. C.** See Bu, Y.
**Lin, M. E.** See Ma, Z.; Strite, S.
**Lin, M. E.; Sverdlov, B. N.; Morkoc, H.**
Growth and characterization of GaN on *c*-plane (0001)sapphire substrates by plasma-enhanced molecular beam epitaxy.—73-13078
**Lin, M.-H.** See Wang, M.-C.
**Lin, Ming-Cherng** See Lai, Mi-Cheng
**Lin, Ming-Zhu** See Meng, Xian-Ren
**Lin, Pang** See Chang, De-An
**Lin, Q.; Zhang, P.-L.; Shen, Z.-G.; Tang, D.-S.; Yan, Q.-W.; Zhao, B.-R.**
Neutron diffraction study of $YBa_2Cu_{2.7}Fe_{0.3}O_y$.—73-08140
**Lin, R.-Y.** See Hwang, C.-L.
**Lin, Ray Y.** See Blue, Craig A.; Warrier, Sunil G.
**Lin, S. H.** See Ma, H.
**Lin, S.-J.** See Chiao, Y.-S.
**Lin, Shu-Jie; Wu, Bai-Chang; Xie, Fa-Li; Chen, Chuang-Tien**
Phase matching retracing behavior for second harmonic generation in $LiB_3O_5$ crystal.—73-02662
**Lin, T. L.** See Kuo, T. C.
**Lin, Tze-Pin; Cooper, George A.; Hood, Michael**
Fatigue test on polycrystalline diamond compacts.—73-09596
**Lin, Tze-Pin; Hood, Michael; Cooper, George A.; Smith, Redd H.**
Residual stresses in polycrystalline diamond compacts.—73-13584
**Lin, V. Y.** See Akimov, B. A.
**Lin, W. P.** See Irvine, S. J. C.
**Lin, W.-X.** See Shen, H.-Y.
**Lin, Wen-Haur** See Hwang, Chii-Shyang
**Lin, Wen-Tai** See Chen, Yung-Fu
**Lin, Wen-Tai; Chen, Yung-Fu; Kao, Chih-Chang; Wu, Kuo-Chung**
Parametric study of the phase formation of in situ BiSrCaCuO thin films by laser ablation.—73-11859
**Lin, Wen-Tai; Wu, Kuo-Chung**
Effects of oxygen pressure and substrate temperature on the in situ grown BiSrCaCuO films by laser ablation.—73-11740
**Lin, Wen-Xiong** See Xu, Hao
**Lin, Wen-Yi; Hsu, Jen-Yan; Berta, Yolande; Speyer, Robert F.**
Combustion gas corrosion resistance of heat-exchange materials and refractories for glass furnaces at high temperatures: I, Silicon carbide and molybdenum silicide.—73-07199; Combustion gas corrosion resistance of heat-exchange materials and refractories for glass furnaces at high temperatures: II, Oxides and composites.—73-07200
**Lin, Wen-Yi; Hsu, Jen-Yan; Speyer, Robert F.**
Stability of molybdenum disilicide in combustion gas environments.—73-09538
**Lin, X. W.** See Piotrowska, A.
**Lin, X. W.; Liliental-Weber, Z.; Washburn, J.; Piotrowska, A.; Kaminska, E.**
Structural characterization of encapsulated Au/Zn/Au ohmic contacts to *p*-type GaAs.—73-11460
**Lin, X.** See Chen, Ming-Y.
**Lin, Y. F.** See Coon, D. D.
**Lin, Y.** See Krauss, A. R.
**Lin, Y.-F.** See Huang, Y.
**Lin, Y.-S.; Chen, C.-J.; Wu, G.-Y.; Hung, K.-M.**
Magnetoexcitons in quantum wells in parallel-field configuration.—73-04397
**Lin, Ya-Yun; Van Rheenen, Arthur D.; Chen, Chang-Lee; Smith, F. W.**
Low-frequency noise and phase noise in MESFET's with LT [low-temperature] GaAs passivation.—73-15018
**Lin, Ying-Jen** See Hsu, Chin-Tsar
**Lin, Yuan-Kun; Lan, Guo-Xiang; Liu, Dao-Zhi; Wang, Hua-Fu**
Crystallization and formation of pressure-induced amorphous barium metaborate.—73-08589
**Lin, Yuan-Kun; Lan, Guo-Xiang; Wang, Hua-Fu**
Pressure-induced amorphization in crystalline $PbGe_3O_{11}$.—73-05460
**Lin, Yuan-Qi** See Yang, Bao-Cheng
**Lin, Zha-Chui** See Mytilineou, E.
**Lin, Zong-Shou** See Liu, Shun-Ni
**Lin, Zu-Xiang** See Shi, J.-L.
**Lin, Zu-Xiang; Tian, Shun-Bao; Yu, Hui-Jun; Deng, M.-X.; Ma, Z.-W.; Xu, R.-Q.**
Mineral ionic conductor—saponite.—73-04140
**Linares, C.** See Aamili, A.
**Linch, D.** See Bhaduri, S. B.
**Linck, John S.** See Booth, Roy E.
**Lincoln, J. R.** See Wang, J.
**Lind, D. M.** See Krebs, J. J.
**Lind, D. M.; Tay, S.-P.; Berry, S. D.; Borchers, J. A.; Erwin, R. W.**
Structural and magnetic ordering in iron oxide/nickel oxide multilayers by X-ray and neutron diffraction.—73-04655
**Lind, M. D.** See Sullivan, G. J.
**Lind, Rudolf**
Porcelain enameling with thermal pretreatment (oxide enameling). A patent application.—73-10261
**Lindau, I.** See Rogelet, T.; Wu, J.
**Lindeman, S. V.** See Shuvaeva, V. A.
**Lindenschmidt, K.-E.** See Xu, P.-C.
**Linder, E.** See Zahler, M.
**Lindfors, S.** See Kattelus, Hanno
**Lindgren, E.** See Poret, J. C.
**Lindner, H. A.; Hennicke, J.; Thoma, H.-J.**
Production-oriented, nondestructive testing of structural advanced ceramics: I, Ultrasonic testing.—73-12182
**Lindner, H. A.**
Strength of ceramic structural parts under multiaxial loading.—73-13594
**Lindqvist, O.** See Sjoberg, Jorgen
**Lindrup, G.**
EC [European Community] competition policy and its impact on British industry.—73-09713
**Lindsay, Curtis G.** See Begley, E. F.
**Lindsay, Curtis G.; White, Grady S.; Freiman, Stephen W.; Wong-Ng, Winnie**
Molecular orbital study of an environmentally enhanced crack growth process in silica.—73-17402
**Lindsay, R.; Strange, W.; Chamberland, B. L.; Moyer, R. O.**
Weak ferromagnetism in $BaIrO_3$.—73-07982
**Lindsay, S. M.** See DeRose, J. A.
**Lines, M. E.**
Physical origin of the temperature dependence of chromatic dispersion in fused silica.—73-00530
**Linfield, E. H.; Hamilton, A. R.; Iredale, N.; Ritchie, D. A.; Jones, G. A. C.**
Transport properties of a two-dimensional electron gas closely separated from an underlying $n^+$ GaAs layer: the fabrication of independent ohmic contacts using molecular beam epitaxial regrowth and in situ focused ion beams.—73-11488
**Ling, C.-H.** See Sundaram, K.
**Ling, Ping** See Zeng, Shao-Xian
**Ling, Qi-Fen; Li, Guo-Dong; Li, De-Xin; Guo, Shu-Jiao**
Magnetic relaxation enhancement effects of Mossbauer line shapes in Ni-Zn-Co ferrite system.—73-04624
**Ling, S.-H.; Au, W.-S.; Tang, Y.-S.**
Epitaxial growth of $PrO_x$ thin films on sapphire by pulsed laser deposition.—73-13049

**Ling, Yi-Bong**
Adding fishscale-resistant agent to eliminate fishscale in enamelware.—73-03561

**Lingemann, Horst**
Laminated multilayer insulating glass and a spacer for the laminated multilayer insulating glass.—73-03935

**Lingertat, Helmut** See Buljan, Sergej-Tomislav

**Lingle, Philip J.; Nalepka, Raymond; Hartig, Klaus W.**
Heat-treatable sputter-coated glass systems.—73-10635

**Lingle, Philip J.; Nalepka, Raymond**
Heat-treatable sputter-coated glass.—73-00735

**Linhart, Richard V.** See Adair, James H.

**Liniger, Eric G.** See Cook, Robert F.

**Link, G.** See Molla, J.

**Link, P.** See Bauer, S.

**Linke, Erich A. E.; Zwart, Cornelis H.; Smout, Adrianus D.**
Doped zirconium mixed silicate pigment, method for the preparation thereof, and products containing such pigment or a thus prepared pigment.—73-10912

**Linke, Joachim; Akiba, M.; Mazul, I.**
Performance of ceramics and fiber composites under severe thermal shocks applied by energetic electron beams or accelerated plasmas.—73-05609

**Linkewitz, T.** See Gerhardt, R.

**Linn, Jack H.** See Schrantz, Gregory A.

**Linnet, Niels D.** See Roed, Gjerloff

**Linnik, V. G.** See Duda, V. M.

**Lins, Antonio P. C.** See Bruha, Richard

**Linsey, G. D.** See Larsen, D. C.

**Linz, R.; Clemens, H. J.; Monch, W.**
Cesium on GaP(110) surfaces: a confirmation of the metal-induced gap states-plus-defects model.—73-11095

**Liou, S. H.** See Budhani, R. C.

**Liou, Yung** See Chiu, Chin-Chen

**Lipetzky, P.** See Nutt, Steven R.

**Lipinska-Kalita, K. E.; Mariotto, G.**
Very low frequency light scattering in glass matrix.—73-10414

**Lipinski, A.** See Mycielski, W.

**Lipinskii, I. E.** See Perekalina, T. M.

**Lipkin, F. M.** See Starostin, Yu. V.

**Lipochkin, S. V.** See Mal'kov, M. A.

**Lipovskii, A. A.; Mikhailov, A. V.; Motkov, V. A.**
Computation of the efficiency of semiconductor laser second harmonic generation in $LiNbO_3$.—73-01108

**Lipowitz, Jonathan** See Deleeuw, David C.; Freeman, Harvey A.; Xu, You-Ren

**Lipp, G. Daniel** See Gheorghiu, Tudor C.

**Lipp, Roland** See Loest, Hagen

**Lipsanen, Harri K.** See Huelt, Kari T.

**Lipson, A. G.; Kuznetsov, V. A.; Sakov, D. M.**
Electron localization on the surface of particles of mechanically fractured lithium fluoride crystals.—73-05390

**Lipson, A. G.; Sakov, D. M.; Kuznetsov, V. A.; Saunin, E. I.; Gromov, V. V.**
Electrophysical processes on the surface of mechanically and irradiation excited $YBa_2Cu_3O_{7-\epsilon}$ superconductors.—73-01541

**Lipson, A. G.; Sakov, D. M.; Lyakhov, B. F.; Deryagin, B. V.**
Generation of neutrons in high-temperature superconducting $YBa_2Cu_3O_{7-\delta}D$ stimulated by a superconducting phase transition.—73-15490

**Lipson, A. G.; Sakov, D. M.; Saunin, E. I.; Kalimin, V. B.; Kolobov, M. A.; Deryagin, B. V.**
Cold nuclear fusion induced in $KD_2PO_4$ single crystals by a ferroelectric phase transition.—73-15699

**Lipson, A. G.; Sakov, D. M.; Toporov, Yu. P.**
Possibility of "cold nuclear synthesis" in the deuterated ceramic $YBa_2Cu_3O_{7-x}$ in the superconducting state.—73-01634

**Liptaj, Tibor** See Mazur, Milan

**Lira, Joaquin; Di Giampaolo, Ana Rita; Grigorescu, I. C.; Ruiz, H.; Sanz, A.**
Stability of cermet coatings and their dependence on the distribution of elements.—73-00267

**Lirtsman, V. G.; Lubenets, S. V.; Natsik, V. D.**
Effect of Peierls relief on the low-temperature plasticity of pure CdTe crystals.—73-07467

**Lis, Jerzy** See Stobierski, Ludoslaw

**Lis, Jerzy; Pampuch, Roman; Piekarczyk, Jan; Stobierski, Ludoslaw**
New ceramics based on $Ti_3SiC_2$.—73-08536

**Lischka, K.** See Hauzenberger, F.; Neswal, M.

**Lisetskaya, E. K.** See Embergenov, B.

**Lishan, D. G.** See Prater, C. B.

**Lishko, T. P.** See Nedil'ko, S. A.

**Lisitsa, M. P.** See Berezhinskii, L. I.

**Lisitsa, M. P.; Litvinchuk, A. P.; Silenko, V. V.; Tarbaev, N. I.**
Piezospectroscopic study of anti-Stokes color centers in LiF.—73-02670

**Lisitsyna, E. A.** See Zhmyreva, I. A.

**Liska, Marek** See Hulinova, Hana; Mazur, Milan; Nagy, Ladislav Turi; Simurka, P.; Turi Nagy, Ladislav

**Liska, Marek; Hulinova, Hana; Mazur, Milan**
Analysis of EPR spectra of Cu(II) spin label of heat-treated $SiO_2$ xerogels.—73-03707; Reverse reactions in the functional group kinetics of TMOS hydrolytic polycondensation.—73-06021

**Liska, Timothy J.** See Peterson, George T.

**Liskowitz, John W.** See Cerkanowicz, Anthony E.

**Lisogorskaya, V. G.** See Atkarskaya, A. B.

**Lisovskii, I. P.; Litovchenko, V. G.; Lozinskii, V. G.; Steblovskii, G. I.**
Ir spectroscopic investigation of $SiO_2$ film structure.—73-08650

**List, R. S.** See Dessau, D. S.

**List, R. S.**
Electrical effects of dislocations and other crystallographic defects in $Hg_{0.78}Cd_{0.22}Te$ *n*-on-*p* photodiodes.—73-13350; Formation and electrical effects of process-induced dislocations in HgCdTe.—73-07533

**Listinsky, Jay J.** See Sur, Sandip K.

**Lisy, Antonin** See Kasa, Stanislav

**Lisy, Antonin; Kasa, Stanislav; Viewegh, J.**
All-electric melting furnace with prolonged durability.—73-15864

**Lisy, Antonin; Kasa, Stanislav**
Optimization of direct electrical heating of the forehearth.—73-05126

**Litke, C. D.** See Harvey, K. B.

**Litovchenko, V. G.** See Lisovskii, I. P.

**Litovskaya, T. I.** See Aleksandrov, I. E.; Pivinskii, Yu. E.

**Litovskii, E. Ya.** See Kazakov, S. V.

**Litterst, F. J.** See Becker, K. D.

**Little, J. A.** See Buchanan, F. J.; Kara, F.

**Little, T. S.** See Bist, H. D.

**Little, W. A.** See Rieck, C. T.

**Littlejohn, M. A.** See Kaneto, T.

**Littler, C. L.** See Lowney, Jeremiah R.

**Littler, C. L.; Maldonado, E.; Song, X.-N.; Yu, Z.; Elkind, J. L.; Seiler, D. G.**
Mercury interstitials in $Hg_{1-x}Cd_xTe$ alloys [investigated] using resonant impact-ionization spectroscopy.—73-07667

**Litvak, A. M.** See Baranov, A. N.

**Litvak, A. M.**
Fusibility diagrams of the multicomponent systems with neutral solvent (on the pattern of the system Pb-In-Ga-As-Sb).—73-12594

**Litvak, G. S.** See Plyasova, L. M.

**Litvak-Gorskaya, L. B.** See Gershenzon, E. M.

**Litvan, Gerard G.**
Effect of sealers on the freeze-thaw resistance of mortar.—73-09915

**Litvin, D. P.** See Verenchikova, R. G.

**Litvina, Alexandra D.** See Zaitsev, Alexander I.

**Litvinchuk, A. P.** See Lisitsa, M. P.

**Litvinchuk, A. P.; Thomsen, C.; Cardona, M.; Borjesson, L.; Kall, M.; Berastegui, Pedro**
Evidence for a scaling of the superconducting gap with $T_c$ in $Pr_2Y_{1-x}BaCu_4O_8$.—73-15462

**Litvinchuk, A. P.; Thomsen, C.; Cardona, M.**
Phonon anomalies above $T_c$ in $YBa_2Cu_4O_8$ and $YBa_2Cu_3O_{7-\delta}$ superconductors: an effect of coupling to spin excitations.—73-01627

**Litvinov, L. A.** See Aluker, E. D.; Blank, A. B.; Grinchenko, A. Yu.; Kvyatkovskii, S. F.

**Litvinov, V. A.** See Ovchinnikova, E. I.

**Liu, A.-M.** See Wang, Wan-Lu

**Liu, An-Sheng** See Shao, Bei-Ling

**Liu, B.-X.** See Zhu, D.-H.

**Liu, B.; Hicks, R. F.; Zinck, J. J.; Jensen, J. E.; Olson, G. L.**
Photoassisted organometallic vapor phase epitaxy of CdTe.—73-07713

**Liu, Bau-Yuan** See Ye, Qing

**Liu, C. W.** See Sturm, J. C.

**Liu, C.-F.** See Wang, Y.-L.

**Liu, C.-S.** See Chen, C.-C.; Tsay, M.-J.

**Liu, Chang-Fa** See Li, Pei-Quan

**Liu, Chun-Yu** See Gu, Shang-Zhe

**Liu, Ci-Guang**
Batch formula for saving energy and increasing production of tunnel kiln.—73-10800; Development of titanium-opacified glaze.—73-07245

**Liu, D.-H.; Yao, Xi; Smyth, Donald M.; Bhalla, Amar S.; Cross, L. Eric**
Structure order-disorder and dielectric response in perovskite-related $SrO\text{-}Fe_2O_3\text{-}Nb_2O_5$ system: the oxygen-deficient composition $Sr(Fe_{1-x}Nb_x)O_{2.5+y}$ ($x$=0.17, 0.25, 0.5).—73-08760

**Liu, Da-Ming** See Jiao, Shu-Liang

**Liu, Da-Ming; Jiao, Shu-Liang; Li, Zai-Guang; Guan, Wen-Jie**
Determination of electron density of laser-produced Y-Ba-Cu-O plasma with laser interferometry.—73-15415

**Liu, Dao-Zhi** See Lin, Yuan-Kun

**Liu, Dean-Mo** See Lin, Bor-Wen

**Liu, Dean-Mo**
Grain growth in $(Ca_{1-x}Mg_x)Zr_4(PO_4)_6$ ceramics.—73-17139

**Liu, Don-Hang; Yao, Xi; Smyth, Donald M.**
Defect chemistry of perovskite compound $Sr(Fe_{0.5}Nb_{0.5})O_3$.—73-06148

**Liu, E. Z.** See Bernstein, J. B.

**Liu, Fang-Xing; Liu, Jia-Chen; Du, Hai-Yan**
Rheological and electrokinetic properties of $ZrO_2\text{-}Al_2O_3$ slurry.—73-05630

**Liu, Felix; Guiheen, James; Van Ackeren, James**
Making porous zirconia for heat pipes.—73-08517

**Liu, Feng; Garofalini, Stephen H.; King-Smith, R. D.; Van der Bilt, D.**
First-principles studies on structural properties of ß-cristobalite.—73-16154

**Liu, Fu-Yi** See Song, Xiao-Lan

**Liu, G. H.; Robbevalloire, F.; Gras, R.; Blouet, J.**
Improvement in tribological properties of chromium oxide coating at high temperature by solid lubricants.—73-09616

**Liu, G.** See Gong, W. H.

**Liu, G.-C.** See Wang, Kai-Ying

**Liu, Gang** See Fonash, S. J.; Grutzeck, Michael W.

**Liu, Guang-Huan** See Li, Jian-Quan

**Liu, Gui-Hai; Zheng, An-Zhong**
Synthesis of Y-TZP ultrafine powder and its properties.—73-06101

**Liu, Guo-Qing** See Zhou, Ya-Dong

**Liu, H. K.** See Kusevic, I.; Shi, F.; Zhao, Y.

**Liu, H. Y.** See Celii, F. G.; Kao, Y. C.

**Liu, H.-S.** See Shen, P.

**Liu, H.-S.; Chen, S.; Shen, P.**
Effect of NiO dissolution on the microstructural development of $t'\text{-}ZrO_2$ with 5 mol% $Y_2O_3$.—73-09447

**Liu, H.-W.** See Zhang, Xu-Shou

**Liu, H.-Y.** See Cho, C.-C.; Tregilgas, J. H.

**Liu, H.; Frenkel, A. C.; Kim, J. G.; Park, R. M.**
Growth of zinc blende-GaN and ß-SiC-coated (001)Si by molecular beam epitaxy using a radio-frequency plasma discharge, nitrogen-free radical source.—73-13084

**Liu, H.; Samuel, A. M.; Samuel, F. H.**
Effect of inclusions/oxides on the castability and tensile properties of four SiC particulate Al-Si-Mg composites.—73-06774

**Liu, H.; Zawadzki, P. A.; Norris, P. E.**
GaAs/AlGaAs atomic layer epitaxy in a commercial MOCVD reactor.—73-04344

**Liu, Hai-Feng; Ngai, Wan-Fung**
Nonlinear dynamics of directly modulated 1.55-µm InGaAsP DFB semiconductor laser.—73-15060

**Liu, Hai-Yan; Fine, Morris E.; Cheng, H. S.; Geiger, Alan L.**
Lubricated rolling wear of SiC-whisker-reinforced $Al_2O_3$ composites against M2 tool steel.—73-06470

**Liu, Hao-Chieh** See Chen, Kuo-Tong

**Liu, Hui-Lan**
Use of water-granulated chrome slag as fine aggregate for concretes.—73-10187

**Liu, J. R.** See Hsieh, Peter Y.

**Liu, J.** See Song, S. N.

**Liu, J.-H.; Fang, Z.-G.**
Recent development of China's refractories for glass furnaces.—73-10758

**Liu, J.-J.** See Wang, Y.

**Liu, J.-P.** See Chuang, Y.-C.

**Liu, J.; Barbero, C. J.; Corbett, J. W.**
In situ transmission electron microscopy study of electron-beam-induced amorphous-to-crystalline transformation of $Al_2O_3$ films on silicon.—73-03153

**Liu, J.; Das Chowdhury, K.; Carpenter, R. W.; Braue, W.**
Elemental analysis of matrix grain boundaries in SiC whisker-reinforced $Si_3N_4$-based composites.—73-06216

**Liu, Jeng** See Hasselman, D. P. H.

**Liu, Jia-Chen** See Liu, Fang-Xing

**Liu, Jian-Xiong** See Weinstein, Roy

**Liu, Jian-Xiong; Chen, In-Gann; Weinstein, Roy; Xu, Jian-Chun**
Magnetization currents in $YBa_2Cu_3O_{7-x}$ superconductors.—73-04765

**Liu, Jin-Ji**
Fast firing of textured color glazed tile.—73-14657

**Liu, Jin-Song; An, Yu-Ying; Li, Ming-Hua; Zhao, Ye-Quan; Xu, Yu-Heng**
Temperature effect of two-beam coupling efficiency in Ce:Fe:$LiNbO_3$ crystals.—73-15293

**Liu, Jin-Song; Wu, Zhong-Kang; Xu, Yu-Heng**
Output property of a doped lithium niobate He-Ne phase conjugate laser in steady state.—73-11594

**Liu, Jin-Xiang; Pierson, S. W.; Spalding, G. C.; Wan, J. C.; Goldman, A. M.**
High-$T_c$ superconductor $Bi_2Sr_2CaCu_2O_x$ as a superconducting superlattice.—73-08094

**Liu, Jun-Shen** See Zhang, Ming-Qian

**Liu, Jun-Yi** See Wu, Yi-Ming

**Liu, Jun; Vohra, Yogesh K.**
Pressure dependence of the fluorescence spectra of the Sm doped YAG to 73 GPa.—73-16277

**Liu, K.-S.** See Yeh, M.-H.

**Liu, Kang-Shi**
Relationship between fineness of glaze and quality of porcelain ware.—73-10893

**Liu, Ke-Zhong; Deng, Zhong-Yan; Yuan, Ming-Dong**
Cement in the $C_{11}A_7\text{:}CaF_2\text{-}C_2S$ [$11CaO\cdot7Al_2O_3\cdot CaF_2\text{-}CaO\cdot SiO_2$] system.—73-13688

**Liu, Kenneth C.** See Ding, Jow-Lian

**Liu, Kenneth C.**
Apparatus for tensile testing plate-type ceramic specimens.—73-01940

**Liu, Kuo-Chung; Thomas, Gareth; Caballero, Angel; Moya, J. S.; De Aza, Salvador**
Time-temperature-transformation curves [T-T-T curves] for kaolinite–α-alumina.—73-12725

**Liu, Kuo-Shung** See Shaw, Jin-Chen

**Liu, L. Z.** See Anderson, R. O.

**Liu, L.-X.** See Lu, G.-Q.

**Liu, L.; Dong, Y.-D.**
Nanocrystalline intermetallic compounds prepared by mechanical alloying.—73-16876

**Liu, Li-Zhong** See Li, Xiao-Mei

**Liu, M. X.** See Wu, X.-I.

**Liu, Mei-Lin** See Joshi, Ashok V.

**Liu, Mei-Lin; Joshi, Ashok V.; Shen, You-Sheng; Krist, Kevin**
Mixed ionic-electronic conductors for oxygen separation and electrocatalysis.—73-04222

**Liu, Meng-Yang**
Production processes of positive temperature coefficient [PTC] $BaTiO_3$ ceramics.—73-15118

**Liu, Paul K. T.; Gallaher, George R.; Wu, Jeffrey C. S.**
Method of producing a carbon-coated ceramic membrane and associated product.—73-04998

**Liu, Ping** See Shen, Ding-Kun

**Liu, Po-Hsin** See Streit, D. C.

**Liu, Qi; Ding, Wei; Zhu, Gui-Hong**
Using surfactants to control ultrafine $ZrO_2$ powder aggregation in drying and firing processes.—73-13333

**Liu, Qian; Chen, Yu-Ru; Yuan, Qi-Ming**
Mechanism of $ZrO_2$ strengthening and toughening in mullite-zirconia composites.—73-06488

**Liu, R. S.** See Han, Z. P.; Mackenzie, A. P.; Zhou, W.

**Liu, R. S.; Edwards, P. P.; Hu, S. F.; Jefferson, D. A.; Huang, Y. T.; Wu, S. F.**
Chemical control of high-$T_c$ superconductivity: metal-superconductor-insulator transition in $(Tl_{1-x}Pb_x)Sr_2(Ca_{1-x}Y_x)Cu_2O_7$.—73-11702

**Liu, R. S.; Edwards, P. P.**
Enhancement of the superconducting transition temperature of $TlSr_2CaCu_2O_7$ by yttrium and vanadium substitutions.—73-01545

**Liu, R. S.; Ho, J. S.; Chang, C. T.; Edwards, P. P.**
Synthesis, by triethylammonium oxalate coprecipitation, and superconducting properties of $Y(Ba_{1-x}Sr_x)_2Cu_4O_8$ [0≤x≤0.5].—73-01687

**Liu, R. S.; Johnson, J. D.; Edwards, P. P.**
Ferromagnetism in the Tl-Sr-V-O system.—73-01462

**Liu, R. S.; Obertelli, S. D.; Hu, S. F.; Edwards, P. P.; Jefferson, D. A.**
Superconductvity in Pb-based 1212 cuprates: evidence for underdoping from thermoelectric power.—73-15639

**Liu, R. S.; Zheng, D. N.; Obertelli, S. D.; Ho, J. S.; Chen, T. M.; Edwards, P. P.**
Microstructure, thermoelectric power, and magnetic irreversibility of coprecipitated $YBa_2Cu_4O_8$ powders.—73-08134

**Liu, Ran; Salomon, D.; Klein, M. V.; Cooper, S. L.; Lee, W. C.; Cheong, S. W.**
Novel Raman-active electronic excitations near the charge-transfer gap in insulating cuprates.—73-10979

**Liu, Rang-Jiao** See Yang, Dan-Sheng

**Liu, Rang-Jiao; Wang, Shi-Guang; Dai, Yuan-Dong**
New biepitaxial grain-boundary junction.—73-08143

**Liu, Rong-Chuan** See Huang, Run-Sheng

**Liu, S.-H.** See Lee, C.-H.

**Liu, S.-K.** See Zhu, H.-X.

**Liu, Shen-Sheng** See Sun, Shou-Lin

**Liu, Shen-Sheng; Li, Yong; Huang, Ze-Hui**
Effect of ultrafine powder on properties of rebonded fused magnesia chrome refractories.—73-07207

**Liu, Shen-Sheng; Liu, Yu-Ying; Qi, Guo-Yong**
Development and application of light-burned MgO-bonded alumina castable.—73-10714

**Liu, Shih-Yu; Chen, I-Wei; Tien, Tseng-Ying**
Fatigue crack growth of silicon nitride at 1400°C: a novel fatigue-induced crack-tip bridging phenomenon.—73-06417

**Liu, Shih-Yu; Chen, I-Wei**
Plasticity-induced fatigue damage in [12 mol%] ceria-stabilized tetragonal zirconia polycrystals.—73-17408

**Liu, Shou-Rong**
Quantitative phase analysis by X-ray for Co binder structure in WC-Co cemented carbides.—73-10269

**Liu, Shun-Ni; Lin, Zong-Shou**
Decomposition of alite in portland cement clinker.—73-09880

**Liu, Sung-Tsuen; Chung, Harvey H.**
Resorbable bioactive phosphate-containing cements.—73-05243

**Liu, Tian-Shun**
Characterization of three-dimensional through-thickness transformaton zone in 9-mol% Ce-TZP ceramics.—73-17247

**Liu, Tong-Rong** See Nie, Man-Yun

**Liu, W.** See Ren, D.-M.

**Liu, Wai-Min** See Margaryan, A.

**Liu, Wan-Yu** See Ding, Yi

**Liu, Wei-Dong; Zhu, Li-Qun**
Ball miling at varied rotating speed and its optimization of process parameters—ball milling of luster tile bodies.—73-14646

**Liu, Wen-Chuan; Sun, Shou-Jin; Li, Min-Jun; Wei, Yong-Liang**
Preparation of C/C-SiC nanomatrix composites by chemical vapor infiltration.—73-09258

**Liu, William; Harris, James S., Jr.**
Critical passivation ledge thickness in AlGaAs/GaAs heterojunction bipolar transistors [HBT's].—73-11124; Mesa surface recombination current in AlGaAs/GaAs heterojunction bipolar transistors with an emitter-base-emitter structure.—73-07668

**Liu, X. D.; Hu, Zhuang-Qi; Ding, B.-Z.**
Hall-Petch relation in nanocrystalline Fe-Mo-Si-B alloys.—73-15496

**Liu, X.** See Jackson, S. L.; Moy, A. M.

**Liu, X.; Liebermann, R. C.**
X-ray powder diffraction study of $CaTiO_3$ perovskite at high temperatures.—73-08794

**Liu, Xheng-Qun** See Yin, Hong

**Liu, Xi-Cong; Bathias, Claude**
Defects in squeeze-cast $Al_2O_3$/Al alloy composites and their effects on mechanical properties.—73-00218

**Liu, Xi-Cong; Bathias, Claude**
Fatigue damage development in $Al_2O_3$/Al composites.—73-03291

**Liu, Xi-Jun**
Alumina slurry.—73-16654

**Liu, Xian-Ji** See Fan, Zhen-Kun

**Liu, Xiang-Dong** See Shi, Bo-Rong; Wang, Ke-Ming

**Liu, Xiao-Ping** See Zhang, Deng-Xia

**Liu, Xin-Sheng; Lu, Kai-Kong; Thomas, John Kerry**
Preparation, characterization, and photoreactivity of titanium(IV) oxide encapsulated in zeolites.—73-12865; Surface properties of clay laponite using pyrene as a photophysical probe molecule: II, Photoinduced electron transfer.—73-16608

**Liu, Xue-Yan** See Gao, Ying

**Liu, Y. X.; Wang, M. W.; McCaldin, J. D.; McGill, T. C.**
Schottky barrier induced injecting contact on wide band gap semiconductors.—73-07788

**Liu, Y.-C.** See Yeh, M.-H.

**Liu, Y.-G.** See He, Hui-Juan

**Liu, Ya-Ping** See Ye, Z.-Z.

**Liu, Yan-Ling** See Zheng, Zhi-Do

**Liu, Yao-Gang** See Shi, Lu-Ping; Wang, Ke-Ming

**Liu, Yi-Jun** See Zhang, Hong

**Liu, Yu-Pu** See Xiao, Gang-Yao

**Liu, Yu-Ying** See Liu, Shen-Sheng

**Liu, Yu; Cai, Xiao-Lan**
Synthesis of ZnO-CoO-$Cr_2O_3$-$Fe_2O_3$-based chocolate color ceramic pigment and its coloration properties.—73-14669

**Liu, Yu; Deng, Yong-Qian**
Current situation and development of architectural pottery in China.—73-10811

**Liu, Yu; Li, Jian-Fei**
Fabrication of dark brown ceramic pigment and its coloring properties.—73-09131

**Liu, Yu; Wang, Yong-Xian**
Synthesis of brown ceramic pigments from mineral slag containing staining oxides.—73-10902

**Liu, Yu; Wu, De-Sin**
Synthesis of black low-priced pigment using industrial waste.—73-08501

**Liu, Z. D.** See Lin, D. L.

**Liu, Z.-M.** See Zhu, J.-S.

**Liu, Z.-T.; Xu, N.-K.; Geng, D.-S.**
Thermostability of diamondlike carbon [DLC] films.—73-08997; Thermostability of diamondlike carbon films.—73-16640

**Liu, Z.-Y.** See Chen, H.-C.

**Liu, Ze-Yong; Zhao, Huan-Jiong; Wang, Guo-Cheng**
Densification of spray-dried powders [for imitation granite ceramic tiles].—73-12972

**Liu, Zhen-Jia**
Stressed enamel for easy breaking ampoules.—73-03761

**Liu, Zhen-Qun** See Yin, Hong

**Liu, Zheng; Cui, Xue-Hua; Tang, Ming-Shu**
Hydration and setting time of MgO-type expansive cement.—73-03477

**Liu, Zhun-Xiao** See Dai, Yuan-Dong

**Liu, Zi-Yuan** See Kawai, Maki

**Liu, Zun-Xiao** See Lin, Chin

**Livage, C.** See Coulon, C.

**Livage, Jacques** See Babonneau, Florence; Gerardin, Cornine M.; Guzman, G.; Valente, Isabelle

**Livage, M.** See Faure, Sylvain P.

**Livanov, D. V.** See Calzona, V.

**Livanov, F. A.; Stefanovskii, S. V.; Lashchenova, T. N.**
Use of local loam in vitrifying radioactive wastes.—73-01760

**Livingston, Jeffrey A.; Kemner, Carl A.; Dam, Chuong Q.; Davis, Jack R.; Clemens, Larry C.**
Testing apparatus for a multilayer piezoelectric actuator.—73-11643

**Livingstone, J.** See Ruther, R.

**Livshits, A. I.** See Kadrgulov, R. F.

**Livshits, M. G.** See Kimaev, A. E.; Korzhik, M. V.

**Livshits, V. Ya.; Marchuk, E. A.; Potalitsyn, M. G.**
Elastic moduli of glasses in the $Li_2O$-$Na_2O$-$Nb_2O_5$-$SiO_2$ system.—73-00472

**Livshits, V. Ya.; Mokin, N. K.; Potalitsyn, M. G.; Shchavelev, O. S.**
Elastic modulus, refractive index, and its change during ion exchange in melts of salts for alkali phosphate glasses.—73-14167

**Livshits, V. Ya.; Potalitsyn, M. G.; Nakhapetyan, R. A.; Polukhin, V. N.; Smirnova, R. P.**
Elastic properties and energetics of sodium germanate glasses containing oxides of group II-VI elements of the periodic table.—73-14168

**Livshits, V. Ya.; Potalitsyn, M. G.**
Change of refractive index upon ion exchange; elasticity and optical properties of alkali silicate glasses containing titanium oxide.—73-14141

**Livshits, V. Ya.; Potalytsin, M. G.; Startsev, Yu. K.**
Refractive index modification after ion exchange [of] Na⁺(glass)-Li⁺(molten salt) in germanate glasses with tantalum and calcium oxides.—73-14078

**Lizzo, S.** See Van Schaik, W.

**Ljungcrantz, H.; Hultman, L.; Sundgren, J. E.; Johansson, S.; Kristensen, N.; Schweitz, J. A.**
Residual stresses and fracture properties of magnetron-sputtered Ti films on Si microelectronics.—73-06512

**Llewellyn, P. L.; Coulomb, J. P.; Grillet, Y.; Patarin, J.; Andre, G.; Rouquerol, J.**
Adsorption by MFI-type zeolites examined by isothermal microcalorimetry and neutron diffraction: II, Nitrogen and carbon monoxide.—73-08804

**Llewellyn, P. L.; Coulomb, J. P.; Grillet, Y.; Patarin, J.; Lauter, H.; Reichert, H.**
Absorption of MFI-type zeolites examined by isothermal microcalorimetry and neutron diffraction: I, Argon, krypton, and methane.—73-08798

**Llewellyn, R. J.** See Kuriakose, A. K.

**Llinares, C.** See Mbow, B.; Mezerreg, A.

**Llopis, J.; Paje, S. E.**
Characterization of zirconia-toughened alumina (ZTA) ceramics by SEM cathodoluminescence.—73-12551

**Llorca, J.** See Ogawa, Takeshi

**Llorca, J.; Elices, Manuel**
Size effect in fracture of ceramic-ceramic composite materials.—73-06522

**Llorca, J.; Ogawa, Takeshi**
Crack wake effects on MgO fracture resistance.—73-06355

**Llorens, J.** See Galan, M.; Gonzalez, C.

**Llorente, J. M. M.** See Saez-Puche, R.

**Lloyd, Andrew I.** See Tank, Klaus

**Lloyd, Isabel K.** See Bhalla, Amar S.; Xu, Hockin H. K.

**Lloyd, Patrick H.** See Withrow, Shelby M.

**Lo Casto, S.; Lo Valvo, E.; Ruisi, V. F.; Lucchini, E.; Maschio, S.**
Wear mechanism of ceramic tools.—73-09693

**Lo Valvo, E.** See Lo Casto, S.

**Lo, C. S.** See Cox, Brian N.

**Lo, G. Q.** See Richardson, J. T.

**Lo, G. Q.; Kwong, D. L.; Abbott, K. J.; Nazarian, D.**
Thickness dependence of charge-trapping properties in ultrathin thermal oxides prepared by rapid thermal annealing.—73-07366

**Lo, Kuang-Yao** See Lue, Juh-Tzeng

**Lo, Ming-Hung; Wei, Wen-Cheng**
Microstructural analysis of interface between $YBa_2Cu_3O_{7-x}$ [Y123] and Ag/Pd alloys.—73-11832

**Lo, S. H. J.** See Dionne, S.

**Lo, T.-C.; Huang, H.-C.**
Reactive ion etching [RIE] of a-SiC:H films using $CCl_4$ and $O_2$ gas mixture.—73-06015

**Lo, Young-Shin** See Kim, In-Ki

**Loan, Do Tkhi** See Plyutto, V. P.

**Lobach, V. A.** See Bezel, A. V.; Sobolev, A. B.

**Lobad, A. I.** See Tousley, B. C.

**Lobanov, A. V.** See Dmitrikova, E. Yu.

**Lobas, L. M.** See Solov'ev, L. A.

**Lobb, C. J.** See Walkerhorst, A.

**Lobe, K.; Boyn, R.; Zimmermann, H.**
Excitation of the *4f-4f* emission of donor-type rare-earth centers through donor-acceptor pair states (ZnS:Tm).—73-04338

**Loberg, B.** See Niska, J.

**Lobnig, R.** See Frankenthal, R. P.

**Lobo, Colin; Cohen, Menashi D.**
Hydration of type K expansive cement paste and the effect of silica fume: II, Pore solution analysis and proposed hydration mechanism.—73-06668

**Lobo, Melvyn** See Sultan, Akif

**Lobo, Raul F.; Annen, Michael J.; Davis, Mark E.**
Zeolite phi: a physical mixture of chabazite and offretite.—73-16401

**Lobo, Ricardo P. S. M.** See Gervais, Francois

**Loboda, M. J.; Baumann, S.; Edgell, M. J.; Stolt, K.**
Measurement of the elemental composition of a-SiC:H films by electron spectroscopy and high-energy ion scattering spectrometry.—73-12627

**Locardi, Bruno**
Research and applications of new glasses.—73-06589; Research on and applications of new glasses.—73-09746

**Locatelli, M. L.; Gamal, S.**
Silicon carbide against silicon: a comparison in terms of physical properties, technology, and electrical performance of power devices.—73-08542

**Lochel, B.; Huber, H. L.; Klages, C.-P.; Schafer, L.; Bluhm, A.**
Diamond-membrane-based X-ray masks.—73-16712

**Lochner, U.** See Paulus, E. F.

**Locker, Howard J.**
Cordierite substrates.—73-12358

**Lockhart, Thomas P.; Piro, Giampietro; Gagliardi, Federica; Zanibelli, Laura**
Nickel cermet, and process for preparing it.—73-03698

**Lockwood, David J.** See Gnezdilov, V. P.; Ohno, Nobuhito

**Lockwood, Steven J.** See Dimos, Duane

**Lockyer, M. W. G.** See Holland, D.

**Lockyer, M. W. G.; Holland, D.**
Structure of some lead aluminophosphate glasses.—73-03765

**Locoge, P.; Massat, M.; Ollivier, J. P.; Richet, C.**
Ion diffusion in microcracked concrete.—73-03493

**Locquet, Jean-Pierre; Machler, Erich**
Characterization of a radio-frequency plasma source for molecular beam epitaxial growth of high-$T_c$ superconductor films.—73-07997

**Lodding, A. R.** See Clark, David E.; Schulz, R. L.; Wicks, George G.

**Loebs, V. A.** See Chambers, S. A.

**Loehman, Ronald E.** See Moorhead, Arthur J.

**Loehman, Ronald E.; Tomsia, Antoni P.**
Wetting and joining of mullite ceramics by active-metal braze alloy.—73-03665

**Loehman, Ronald E.**
Characterization of Ceramics.—73-13653; Problems and opportunities in microwave joining of ceramics.—73-05993

**Loehr, John P.** See Lam, Yee-Loy; Nichols, D.

**Loest, Hagen; Lipp, Roland; Mitsoulis, Evan**
Numerical flow simulation of viscoplastic slurries and design criteria for a tape casting unit.—73-05938

**Loewenthal, S. H.** See Hopple, G. B.

**Loffe, L. B.** See Altshuler, B. L.

**Loffelbein, B.; Woydt, M.; Habig, K.-H.**
Sliding friction and wear of ceramics in neutral, acid, and basic aqueous solutions.—73-06523

**Loffler, Frank** See Knotek, Otto

**Loffler, J. C.** See Schweizer, A.

**Lofvander, Jan P. A.** See Weber, Christian H.

**Log, T.; Cutler, R. A.; Jue, J. F.; Virkar, Anil V.**
Polycrystalline *t*-$ZrO_2$($Ln_2O_3$) formed by displacive transformations.—73-09656

**Logan, E. A.** See Holland, D.

**Logan, Kathryn V.**
Material made from highly reactive [submicron] amorphous titanium diboride powder and products made therefrom.—73-12479

**Logan, Mark A.** See Tedder, Laura L.

**Logan, Monica N.** See Brinker, C. Jeffrey

**Logan, R. A.** See Berger, Paul R.; Ouacha, A.

**Loginov, V. E.** See Hollman, E. K.

**Loginov, V. M.** See Barshchevskii, B. U.; Vlasov, A. S.

**Loginov, V. M.**
What does Gzhel porcelain whiteness depend on.—73-10298

**Logothetidis, S.** See Paloura, E. C.

**Logothetidis, S.; Petalas, J.; Markwitz, A.; Johnson, R. L.**
Optical and compositional studies of SiN thin films with conventional and synchrotron radiation ellipsometry.—73-07348

**Logothetis, E. M.** See Rimai, L.

**Logunov, M. V.** See Airapetov, A. A.

**Logunov, M. V.; Randoshkin, V. V.**
Remagnetization dynamics of ferrite-garnet films with weak uniaxial anisotropy.—73-01480

**Loh, N.-L.; Wu, Y.-L.; Khor, K.-A.**
Shear bond strength of nickel-alumina interfaces diffusion bonded by HIP.—73-13897

**Loh, Roland** See Cass, Richard B.

**Lohner, A.; Rick, K.; Leisching, P.; Leitenstorfer, A.; Elsaesser, T.; Kuhn, T.**
Coherent optical polarization of bulk GaAs studied by fs photon-echo spectroscopy.—73-14810

**Lohner, A.; Woerner, M.; Elsaesser, T.; Kaiser, W.**
Picosecond capture of photoexcited holes by shallow acceptors in *p*-type GaAs.—73-07734
**Lohnherr, L.** See Ahlkvist, Bo; Patzelt, N.
**Lohrengel, Joachim** See Geotti-Bianchini, F.
**Lohse, Ursula** See Martin, Andreas
**Lohwasser, Werner; Fleischer, Maximilian; Gerblinger, Josef; Meixner, Hans**
High-temperature Hall measurements on cerium dioxide thin films.—73-11249
**Loi, K.-K.** See Pun, E. Y. B.
**Loiacono, D. N.** See Loiacono, G. M.
**Loiacono, G. M.; Loiacono, D. N.; McGee, T.**
Laser damage formation in $KTiOPO_4$ and $KTiOAsO_4$ crystals: grey tracks.—73-12825
**Loidl, A.** See Bohmer, R.; Lunkenheimer, P.
**Lointier, P.; Valin, F.; Boncoeur, M.**
Diffusion bonding of Inconel 600 to alumina without and with intermediate graded layers.—73-03576
**Loison, J. L.** See Netiksis, V.
**Loizos, Z.** See Bouroushian, M.
**Loizos, Z.; Mitsis, A.; Spyrellis, N.; Froment, M.; Maurin, G.**
Cadmium chalcogenide semiconducting thin films prepared by electrodeposition from boiling aqueous electrolytes.—73-11088
**Lok, C. K. C.** See Shapoval, S. Y.
**Lokhande, C. D.** See Gadave, K. M.
**Lokken, R. O.**
Effect of aluminate ions on the heat of hydration of cementitious waste forms.—73-09898
**Loktev, V. M.** See Ivanov, M. A.
**Loktev, V. M.**
Possible role of neutral oxygen in the formation of electron spectrum in high-$T_c$ superconductors.—73-08169
**Lollman, D. B. B.** See Veuillen, J. Y.
**Lomako, I. D.** See Ivzhenko, N. A.
**Lomako, V. M.** See Kol'chenko, T. I.; Kozlovskii, V. V.
**Lomascolo, M.** See Cingolani, R.
**Lomascolo, M.; Cingolani, R.; Calcagnile, L.; Digiulio, M.; Vasanelli, L.; Brandt, O.**
Gaussian lineshape analysis of the RT photoreflectance of GaAs/AlGaAs and InAs/GaAs multiple quantum wells.—73-14940
**Lomax, J. F.** See McGowan, P. C.
**Lombard, James H.; Anderson, Leonard J.**
Palladium thick-film resistor containing boron nitride.—73-04227
**Lombardo, L. W.** See Dessau, D. S.; Ma, Zheng-Xiang; Spielman, S.
**Lomnitskaya, Ya. F.**
Interactions of zirconium (hafnium) with silicon and phosphorus.—73-16184
**Lomonov, V. A.** See Radaev, S. F.
**Lomonova, E. E.** See Gogotsi, G. A.
**Lomov, A. A.** See Zav'yalova, A. A.
**Lomovskoi, V. A.; Bartenev, G. M.**
Features of low-temperature relaxation transition in vitreous boric anhydride.—73-13988
**Londry, C. H.** See Jarosinski, W. J.
**Lonergan, J.; Morrissey, V.; Hampshire, S.**
Optimization of heat-treatment schedules for oxynitride glass-ceramics.—73-00675
**Long, Gabrielle G.** See Luecke, William; Smith, Peter A.
**Long, Gabrielle G.; Black, D. R.; Feldman, A.; Farabaugh, E. N.; Spal, R. D.; Tanaka, D. K.**
Structure of vapor-deposited yttria and zirconia thin films.—73-16340
**Long, Huai-Sheng** See Zhang, Zhong-Xian
**Long, J. P.; Goldenberg, S. S.; Kabler, M. N.**
Pulsed laser-induced photochemical decomposition of GaAs(110) studied with time-resolved photoelectron spectroscopy using synchrotron radiation.—73-07750
**Long, X. P.** See Chen, H.
**Long, Xiang-Yun** See Peng, Huo-Tian
**Long, Y.-C.** See Tang, Xiao-Yong
**Longacre, William A.** See Stark, Miriam T.
**Longo, A. S.** See Sonnenberg, N.
**Lonzarich, G. G.** See Mackenzie, A. P.
**Loo, B. H.** See Rao, S. M.
**Loo, C. E.; Mathews, I.. T.; Ostwald, J.**
Sintering mechanism of Western Australian pisolitic limonite.—73-09327
**Look, D. C.** See Fang, Z. Q.; He, Y.; Liliental-Weber, Z.
**Look, D. C.; Fang, Z. Q.; Sizelove, J. R.; Stutz, C. E.**
New $As_{Ga}$-related center in GaAs.—73-15054
**Look, D. C.; Robinson, G. D.; Sizelove, J. R.; Stutz, C. E.**
Electrical properties of molecular beam epitaxial GaAs grown at 300–450°C.—73-14870
**Look, D. C.**
Molecular beam epitaxial GaAs grown at low temperatures.—73-15044
**Loong, C.-K.** See Plakhty, V.; Soderholm, L.
**Loopstra, O. B.** See Jongste, J. F.
**Looser, H.** See Fluck, D.
**Lopata, J. L.** See Hobson, W. S.
**Lopatin, A. L.** See Chichagov, A. V.
**Lopatina, N. P.** See Sviridov, S. I.
**Lopes, V.** See Koestner, R.
**Lopez Garcia, Alberto R.** See Scian, Alberto N.
**Lopez, Carmen M.** See Martinez, Nelson P.
**Lopez, F. J.** See Bravo, D.; Moya, E.
**Lopez, M. F.; Hohr, A.; Laubschat C.; Domke, M.; Kaindl, G.**
Resonant photoemission vs Coster-Kronig Auger decay at the $L_{III}$ thresholds of Ni metal and CuO.—73-08724
**Lopez, M.; Yamauchi, Y.; Kawai, T.; Takano, Y.; Pak, K.; Yonezu, H.**
Molecular beam epitaxy and migration-enhanced epitaxy growth modes of GaAs on pseudomorphic Si films grown on GaAs(100) substrates.—73-07679
**Lopez, V.; Escudero, M. L.; Bello, J. M.**
Laser melting of plasma-sprayed alumina coatings.—73-13860
**Lopez, W.** See Gonzalez, J. A.
**Lopez, W.; Gonzalez, J. A.; Andrade, Carmen**
Influence of temperature on the service life of rebars.—73-13740
**Lopez, W.; Gonzalez, J. A.**
Influence of the degree of pore saturation on the resistivity of concrete and the corrosion rate of steel reinforcement.—73-03489
**Lopez-Cruz, E.** See Gonzalez-Hernandez, J.
**Lopez-Villanueva, J. A.** See Banqueri, J.
**Loram, J. W.; Mirza, K. A.; Cooper, J. R.; Liang, W. Y.**
Electronic specific heat of $YBa_2Cu_3O_{6+x}$ from 1.8 to 300 K.—73-15453
**Lorans, D.** See Triboulet, R.
**Lord, C. E.** See Shelby, J. E.
**Lord, H. A.** See Robertson, A., Jr.
**Lorenz, D.**
Feldspathic sand as raw material for porcelain.—73-01981
**Lorenzana, J.; Yu, L.**
Optical conductivity of $La_{2-x}Sr_xCuO_4$ and soft electronic modes.—73-16554
**Lorenzano Porras, C. Francisco; Carr, P. W.; McCormick, A. V.**
Pore characterization of $SiO_2$ chromatographic gels using nuclear magnetic resonance.—73-08433
**Lorenzelli, V.** See Baraton, Marie-Isabelle; Busca, Guido; Delmastro, Alessandro; Merle, Therese
**Lorenzo, J. P.** See Davis, A.
**Loriers, J.** See Bocquillon, G.
**Loriers-Susse, C.** See Bocquillon, G.
**Lorke, A.** See Krishnamurthy, Mohan
**Los, P.** See Dumont, H.
**Losacco, A.** See Battaglin, G.
**Losbichler, P.; Mitterer, C.; Werner, W. S. M.; Stori, H.; Barounig, J.**
Influence of various process gases on the magnetron sputtering of $ZrB_{12}$.—73-03603
**Losch, R.** See Dinges, H. W.
**Loschner, H.; Stengl, G.; Chalupka, A.; Fegerl, J.; Fischer, R.; Lammer, G.**
Ion projection lithography for vacuum microelectronics.—73-11285
**Losenicky, Miroslav**
Direct cyclic electric heating of glass melt.—73-00612
**Loseva, G. V.** See Petrakovskii, G. A.
**Loseva, G. V.; Mukoed, G. M.; Ovchinnikov, S. G.**
Features of electrical and magnetic properties of MeS-$Fe_2O_3$ oxysulfides [Me=V, Fe, Mn].—73-16496
**Losey, Robert W.** See Clark, Douglas T.
**Loshkareva, N. N.; Bebenin, N. G.; Gizhevskii, B. A.; Sukhorukov, Yu. P.; Samokhvalov, A. A.**
Effective mass of holes in ferromagnetic semiconductor $HgCr_2Se_4$.—73-14860
**Lossy, Richard** See Cuomo, Jerome J.
**Lost, C.** See Hahn, R.
**Lostak, P.; Cernosek, Z.; Cernoskova, E.; Benes, L.; Kroutil, J.; Rambousek, V.**
Real structure of $TiO_2$ in samples of the $TiO_2$-$V_2O_5$ system.—73-02421
**Losurdo, M.** See Cicala, G.
**Lothian, J. R.** See Pearton, S. J.; Ren, F.
**Lothian, J. R.; Kuo, J. M.; Hobson, W. S.; Lane, E.; Ren, F.; Pearton, S. J.**
Wet and dry etching characteristics of $Al_{0.5}In_{0.5}P$.—73-07861
**Lothian, J. R.; Kuo, J. M.; Ren, F.; Pearton, S. J.**
Plasma and wet chemical etching of $In_{0.5}Ga_{0.5}P$.—73-15104
**Lothian, J. R.; Ren, F.; Pearton, S. J.; Chakrabarti, U. K.; Abernathy, C. R.; Katz, A.**
Trilayer lift-off metallization process using low-temperature-deposited $SiN_x$.—73-07843
**Lottici, Pier Paolo; Manzini, Ivano; Antonioli, Gianni; Gnappi, G.; Montenero, A.**
EXAFS investigation of the coordination state of germanium in $xBi_2O_3$-(100–$x$)$GeO_2$ glasses.—73-06915
**Lou, B.**
Plasmon-phonon coupling in GaAs-AlAs superlattices.—73-01285
**Lou, Kai-Jun; Wang, Guo-Xiu; Le, Chuan**
Application of antiabrasive nodular cast iron to double rollers.—73-12106
**Lou, L.** See Lupei, V.
**Loubet, J. L.** See Bauer, M.
**Loubiere, A.** See Castelan, P.
**Loubinoux, Dominique** See Roncato, Giordano
**Loubnin, E. N.** See Roginskaya, Yu. E.
**Loudjani, M. K.; Huntz, A. M.; Cortes, R.**
Influence of yttrium on microstructure and point defects in an $\alpha$-$Al_2O_3$ in relation to oxidation.—73-17148
**Loughin, Stephen** See French, Roger H.
**Loukes, D. G.**
Electrolytic surface modification of float glass [at 600–950°C] using molten metal electrodes.—73-00621
**Loup, J. P.** See Gervais, Francois
**Loupias, G.** See Codazzi, V.
**Loural, M. S. S.** See Morosini, M. B. Z.
**Love, David W.** See Dvorsky, George R.
**Love, Jim**
Ir temperature sensors: single point vs multi point.—73-08407
**Love, Michael W.**
Ceramic chronology and chronometric dating: stratigraphy and seriation at La Blanca, Guatemala.—73-06610
**Lovell, D.** See Kobayashi, K.
**Lovering, D. J.; Phillips, R. T.; Denton, G. J.; Smith, G. W.**
Resonant generation of biexcitons in a GaAs quantum well.—73-07771
**Low, Boon-Hwee** See Tan, Stew-Ann
**Low, I. M.; Lim, F. W.; Low, S. S.**
Synthesis of highly leachable gel-derived alumina ceramic cores.—73-17038
**Low, I. M.; Low, S. S.; Klauber, C.**
Chemical reactivity of YBCO and Bi(Pb)SrCaCuO superconductors in water.—73-15399
**Low, I. M.; Skala, R.; Richards, R.; Perera, D. S.**
Synthesis and properties of novel mullite–zirconia-toughened alumina composites.—73-17023
**Low, M.** See Li, X. S.
**Low, Norman M. P.; Beaudoin, James J.**
Flexural strength and microstructure of cement binders reinforced with wollastonite microfibers.—73-06655; Mechanical properties and microstructure of cement binders reinforced with synthesized xonotlite microfibers.—73-13751
**Low, R.** See Piehler, A.
**Low, S. S.** See Low, I. M.
**Lowden, Richard A.** See Allard, L. F.; Besmann, Theodore M.; Lara-Curzio, Edgar; Singh, J. P.; Tortorelli, P. F.; Wang, Hong-Yu
**Lowden, Richard A.**
Molybdenum-enhanced low-temperature deposition of crystalline silicon nitride.—73-12501
**Lowe, A. J.; Regan, S. E.; Howson, M. A.**
Thermopower of $YBa_2Cu_3O_{7-\delta}$ single crystals.—73-01692
**Lowe, David M.** See Kourtides, Demetrius A.
**Lowe-Ma, C. K.; Kipp, D. O.; Vanderah, T. A.**
Crystal structure of $KInS_2$-I.—73-02198
**Lowenstein, Lee M.** See Henck, Steven A.
**Lowndes, Douglas H.** See McCamy, J. W.
**Lowney, Jeremiah R.** See Kopanski, Joseph J.; Mayo, Santos
**Lowney, Jeremiah R.; Seiler, D. G.; Thurber, W. R.; Yu, Z.; Song, X.-N.; Littler, C. L.**
Heavily accumulated surfaces of mercury cadmium telluride detectors: theory and experiment.—73-11240
**Lowry, Jeffry T.** See Hinkle, Robert
**Lowther, J. E.** See Paslovsky, L.
**Lozinskii, V. G.** See Lisovskii, I. P.
**Lozovski, V. Z.** See Gomeniuk, Yu. V.
**Lozovskii, A. I.** See Makarov, A. N.
**Lozovskii, V. Z.** See Varyukhin, V. N.
**Lozykowski, H. J.** See Alshawa, A. K.
**Lozykowski, H. J.; Alshawa, A. K.; Pomrenke, Gernot S.; Brown, Ian G.**
Luminescence properties of Yb-doped InP.—73-04393
**Lozykowski, H. J.**
Kinetics of the luminescence of isoelectronic rare-earth ions in III-V semiconductors.—73-04378
**Lozzi, L.** See Alfonsetti, R.
**Lu, Chang-Gao**
Hydration products and mineral phase of fly ash–slag–alkali cementing material (FKJ).—73-09992; Reactive products and mineral phase for FKJ [fly ash slag alkali] cementitious material.—73-13659
**Lu, Chung-Hsin; De Jonghe, Lutgard C.**
Influence of $Nd_2O_3$ doping on the reaction process and sintering behavior of $BaCeO_3$ ceramics.—73-16837
**Lu, Chung-Hsin**
Compositional effect on the liquid-phase formation in lead iron tungstate ferroelectric ceramics.—73-15252
**Lu, D. F.** See Xin, Y.
**Lu, De-Xin; Xue, Qi; Zheng, An-Zhong**
Effects of $TiO_2$ on microstructure and properties of zirconia corundum materials.—73-13392
**Lu, Feng** See Zeng, Quan-Pu
**Lu, G.-Q.; Liu, L.-X.**
Importance of pore-grain boundary evolution in sintering kinetics.—73-03151
**Lu, G.-Q.**
Modeling the densification of porous structures in CVI ceramic composites processing.—73-16873
**Lu, Guo** See Lin, Chin
**Lu, H. A.** See Chen, J.
**Lu, H. A.; Chen, J.; Wessels, B. W.**
Weak links and critical current density in $Bi_2Sr_2CaCu_2O_x$ thin films.—73-01703
**Lu, H.-B.** See Yu, Fu-Dong; Zhu, D.-H.
**Lu, H.-B.**
Fabrication processes of black pottery.—73-14656
**Lu, Hong-Yang; Chen, Min-Ru; Chen, Shui-Yuan**
Crystallization of an $Al_2O_3$-MgO-$SiO_2$ glassy grain-boundary phase.—73-12566
**Lu, Hsin-Chun; Schroder, Glenn L.**
Characterization of the growth of sol-gel-derived Ba-Ti-O thin films by laser Raman spectroscopy.—73-13379
**Lu, Hui** See Zhu, Yi-Hua
**Lu, Hung-Hua** See Hwang, Chii-Shyang
**Lu, J.** See Gao, Xian-Cheng; Provot, X.
**Lu, Jian-Ping** See Yu, R. C.
**Lu, Jing-Cai** See Yue, Yong
**Lu, Jyh-Woei; Sargent, Gordon A.; Conrad, Hans**
Fundamental mechanisms of erosion [studied] using Hertzian fracture test.—73-07030
**Lu, Kai-Kong** See Liu, Xin-Sheng
**Lu, M.** See Gao, Q.-J.
**Lu, Ping; Danforth, Stephen C.; Symons, W. T.**
Characterization of HIPed, high-purity $Si_3N_4$ grain boundaries.—73-06195; Microstructure and grain-boundary characterization of HIPed high-purity silicon nitride.—73-09481
**Lu, Qing** See Shih, Wei-Heng
**Lu, Qing**
Temperature of ceramic article in tunnel kiln.—73-08489
**Lu, Shu-Zhen**
SiC kiln furniture materials.—73-07223
**Lu, Shy-Wen; Huang, Chi-Yuen**
Effect of microstructure on thermal expansion of $MZr_2P_3O_{12}$ (M=Na, K, Rb).—73-05547
**Lu, W.-C.** See Xie, J.-J.
**Lu, Wei-Jie** See Li, Ying-Sing

**Lu, Wen-Han** See Wei, Kun
**Lu, Wun-Hwa** See Chan, Sammy Lap-Ip; Lee, Huei-Long
**Lu, Xin-Liang** See Yue, Xue-Feng
**Lu, Xin-Liang; Yue, Xue-Feng; Song, Yong-Yuan**
Self-pumped phase conjugation in Cu-doped potassium-sodium-strontium-barium niobate (KNSBN).—73-11613
**Lu, Xu-Zhang**
Introduction of bauxite into batch formula of porcelain body.—73-10860
**Lu, Y. C.** See Yang, J. C.
**Lu, Y.** See Gurary, A.
**Lu, Y.-C.** See Snoke, D. W.
**Lu, Y.-J.; Ibers, J. A.**
Synthesis and characterization of the new quaternary two-dimensional materials $KCu_3NbQ_4$ (Q=Se, S).—73-02477
**Lu, Y.-M.** See Deng, Min
**Lu, Y.-T.** See He, Hui-Juan
**Lu, Ya-Feng; Wu, Xiao-Zu; Li, Qin-Yun**
Oxide superconductor $Bi_{1.6}Pb_{0.4}Sr_{2-x}M_xCa_2Cu_3O_y$ (M=Mg, Ba).—73-11858
**Lu, Yang-Ming; Hon, Min-Hsiung**
Effect of argon addition on the microstructure, texture, and phases of silicon carbide prepared by chemical vapor deposition.—73-02780
**Lu, Yi-Wei** See Collins, R. W.
**Lu, Yuan-Cheng** See Zhu, Yi-Hua
**Lu, Yuh-Yih** See Lai, Chun-Hung
**Lu, Yuh-Yih; Lai, Chun-Hung; Tseng, Tseung-Yuen**
Effect of soaking time on the temperature coefficient of resistivity [TCR] of semiconducting barium titanate PTCR ceramics.—73-14856
**Lu, Z.; Friedrich, K.; Pannhorst, Wolfgang; Heinz, J.**
Wear and friction of a unidirectional carbon fiber–glass matrix composite against various counterparts.—73-07102
**Lu, Z.; Schmidt, M. T.; Osgood, R. M.; Holber, W. M.; Podlesnik, D. V.**
GaAs surface oxidation and deoxidation using electron cyclotron resonance oxygen and hydrogen plasmas.—73-01171
**Lu, Zhang-Ming; Weng, Tong-Xu; Mao, Bai-Ming**
Development of cast pipe for copper continuous casting.—73-10716
**Lu, Zhi-Gao; Bonnet, J. P.; Ravez, J.; Hagenmuller, P.**
$Pb_3KNb_2O_{15}$ ferroelectric ceramics: elaboration, control of stoichiometry, and dielectric properties.—73-11595
**Lu, Zhong-Yuan** See Huang, Wen-Xi; Xu, Guang-Liang
**Lu, Zhong-Yuan; Huang, Wen-Xi; Xu, Guang-Liang**
Effect of the composite mineralizers of $CaF_2$, $CaSO_4$, and ZnO on the formation of the portland cement clinker in a rapid heating-up burning.—73-09922
**Lu, Zhuo** See Chen, Ang
**Lubas, Jaroslav** See Nemec, Lubomir
**Lubbehusen, M.** See Kukla, Reiner
**Lubben, D.** See Modine, F. A.
**Lubbers, K.** See Disam, J.
**Lube, E. L.; Zlatkin, A. T.; Bagdasarov, Kh. S.; Fedorov, E. A.; Tarasova, N. V.; Bologova, A. V.**
Estimation of fracture toughness and residual stresses in yttrium-aluminum garnet [single] crystals.—73-17307
**Lubenets, S. V.** See Lirtsman, V. G.
**Lubic, Karen** See Moinpour, Mansour
**Lubig, A.; Buchal, C.; Guggi, D.; Jia, C. L.; Stritzker, B.**
Epitaxial growth of monoclinic and cubic $ZrO_2$ on Si(100) without prior removal of the native $SiO_2$.—73-16138
**Lubin, J. A.** See Yang, W.-H.
**Lubitz, P.** See Qadri, S. B.
**Lubke, K.** See Neswal, M.
**Lubnow, A.; Tang, G.-P.; Wehmann, H.-H.; Schlachetzki, A.; Bugiel, E.; Zaumseil, P.**
Influence of a hydride preflow on the crystalline quality of InP grown on exactly oriented (100)Si.—73-11268
**Luby, S.; Majikova, E.; Daniska, V.; Luches, A.; Martino, M.; Perrone, A.**
Synthesis of tungsten silicide by pulsed laser irradiation of sputtered alloy layers.—73-09366
**Lubyova, Zelmira; Danek, Vladimir**
Formation mechanism, nucleation, and crystallization of $Li_2TiO_3$ from fused salts.—73-12584
**Lucas, Jacques** See Adam, J. L.; Charron, Christophe; Ma, H. L.; Matecki, Marc; Rigout, N.
**Lucazeau, G.** See Scherban, T.
**Lucchese, P.; Salin, J. F.; Blot, J.; Castagnos, Jacques**
Optimization of robotic trajectories in the atmosphere- and temperature-controlled plasma spray process on ceramic subtrate using heat flow modeling.—73-09227
**Lucchini, E.** See Lo Casto, S.
**Luce, Edward S.** See Gesing, Adam J.
**Luce, Michel** See Cauchetier, Michel
**Lucek, John W.** See Corbin, N. D.
**Luches, A.** See D'Anna, F.; Luby, S.; Mihailescu, I. N.
**Luchko, S. V.** See Genkina, E. A.; Lyubutin, I. S.
**Lucia, M. L.** See Hernandez-Rojas, J. L.
**Luck, C. F.** See Wachs, A. L.
**Luck, F.** See Lauron-Pernot, H.
**Luck, R.** See Bruckner, A.
**Luckenbach, Thomas A.**
Simultaneous rheological and optical analyses.—73-12195
**Luckham, P. F.** See Briscoe, B. J.
**Luckscheiter, Berthold** See Kipka, Annette
**Lucovsky, G.** See Bjorkman, C. H.; Choi, S. W.; Hattangady, S. V.; He, S. S.; Ma, Y.; Stephens, D. J.; Wang, C.; Yasuda, T.
**Lucovsky, G.; Ma, Y.; He, S. S.; Yasuda, T.; Stephens, D. J.; Habermehl, S.**
Quasi-stoichiometric silicon nitride thin films deposited by remote plasma-enhanced chemical vapor deposition.—73-06004
**Lucovsky, G.; Yasuda, T.; Ma, Y.; Habermehl, S.; He, S. S.; Stephens, D. J.**
Low-temperature plasma-assisted oxidation and thin-film deposition processes for forming device-quality $SiO_2$/Si and composite dielectric-$SiO_2$/Si heterostructures.—73-10968
**Lucuta, P. G.; Halliday, J. D.; Christian, B.**
Phase evolution in $Al_2O_3$ fiber prepared from an oxychloride precursor.—73-02918
**Ludeke, R.; Prietsch, M.**
Ballistic electron emission spectroscopy of noble metal-GaP(110) interfaces.—73-01082
**Ludeke, R.**
Density of states and hot electron effects in ballistic electron emission spectroscopy.—73-06203
**Ludescher, B.** See Schuster, T.
**Ludwig, H.-M.** See Stark, Jochen
**Ludwig, K. F., Jr.** See Lei, T.
**Ludwig, W.** See Falter, C.
**Lue, Juh-Tzeng; Lo, Kuang-Yao; Tzeng, Chin-Ching**
Optical second harmonic generation from unbiased single $Ga_{1-x}Al_xAs$ quantum wells with symmetric structures.—73-01266
**Luecke, William; Wiederhorn, Sheldon M.; Hockey, Bernard J.; Long, Gabrielle G.**
Cavity evolution during tensile creep of $Si_3N_4$.—73-06337
**Lugagne-Delpon, Emanuel** See Roth, A.
**Lugagne-Delpon, Emanuel; Andre, J. P.; Voisin, P.**
Evidence of noncommutativity and nontransitivity of band discontinuities in InP-Al(In)As-Ga(In)As heterostructures.—73-04334
**Luginets, A. M.** See Barilo, S. N.
**Luginina, I. G.; Boikova, Alexandra I.; Fomicheva, O. I.**
Effect of increased magnesium oxide contents and mixture basicity upon clinker phases.—73-09909
**Lugscheider, E.** See Borisov, Y.; Eschnauer, H.; Smith, R. W.; Vityaz, P.
**Lugscheider, E.; Boretius, M.; Tillmann, W.**
Development of high-strength, active-brazed silicon nitride and silicon carbide joints.—73-00220
**Lugscheider, E.; Rass, I.**
Plasma processing of materials underwater.—73-09244; Processing stabilized zirconia underwater—spherical composite powders for plasma-sprayed thermal barrier coatings.—73-09281
**Luhrmann, R.; Dotsch, H.; Sure, S.**
Excitation and diffraction of elastic waves by oscillating domain lattices in magnetic garnet films.—73-04611
**Lui, Kenneth** See Lau, James C.
**Lui, M.; McFarlane, R. A.; Yap, D.**
MBE growth of rare-earth-doped fluoride insulators on semiconductors for laser applications.—73-04399
**Lui, Siu-Ching** See Li, Chien-Wei
**Luisa des Glorgi, M.** See Mihailescu, I. N.
**Lujano, Juan A.** See Martinez, Nelson P.
**Luk'yanchenko, A. I.** See Gergel, V. A.
**Lukacs, Alexander, III; Matsumoto, Roger L. K.**
Reaction injection molding of silicon nitride ceramics having crystallized grain-boundary phases.—73-02132
**Lukashev, A. V.** See Vodop'yanov, K. L.
**Lukashin, S. A.** See Makarov, R. I.
**Lukasiewicz, T.** See Borowiec, M. T.
**Luke, John** See Cass, Richard B.
**Luke, Karen** See Moukwa, M.
**Luke, Karen**
Influence of superplasticizer on aqueous phase composition in the CaO-$Al_2O_3$-$SO_3$-$H_2O$ system.—73-10013
**Lukes, F.; Ploog, K.**
Dielectric function of GaAs/AlAs superlattices grown on GaAs substrates with different orientation.—73-14833
**Lukin, E S.** See Tarasovskii, V. P.; Zhuravleva, N. V.
**Lukin, E. S.; Popova, N. A.; Tsetskhladze, D. L.**
Strong corundum-based ceramic "Sikor."—73-00871
**Lukina, M. M.** See Artem'ev, G. G.; Karnachev, A. S.
**Lukiyanchuk, G. D.** See Bayukov, O. A.; Merkulov, E. B.
**Lukiyanchuk, G. D.; Goncharuk, V. K.; Merkulov, E. V.; Usol'tseva, T. I.**
Vitrification and the properties of glass systems containing tin tetrafluoride.—73-14125
**Luksich, John; Aita, Carolyn Rubin**
Annealing response of disordered sputter-deposited vanadium pentoxide ($V_2O_5$).—73-02727
**Lukyanov, A. A.**
Theory of the Si(100) surface reconstruction at finite temperatures: Bragg-Williams-type approximation.—73-05511
**Lukyanov, A. I.** See Matyushev, V. V.
**Lum, Genevieve S.** See Langlois, Conrad J., Jr.
**Lum, Genevieve S.; Langlois, Conrad J., Jr.**
Preceramic composition and ceramic product.—73-05238
**Lum, L.-S. H.** See Malghan, Subhas G.
**Lum, S. F. H.** See Weyers, Richard E.
**Luna, R. G.** See Gonzalvez, J. M.
**Lunden, A.; Dissanayake, M. A. K. L.**
Ionic conductivity and phase transitions in the $Li_2SO_4$-$Li_2WO_4$ system and their relation to ion transport mechanism.—73-03098
**Lundgren, P.** See Farmer, K. R.
**Lundstrom, T.; Holtz, P. O.; Zhao, Q.-X.; Bergman, J. P.; Monemar, B.; Sundaram, M.**
Radiative recombination in modulation-doped GaAs/AlGaAs heterostructures in the presence of an electric field.—73-15136
**Lunk, A.** See Steffen, H.
**Lunkenheimer, P.; Resch, M.; Loidl, A.; Hidaka, Y.**
Ac conductivity in $La_2CuO_4$.—73-08799
**Lunn, B.** See Halsall, H. P.
**Lunney, James G.** See Asatsuma, T.; Masterson, H. J.
**Lunney, James G.; Lawler, Justin F.; Aratari, Roberto**
Ion emission studies of pulsed laser evaporation of $YBa_2Cu_3O_7$.—73-08116
**Lunt, Stephen G.** See Devon, A. K.
**Lunter, S. G.** See Il'khamov, R. A.
**Lunter, S. G.; Petrovskii, G. T.; Plukhin, A. G.; Fedorov, Yu. K.**
Nd laser glasses based upon several glass-forming substances.—73-14232
**Lunts, D. G.** See Brazhkin, V. V.
**Luo, C.-P.** See Xu, Z.-Y.
**Luo, Chang-Xun** See Feng, Yong; Yang, Wan-Ming
**Luo, Ching-Rong** See Chang, Chu-Nan
**Luo, De-Gao**
Optimum rotating speed of wet ball mills.—73-12053
**Luo, H.** See Ding, J.; Smyth, J. A.; Yokogawa, T.
**Luo, H.; Dai, N.; Zhang, F. C.; Samarth, N.; Dobrowolska, M.; Furdyna, J. K.**
Quasi-bound states in semiconductor single quantum barriers.—73-15132
**Luo, H.; Ram-Mohan, L. R.; Yang, G. L.; Xuan, Y.; Furdyna, J. K.**
Stress confined in the barriers of type-III HgTe/CdTe superlattices.—73-11457
**Luo, H.; Samarth, N.; Yin, A.; Pareek, A.; Dobrowolska, M.; Furdyna, J. K.**
Growth and characterization of digital alloy quantum wells of CdSe/ZnSe.—73-04349
**Luo, Hong-Gi**
Compositional improvement of fluorescent tube glasses.—73-03716
**Luo, J. K.** See Thomas, H.
**Luo, J. K.; Thomas, H.; Clark, S. A.; Williams, R. H.**
Effect of growth temperature on the electrical properties of AlInAs/InP grown by molecular beam epitaxy and metallorganic chemical vapor deposition.—73-11154
**Luo, J. K.; Thomas, H.**
Influence of indium tin oxide deposition on the transport properties at InP junctions.—73-17081
**Luo, J. S.; Lee, H. G.; Sinha, S.**
Mechanochemical effects of high-energy attrition milling on the $Bi_2Sr_2CaCu_2O_x$ superconductor.—73-04771
**Luo, J.; Orlando, T. P.; Graybael, J. M.; Wu, X.-D.; Muenchausen, Ross E.**
Scaling of the longitudinal and Hall resistivities from vortex motion in $YBa_2Cu_3O_7$.—73-11896
**Luo, Jie-Yao** See Bao, Zhi-Qin
**Luo, Le** See Wei, Wang-Shui; Zhang, Yong-Hong
**Luo, Li** See Chen, Ling
**Luo, M. S. C.** See Planken, Paul C. M.
**Luo, Ping; Strutt, P. R.**
Processing of chromium silicide–silicon carbide nanostructured composite by thermal conversion of spray-dried precursor powders.—73-05999
**Luo, Shou-Jing** See Jiang, Peng
**Luo, W.-A.** See Su, Chao-Chin; Zeng, You-Yi
**Luo, Wei-Ang** See Zeng, You-Yi
**Luo, Wu-Quan**
Approach to positioned crystal glaze of glazed tiles.—73-10799; Developing pearl-glazed tiles.—73-10813
**Luo, Yu-Kuan**
Combined interfaces between hydroxyapatite (HAp) coating and metal with electron microprobe analyzer.—73-13809
**Luo, Zun-Du** See Huang, Yi-Dong; Wang, Guo-Fu
**Lupacheva, A. N.** See Karyagin, S. N.
**Lupal, M. V.** See Glinskii, G. F.
**Lupei, A.** See Lupei, V.
**Lupei, V.; Lou, L.; Boulon, G.; Lupei, A.; Tiseanu, C.**
Static and dynamic luminescence effects of $Cr^{3+}$-$Tm^{3+}$ pairs in YAG.—73-05641
**Lupeiko, T. G.** See Bikyashev, E. A.; Solov'ev, L. A.
**Lupescu, M. B.**
Ground coats for chemical equipment.—73-13843
**Lupi, Stefano** See Calvani, Paolo
**Luprano, Vincenza** See Marrow, James
**Lupsa, I.** See Ardelean, I.
**Lusakowski, J.; Karpierz, K.; Sadowski, M. L.; Grynberg, M.**
Fluctuating potential and localization in semiinsulating GaAs.—73-01166
**Luscombe, James H.** See Randall, J. N.
**Luscombe, James H.**
Current issues in nanoelectronic modeling.—73-16435
**Lushchik, A. Ch.** See Ibragimov, K. I.
**Lushchik, Ch. B.** See Ibragimov, K. I.
**Lushnikov, P. V.** See Sobolev, A. B.
**Lushnikov, P. V.; Sobolev, A. B.**
Energy band structure of $La_2O_3$ crystal and $F^+$, $F$ centers.—73-02265
**Lushpenko, S. F.** See Ved, V. E.
**Luspin, Yves** See Vaills, Yahn
**Luspin, Yves; Vaills, Yann; Hauret, Georges**
Brillouin scattering in $RbHSeO_4$ near the ferroelectric transition.—73-16417
**Luss, Dan** See Richardson, J. T.
**Lustenberg, E. E.** See Lapides, I. L.
**Lusvardi, Gigliola** See Bruckner, Sergio
**Luszcz, Stanley J.; Urquhart, Andrew W.; Newkirk, Marc S.**
Surface bonding of ceramic bodies.—73-00297
**Lutgemeier, H.** See Egorov, A. V.
**Luth, H.** See Moritz, H.; Rizzi, A.
**Luth, Hans** See Forster, A.
**Luther, Erik P.; Kramer, Thomas M.; Lange, Fred F.; Pearson, Dale S.**
Development of short-range repulsive potentials in aqueous, silicon nitride slurries.—73-09068
**Luthra, Krishan L.; Brun, Milivoj K.; Corman, Gregory S.**
Protective coating with reactive interlayer on reinforcement in silicon carbide composite.—73-12515
**Luthy, W.** See Breguet, J.; Morris, P. J.
**Luts, G. B.** See Popov, P. A.
**Lutsenko, A. S.** See Pilipchatin, L. D.
**Lutsenko, E. V.** See Gribkovskii, V. P.
**Lutsiv, R. V.** See Dovgii, Ya. O.
**Lutteroti, L.** See Scardi, P.
**Luttmer, J. D.** See Wan, C. F.
**Lutz, Ekkehard H.; Sakai, Mototsugu**
*R*-curve and compliance change upon renotching.—73-03347

**Lutz, Ekkehard H.; Swain, Michael V.**
Interrelation between flaw resistance, $K^R$-curve behavior, and thermal shock strength degradation in ceramics.—73-06465
**Lutz, Ekkehard H.**
Interrelation between flaw resistance, *R*-curve behavior, thermal shock strength degradation, and stress-strain behavior of ceramics.—73-06466; Microstructure and properties of plasma ceramics.—73-09486; Predictability of the mechanical properties of inclusion-containing ceramics.—73-13578
**Lutz, Gerhard**
Grinding advanced ceramics.—73-15728
**Lutz, H. D.; Muller, B.; Steiner, H. J.**
Lattice vibration spectra: LIX, Single-crystal infrared and Raman studies of spinel-type oxides.—73-02317
**Lutz, H. D.; Pfitzner, A.; Wickel, C.**
Ionic conductivities of spinel-type quaternary lithium chlorides: phase diagrams of LiCl-$M^{II}$Cl-$M^{II}Cl_2$ ($M^I$=Cu, Na; $M^{II}$=Mn, Cd, Mg).—73-05426
**Lutz, Norbert** See Buerhop, Claudia
**Lutz, W.** See Fichtner-Schmittler, H.
**Lutze, Werner** See Kipka, Annette
**Lutzner, Wolfram** See Hofmann, Otto R.
**Lux, G. E.; Stevie, F. A.; Kahora, P. M.; Wilson, R. G.; Cochran, G. W.**
Secondary ion mass spectrometry quantification of elements in $TiSi_2$, TiN, and TiW matrices.—73-08728
**Luxan, M. P.** See Frias, M.; Sanchez de Rojas, M. I.; Frias, M.
**Luxova, Ida** See Nemec, Lubomir
**Luyten, J.** See Hendrix, W.
**Luyten, J.; De Schutter, F.; Schram, J.; Schoonman, J.**
Chemical and electrical properties of Yb-doped strontium cerates in coal combustion atmospheres.—73-02560
**Luyten, J.; Sieurs, J.**
Zeolite-$Al_2O_3$ membrane configuration.—73-12335
**Lyadova, V. Ya.** See Arakcheeva, A. V.
**Lyakhov, B. F.** See Lipson, A. G.
**Lyakhovich, T. T.** See Gurbanov, A. G.
**Lyanda-Geller, Yu. B.** See Andrianov, A. V.
**Lyapin, A. E.** See Demishev, S. V.
**Lyapin, A. G.** See Brazhkin, V. V.; Demishev, S. V.
**Lyashenko, T. V.** See Kolesnikova, R. N.
**Lycourghiotis, A.** See Dalas, Evagelos; Spanos, N.
**Lye, Barry**
Lead—beginning of the end.—73-13628
**Lyke, James** See Carpenter, Joseph A., Jr.
**Lyklema, Johannes** See Kijlstra, Johan
**Lykov, S. N.** See Chernik, I. A.
**Lykov, V. V.** See Chetkin, M. V.
**Lyman, Charles E.** See Dravid, Vinayak P.
**Lyman, P. F.** See Seiberling, L. E.
**Lyman, P. S.** See Hoke, W. E.
**Lyn'kov, L. M.; Prishchepa, S. L.; Solov'ev, V. V.; Tseiger, E. N.**
Structure, texture, and aging of thin $ZrO_2$ films.—73-02468
**Lynch, Ann M.** See Thomas, David
**Lynch, Ann M.**
Effect of current laundry detergents on porcelain enamel surfaces.—73-13826
**Lynch, J.** See Caullet, P.
**Lynch, Kenneth L.**
Bone induction method.—73-12341
**Lynch, S.** See Greef, R.
**Lynch, S.; Murtagh, M.; Crean, G. M.; Kelly, P. V.; O'Connor, M.; Jeynes, C.**
Nondestructive depth profiling of silicon ion implantation induced damage in silicon(100) substrates.—73-15059
**Lynn, J. W.** See Clinton, T. W.; Skanthakumar, S.; Sumarlin, I. W.
**Lynn, K. G.** See Umlor, M. T.
**Lynn, M.; Lynn, S.; Varacalle, D. J., Jr.; Riggs, W. L., II**
Experimental/analytical investigation of plasma-sprayed alumina coatings.—73-09124
**Lynn, S.** See Lynn, M.
**Lyo, I.-W.** See Avouris, P.
**Lyons, Jed S.; Starr, Thomas L.**
Strength and toughness of slip-cast fused-silica composites.—73-10484
**Lyons, Shirley W.; Wang, L. M.; Kodas, Toivo T.**
Nanophase oxide formation by intraparticle reaction.—73-13146
**Lysak, S. V.** See Alapin, B. G.
**Lysanova, G. V.** See Tselebrovskaya, E. G.
**Lysenko, V. S.** See Gomeniuk, Yu. V.
**Lysy, A.** See Skvor, Z.
**Lytsyuk, N. B.** See Gerashchenko, I. I.
**Lyubalin, M. D.** See Gutman, V. I.
**Lyubalin, M. D.; Pis'mennyi, V. A.; Petrovskii, G. T.**
Homogeneity of ceramics prepared by crystallizing $Al_2O_3$-$ZrO_2$-$Y_2O_3$ melts with near-stoichiometric composition.—73-05845
**Lyubchenko, A. V.** See Bakshi, I. S.; Grigor'ev, N. N.; Karachevtseva, L. A.
**Lyubchenko, V. E.** See Borisov, V. I.
**Lyubimov, A. G.**
Model of mosaic crystal with dynamically scattering blocks.—73-02331
**Lyubimov, V. N.** See Al'shits, V. I.
**Lyubin, V. M.** See Aver'yanov, V. L.; Barash, E. G.; Kolobov, A. V.
**Lyubin, V. M.; Tikhomirov, V. K.; Zemel'ko, V. I.**
Natural and photoinduced optical activity of chalcogenide glasses.—73-00518
**Lyubin, V. M.; Tikhomirov, V. K.**
Intrinsic and photoinduced elliptical dichroism and birefringence in chalcogenide glasses.—73-14212; Optical bistability and photoinduced quenching of light scattering in bulk chalcogenide glasses under sub-band-gap excitation.—73-15070; Photoinduced anisotropy and gyrotropy in chalcogenide glasses.—73-14247
**Lyubutin, I. S.** See Genkina, E. A.
**Lyubutin, I. S.; Terziev, V. G.; Dmitrieva, T. V.; Balagurov, A. M.**
Structural positions and magnetic ordering of Fe atoms in $YBa_2(Cu_{1-x}Fe_x)_3O_y$ system enriched in or depleted of oxygen.—73-15632
**Lyubutin, I. S.; Terziev, V. G.; Dmitrieva, T. V.; Luchko, S. V.; Shapiro, A. Y.**
Magnetically ordered states in $YBa_2(Cu_{1-x}Fe_x)_3O_{7+\delta}$ with $0.15<x<0.3$.—73-07960
**Lyubutin, I. S.; Terziev, V. G.; Dmitrieva, T. V.**
Low-temperature magnetic phase transition in $YBa(Cu_{1-x}Fe_x)_3O_{7+\delta}$ system ($0.15\leq x\leq 0.3$) accompanied by change in electronic structure of Fe atoms.—73-15541; Magnetic phase diagrams of the system $YBa_2(Cu_{1-x}Fe_x)_3O_y$.—73-08661
**Lyutovich, K. L.** See Balakauskas, S. I.; Vdovin, V. I.
**Ma, Bao-Guo** See Shui, Zhong-He
**Ma, C. L. F.; Deen, M. J.; Hardy, R. H. S.**
Excess currents as a result of trap-assisted tunneling in double barrier resonant tunneling diodes.—73-07515
**Ma, Chang-Chen** See Feng, Nai-Qian
**Ma, Chen-Chi M.** See Tai, Nyan-Hwa
**Ma, Cheng-Hui** See Zhang, Deng-Xia
**Ma, De-Jin** See Miao, He-Zhuo
**Ma, H. L.; Zhang, X. H.; Lucas, Jacques; Iizuka, R.; Yamagishi, T.; Yamashita, T.**
Refractive index measurement of the TeX glasses.—73-07070
**Ma, H.** See Jedral, L.
**Ma, H.; Gomes, A. S. L.; De Araujo, Cid B.**
Ir nonlinearity of commercial Cd(S,Se) glass composites.—73-01224
**Ma, H.; Lin, S. H.; Carpenter, R. W.; Rice, P.; Sankey, O. F.**
Ab initio calculation of band structure, X-ray emission, quantum yield, and electron-energy-loss spectra of hexagonal boron nitride.—73-07281
**Ma, Hong** See Jiang, Lian-Hua
**Ma, J. F.** See Zhang, J.
**Ma, J.-M.** See Zhong, Wei-Lie
**Ma, J.-P.** See Xu, Wen-Yang
**Ma, Jai** See Kelley, R. J.
**Ma, Jian-Wei; Zhou, Fu-Zheng; Shen, Xiao-Hua**
Intracavity frequency doubling of double-heterostructure junction-diode laser array (DH-LDA) pumped Nd:YAG laser.—73-12823
**Ma, Juan-Rong; Wang, Lin-Sheng; Jin, Zong-Zhe**
Reliability of strength testing for glass by the relation between sample size and strength data.—73-14273
**Ma, Juan-Rong; Zeng, Shang-Tang; Zhou, Ji-Cai**
Evaluating life reliability of aerial glass by timing termination theory.—73-14181
**Ma, Jun-Rong** See He, Bing-Fang
**Ma, Jun-Rong; Zhao, Xiu-Zhi**
Manufacture of fired hollow blocks of fly ash.—73-08350
**Ma, K.** See Sha, J.
**Ma, K.-J.** See Huang, Y.
**Ma, Kun-Song; Pierre, A. C.**
Sedimentation behavior of a fine kaolinite in the presence of fresh Fe electrolyte.—73-13246
**Ma, L.** See Bu, Y.; Zhang, Guo-Wei
**Ma, Li-Tai** See Guo, Jing-Kun; Song, Xiang-Yun
**Ma, Li-Ying** See Li, Jia
**Ma, Q. Y.** See Chow, Julie L.
**Ma, Q. Y.; Schmidt, M. T.; Weinman, L. S.; Yang, E. S.; Sampere, S. M.; Chan, S. W.**
Characterization of bilayer-metal contacts to high-$T_c$ superconducting films.—73-01501
**Ma, Q.-A.** See Li, Jian-Quan
**Ma, Qing; Clarke, David R.**
Measurement of residual stresses in sapphire fiber composites using optical fluorescence.—73-06476; Optical fluorescence from chromium ions in sapphire: a probe of the image stress.—73-05442; Piezospectroscopic determination of residual stresses in polycrystalline alumina.—73-05614
**Ma, Ru-Zhang** See Cao, Gou-Hui
**Ma, Tie-Cheng** See Hu, Zhi-Qiang
**Ma, Wei-Ping; Brown, Paul W.; Shi, De-Xiang**
Solubility of $Ca(OH)_2$ and $CaSO_4{\cdot}2H_2O$ in the liquid phase from hardened cement paste.—73-10157
**Ma, Wei-Ping; Brown, Paul W.**
Mechanical behavior and microstructural development in phosphate-modified high-alumina cement.—73-10034
**Ma, Xiang-Feng; Tanihata, Kimiaki; Miyamoto, Yoshinari**
Gas-pressure combustion sintering and properties of $Cr_3C_2$ ceramic and its composite with TiC.—73-05822; Gas-pressure combustion sintering and properties of $Cr_3C_2$ ceramic and its composite with TiC.—73-13071
**Ma, Xiao-Peng**
Opaque raw glazes for once low-temperature firing.—73-10875; Rose, high-temperature, Cr-Ti-Sn pigment for porcelain.—73-10897
**Ma, Y.** See Bjorkman, C. H.; Lucovsky, G.; Yasuda, T.
**Ma, Y.-Z.; Chi, Xiu-Ming; Nei, Bao-Min**
Correlation of slip property with additives.—73-08330; Energy-saving mechanism of diopside in glazed tiles.—73-10836; Relationship between properties of clays and additives for their slurries.—73-10894
**Ma, Y.; Yasuda, T.; Chen, Y. L.; Lucovsky, G.; Maher, D. M.**
Electrical properties of oxide-nitride-oxide, ONO, heterostructures fabricated by low-temperature [300°C] remote PECVD.—73-04086
**Ma, Y.; Yasuda, T.; Lucovsky, G.**
Fixed and trapped charges at oxide-nitride-oxide [ONO] heterostructure interfaces formed by remote plasma-enhanced chemical vapor deposition.—73-10949; Formation of device-quality metal-insulator-semiconductor structures with oxide-nitride-oxide [ONO] dielectrics by low-temperature plasma-assisted processing, combined with high-temperature rapid thermal annealing.—73-04104
**Ma, Yan; Langdon, Terence G.**
Implications of void growth in submicrometer and nanocrystalline structures.—73-13549
**Ma, Yi-H.; Xiang, Shou-He**
Formation of zeolite membranes from sols.—73-05214
**Ma, Yi-Jun** See Chen, Kai-Yuan
**Ma, Yu-Rong** See Li, Qing-San
**Ma, Yuan-Ron** See Chiu, Chin-Chen
**Ma, Z.-W.** See Lin, Zu-Xiang
**Ma, Z.; Xu, Y.; Allen, L. H.; Lee, S.**
Nucleation and growth in the initial stage of metastable titanium disilicide formation.—73-09495
**Ma, Z.; Zhou, G. L.; Shen, T. C.; Lin, M. E.; Hsieh, K. C.; Allen, L. H.**
Wafer bonding for hybrid circuit technology using solid-state reactions.—73-01363
**Ma, Zheng-Xiang; Taber, Robert C.; Lombardo, L. W.; Kapitulnik, A.; Beasley, M. R.; Merchant, P.**
Microwave penetration depth measurements in $Bi_2Sr_2CaCu_2O_{7-\delta}$ single crystals and $YBa_2Cu_3O_8$ thin films.—73-15556
**Maa, B. Y.; Dapkus, P. D.**
Surface reactions in atomic layer epitaxy of GaAs [studied] using trimethylgallium by reflectance difference spectroscopy and mass spectroscopy.—73-01337
**Maahs, H. G.** See Yamaki, Y. R.
**Maan, A. S.; Sharma, L. R.; Dahiya, H. S.; Goyal, D. R.**
Laser-induced photoconductivity in thin films of amorphous $Sb_{15}Ge_5Se_{80}$ alloy.—73-07633
**Maaref, M.; Charfi, F. F.; Scalbert, D.; Guillaume, C. B.; Planel, R.**
$\Gamma$-$X_z$ mixing in GaAs/AlAs superlattices of type II.—73-01172
**Maaref, M.; Charfi, F. F.; Scalbert, D.; Laguillaume, C. B. A.; Planel, R.; Leroux, G.**
Interface roughness from $\Gamma$ and $\chi$ luminescence in type II GaAs/AlAs superlattices with composition gradient.—73-01220
**Maassen, M.; Kayser, O.; Westphalen, R.; Guimaraes, F. E. G.; Geurts, J.; Finders, J.**
Localized deposition of GaAs/GaInP heterostructures using LP-MOVPE.—73-15013
**Maboudian, R.** See Bressler-Hill, V.; Pond, K.; Wang, X.-S.
**Mabuchi, Akira** See Manabe, Katsuhide
**Mabuchi, Mamoru; Imai, Tsunemichi; Kubo, Katsushi; Higashi, K.; Okada, Y.; Tanimura, S.**
Superplastic behavior in a high strain rate range of 6061 aluminum composites reinforced with $Si_3N_4$ whiskers or particulates.—73-10280
**Mabuchi, Mamoru; Imai, Tsunemichi; Kubo, Katsushi**
Superplastic behavior in a high strain rate range of 6061 aluminum composites reinforced with $Si_3N_4$ whiskers or particulates.—73-03646
**Mabuchi, Yutaka** See Ogasawara, Toshio
**Mac Elroy, J. M. D.**
Sorption in energetically heterogeneous model silica systems.—73-16596
**Mac, W.** See Krevet, R.
**Mac, W.; Khoi, Nguyen-The; Twardowski, A.; Gaj, J. A.; Demianiuk, M.**
Ferromagnetic *p-d* exchange in $Zn_{1-x}Sr_xSe$ diluted magnetic semiconductor.—73-15326
**Macagno, V. A.** See Avalle, L.
**MacAllister, Burton W.** See Wang, Da-Yu
**MacChesney, John B.** See Chandross, Edwin A.
**Macchioni, C. V.**
Effect of substrate temperature and bias on the stress, chemical etch rate, and microstructure of high deposition rate sputtered $SiO_2$ films.—73-02797
**MacCrone, R. K.** See Shaw, K. G.
**Macdonald, Digby D.** See Hettiarachchi, Samson
**MacDowell, John F.** See Andrus, Ronald L.
**Macedo, P. B.** See Bowan, B. W.; Wang, E.; Wicks, George G.
**Macewan, W. R.** See Moze, O.
**MacFarlane, Douglas R.** See Uhlherr, Alfred
**MacFarlane, Douglas R.; Newman, P. J.; Zhou, Zhi-Ping; Javorniczky, J.**
Systematic study of refractive index variations with composition in heavy metal fluoride glasses.—73-07082
**Macfarlane, P. J.** See Kouvatsos, Dimitrios N.
**MacGibbon, B. S.** See Yurgartis, S. W.
**MacGill, R. A.; Yao, X. Y.; Castro, R. A.; Dickinson, M. R.; Brown, Ian G.**
Poor man's scratch tester.—73-15831
**Machado, Francisco** See Martinez, Nelson P.
**Machal, C.; Davidson, A.; Thouvenot, R.; Herve, G.**
Influence of small amounts of tungsten on the physicochemical and catalytic properties of (40)4-heteropolyanions.—73-12815
**Machet, J.** See Baraton, Marie-Isabelle
**Machi, Yoshio** See Shimada, Yoshihito
**Machida, K.** See Nagase, M.
**Machida, Katsuyuki; Hashimoto, Chisato; Oikawa, Hideo**
Effect of oxygen ions on filling $SiO_2$ into holes using biased electron cyclotron resonance plasma deposition.—73-13010
**Machida, M.** See Chai, Mao-Rong; Hirano, Masanori
**Machida, M.; Shiomitsu, Toru; Eguchi, K.; Arai, H.; Shimizu, Y.**
Anisotropic oxygen diffusion in hexaaluminate.—73-03075
**Machida, M.; Shiomitsu, Toru; Eguchi, K.; Haneda, H.; Arai, H.**
Secondary ion mass spectrometric analysis of anisotropic oxygen self-diffusion in barium hexaaluminate single crystals.—73-13367
**Machida, M.; Yasuoka, K.; Eguchi, K.; Arai, H.**
Formation and decomposition of $BaCuO_{2.5}$ prepared from a mixture of nitrates.—73-02831
**Machida, Nobuya** See Minami, T.; Minami, Tsutomu

**Machida, Nobuya; Shigematsu, Toshihiko; Nakanishi, Norihiki; Tsuchida, Shinji; Minami, Tsutomu**
Glass formation and ion conduction in the $CuCl$-$Cu_2MoO_4$-$Cu_3PO_4$ system.—73-14194; Glass formation and ion conduction in the $CuCl$-$Cu_2MoO_4$-$Cu_3PO_4$ system.—73-07031
**Machida, Nobuya; Shinkuma, Yoshikane; Minami, Tsutomu**
Structure and electrical properties of $Cu^+$ ion-conducting oxyhalide glasses in the system $CuI$-$CuPO_3$-$Cu_2MoO_4$.—73-01028
**Machida, Nobuya; Tsuchida, Shinji; Minami, Tsutomu; Shigematsu, Toshihiko; Nakanishi, Norihiko**
Preparation and conductivity measurement of the $CuCl$-$Cu_2MoO_4$-$CuPO_3$ glasses.—73-01014
**Machida, Osamu** See Takenaka, Takashi
**Machino, T.** See Lee, W.-K.
**Machler, Erich** See Locquet, Jean-Pierre
**Macho, E.; Balda, R.; Elejalde, M. J.; Fernandez, J.; Adam, J. L.**
Luminescence thermal quenching of $Nd^{3+}$-doped fluoride BIGaZYTZr glass.—73-07046
**Machova, Gabriela** See Mrnikova, Miroslava
**Macias, M.** See Hernan, L.; Navio, J. A.
**Macias, M.; Sanchez-Soto, P. J.; Navio, J. A.**
Kinetic study of crystallization in zirconium titanate from an amorphous reactive prepared precursor.—73-12619
**Maciejewicz, Norbert**
Pyrometric measurements in glass furnaces, tanks, feeders, and in the glass-forming area.—73-03879
**Maciejko, R.** See Tronc, P.
**Maciejny, A.** See Formanek, B.
**Maciel, Gary E.** See Chuang, I-S.; Kinney, David R.; Schwab, Stuart T.
**Maciel, P. D.** See Shapoval, S. Y.
**MacInnes, Andrew N.** See Barron, Andrew R.; Landry, Christopher C.
**MacInnes, Andrew N.; Cleaver, William M.; Barron, Andrew R.**
MOCVD of polycrystalline tetragonal InS thin films.—73-07675
**MacKay, Rebecca A.** See Sathish, Shamachary
**Mackechnie, C. J.** See Wang, J.
**Mackenzie, A. P.** See Carrington, A.
**Mackenzie, A. P.; Julian, S. R.; Lonzarich, G. G.; Carrington, A.; Hughes, S. D.; Liu, R. S.**
Resistive upper critical field in $Tl_2Ba_2CuO_6$ at low temperatures and high magnetic fields.—73-15612
**Mackenzie, J. A.** See Johnson, S. R.
**MacKenzie, J. D.** See Wilson, M. T.
**MacKenzie, J. D.; Zheng, H.**
Oxide–nonoxide glasses.—73-15968
**MacKenzie, J.** See Royle, M.
**Mackenzie, John D.** See Nazeri, Azar
**Mackenzie, John D.**
Sol-gel optics.—73-06061; Sol-gel optics.—73-13277
**Mackin, T. J.** See Heredia, Fernando E.; Warren, P. D.
**Mackin, T. J.; Warren, P. D.; Evans, Anthony G.**
Effects of fiber roughness on interface sliding in composites.—73-17127
**Mackin, T. J.; Yang, J. Y.; Levi, Carlos G.; Evans, Anthony G.**
Environmentally compatible double coating concepts for sapphire fiber-reinforced γ-TiAl.—73-06781
**Mackinnon, Ian D. R.** See Golden, S. J.
**Mackinnon, Ian D. R.; Uwins, Philippa J. R.; Yago, Anya; Page, David**
Kaolinite particle sizes in the <2 μm range using laser scattering.—73-12154
**MacKinnon, N.; Sinclair, B. D.**
Pump-power-induced cavity stability in lithium neodymium tetraphosphate (LNP) microchip lasers.—73-08961
**MacKinnon, Robin J.** See Edward, John P.
**Macklin, W. J.; Claude, S.; Brien, V.; Moseley, P. T.**
Electrochemical intercalation of alkali metals into superconducting oxide phases.—73-11743
**Maclay, G. Jordan** See Esfahani, Rasoul N.
**MacManus-Driscoll, Judith L.; Bravman, John C.; Savoy, Richard J.; Gorman, Grace; Beyers, Robert B.**
Effects of silver and lead on the phase stability of $Bi_2Sr_2Ca_1Cu_2O_{8+x}$ [Bi-2212] and $Bi_2Sr_2Ca_2Cu_3O_{10+x}$ [Bi-2223] above and below the solidus temperature.—73-15445
**Macosko, C. W.** See Glasrud, G. G.
**Macphee, D. E.; Black, C. J.; Taylor, A. H.**
Cements incorporating brown coal fly ash from the Latrobe valley region of Victoria, Australia.—73-06635
**Macphee, Donald E.** See Atkins, M.; Smillie, S.
**Macphee, Donald E.; Glasser, Fredrick P.**
Immobilization science of cement systems.—73-06670
**MacQuistan, D.** See Springthorpe, A. J.
**Macrelli, Guglielmo** See Daneo, Antonio
**Maczek, R.** See Bulga, Z.
**MacZura, George; Moody, Kenneth J.; Anderson, Edward M.; Kunka, Marilyn K.**
Alumina.—73-12254
**Mada, M.; Ajersch, F.**
Deformation of A 356-15% $SiC_p$ semisolid alloys during squeezing flow.—73-06765
**Madan, Sanjeev; Kogelnik, Hans-Joachim; Daneshvar, Majid; Pantone, Richard S.; Clatty, Jan L. R.**
Process for the preparation of a composite structure comprising a ceramic enamel layer and polyurethane layers.—73-10343
**Madani, M. R.; Ajmera, P. K.**
Characterization of silicon oxide films grown at room temperature by point-to-plane corona discharge.—73-10922
**Madden, Michael** See Kirby, Robert E.
**Maddex, David P.** See Blanchette, Curtis N.
**Maddox, Michael W.; Rowlinson, John S.**
Computer simultion of the adsorption of fluid mixture in zeolite Y.—73-12759
**Maddox, S. R.** See Lauf, R. J.
**Maddux, J. R.** See Dumin, D. J.
**Madej, C.** See Grinberg, M.
**Madej, Jan; Stevula, Ladislav; Madejova, Jana**
Assessment of the chemical and mineralogical composition of air-cooled blast-furnace slag for its use as concrete aggregate.—73-08491
**Madejova, Jana** See Madej, Jan
**Maden, Michele A.** See Tong, Quinn K.
**Maden, Michele A.; Jagota, Anand; Mazur, Stephen; Farris, Richard J.**
Vibrational technique for stress measurement in films: I, Ideal membrane behavior.—73-05097
**Madey, Theodore E.** See Pan, Jian-Mei; Zhang, L.
**Madhukar, A.** See Kaviani, Kian; Ogale, S. B.; Rich, D. H.
**Madhukar, A.**
Growth of semiconductor heterostructures on patterned substrates: defect reduction and nanostructures.—73-14952
**Madhusoodanan, K. N.** See Srinivasan, A.
**Madison, P.** See Korenstein, R.
**Madison, Thomas J.**
Composite tactical hard body armor.—73-10308
**Madrigal-Melchor, J.; Halevi, P.**
Coupled exciton-plasmon polaritons at semiconductor-metal interface.—73-01113
**Maeda, Akiho** See Oda, Tetsuhiro
**Maeda, Chikahiro**
Glass melting in pot furnaces.—73-12221; Variety of crystal glasses.—73-13648
**Maeda, Fumihiko** See Watanabe, Yoshio
**Maeda, H.** See Kumakura, Hiroaki
**Maeda, Hideaki** See Tsugeki, Keiichi
**Maeda, Hiroshi** See Tanaka, Yoshiaki
**Maeda, K.** See Naitoh, Takashi
**Maeda, K.; Ichikura, Eiji; Nakao, Yasumasa; Ito, S.**
Nucleation of beta-wollastonite crystal by noble metal particles.—73-14446
**Maeda, Kazuo; Tokumasu, Noboru; Nishimoto, Yuko**
Method for forming CVD thin glass films.—73-13918
**Maeda, Kazutoshi** See Kobayashi, Kazuo
**Maeda, Kazuyuki; Mizukami, Fujio; Niwa, Shuichi; Toba, M.; Watanabe, M.; Masuda, K.**
Thermal behavior of alumina from aluminum alkoxide reacted with complexing agent.—73-12888
**Maeda, Kunihiro** See Takeda, Yukio; Tanaka, Shigeru
**Maeda, M.** See Suehiro, Masayuki
**Maeda, Masahiko**
Low-dielectric-constant interlayer insulation for multilevel metallization.—73-04129
**Maeda, Masahito; Ohno, Michio; Kobe, Toshihiko**
Ceramic heater.—73-02091
**Maeda, Masaki** See Sano, Saburo
**Maeda, Mitsuo** See Kumuduni, Wanniarachchi K. A.
**Maeda, T.** See Kobayashi, Kenkichiro; Matsumura, Y.; Tanino, Hiroshi
**Maeda, Takao** See Shimoda, Kouhei
**Maeda, Takashi** See Shimoo, Toshio
**Maeda, Toshihiko; Sakuyama, Kazuhiro; Koriyama, Shinichi; Ichinose, Ataru; Yamauchi, Hisao; Tanaka, Shoji**
Oxide superconductor having the formula $Pb_a$-$(M_{1-x-y}Ce_xSr_y)_4Cu_{3-a}O_z$ where M is at least one rare-earth element.—73-04862
**Maeda, Yasuhiro; Taniguchi, Seiichi; Fukuda, Momoya**
Apparatus for continuous growth of SiC single crystal from SiC synthesized in a vapor phase without using graphite crucible.—73-12071
**Maeda, Yoshinobu**
Negative nonlinear absorption effects in erbium-yttrium aluminum garnets.—73-12839
**Maeda, Yuuji** See Moriyama, Minoru
**Maekawa, Hideki** See Unuma, Hidero
**Maekawa, Ichiro; Shin, Hyung-Seop; Miyata, Hiroshi**
Damage caused by an oblique particle impact to ceramics.—73-17270
**Maekawa, S.** See Ohishi, T.
**Maekawa, Sadamichi** See Ohta, Yukinori
**Maekawa, Shoji** See Kinjo, Tsuneo
**Maekawa, T.** See Unuma, Hidero
**Maekawa, Takashi** See Hatakeyama, Fumie; Kawabata, Kyoko; Mori, Hideo; Morita, Toshifumi; Yamashita, Hiroshi
**Maenhoudt, M.** See Gao, Z. X.
**Maes, H. E.** See Willems, G. J.
**Maesen, E.** See Celis, J. P.
**Maeseto, T.** See Nukui, Akihiko
**Maetze, G.** See Mennig, M.
**Maeva, O. I.** See Basyuk, E. V.
**Maeyaert, Gilbert**
Overview of EC glass industry performance.—73-17496; Present and future economic outlook for European Community (EC) glassmakers.—73-13635; Situation of the EC glass industry.—73-13646
**Maffei, N.** See Krupanidhi, S. B.
**Maffei, N.; Krupanidhi, S. B.**
Electrical characteristics of excimer laser-ablated bismuth titanate films on silicon.—73-12786; Process-property correlations of excimer laser-ablated bismuth titanate films on silicon.—73-11605
**Magana, L. F.** See Zaldo, C.
**Magee, C. W.** See Shih, Y.-C. A.
**Magee, C.** See Lin, J.
**Magee, R. W.**
Faience beads of the Irish Bronze Age.—73-09784
**Mager, Beate** See Voigt, Ingolf
**Mager, P.; Naga, J. O.; Roberge, R.**
Opportunities for advanced materials used in power transmission.—73-12328
**Magerl, Franz** See Schneider, Gerold A.
**Magerl, Franz; Schneider, Gerold A.; Petzow, Gunter**
Thermal fatigue and subcritical crack growth in ceramics.—73-05658
**Mages, G.** See Schwab, R. G.
**Magini, M.; Burgio, N.; Iasonna, A.**
Energy transfer in the mechanical alloying process in the collision regime.—73-16762
**Maglione, M.** See Gillot, C.
**Magnacca, Giuliana** See Morterra, Claudio
**Magnee, A.**
Modelization of damage by abrasion.—73-09654
**Magni, Vittorio; De Silvestri, Sandro; Qian, Lie-Jia; Svelto, O.**
Rod-imaging super-Gaussian unstable resonator for high-power solid-state lasers.—73-08964
**Magnotta, Vincent L.** See Benander, Robert E.; Dyer, Paul N.; Holzl, Robert A.
**Magomedov, M. A.** See Gremenok, V. F.; Konstantinova, N. N.
**Magomedov, M. A.; Medvedkin, G. A.; Rud, V. Yu.; Rud, Yu. V.**
Fabrication and properties of isotypic heterostructures based on *n*-type $CuInSe_2$.—73-04341
**Magomedov, M. A.; Prochukhan, V. D.; Rud, Yu. V.**
Photoelectric properties of In-*p*-$CuInSe_2$ Schottky diodes.—73-07715
**Magomedov, M. A.; Rul, Yu. V.**
Photoelectric properties of *n*-CdS:In-*p*-$CuInSe_2$ heterojunctions.—73-15092
**Magruder, R. H., III; Henderson, D. O.; White, C. W.; Zuhr, R. A.**
Formation of photosensitive materials by ion implantation of oxygen ions in silica.—73-07028
**Magruder, R. H., III; Henderson, D. O.; Zuhr, R. A.**
Optical spectra of Pb-implanted fused silica.—73-00525
**Magruder, R. H., III; Park, S. Y.; Weeks, R. A.; Zuhr, R. A.**
Bi-implanted $SiO_2$: a potential optical device material.—73-14135
**Magrupov, M. A.** See Umarov, A. V.
**Magrupov, M. A.; Umarov, A. V.; Khamidov, Sh. R.**
Electrical conductivity of a glass-ceramic.—73-08853
**Magrupov, R. D.; Rakhmanbekov, N.; Igrashev, T. I.**
Ceramics from wastes of fluorite beneficiation mills.—73-00898; Ceramic bodies obtained using the waste products of the fluorite concentration plants.—73-00894
**Magulies, L.** See Kramer, M. J.
**Mah, Tai-Il** See Hay, Randall S.; Moore, Edmund H.
**Mahadevan, Sudha; Giridhar, A.**
Thermal expansion and network constraints in Ge-In-Se glasses.—73-07086
**Mahajan, A.** See Alloul, H.
**Mahalingam, K.** See Chang, C. L.
**Mahalingam, Mali** See Chambers, Ben
**Mahamuni, Shailaja; Azam Khosravi, Ali; Kundu, Manisha**
Thiophenol-capped ZnS quantum dots.—73-01354
**Mahanti, S. D.; Kaplan, T. A.; Chang, Hyun-Ju; Harrison, J. F.**
Magnetism in the insulating parents of the high-$T_c$ superconductors: well or ill understood.—73-04764
**Maheo, D.; Poitevin, J. M.**
Structure of TiN films deposited on heated and negatively biased silicon substrates.—73-12705
**Maher, D. M.** See Ma, Y.; Ren, Xiao-Wei; Yasuda, T.
**Maher, D. M.; Zhang, Bo-Jun**
Advanced electronic material systems: characterization by electron microscopy.—73-06185
**Maher, Caleb H.**
Fine-grained $BaTiO_3$ powder mixture and method for making.—73-04209
**Maher, M. H.; Balaguru, P. N.**
Properties of fiowable, high-volume fly ash–cement composite.—73-03521
**Maher, M. P.; Adelman, T. L.; Ramakrishna, S.; McCarten, J. P.; Di Carlo, D. A.; Thorne, R. E.**
CDW phase slip and current conversion in $NbSe_3$.—73-08564
**Mahesh, R.** See Rao, C. N. R.
**Maheswari, Shyam P.** See Habib, M. Ahsan
**Mahfuz, Hassan** See Vaidya, Uday K.
**Mahfuz, Hassan; Das, P. S.; Jeelani, Shaik; Baker, D. M.; Johnson, S. A.**
Failure mechanisms in mission-cycled carbon-carbon composites under flexural load at room and elevated temperatures.—73-17315
**Mahfuz, Hassan; Zadoo, Durga P.; Wilks, Freeman; Maniruzzaman, M.; Vaidya, Uday K.; Jeelani, Shaik**
Fracture and flexural characterization of monolithic SiC and $SiC_w$/SiC composites at room and elevated temperatures.—73-17324
**Mahiou, R.** See Aamili, A.
**Mahiout, A.** See Ronkainen, H.
**Mahmood, A.** See Khan, J. A.
**Mahmood, F.; Ahmed, H.; Suleman, M.; Raman, V. K.**
Interaction of titanium with single-crystal silicon during rapid electron beam heating.—73-00243
**Mahmood, M. N.** See Bonanos, Nicholas
**Mahoney, Derek D.** See Kash, K.
**Mahoney, Edward E.**
How the ISO 9000 quality standards program works.—73-17487
**Mai, C.** See Othmani, A.
**Mai, Yiu-Wing** See Duan, Kai; Kim, Jang-Kyo; Mukhopadhyay, A. K.; Zhou, Li-Min
**Mai, Yiu-Wing; Hu, Xiao-Zhi; Duan, Kai; Cotterell, Brian**
Crack-resistance curve and cyclic fatigue in ceramic materials.—73-06356
**Maia, Ana E. P.** See Pires, A. P. C.
**Maiello, Gabriella** See Dinescu, Maria
**Maier, D.** See Eiche, C.
**Maier, H. G.**
Heavy-duty bucket elevators with round steel chain as the traction element.—73-12033
**Maier, M.** See Amler, H.
**Maier, P.; Becker, F.-P.**
Rationalization of energy for glost and bisque firing of porcelain in shuttle kilns.—73-01967
**Maier, Wilhelm F.**
Procedure for the preparation of microporous ceramic membranes for the separation of gas and liquid mixtures.—73-05241

**Maignan, A.** See Huve, M.
**Maigne, P.** See Gnezdilov, V. P.
**Maigne, P.; Roth, A. P.; Desruisseaux, C.; Coulas, D.**
Epitaxial tilt of partially relaxed InGaAs layers grown on (100)GaAs substrates.—73-07508
**Mallhiot, C.** See Klepeis, J. E.
**Mailly, D.; Chapelier, C.; Benoit, A.**
Experimental observation of persistent currents in a GaAs-AlGaAs single loop.—73-14903
**Maimoun, I. Ben** See Seron, A.
**Main, P. C.** See Henini, M.; Taylor, R. P.
**Maine, B.** See Boutinaud, P.
**Maior, M. M.** See Vysochanskii, Yu. M.
**Maire, Jacques** See Fely, Daniel
**Maireles-Torres, P.** See Criado, C.
**Mairesse, G.** See Iharada, T.
**Mairey, D.** See Takadoum, J.
**Maistrenko, A. A.** See Zadiraka, Yu. V.
**Maistrenko, A. L.** See Dub, S. N.
**Maiti, A.** See Mukherjee, S.
**Maiti, Bikas; Hao, Ming-Yin; Lee, Jack C.**
Incorporation of nitrogen into oxynitride dielectric through thermal nitridation of silicon.—73-04114
**Maiti, C. K.** See Ray, S. K.
**Maiti, H. S.** See Bhattacharjee, S.
**Majeed, A.** See Miner, C. J.; Springthorpe, A. J.
**Majetich, Sara A.** See Carter, Adrian C.
**Majetich, Sara A.; Carter, Adrian C.; McCullough, Richard D.**
Connected cadmium selenide nanocrystallite networks.—73-04275
**Majewski, Peter** See Hettich, B.
**Majewski, Peter; Hettich, B.; Ruffer, Nils; Aldinger, Fritz**
Influence of the phase equilibria on the critical temperatures $T_c$'s of the high-$T_c$ Bi-Sr-Ca-Cu-O and Y-Ba-Cu-O compounds.—73-11804
**Majid, J. M.** See Khattak, G. M.
**Majikova, E.** See Luby, S.
**Majima, A.** See Uekusa, Shinichiro
**Majima, A.; Uekusa, Shinichiro; Ootake, K.; Abe, K.; Kumagai, Masao**
Optical direct and indirect excitation of $Er^{3+}$ ions in silicon.—73-04428
**Majima, Kazuhiko** See Katsuyama, Shigeru
**Majima, Kazuhiko; Hasegawa, M.; Katsuyama, Shigeru; Nagai, Hiroki; Mishima, S.**
ZnO precipitation during sintering of Ni-Zn ferrite used for the substrate of thin-film heads.—73-01485
**Majima, Kazuhiko; Hasegawa, Shinji; Katsuyama, Shigeru; Nagai, Hiroshi**
Effect of hydrogen on the electric resistivity of Bi-Sr-Ca-Cu-O superconductors at high temperature.—73-01530
**Majkrzak C. F.** See Borchers, J. A.
**Majling, Jan** See Sahu, S.
**Majling, Jan; Roy, Della M.**
Potential of fly ash for cement manufacture.—73-00166
**Majling, Jan; Znasik, P.; Khandl, V.; Komarneni, S.**
Porosimeter as a means to measure the compactibility of powders.—73-08434
**Majumdar, A. K.** See Sharma, S. V.
**Majumdar, Amal J.** See Quillin, K. C.; Singh, B.
**Majumdar, Amal J.; Singh, B.**
Properties of some blended high-alumina cements.—73-10114
**Majumdar, Debasis** See Chatterjee, Dilip K.; Ghosh, Syamal K.
**Majumdar, Debasis; Chatterjee, Dilip K.**
Application of X-ray photoelectron spectroscopy valence bands in studying ceramic surfaces and interfaces.—73-12538
**Majumdar, Saurin** See Singh, Dileep
**Majumder, F. A.** See Gregory, A.
**Mak, C.-F.** See Pun, E. Y. B.
**Makaki, Hiromasa; Yasuoka, Hiroshi; Kakihana, Masato; Yoshimura, Masahiro**
Complex susceptibilities of Co-doped $YBa_2Cu_3O_{7-d}$ synthesized by the polymerized complex method.—73-15402
**Makarenko, E. S.; Kasimov, A. M.; Rovenskii, A. I.**
Air classification on an inclined moving grid.—73-01761; Possibilities of decreasing dust releases in transportation and firing of refractory raw material as the result of local dust removal.—73-01812
**Makarenko, I. V.** See Berkovits, V. L.
**Makarenko, I.** See Dumas, P.
**Makarenko, L. F.; Gurinovich, V. A.; Kononyuk, I. F.**
Annealing effect on critical temperature and resistivity of $(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ superconductor irradiated by Co-60 gamma rays.—73-11689
**Makarov, A. N.; Lozovskii, A. I.; Kartsev, V. Yu.**
Resistivity of glass under production conditions.—73-00697
**Makarov, L. L.** See Aksenov, N. D.; Namedov, S. B.
**Makarov, R. I.; Dubov, I. R.; Lukashin, S. A.**
Use of a mathematical model in predicting the density of glass for controlling a tank furnace.—73-07187; Use of a model for predicting glass density for control of a glass furnace.—73-10613
**Makarov, V. I.** See Eremenko, V. V.
**Makarov, V. I.; Kleiner, V. Z.; Ovcharenko, O. N.**
Superconductivity of $Y_{1-x}Ca_xBa_2Cu_4O_{8+y}$.—73-08231
**Makarov, V. I.; Vereshkov, G. M.; Gufan, Yu. M.**
Ultrasonic spectroscopy of an$La_2CuO_4$ crystal in the vicinity of the tetra-ortho phase transition.—73-08786
**Makarov, V. N.** See Balashov, Yu. S.
**Makarov, V. V.** See Grum-Grzhimailo, O. S.; Kol'tsov, G. I.; Shchipalov, Yu. K.
**Makarov, V. Yu.** See Korolev, K. M.
**Makarova, I. P.; Aleksandrov, K. S.; Vasil'ev, A. D.**
Crystal structure of new pyroelectric $RbLiCrO_4$ at room temperature.—73-02207
**Makarova, T. L.** See Boitsov, S. K.; Vul, A. Ya.
**Makarova, T. V.** See Gorev, N. B.
**Makeeva, N. P.** See Grunin, V. S.
**Makel, David D.** See Gao, Chao
**Makela, A.** See Vuoristo, P. M. J.
**Makerov, A. V.; Shardakov, N. T.; Prusov, V. A.**
Recording penetrative defects in glass enamel coatings.—73-00263
**Makhin, A. V.** See Andreeva, E. V.
**Makhmudov, R. Kh.** See Umarov, A. V.
**Makhnev, A. A.** See Nomerovannaya, L. V.
**Makhnii, V. P.; Mel'nik, V. V.; Sobishchanskii, B. M.**
Optoelectronic properties of In-doped ZnSe.—73-04432
**Makhonina, S. N.; Permikina, N. M.**
Corundum-chromite refractories with improved thermal shock resistance.—73-00795
**Maki, Iwao** See Fukuda, Koichiro; Ohsato, Hitoshi
**Maki, Iwao; Ito, S.; Tanioka, T.; Ohno, Y.; Fukuda, Koichiro**
Clinker grindability and textures of alite and belite.—73-13692
**Maki, Iwao**
Processing conditions of portland cement clinker as viewed from the fine textures of the constituent minerals.—73-10099
**Maki, Jun** See Yao, Takeshi
**Maki, Masao** See Matsumoto, Tomohide
**Maki, Satoshi**
Moisture-resistant low-melting-point glass for magnetic head and magnetic head.—73-03954
**Makievskii, A. V.** See Prokhorov, I. Yu.
**Makihara, Masaki** See Fukumi, Kohei
**Makinen, J.; Laine, T.; Saarinen, K.; Hautojarvi, P.; Corbel, C.; Airaksinen, V. M.**
Vacancy at the DX center [observed] in Si- and Sn-doped AlGaAs.—73-11500
**Makino, Akihiro** See Yamamoto, Yutaka
**Makino, Akihiro; Yamamoto, Yutaka**
Core losses of Mn-Zn ferrites with fine grain size.—73-04596
**Makino, Atsushi; Law, Chung K.**
SHS combustion characteristics of several ceramics and intermetallic compounds.—73-06038
**Makino, Hideaki; Wada, Shigetaka**
Effects of microstructure of ceramics on microfracture induced by round indenter.—73-06396
**Makino, Hiroaki** See Uchiyama, Yasuo
**Makino, Hiroaki; Kamiya, Nobuo; Wada, Shigetaka**
Strength degradation of ceramics caused by residual stress around impression.—73-06529
**Makino, Mitsuo** See Maruyama, Katsuhisa
**Makino, T.** See Masuda, Masaaki
**Makinson, Owen** See Guggenberger, Rainer
**Makio, Kelzo** See Nawa, Masahiro
**Makishima, A.** See Inoue, Hiroyuki; Uo, Motohiro
**Makishima, Akio** See Inoue, Satoru; Uo, Motohiro
**Makishima, Akio**
Materials design for glass and expert database system.—73-03799
**Makita, Kensuke** See Takamatsu, Atsushi; Yamasaki, Seiji
**Makita, Kensuke**
Surface treatment of glass by sol-gel technique.—73-07179
**Makita, T.** See Ogihara, M.
**Makita, T.; Horikawa, T.; Kuroki, H.; Kataoka, Masayuki; Tanimura, Junji; Mikami, N.**
Electrical properties and film structures of $(Ba,Sr_{1-x})TiO_3$ [BST] thin films by rf sputtering.—73-04085
**Makipaa, M.; Hirvonen, J.-P.; Likonen, J.**
Erosion of some HVOF [high-velocity oxy-fuel] sprayed coatings in fluidized bed circumstances.—73-09526
**Makovec, Darko; Kolar, D.; Trontelj, Marija**
Sintering and microstructural development of metal oxide varistor ceramics.—73-07800
**Makovec, Darko; Trontelj, Marija**
Extended defects in ZnO ceramics containing $Bi_4Ti_3O_{12}$ additive.—73-09404
**Makovicky, E.; Hyde, B. G.**
Incommensurate two-layer structures with complex crystal chemistry: minerals and related synthetics.—73-05420
**Makovozova, A. A.** See Chetkin, M. V.
**Makrides-Saravanos, Elli; Nasser, Karim W.**
Effect of fly ash on the strength development of high-performance concrete.—73-03455
**Makridin, N. I.** See Zaitsev, Yu. V.
**Maksimov, A. A.; Puchkov, A. V.; Tartakovskii, I. I.; Timofeev, V. B.; Reznik, D.; Klein, M. V.**
Temperature dependence of the low-energy electronic Raman scattering in $Tl_2Ba_2CaCu_2O_8$ single crystals.—73-02515
**Maksimov, B. A.** See Genkina, E. A.; Radaev, S. F.
**Maksimov, B. A.; Klokova, N. E.; Radaev, S. F.; Simonov, V. I.**
Refinement of atomic structure of the ionic conductor $Na_{4+x}FeP_2O_{8+y}F_{1-x}$.—73-16289
**Maksimov, B. A.; Muradyan, L. A.; Bydanov, N. N.; Sarin, V. A.; Bykov, A. B.; Timofeeva, V. A.**
Neutron diffraction refinement of atomic structure of α- and γ-phases of $Li_3Sc_2(PO_4)_3$ crystals at 293 and 573 K.—73-02344
**Maksimov, B. A.; Tamazyan, R. A.; Klokova, N. E.;**
**Petrzhichek, V.; Popov, A. N.; Simonov, V. I.**
Incommensurate modulation in $Na_9[Fe_2[PO_4]_4(O,F)_2]$ structure at 623 K.—73-16172
**Maksimov, I. L.; Murav'eva, T. M.; Eingorin, M. Ya.**
Three-dimensional model of a $VO_2$ memory element.—73-05680
**Maksimov, L. V.** See Karapetyan, G. O.
**Maksimova, G. V.** See Voronko, Yu. K.
**Maksimova, S. Yu.** See Sarsembinov, Sh. Sh.
**Makurin, Yu. N.** See Sumin, V. I.
**Makushenko, Yu. M.** See Kokhanovskii, S. I.
**Makyta, M.; Patarak, O.; Utigard, T. A.**
Electrochemical synthesis of $TiB_2$ powder in molten salts.—73-13041
**Mal'chenko, S. I.** See Ivanovskaya, M. I.
**Mal'kov, M. A.; Lipochkin, S. V.; Mosin, Yu. M.**
Medical ceramics based on hydroxyapatite.—73-02016
**Mal'kova, N. V.** See Gogoladze, D. T.
**Mal'tekbasov, M. Zh.** See Sarsembinov, Sh. Sh.
**Mala, Takashi; Onoda, M.; Nagasawa, Hiroshi**
$S=1$ impurity effect on phase transition in $LiVO_2$.—73-16298
**Malakhovskaya, V. E.** See Bumai, Yu. A.
**Malandrino, G.** See Ciliberto, Enrico; Schulz, D. L.
**Malarkey, C. J.** See Janas, Victor F.
**Malashkevich, G. E.; Ovcharenko, N. V.; Smirnova, T. V.;**
**Bazylev, A. G.**
Influence of the composition of europium- and ytterbium-activated tellurite-wolframate glasses on their physicochemical, optical, and spectral-luminescence properties.—73-14208
**Malashkevich, G. E.; Ovcharenko, N. V.; Smirnova, T. V.**
Effect of the composition of europium-activated tungsten-alkali tellurite glasses on their physicochemical, optical, and spectroscopic characteristics.—73-00466
**Malbrel, C. A.; Somasundaran, P.**
Effect of water on the dispersion of colloidal alumina in cyclohexane solutions of aerosol OT.—73-13023
**Malchenko, S. N.; Goroshko, N. N.; Baikov, M. V.;**
**Chudakov, V. A.; Ermolenko, V. I.**
Formation of iron oxide films from stabilized magnetite sols—magnetic liquids.—73-04614
**Maldonado, A.** See Acosta, D. R.; De la Olvera, M.
**Maldonado, E.** See Littler, C. L.
**Maldonado, Edison Puig; Nogueira, Gesse Eduardo Calvo; Viera, Nilson Dias, Jr.**
Determination of the fundamental laser parameters of an acoustooptical device.—73-16441
**Male, Alan T.** See Mole, Cecil J.
**Malecki, Bronislaw; Korczak, Dariusz**
Estimation of properties and results of utilization of a new type of cement SG-45.—73-00084
**Maletta, H.; Malozemoff, A. P.; Cronemeyer, D. C.; Tsuei, Chang-C.; Green, R. L.; Bednorz, J. G.**
Diamagnetic shielding and Meissner effect in the high-$T_c$ superconductor $Sr_{0.2}La_{1.8}CuO_4$.—73-15417
**Malevannaya, O. I.** See Lashkarev, G. V.
**Maley, M.** See Kung, Pang-Jen
**Maley, N.** See Yang, Y. H.
**Maleysson, C.** See Dogo, S.
**Malghan, Subhas G.** See Chen, Wei; Hackley, V. A.; Wang, Pu-Sen
**Malghan, Subhas G.; Hackley, V. A.; Wang, Pu-Sen**
Intelligent processing of ceramic powders and slurries.—73-16845
**Malghan, Subhas G.; Lum, L.-S. H.; Lagergren, E.; Kelly, J.; Kacker, R. N.**
Statistical analysis of parameters affecting the measurement of particle size distribution of silicon nitride powders by sedigraph.—73-15850
**Malhotra, S. K.** See Santhanakrishnan, G.
**Malhotra, V. M.** See Douglas, E.; Sivasundaram, V.
**Malic, B.; Kosec, M.; Kosmac, T.**
Anomalous dilatation-temperature curves of PZT-$ZrO_2$ composites.—73-12745
**Malik, S. K.** See Bhargava, S. C.; Chakrabarty, J. S.; Jhans, H; Pinto, R.
**Malik, S. K.; Jhans, H.; Yelon, W. B.; Rhyne, J. J.**
Structural and magnetic studies on $PrBa_2Cu_2NbO_{8-y}$.—73-08745
**Malik, S.; Mohammad, M.; Khan, A. Y.; Subhani, M. S.**
Superconductivity in Y-Ba-Na-Cu-O.—73-08229
**Malin, J. J.** See Jackson, S. L.
**Maline, M.** See Hillel, R.
**Maline, M.; Hillel, R.; Berjoan, R.**
Chemical vapor deposited in situ composites in the system Ti-Si-C.—73-02744
**Malinenko, V. P.** See Aleshina, L. A.
**Malinin, V. G.** See Delyi, Ya. V.
**Malinovskii, V. K.; Novikov, V. N.; Sokolov, A. P.; Kisliuk, A.; Quitmann, D.; Soltwisch, M.**
Medium-range structure of glasses: comparison of Raman and diffraction measurements.—73-14034
**Malinovskii, V. K.; Novikov, V. N.; Sokolov, A. P.**
Lognormal law for size distribution of nanoinhomogeneities in glasses.—73-14417; Low-frequency Raman scattering and nanostructure of vitreous solids.—73-14030
**Malinovskii, V. K.; Novikov, V. N.**
Nature of glass transition and the excess low-energy density of vibrational states in glasses.—73-14048
**Malinovskii, Yu. A.** See Genkina, E. A.; Tamazyan, R. A.; Vigdorchik, A. G.
**Malinovskii, Yu. A.; Bondareva, O. S.**
Refined crystal structure of $Er_2O_3$.—73-02422
**Malinovskii, Yu. A.; Dadashov, M. S.; Bondareva, O. S.**
Synthesis of single crystals and crystal structure of gallosilicate zeolites: II. Gallosilicate with NAT [natrolite]: $Na_2Ga_2Si_3O_{10}{\cdot}2H_2O$—synthesis and X-ray diffraction study.—73-02500
**Malinovskii, Yu. A.; Dadashov, M. S.; Genkina, E. A.**
Synthesis of single crystals and crystal structure of gallosilicate zeolites: I. Gallosilicate with ANA [analcime]: $NaGaSi_2O_6{\cdot}H_2O$ framework—temperature structure studies.—73-02499
**Malinovskii, Yu. A.; Genkina, E. A.**
Crystal structure of olympite, $LiNa_5(PO_4)_2$.—73-16091
**Malinovsky, V. K.** See Isakov, S. L.
**Malinskii, E. N.; Mirzaev, Sh. R.**
Heliothermal treatment of construction thermal-insulating keramzit concrete.—73-00099
**Malis, Ales** See Kupcak, Jaroslav
**Malisci, Abe** See Bhatty, Javed I.
**Malitests, Cosimino** See Torsi, Luisa
**Malkiman, V. I.** See Kosenko, E. I.
**Malkin, B. Z.** See Avanesov, A. G.

**Malkov, A. A.** See Dolgushev, N. V.; Zarko, V. I.
**Malkov, M. A.** See Barinov, Sergej M.
**Malkovich, R. Sh.** See Didik, V. A.; Gafarov, S. F.
**Malkovich, R. Sh.; Skoryatina, E. A.; Usacheva, T. A.**
Silver diffusion in lead zirconate titanate.—73-17100
**Mall, S.; Bachmann, S. E.**
Transverse cracking in a fiber-reinforced ceramic matrix composite.—73-06543
**Malla, P. B.; Komarneni, S.**
Oxide- and metal-intercalated clay nanocomposites.—73-05941; Properties and characterization of $Al_2O_3$ and $SiO_2$-$TiO_2$ pillared saponite.—73-12664
**Mallener, W.** See Li, Z.
**Mallener, W.; Stover, D.**
Plasma spraying of boron carbide using pressures up to two bar.—73-09245
**Mallik, A.; Vasi, J.; Chandorkar, A. N.**
Nature of the hole traps in reoxidized nitrided oxide gate dielectrics.—73-07345
**Mallik, R. R.; Butler, T., Jr.; Kulnis, W. J., Jr.; DeVier, B.**
Inelastic electron tunneling spectroscopy and atomic force microscopy investigation of ultrathin sputtered amorphous silica films on gold.—73-03154
**Mallik, S. K.** See Champagnie, A. M.
**Mallon, Thomas G.; Kao, Chi-Yi; Hsia, Wei-Jen; Shimoda, Atsushi**
Method for the controlled formation of voids in doped glass dielectric films.—73-11033
**Mallory, D. S.** See Ballentine, P. H.
**Malloy, K. J.** See Guel, G.
**Malmberg, S.; Heberlein, J.**
Effect of plasma-spray operating conditions on plasma jet characteristics and coating properties.—73-09084
**Malmgren, Richard P.** See Lau, James C.
**Malmgren, Rick**
Glaze calculation software.—73-13670
**Malolepszy, J.** See Brylicki, W.
**Maloney, Michael J.** See Hecht, Ralph J.
**Maloney, Michael J.; Hecht, Ralph J.**
Method for improving ceramic fiber-reinforced molybdenum disilicide composites.—73-12484
**Malov, V. V.; Ryabov, P. M.; Titov, V. V.; Shuvalov, V. A.; Yakoviev, A. A.**
Equipment for contactless determination of the superconducting transition of ceramic specimens.—73-11750
**Malovichko, E. A.** See Karachevtseva, L. A.
**Malovichko, G. I.; Vitruk, L. E.; Yurchenko, N. Yu.; Burak, Ya. V.; Grachev, V. G.; Matkovskii, A. O.**
Thermal stability of radiation defects in lithium tetraborate from EPR and optical spectroscopy data.—73-16634
**Malozemoff, A. P.** See Chikumoto, N.; Maletta, H.
**Malpezzi, M. Christina** See Tampieri, Anna
**Malshe, Ajay** See Bhushan, Bharat
**Malt'sev, S. V.; Prints, V. Ya.**
High-field filling of deep levels in heterostructure AlGaAs/GaAs FET's with modulated doping.—73-07560
**Malta, D. M.** See Venkatesan, Vasudev; Von Windheim, J. A.
**Maltesh, C.** See Somasundaran, P.
**Maltha, J. C.; Dalmiir, W. L.; Houwelingen, J. V.**
Automation in glass recycling: a Dutch perspective.—73-14327
**Malugani, J. P.** See Rousselot, C.
**Malwah, Manohar L.**
High-density local interconnect in a semiconductor circuit using metal silicide.—73-04515
**Malyavkin, A. V.** See Dremin, A. A.
**Malygin, A. A.** See Dolgushev, N. V.; Zarko, V. I.
**Malygin, G. A.**
Effect of hydrostatic pressure on screw dislocation annihilation by cross gliding in alkali halide crystals.—73-17123; Screw dislocation annihilation by cross gliding as dynamic relaxation mechanism.—73-17099
**Malygin, N. D.; Shchurov, A. F.; Gracheva, T. A.**
Method of X-ray diffraction examination of thin superconducting films.—73-15820
**Malykh, A. G.; Zuev, M. G.; Dotsenko, V. P.**
Phase relations in the systems $Ln_2O_3$-$B_2O_3$-$Ta_2O_5$, where Ln=Sm, Eu, in the subsolidus region.—73-16259
**Malykh, A. G.; Zuev, M. G.**
Phase relations in the system $Ln_2O_3$-$B_2O_3$-$Ta_2O_5$, where Ln stands for Ce, Pr, Nd, in the subsolidus region.—73-12655
**Malyshev, E. N.** See Zavadskii, E. A.
**Malyshev, I. P.** See Shevtsov, A. L.
**Malyshev, V. Yu.** See Bashkin, I. O.
**Malyshkin, V. G.** See Ipatov, I. P.
**Malyushitskaya, Z. V.** See Blank, V. D.
**Malyutenko, V. K.** See Bolgov, S. S.; Vladimirov, V. V.
**Malyutin, A. A.** See Sorokin, I. N.
**Mamaladze, R. A.; Tsanava, Ts. P.; Shubladze, N. N.**
Use of rock in ceramic production.—73-00926; Using rocks in ceramic production.—73-02000
**Mamalui, A. A.; Palatnik, L. S.**
Effect of low-temperature quenching on $T_c$ and substructural thermal activity of $YBa_2Cu_3O_{7-\delta}$ ceramics.—73-15428
**Mambrim, J. Silvo T.** See Nakamura, O.
**Mamedov, A. A.** See Basiev, T. T.
**Mamedov, A. A.; Smirnov, V. A.**
Optical $Nd^{3+}$ centers in lanthanum oxysulfide crystals.—73-16556
**Mamedov, T. S.** See Allakhverdiev, K. R.; Ismailov, A. A.
**Mamedova, I. A.** See Kerimova, T. G.
**Mamikin, A. E.** See Zadiraka, Yu. V.
**Mamikin, E. T.** See Zadiraka, Yu. V.
**Mamontova, M. Yu.; Sidorenko, F. A.; Filatova, L. A.**
Molybdenum disilicide interaction with barium borate glass in air.—73-00377
**Mamontova, T. N.** See Babaev, A. A.
**Mamsurova, L. G.** See Krasil'nikov, A. S.
**Mamsurova, L. G.; Pigal'skii, K. S.; Shlyakhtina, A. V.**
Effect of an increase in the lower critical field in superfine-grained $YBa_2Cu_3O_{7-\delta}$.—73-08027
**Mamyan, S. S.** See Chausskaya, I. D.
**Man, P. P.** See Derewinski, Miroslav
**Manabe, Katsuhide** See Okazaki, Nobuo; Takeuchi, Tetsuya
**Manabe, Katsuhide; Mabuchi, Akira; Kato, Hisaki; Sassa, Michinari; Koide, Norikatsu; Yamazaki, Shiro**
Light-emitting semiconductor device using gallium nitride group compond with double layer structures for the *n*-layer and/or the *i*-layer.—73-11525
**Manabe, Seiichiro** See Inaka, Yoshiyuki; Nagashima, Yukihito
**Manabe, Takaaki; Kondo, Wakichi; Mizuta, Susumu; Kumagai, T.**
Preparation of $Y_{1-x}Ca_xBa_2Cu_4O_8$ ($0 \le x \le 0.1$) superconductor films by the dipping-pyrolysis process.—73-04789
**Manabe, Tsuneo** See Chiba, Jiro
**Manabe, Tsuneo; Chiba, Jiro; Ichikura, Eiji**
Process for producing a glass sheet with ceramic color composition and a conductive strip.—73-14556
**Manabe, Tsuneo; Usui, Hirosi; Osaki, Yasuko**
Calcium phosphate type glass-ceramic.—73-00727
**Manabe, Yoshio** See Tanahashi, Ichiro
**Manabe, Yuji** See Matsumoto, Seiichiro
**Manai, N.** See Bernede, J. C.
**Manako, Takashi; Shimakawa, Yuichi; Kubo, Yoshimi**
Oxide superconductor composition and a process for the production thereof.—73-15690
**Manapov, R. A.** See Bukharaev, A. A.
**Manasreh, M. O.** See Talwar, D. N.
**Manassidis, Ioannis; Gillan, Michael J.**
Structure and energetics of alumina surfaces calculated from first principles.—73-05498
**Manaud, J. P.** See Campet, G.; Meunier, G.
**Mancini, G.** See Chudinov, S. M.
**Mancini, Karen** See Li, Ching-Hsien
**Mandache, S.** See Aldica, G.
**Mandal, H.; Thompson, D. P.; Ekstrom, Thommy**
Heat treatment of SiAlON ceramics densified with higher atomic number rare-earth and mixed yttrium/rare-earth oxides.—73-02849
**Mandal, K.; Ghatak, S. K.**
Stress dependence of magnetic properties of an Fe-Ni-B alloy.—73-04654
**Mandal, P.** See Bandyopadhyay, S. K.
**Mandecka-Kamien, Lucjana; Kielski, Andrzej**
New sodium fluxing agents for ceramics.—73-01989
**Mandel, Stephen**
Keeping stack emissions and you within the law.—73-05060
**Mandelis, Andreas; Munidasa, Mahendra; Othonos, Andreas**
Single-ended ir photothermal radiometric measurement of quantum efficiency and metastable lifetime in solid-state laser materials: the case of ruby ($Cr^{3+}$:$Al_2O_3$).—73-15847
**Manderscheid, J. M.** See Nemeth, Noel N.
**Mandour, M. A.** See El-Shennawi, A. W.; Serry, M. A.
**Mandralis, Zenon I.; Feke, Donald L.**
Fractionation of suspensions using synchronized ultrasonics and flow fields.—73-05048
**Mandrino, D.** See Panjan, P.
**Mandrus, D.** See Romero, D. B.
**Mandrus, D.; Hartge, J.; Kendziora, C.; Mihaly, L.; Forro, L.**
Gapless superconductivity in $Bi_2Sr_2CaCu_2O_8$.—73-15489
**Mandrus, D.; Martin, Michael C.; Kendziora, C.; Koller, D.; Forro, L.; Mihaly, L.**
No far-ir spectroscopic gap in clean and dirty high-$T_c$ superconductors.—73-15567
**Mandryka, L. A.** See Bespalova, L. L.
**Manevich, L. I.; Sigalov, G. M.**
Structural transitions in one-dimensional model of glass.—73-14504
**Manevich, V. E.** See Kayumov, R. T.
**Manevich, V. E.**
Trends in the development of control systems of glass manufacturing.—73-14523
**Manfre, G.**
Automotive design glazing and new glasses.—73-14328
**Manfredini, T.** See Andreola, Fernanda; Barbieri, Luisa; Corradi, Anna Bonamartini
**Mangat, P. S.** See Chen, W.; Huttel, Y.; Schirm, K. M.; Soukiassian, P.
**Mangat, P. S.; El-Khatib, J. M.**
Influence of initial curing on sulfate resistance of blended cement concrete.—73-10009
**Mangat, P. S.; Molloy, B. T.**
Influence of PFA [pulverized fly ash], slag, and microsilica on chloride-induced corrosion of reinforcement in concrete.—73-00118
**Mangat, P. S.; Soukiassian, P.; Schirm, K. M.; Hurych, Z.**
*s*-polarization photoemission extended X-ray absorption fine structure study of clean and adsorbate-covered Si(100) 2×1 surface.—73-08727
**Mangels, John A.**
Low-pressure injection molding.—73-12043
**Manghnani, M. H.** See Askarpour, V.; Jayaraman, A.
**Manghnani, M. H.; Askarpour, V.; Di Carlo, J. A.**
High-temperature elasticity of single-crystal $Al_2O_3$ fibers by Brillouin spectroscopy.—73-08881
**Manghnani, M. H.; Fisher, Edward S.; Li, Feng-Ying; Grady, Dennis E.**
Elastic moduli of $TiB_2$.—73-08844
**Mangialardi, T.** See Berra, M.
**Manglore, R. B.** See Varhue, W. J.
**Mani, Moussa** See Banthia, Nemkumar
**Mani, T. V.** See Varma, Hari Krishna
**Mani, T. V.; Damodaran, Alathoor D.; Warrier, K. G. K.**
Presintering processing of a Bi-based bulk superconductor by slurry pressing.—73-11874
**Maniar, Papu D.**
Method for making a semiconductor device having an anhydrous ferroelectric thin film.—73-04583; Process for fabricating a ferroelectric capacitor in a semiconductor device.—73-04587
**Manias, C. G.; Nathan, G. J.**
Precessing jet [P.J.] gas burner—a low $NO_x$ burner providing process efficiency and product quality improvements.—73-05129
**Manier, M.** See Mercurio, J. P.; Souirti, A.
**Maniette, Yves** See Okutani, Takeshi
**Maniruzzaman, M.** See Mahfuz, Hassan
**Maniv, S.**
Proposition of a novel reactive sputter deposition system for synthesizing multicomponent materials.—73-04945
**Manivannan, Gurusamy** See Islam, D.
**Manivannan, V.** See Ayyappan, S.
**Mankiewich, P. M.** See Dong, F.
**Manley, M. E.; Erturk, Turgay; Vaucamps, C.; Gallus, D.**
Four-point and biaxial flexure strength of PZT ceramics: a probabilistic approach.—73-17323
**Mann, Ian**
Composite heat-insulating bodies and a method for producing [the] same.—73-10779
**Mann, Larry G.** See Johnston, Lisa E.
**Manna, I.** See Lian, S.
**Mannaerts, J. P.** See Wang, Y.-H.
**Mannhart, Jochen D.** See Bednorz, J. G.; Chaudhari, Praveen; Lichtenberg, F.
**Mannheimer, W. A.** See Nobrega, M. C. S.
**Mannik, L.** See Jedral, L.; Solomah, A. G.
**Manning, M.** See Sultan, Akif
**Manni, Reinhard; Wolfrum, Alfons; Neumeier, Franz**
Device and forming finger for forming a mouth area on a glass vial.—73-04970; Device and process for deformation of the heat-softened end of a glass tube.—73-12074
**Manno, Daniela** See Di Giulio, Massimo
**Manohar, B.** See Reddy, B. Mahipal
**Manoharan, H.** See Vancauwenberghe, N.
**Manoharan, M.** See Kamat, S.
**Manoiu, D.** See Frunza, Ligia
**Manolatos, P.** See Marcellou, K.
**Manorama, S.; Chaudhari, G. N.; Rao, V. J.**
Growth of BN by hot-filament-assisted electron beam deposition.—73-16808
**Manoravi, P.; Shahi, K.**
Phase diagram and enhanced electrical transport in KBr-NaBr mixed crystals.—73-02375
**Manos, Peter N., II** See Hindman, Gregory
**Manrich, S.** See Weinberg, Michael C.
**Manring, E. B.; Asmussen, J., Jr.**
Numerical model for the modes of a lossy, coaxially loaded cylindrical cavity.—73-05599
**Mansfel'd, G. D.** See Kabychenkov, A. F.
**Mansfeld, G. D.; Rodionova, M. K.; Freik, A. D.**
Nonmagnetic losses of acoustic waves in polycrystalline yttrium iron garnet and nickel cobalt spinel.—73-15352
**Mansingh, Abhai** See Basantakumar, Sharma H.; Dhar, Ajay
**Mansour, S. A. A.** See Zaki, M. I.
**Mansour, S. F.** See Wafik, A. H.
**Mantei, T. D.** See Gadgil, P.
**Mantese, L.** See Auciello, O.
**Manthiram, A.** See Paranthaman, M.; Zhu, Yun-Tian T.
**Manthiram, A.; Goodenough, John B.**
Thermal expansion mismatch and intergrowth types in the system $La_{2-x}Nd_xCuO_4$.—73-01690
**Manthiram, A.; Zhu, Y. T.**
Chemistry of electron-doped $Ln_{2-x}Ce_xCuO_4$ superconductors.—73-11703
**Mantyla, T. A.** See Niemi, K. J.; Vuoristo, P. M. J.
**Mantyla, T. A.; Vuorinen, P. T.**
Fully reversed bending fatigue of $Si_3N_4$/$SiC_w$ and $Si_3N_4$ in different environments.—73-17339
**Manuel, A. A.** See Hoffmann, L.
**Manuel, P.** See Gu, H.
**Manyakhin, F. I.** See Bogoslovskaya, A. B.
**Manzini, Ivano** See Lottici, Pier Paolo
**Mao, Bai-Ming** See Lu, Zhang-Ming
**Mao, D.** See Chen, W.
**Mao, D.; Kahn, A.; Marsi, M.; Margaritondo, G.**
Coverage-dependent surface photovoltage induced by synchrotron radiation at metal/GaAs interfaces.—73-01114
**Mao, Du-Li** See Pugh, J. Richard
**Mao, Ho-Kwang** See Kingma, Kathleen J.; Meade, Charles
**Mao, J.-F.** See Ge, Q.-L.
**Mao, Jian** See Wu, Dong-Ho
**Mao, Ruo-Ging** See Yuan, Run-Zhang
**Mao, Ruo-Qing; Pan, Guo-Yao; Gao, Qiong-Ying**
Manufacture of cement–unused fly ash bricks without firing or steam curing.—73-06683
**Mao, S. N.** See Walkerhorst, A.; Wu, Dong-Ho
**Mao, Xiao-Nan** See Zeng, Quan-Pu
**Mao, Yun; Thomas, John Kerry**
Photochemical reactions of pyrene on surfaces of γ-alumina and silica–alumina.—73-12856
**Mao, Z.** See Chang, Jin-Yi
**Mao, Z.; Chang, Jin-Yi**
Synthesis of PLT/PLZT ferroelectric thin films by a sol-gel method.—73-15290
**Mao, Zhi-Qiang; Yang, Li; Yao, Zhen; Wang, Yu; Zhang, Yu-Heng**
Modulation structures and new type of twin boundary in Bi-Sr-Cu-O system doped with Ba.—73-11840
**Mao, Zhi-Yuan** See Wang, Dong-Fang
**Maoujoud, M.; Jardinier-Offergeld, M.; Bouillon, F.**
Enrichment in molybdenum carbides and nitrides during $Ar^+$ bombardment.—73-09118
**Maple, M. B.** See Allenspach, P.; Almasan, C. C.; Barbeta, V. B.; Clinton, T. W.; Grumblatt, Gerard
**Mar, A.; Ibers, J. A.**
Synthesis, structure, and physical properties of new layered ternary telluride $TaPtTe_5$.—73-02505
**Mar, Alan** See Cheng, Wood-Hi
**Mar, Leong G.; Timbrell, Peter Y.; Lamb, Robert N.**
XPS study of zinc oxide thin film growth on copper using zinc acetate as a precursor.—73-00278

**Marabelli, F.; Parravicini, G. B.; Wachter, P.**
Anisotropic magnetization and field-induced effects of CuO high-quality monocrystals.—73-05530
**Marabelli, M.; Santopadre, P.; Verita, M.**
Influence of the external protective glazing upon conservation of the medieval stained glass window in Orvieto cathedral.—73-06930
**Maracas, G. N.** See Kuo, Chau-Hong
**Maracas, G. N.; Shiralagi, K.; Ramamurti, R.; Carpenter, R. W.**
Comparison of As- and P-based semiconductors grown at low temperatures by MBE and GSMBE.—73-14812
**Marage, P.** See Langlet, M.
**Marais, T. K.** See Pretorius, R.
**Marakami, Kenji** See Dong, Dun-Zhuo
**Maramzin, V. Yu.** See Garifullin, I. A.
**Maranowski, S. A.** See Kish, F. A.
**Marasco, A. L.** See Breslin, Michael C.
**Marathe, B. R.** See Goyal, D. J.; Rozati, S. M.
**Marazzi, Filippo; Paganelli, M.**
Method of preparing vitreous ceramic composition suitable for coating ceramic articles.—73-15949
**Marcadet, X.** See Larive, M.
**Marcellou, K.; Pantelis, D.; Manolatos, P.**
Laser surface treatment of aluminum 2024 with SiC powder injection: microstructural study and wear behavior.—73-13861
**Marchenko, V. I.** See Get'man, E. I.
**Marchenko, V. M.** See Dianov, E. M.
**Marchese, Leonardo; Bordiga, Silvia; Coluccia, Salvatore; Martra, G.; Zecchina, A.**
Structure of the surface sites of δ-$Al_2O_3$ as determined by HREM, computer modeling, and ir spectroscopy of adsorbed CO.—73-13452
**Marcheselli, Gincarlo** See Polini, Riccardo
**Marchetti, F.** See Gonzo, L.
**Marchot, P.** See Pirard, Jean-Paul
**Marchuk, E. A.** See Livshits, V. Ya.
**Marchuk, N. D.** See Zaitsev, V. K.
**Marchywka, Mike; Pehrsson, Pehr E.; Binari, Steven C.; Moses, Daniel**
Electrochemical patterning of amorphous carbon on diamond.—73-09111
**Marcina, Ivan** See Pach, Ladislav
**Marciniak, M.; Grzegorzewski, J.; Szustakowski, M.**
Lossy mode cutoff conditions in planar waveguides with semiconductor guiding layer.—73-15016
**Marciniec, B.** See Foltynowicz, Z. A.
**Marcus, J.** See Affronte, M.
**Marcus, M. A.** See Benton, J. L.
**Marczewski, Marek** See Juszczyk, Wojciech
**Marczuk, K.** See Roizin, Ya.
**Mardirosova, I. V.; Vassel, N. P.; Kosobokova, N. S.; Savenkova, M. A.**
Fusibility diagram of the system $CsPO_3$-$Ga(PO_3)_3$ and the properties of the compound $CsGa(PO_3)_4$.—73-16160
**Marek, T.** See Bauer, P.
**Marenkin, S. F.** See Zhalilov, N. S.
**Marezio, M.** See LePage, Y.; Takagi, H.
**Marfaing, Y.** See Clerjaud, B.
**Marfaing, Y.**
Point defects and defect-impurity interaction in $Cd_xHg_{1-x}Te$ and other II-VI semiconductors: facts and conjectures.—73-07739
**Margaca, F. M. A.** See Salvado, I. M. Miranda
**Margaritondo, G.** See Almeras, P.; Kelley, R. J.; Mao, D.; McKinley, J. T.; Zanoni, R.
**Margaryan, A.; Liu, Wai-Min**
Fluorine-containing germanate glasses.—73-00343
**Margel, Shlomo** See Brandriss, Sergio
**Margetson, James**
Determination of defect distributions for use in failure theories of load-bearing ceramics.—73-17276
**Margolese, D.** See Tomiya, S.
**Margolin, A. M.** See Surowiak, Z.
**Margulis, Lev** See Golan, Y.
**Mari, C. M.** See Cazzanelli, E.
**Mari, D.; Gonseth, D. R.**
New look at carbide tool life.—73-06835
**Mari, E. A.** See Nieto, M. L.
**Mariani, Carlo** See Campano, R.
**Mariani, Emil** See Konak, Karel; Kozik, Tomas; Lezal, Dimitrij
**Mariani, J. L.** See Zahorski, D.
**Maric, M.** See Richardson, J. T.; Soderholm, L.
**Maricocchi, Antonio F.**
Method for repair and restoration of a ceramic thermal-barrier-coated substrate by providing an intermetallic coating.—73-03693
**Maricq, M. Matti** See Narula, Chaitanya K.
**Marignan, J.** See Lebon, S.
**Mariliet, J.; Bourret, D.; Licht, C.; Val, C.**
Improved glass sealing process for electronic device package.—73-14203
**Mariliet, J.; Bourret, D.**
Crystallization of lead titanate $PbTiO_3$ in gel-derived solder glasses.—73-10513
**Marin, C.; Henry, J. Y.; Boucherie, J. X.**
Structural neutron diffraction study of an $Nd_2CuO_{4-\delta}$ single crystal.—73-05494
**Marin, C.; Moshchalkov, V. V.; Henry, J. Y.; Rossatmignod, J.**
Field enhancement of the diamagnetic onset temperature in a $YBa_2Cu_3O_{6.645}$.—73-04724
**Marin, S. J.; O'Keefe, M.; Young, V. G.; Vondreele, R. B.**
Crystal structure of $Sr_3Y_2Ge_3O_{12}$.—73-02213
**Marinelli, M.** See Balestrino, G.
**Marini, A.** See Berbenni, V.
**Marini, A.; Massarotti, V.; Berbenni, V.; Capsoni, D.; Riccardi, R.; Antolini, E.**
Thermal stability and defect structure of the solid solution $Li_xNi_{1-x}O$.—73-06178
**Marini, Paolo; Tului, Mario; Fortunati, Stefano**
Device for continuous production of ceramic superconductor.—73-01852
**Marinkovic, V.** See Panjan, P.
**Marinkovic-Neducin, Radmila** See Ranogajec, Jonjaua
**Marino, A.; Rodriguez, J. E.**
Thermoelectric power of bulk and thin-film Bi high-$T_c$ superconductors.—73-11935
**Marinos, J.** See Georgiades, A.
**Marinov, Marin**
Wear mechanism of monolithic linings for steel ladles.—73-00884
**Marinova, V.** See Gospodinov, M.; Sainov, V.
**Marinova, V.; Sainov, V.; Gospodinov, M.**
Optical transmission spectra of doped $Bi_{12}TiO_{20}$ photorefractive crystals with antireflection coatings.—73-16560
**Mariotto, G.** See Cazzanelli, E.; Laidani, N.; Lipinska-Kalita, K. E.; Pavesi, L.
**Mariscal, Rene** See Carpio, Ronald A.
**Maritato, L.** See Bottiglione, A.; Fortunato, G.; Scaglione, S.
**Marken, Craig** See Saasen, Arild
**Markendorf, R.** See Eremin, M. V.
**Marker, A. J., III** See Hayden, J. S.
**Markert, J. T.** See Chechersky, Vladimir; Edwards, H. L.
**Markevich, I. V.** See Drozdova, I. A.
**Markiewicz, D. J.; Bender, D.; Derek, D. A.**
Decreasing power costs in operation of electric furnaces and kilns.—73-05106
**Markonrenkov, Yu. A.** See Dyshlova, T. A.
**Markov, A. V.** See Gukasyan, A. M.
**Markov, L. K.** See Orlova, T. S.
**Markov, L. S.** See Shternberg, A. A.
**Markov, V. P.** See Shabanov, A. G.
**Markov, Yu. F.** See Bush, A. A.; Goncharuk, I. N.
**Markov, Yu. N.**
Theory of dielectric interference coatings.—73-01038
**Markova, L. A.** See Krainik, N. N.
**Markova, V. G.** See Chebotarev, A. N.
**Markovic, V.** See Hurem, Z.
**Markovich, V. I.** See D'yakonov, V. P.
**Markovich, V. I.** See Fita, I. M.
**Marks, L. D.** See Bonevich, J. E.
**Marks, L. D.; Ai, R.; Savage, S.; Zhang, J. P.**
Ultrahigh vacuum microscopy of the Si(111) boron $\sqrt{3}X\sqrt{3}R30°$ surface.—73-06302
**Marks, T. J.** See Chen, J.; Ciliberto, Enrico; Han, Bin; Neumayer, Deborah A.; Schulz, D. L.; Song, Y.-Q.; Wessels, B. W.
**Markunas, R. J.** See Hattangady, S. V.; Rudder, R. A.
**Markwitz, A.** See Logothetidis, S.
**Markworth, A. J.**
Transverse thermal conductivity of a unidirectional fiber composite with fiber-matrix debonding: a calculation based on effective-medium theory.—73-12902
**Marom, H.** See Chaim, R.
**Marone, M.** See Tritt, T. M.
**Marotta, A.** See Aronne, A.; Cioffi, Raffaelle; Pernice, P.
**Marotta, A.; Pernice, P.; Palumbo, M.; Catauro, M.; Aronne, A.**
Crystallizing phases and kinetics of crystal growth in lithium germanate glasses.—73-13955
**Marov, I. N.** See Kurmanguzhina, L. K.
**Marple, B. R.** See Lambert, Paul
**Marple, B. R.; Boulanger, Jean**
Graded casting of materials with continuous gradients.—73-16804
**Marple, B. R.; Green, David J.**
Graded compositions and microstructures by infiltration processing.—73-09149
**Marquardt, S.** See Schroeder, N.
**Marques, F. M.** See Labrincha, J. A.
**Marquez, E.** See Ramirez-Malo, J.
**Marquez, H.** See Lerma, J. R.; Zayas, M. E.
**Marquis, Didier** See Hild, Francois
**Marquis, P. M.** See Berry, Frank J.; Brownie, P. M.; Conder, R. J.; Illston, T. J.; Wang, J.
**Marr, J.** See Giminez-Molina, S.
**Marra, Sharon L.** See Andrews, Mary K.
**Marra, Sharon L.; Andrews, Mary K.; Cicero, Connie A.**
Time-temperature-transformation diagrams for DWPF [Defense Waste Processing Facility] projected glass compositions.—73-06983
**Marrakchi, G.** See Benyattou, T.
**Marre, D.** See Calzona, V.
**Marrero, Madelyn; Routbort, J. L.; Whalen, Philip; Li, C. W.; Karasek, K. R.**
Solid-particle erosion of in situ reinforced $Si_3N_4$.—73-06525
**Marrian, C. R. K.** See Dobisz, E. A.
**Marriott, Peter H.; Tickle, Stephen J.**
Method of laminating glass sheets.—73-03948
**Marrow, James; Luprano, Vincenza; Roberts, Steven G.**
Scanning acoustic microscopy observations of high-temperature crack-bridging mechanisms in alumina.—73-03350
**Mars, D. E.** See Bimberg, D.; Houng, Yu-Min
**Mars, D. E.; Yang, L.; Tan, M. R. T.; Rosner, S. J.**
Reproducible growth and application of AlAs/GaAs double barrier resonant tunneling diodes.—73-11419
**Marsh, Gary B.** See Fanelli, Anthony J.
**Marsh, P.** See James, A. C. W. P.
**Marsh, R. E.**
Space groups of $Tl_5Te_3$ and $Tl_2Te_3$.—73-02436
**Marshall, D. J.** See Eastman, J. A.
**Marshall, D. S.** See Dessau, D. S.
**Marshall, David B.** See Kaliszewski, Mary S.; Morgan, Peter E. D.; Morris, Winfred L.
**Marshall, David B.; Lange, Fred F.; Ratto, Joseph J.**
Partially stabilized $ZrO_2$-based laminar ceramic composites.—73-12391
**Marshall, P. A.** See Taylor, R. P.
**Marshall, Richard W.** See Brown, John T.
**Marshall, Ross E.; Goodall, Nigel J.**
New materials—Western Australia.—73-06584
**Marshall, T.** See Petruzzello, J.
**Marsi, M.** See Mao, D.; Zanoni, R.
**Martell, Trevor J.** See Tank, Klaus
**Martelli, S.** See Caneve, L.
**Martens, E. A. A. G.** See Buijs, Maarten
**Martens, J. S.; Hietala, V. M.; Venturini, E. L.; Lee, W. Y.**
Thickness dependence of electrodynamic properties of TlCaBaCuO thin films.—73-08258
**Martens, Thomas; Hennicke, Hans-Walter**
Influencing microstructure and strength of high-alumina porcelain: II, Raw materials and bodies.—73-02874; Influencing microstructure and strength of high-alumina porcelain: III, Properties of porcelain test bodies.—73-02875; Influencing microstructure and strength of high-alumina porcelain: IV, Body porosity and conclusion.—73-02876
**Martev, I.** See Antonova, K.
**Marthon, S.** See Ermolieff, E.; Sindzingre, T.
**Marti, M. C.** See Monros, G.
**Martienssen, W.** See Schneider, T.
**Martil, I.** See Hernandez-Rojas, J. L.
**Martin de Vidales, J. L.** See Leon, M.
**Martin, A.** See Bravo, D.
**Martin, Andreas; Berndt, Heinz; Lohse, Ursula; Wolf, U.**
Effect of Si:Al ratio and type of binder on the catalytic properties of HZSM-5 catalysts.—73-13018
**Martin, Annette** See Thakur, Randhir P. S.
**Martin, C.** See Huve, M.
**Martin, Charles R.** See Foss, Colby A., Jr.
**Martin, Claudine** See Doremieux-Morin, Claudine
**Martin, Cristina** See Del Arco, Margarita
**Martin, Curtis A.** See Talmy, Inna G.
**Martin, Eric** See Prouhet, Stephane
**Martin, Ferran; Aymerich, Xavier; Campabadal, F.; Acero, M. C.**
Carrier transport and storage in $Si_3N_4$ for metal-nitride-oxide-semiconductor memory applications.—73-07399
**Martin, Ferran; Aymerich, Xavier**
Characterization of the spatial distribution of traps in $Si_3N_4$ by field-assisted discharge of metal-nitride-oxide-semiconductor devices.—73-11104; Interface and bulk traps in oxide-nitride stacked films.—73-05058
**Martin, I. R.; Rodriguez, V. D.; Alcala, R.; Cases, R.**
Cross relaxation for $Tm^{3+}$ ions in indium-based glasses.—73-06896; Cross relaxation of $Tb^{3+}$ ions in $ZnF_2$-$CdF_2$-based glasses.—73-13950
**Martin, J. A.** See Ferrer, A.
**Martin, J. C.** See Gadenne, M.
**Martin, Jaime M.; Nadella, R. K.; Rao, M. V.; Simons, David S.; Chi, P. H.; Caneau, C.**
Fe and Ti implants in $In_{0.52}Al_{0.48}As$.—73-11211
**Martin, Jaime M.; Nadella, R. K.; Vellanki, Jayadev; Rao, M. V.; Holland, O. W.**
Thermally stable, buried high-resistance layers in *p*-type InP obtained by MeV-energy Ti implantation.—73-07839
**Martin, Joel J.** See Foldvari, Istvan; Hart, D. W.
**Martin, L. D.** See Venkataraman, K. S.
**Martin, M. Hogan E.** See Park, Dong-Gon
**Martin, M.** See Schmackpfeffer, R.
**Martin, Michael C.** See Mandrus, D.
**Martin, Olivier J. F.; Bona, Gian-Luca; Wolf, Peter**
Thermal behavior of visible AlGaInP-GaInP ridge laser diodes.—73-01349
**Martin, P. A.** See Ballingall, J. M.
**Martin, P. J.** See Bendavid, A.
**Martin, P. J.**
Current status review: filtered arc evaporation.—73-15711
**Martin, P.** See Ermolieff, E.; Gomez, P.; Leclercq, J. L.; Sindzingre, T.
**Martin, P.; Dufour, M.; Ermolieff, A.**
Electrical surface conductivity in quartz induced by ion implantation.—73-12791
**Martin, Paul A.** See Chin, Albert; Ho, Pin
**Martin, R. I.; Brown, Paul W.**
Hydration of tetracalcium phosphate.—73-06667; Hydration of tricalcium germanate.—73-09462
**Martin, Rodger** See Riley, Thomas J.
**Martin, Stephen J.** See Butler, Michael A.
**Martin, Steve W.** See Bloyer, Donald R.
**Martin, Steven C.**
Ceramic fabricator quality revolution: a case study.—73-01766
**Martin-Sanchez, Juan M.** See Ruiz Navarro, Antonio M.
**Martina, S. M.; Sukumar, B.**
Polarizibility of a carrier in GaAs quantum dot.—73-04445
**Martinec, Petr** See Kolar, Petr
**Martinella, R.**
Selection and application of wear-resistant materials to increase service life of components.—73-08541
**Martinelli, J. R.; Dos Reis, S. T.**
Electrical characterization of zirconia-niobium and zirconia-titanium composites.—73-08852
**Martinez Fernandez, Julian; Jimenez Melendo, M.; Dominguez Rodriguez, Arturo; Heuer, Arthur H.; Hayakawa, Motozo**
Unusual twin structure in transformed precipitates in Y-PSZ single crystals—correction.—73-06303; Unusual twin structure in transformed precipitates in Y-PSZ single crystals.—73-05522
**Martinez, Benjamin** See Sandiumenge, F.
**Martinez, Benjamin.; Sandiumenge, F.; Gali, S.; Obradors, X.; Rodriguez-Clemente, R.**
Crystal structure and spin-glass behavior in R-type $BaFe_{4-2x}Sn_{2+x}Co_2O_{11}$ ($x$=1.1) hexagonal ferrites.—73-02183
**Martinez, G.** See Seguy, P.
**Martinez, J. C.** See Laborde, O.
**Martinez, J. L.** See De Andres, A.; Garcia-Matres, E.

**Martinez, M. A.** See Cortes, R.

**Martinez, Nelson P.; Lujano, Juan A.; Alvarez, Nieves; Machado, Francisco; Lopez, Carmen M.**
Zeolitic catalyst of MFI type, its preparation and use.—73-05255

**Martinez, R.; Martinez, S.; Guillem, M. C.; Traveria, A.**
Application of basalts in ceramic glazes: III, Influence of addition of $B_2O_3$/sodium feldspar mixtures.—73-14643

**Martinez, S.** See Martinez, R.; Puertas, F.

**Martinez, S.; Zwick, A.; Renucci, M. A.; Enjalbert, R.; Millet, P.**
Raman spectroscopy of some (M)$Ba_2Cu_3O_{7-\delta}$ "cocktails."—73-11886

**Martinez, Wilfred A.** See Damiano, J.

**Martinez-Duart, J. M.** See Gonzalvez, J. M.

**Martinez-Pastor, J.; Segura, A.; Chevy, A.**
High-temperature behavior of impurities and dimensionality of the charge transport in unintentionally and tin-doped indium selenide.—73-07567

**Martini, M.** See Anedda, Alberto

**Martinie, B.** See Soret, J. C.

**Martinka, M.** See Benson, J. David

**Martino, M.** See Luby, S.

**Martins, C. Saraiva; Steen, M.; Bressers, J.; Rosa, L. Guerra**
Characterization of the flexural strength degradation of a commercial hot-pressed silicon nitride in a high-temperature sulfidizing environment.—73-06340

**Martins, G. B.** See Gennaro, A. M.

**Martinson, L. S.; Schweitzer, J. W.; Baenziger, N. C.**
Metal-insulator transitions in $BaCo_{1-x}Ni_xS_{2-y}$.—73-15039

**Martinuzzi, S.** See El Ghitani, H.

**Martirosyan, R. M.** See Arutyunyan, V. E.

**Martovitskii, V. P.** See Gorima, J.; Vasil'ev, A. L.

**Martra, G.** See Marchese, Leonardo

**Marty, Christian** See Burkarth, Nadine

**Martynenko, L.** See Dzjubenko, N.

**Martys, Nick** See Skamser, Daniel J.

**Marumo, Fumiyuki** See Kataoka, Masako

**Maruno, Shigeo** See Sakamoto, I.

**Maruno, Shigeo; Ban, Seiji; Wang, Yun-Fu; Iwata, H.; Itoh, H.**
Properties of functionally gradient composite consisting of hydroxyapatite containing glass-coated titanium and characters for bioactive implant.—73-10267

**Maruno, Shigeo; Ban, Seiji; Wang, Yun-Fu**
Properties of functionally gradient composite consisting of hydroxyapatite containing glass-coated titanium and characters for bioactive implant.—73-03636

**Maruo, T.; Higashi, Y.; Tanaka, T.; Homma, Y.**
Photoion detection with a wide dynamic range using a quadrupole mass spectrometer for nonresonant multiphoton ionization of sputtered neutrals.—73-15830

**Maruoka, Kazutoshi** See Okano, Kazuo

**Marushkin, K. N.** See Nipan, G. D.

**Marushkin, K. N.; Alikanyan, A. S.**
Quasi-binary systems $HfO_2$-$ZrO_2$, $ZrO_2$-$Y_2O_3$, and $HfO_2$-$Y_2O_3$.—73-02410

**Maruta, Toshihisa; Yokoyama, Shigeru; Fujimoto, Izumi**
Properties of blended cement containing silica fume and super-pulverized materials with water-cementitious material ratios.—73-10108

**Maruta, Toshihisa; Yokoyama, Shigeru; Ninomiya, Koichi; Yamane, Takeshi**
Determination of minor elements in high-purity mullite by acid decomposition associated with a microwave oven/ICP-AES.—73-15787; Simple and rapid method for determination of lignosulfonate admixture in concrete using a flow-injection analytical system.—73-10151

**Maruyama, Gunjiro** See Yamanaka, Seiji

**Maruyama, K.** See Rajavel, D.

**Maruyama, Katsuhisa; Makino, Mitsuo; Kikukawa, Nobuyuki; Shiraishi, Minoru**
Method for deposition of hexagonal diamond using hydrogen plasma jet.—73-01864

**Maruyama, Kazunori** See Kamata, Kiichiro

**Maruyama, Kazunori; Endo, S.; Sasaki, G.**
Formation of ZnO films by $CO_2$ laser ablation at atmospheric pressure.—73-05816

**Maruyama, Kazunori; Kamata, Kiichiro; Inoue, Tohru**
Emission spectra and morphology of carbon films by ECR plasma CVD.—73-03141

**Maruyama, Kazuyuki** See Kato, Naomiki

**Maruyama, Toshiro; Ikuta, Y.**
Vanadium dioxide thin films prepared by CVD from vanadium(111) acetylacetonate.—73-13334

**Maruyama, Toshiro; Tago, Teruoki**
Silicon dioxide thin films prepared by photochemical vapor deposition from silicon tetraacetate.—73-16985

**Maruyama, Toshiro**
Transparent conductive indium oxide thin films prepared by chemical vapor deposition.—73-14740

**Maruyama, Tsuyoshi** See Okuno, Yasuo

**Marvin, Charles G.**
Government regulation increases for chrome-bearing hazardous waste.—73-17484

**Marwick, A. D.; Buchanan, D. A.; DiMaria, D. J.; Saunders, Phil; Dori, L.**
Measurements of hydrogen redistribution in hot electron injection of MOS capacitors.—73-04133

**Maryska, Martin** See Helebrant, A.; Matousek, Josef; Mohanova, Pavla

**Marzinotto, A.** See Denape, J.

**Marzouk, H. A.** See Kim, J. S.

**Masafumi, Kobune; Yosohiro, Sugie; Satoshi, Fujii; Tsubakino, H.; Nakashima, S.**
Etching effect of substrate on crystallinity of oriented platinum thin film.—73-10226

**Masahiro, Tamamaki; Yoshihiro, Onoda; Masaru, Nozaki**
Method for producing monocrystalline alumina grains.—73-03419

**Masnitis, R. L.** See Sher, A.

**Masuki, Hideyuki; Wada, Shigetaka**
Wear of media balls during the ball milling of $Si_3N_4$ powder.—73-06133; Wear of media balls during the ball milling of $Si_3N_4$ powder.—73-17456

**Masuki, Takaki** See Oishi, Manabu

**Masuki, Yuichi; Gibson, Roderick A. G.; Le Comber, Peter G.**
Structural and electrical properties of $SiN_x$:H films.—73-02690

**Masumi, Numata; Ono, Yoshio**
Contact combustion type carbon monoxide sensor.—73-11515

**Masuru, Nozaki** See Masahiro, Tamamaki

**Mascarenhas, A.** See Alonso, R. G.

**Maschio, Roberto Dal** See Bartlett, Andrew H.

**Maschio, S.** See Lo Casto, S.

**Maschke, H.** See Bahr, Hans-Achim

**Maschmeyer, Dietrich** See Fliedner, Christine

**Maserjian, J.** See Rich, D. H.

**Mashchenko, A. I.** See Mukhortov, V. M.

**Mashimo, Masaaki** See Sakai, Etsuo

**Mashimo, Tsutomu** See Yamakawa, Akira

**Mashimo, Tsutomu; Nishida, Minoru; Yamaya, Susumu; Yamasaki, Hisashi**
Stoichiometric B1-type tantalum nitride and a sintered body thereof and method of synthesizing the B1-type tantalum nitride.—73-12527

**Mashimo, Tsutomu; Tashiro, S.; Toya, T.; Nishida, Minoru; Yamazaki, Hisashi; Yamaya, Susumu**
Synthesis of the B1-type tantalum nitride by shock compression.—73-09365

**Mashir, Yu. I.; Abakumova, L. A.; Gorshkov, V. A.**
Solubility of the chlorides of copper, cadmium, and sodium in borate and aluminoborosilicate glasses.—73-14084

**Mashir, Yu. I.; Davydova, N. G.; Artamonova, M. V.**
Effect of iron oxides on the state of copper ions and photochromic properties of glasses.—73-00458; Effect of iron oxides on the state of copper ions and the photochromic properties of glass.—73-00459

**Mashkov, I. V.** See Baranov, P. G.

**Mashkov, V. A.; Dilkov, A. L.**
New mechanism of inhomogeneous broadening in optical spectra of deep defects in dielectric glasses.—73-14234

**Masini, Roberto** See Tampieri, Anna

**Maskell, W. C.** See Ioannou, A. S.

**Maslehuddin, Mohammed** See Al-Amoudi, Omar S. B.

**Maslennikov, A. V.** See Sham, P. I.

**Maslennikova, G. N.** See Shmeleva, V. I.

**Maslov, A. V.** See Afanas'ev, A. M.

**Maslov, A. Yu.** See Ipatov, I. P.

**Maslov, V. A.** See Sil'vestrova, I. M.

**Maslov, V. P.; Tsitsiliano, A. D.**
Relaxation of residual deformations in the surface layers of silicate glasses.—73-00696

**Maslovsky, Vladimir M.; Simanovich, Ellen V.**
Prolonged storage of electrons in MONOS [metal oxide–silicon nitride–dioxide semiconductor] structures.—73-06174

**Masnik, John E.; Kieffer, John; Bass, Jay D.**
Structural relaxations in alkali silicate systems by Brillouin light scattering.—73-00551

**Mason, G. M.** See Hung, L. S.

**Mason, M. G.** See Chen, Samuel

**Mason, Steven M.** See Claar, Terry D.

**Mason, T. E.** See Gaulin, B. D.; Mook, H. A.

**Mason, T. E.; Aeppli, G.; Hayden, S. M.; Ramirez, A. P.; Mook, H. A.**
Low-energy excitations in superconducting $La_{1.86}Sr_{0.14}CuO_4$.—73-15537

**Mason, T. E.; Aeppli, G.; Mook, H. A.**
Magnetic dynamics of superconducting $La_{1.86}Sr_{0.14}CuO_4$.—73-08126

**Mason, Thomas O.** See Cooper, E. A.; Hwang, Jin-Ha; Kirkpatrick, Kelly S.; Shen, Li; Thiele, E. S.; Weber, W. J.

**Mason, Walter R.** See Hoge, Douglas L.

**Masquelier, C.; D'Yvoire, F.; Rodier, N.**
Crystal structure of the sodium ion conductor α-$Na_7Fe_3(P_2O_7)_4$: evidence for a long-range ordering of the $Na^+$ ions.—73-02216

**Masquelier, Christian** See Takeuchi, Tomonari

**Masri, Pierre** See Rahmani, Moulay Driss

**Masrom, A.** See Evans, R. W.

**Massabni, A. M. G.** See Ribeiro, S. J. L.

**Massarotti, V.** See Berbenni, V.; Marini, A.

**Massat, M.** See Locoge, P.; Ollivier, J. P.

**Masse, G.** See Djessas, K.

**Masse, G.; Yarzhou, L.; Djessas, K.**
Preparation and study of $CuXY_2$ (X=Ga, In; Y=Se, Te) thin films for solar cell applications.—73-15112

**Masse, S.; Zanni, H.; Lecourtier, J.; Roussel, J. C.; Rivereau, A.**
$^{29}$Si solid-state NMR study of tricalcium silicate and cement hydration at high temperature.—73-13776

**Masselink, W. Ted**
Transport of quasi-two-dimensional electrons in heterojunction field effect transistors.—73-15216

**Massey, M. J.; Merlin, R.; Girvin, S. M.**
Raman scattering in $FeBO_3$ at high pressures: phonon coupled to spin-pair fluctuations and magnetodeformation potentials.—73-07973

**Massey, M.** See Pandey, G. K.

**Massiani, Pascale** See Jia, Chun-Juan

**Massiani, Y.** See Francois, J. C.

**Massiani, Y.; Medjahed, A.; Gravier, P.; Crousier, J. P.**
Effect of a titanium underlayer on the corrosion behavior of physically vapor deposited titanium nitride films.—73-13822

**Massidda, L.** See Atzeni, C.

**Massies, J.** See Chen, Y.; Landesman, J. P.

**Massimo, M.** See Varhue, W. J.

**Massiot, D.** See Cote, Bertrand; Poe, Brent T.

**Masson, I.; Feiereisen, J. P.; Michel, J. P.**
Creep deformation of aluminum nitride at high temperature.—73-13500

**Mastelaro, V. R.** See Ribeiro, S. J. L.

**Masterov, D. F.; Nasredinov, F. S.; Seregin, P. P.; Saidov, Ch. S.; Shadrin, E. B.; Shcherbatyuk, O. K.**
Tensor of crystalline electric field gradient at copper sites in $RBa_2Cu_3O_7$ lattices [R=Nd, Gd, Y, Yb]. Sternheimer's coefficient of $Cu^{2+}$ centers.—73-15650

**Masterov, V. F.** See Georgitse, E. I.; Il'in, N. P.; Seregin, N. P.

**Masterov, V. F.; Nasredinov, F. S.; Saidov, Ch. S.; Seregin, P. P.; Shcherbatyuk, O. K.**
Parameters of electric field gradient tensor in copper sites of $YBa_2Cu_3O_{7-x}$ lattices.—73-15575

**Masterov, V. F.**
Electron structure and mechanism of excitation of the rare-earth ions in the III-V semiconductors.—73-04311; Electron structure of rare-earth impurities in III-V compounds (a review article).—73-11186

**Masters, Keith**
Applying spray drying to ceramics.—73-04901

**Masterson, H. J.; Lunney, James G.; Coey, J. M. D.**
Thin films of barium ferrite with perpendicular magnetic anisotropy produced by laser ablation deposition.—73-01483

**Masthoff, Klaus** See Forkel, Klaus

**Mastikhin, Vjatcheslav M.** See Terskikh, Victor V.

**Mastrovito, A. L.** See Vernon, S. M.

**Masuda, Hideki; Nishio, Kazuyuki; Baba, Nobuyoshi**
Preparation of microporous metal membranes by two-step replication of the microstructure of anodic alumina.—73-00258

**Masuda, Hirohisa** See Kuromitsu, Yoshirou

**Masuda, Hiroshi** See Yuda, Ryoichi

**Masuda, K.** See Maeda, Kazuyuki

**Masuda, M.** See Tsuruta, Hideyoshi

**Masuda, Masaaki** See Nakasuji, Yoshizumi; Yamada, Naohito

**Masuda, Masaaki; Makino, T.; Nakasuji, Yoshizumi; Matsui, M.**
Fatigue behavior of nonoxide ceramics at elevated temperature.—73-06414

**Masuda, S.; Aoki, M.; Harada, Y.; Hirohashi, H.; Watanabe, Y.; Sakisaka, Y.**
Anomalously enhanced satellite in metastable atom electron spectrum of $LaCoO_3$.—73-12536

**Masuda, Takao** See Hashimoto, Kenji

**Masuda, Tomoyuki** See Mitamura, Takashi

**Masuda, Yoshio; Matsubara, Kazuo; Ogawa, Rikuro; Kawate, Yoshio; Sakka, Sumio**
Reaction of $YBa_2Cu_3O_{7-x}$ superconducting film with YSZ substrate and crystal orientation in the film.—73-15608

**Masuda, Yuichi** See Takahashi, Minoru

**Masumi, Taizo**
Superconductive optoelectronic device with the basic substance $C_2O$ of superconductive-conjugate photoconductivity.—73-01741

**Masumoto, Hiroshi; Namerikawa, Masahiko; Yamane, Hisanori; Hirai, Toshio**
Preparation of epitaxial $Bi_4Ti_3O_{12}$ films on sapphire substrates by chemical vapor deposition.—73-09261

**Masumoto, T.** See Inoue, A.

**Masumoto, Yasuaki** See Mishina, Tomobumi

**Masumura, H.** See Itoh, K.

**Masumura, R. A.** See Hoff, H. A.

**Masuo, K.** See Fujiyasu, H.

**Masut, R. A.** See Bensaada, A.; Cova, P.; Singh, A.; Tran, C. A.

**Matacotta, F. C.** See Mertelj, T.

**Matacotta, F. C.; Pal, D.; Mertelj, T.; Stastny, P.; Nozai, P.; Mateev, D.**
Layered perovskite with alternating Cu-$O_2$ and C-O planes.—73-04755

**Matano, Yoshinori** See Inoue, Akira

**Matar, S.** See Darracq, S.

**Mataras, D.; Cavadias, S.; Rapakoulias, D.**
Power dissipation mechanisms in radio-frequency-driven silane discharges: the influence of discharge geometry.—73-05954

**Matarese, Alfred P.** See Scharman, Alan J.

**Matas, S.** See Kopsansky, P.

**Mate, Nitant** See Ogale, S. B.

**Matecki, Marc; Javel, Jean-Francois; Charron, Christophe; Fonteneau, Gilles; Lucas, Jacques**
Devitrification studies of heavy metal fluoride glasses containing alkali fluoride.—73-07118

**Mateev, D.** See Matacotta, F. C.; Mertelj, T.

**Matej, Jiri** See Bernard, Vladimir

**Matej, Jiri; Bernard, Vladimir**
Influence of alternating current parameters on corrosion of heating electrodes in molten glass.—73-15881; Optimum loading of molybdenum electrodes in corrosive glass melts.—73-12236

**Matejec, Vlastimil** See Sedlar, Miroslav; Kubeckova, Marta

**Matejec, Vlastimil; Hayer, Milos; Kubeckova, Marta**
Mechanical strength of optical fibers coated by thin oxide layers prepared by sol-gel method.—73-03800

**Mateos, J. M. J.; Jones, W.; Morales, J.; Tirado, J. L.**
Composition and cation–vacancy distribution of cation-deficient Mn/Fe spinel oxides.—73-02169

**Mateushita, K.** See Suzuki, S.

**Mathai, Elizabeth** See John, K. Jacob

**Mathews, L. T.** See Loo, C. E.

**Mathews, Viju K.; Niroomand, Ardavan; Blalock, Guy T.; Fazan, Pierre C.**
Integrated circuit fabrication process to reduce critical dimension loss during etching.—73-04211

**Mathews, Viju K.; Thakur, Randhir P. S.; Ditali, Akram; Fazan, Pierre C.**
Influence of surface preparation prior to thermal nitridation on the electrical characteristics of silicon nitride films deposited on polycrystalline silicon films.—73-05876

**Mathey, Y.** See Evain, M.
**Mathi, Jaya S.** See Asokamani, R.
**Mathieu, H.** See Christol, P.
**Mathiot, D.; Straboni, A.; Andre, E.; Debenest, P.**
Boron diffusion through thin gate oxides: influence of nitridation and effect on the $Si/SiO_2$ interface electrical characteristics.—73-07394
**Mathis, M. D.; Dewan, H. S.; Agrawal, Dinesh K.; Roy, Rustum; Plovnick, R. H.**
Microwave processing of Ni-$Al_2O_3$ composites.—73-03622
**Mathisen, Melvin P.; Butler, David L.; White, Jeffrey F.**
Quartz tank member an.l method of production thereof.—73-15895
**Mathoorasing, Dean** See Blez, Monique
**Mathur, A.** See Hnat, J. G.
**Mathur, B. K.** See Rao, M. V.
**Mathur, Michelle** See Kim, Hong-Koo
**Mathur, S. C.; Dube, D. C.; Sinha, Urvija**
Microwave studies in high-temperature superconductors.—73-11836
**Mathur, V. K.** See Parashar, A. K.; Sharma, R. N.
**Mathur, V. K.; Gupta, R. S.; Ahluwalia, S. C.**
Lithium as intensifier in the formation of dicalcium silicate phase.—73-10028
**Matijasevic, Goran** See Lee, Chin C.
**Matijevic, Egon,** See Hsu, Wan Peter; Kim, Myung-Jin
**Matkovic, B.; Paljevic, M.; Mikoc, M.**
Effect of combined additions of silica fume, calcium sulfoaluminate, and gypsum on the hydration and strength development of $Ca_2SiO_4$.—73-09900
**Matkovskii, A. O.** See Malovichko, G. I.
**Matlack, Keith S.** See Wang, E.; Zing, Shi-Ben
**Matousek, Ivo** See Bernat, Dan; Jirman, Pavel
**Matousek, Ivo; Jirman, Pavel**
Dynamic modeling of the heating field development on spatial models.—73-14355
**Matousek, Josef** See Helebrant, A.; Sedmidubsky, David
**Matousek, Josef; Maryska, Martin; Helebrant, A.**
Distribution of $Na^+$ ions in corrosive layer of silicate glasses.—73-03720
**Matousek, Josef; Maryska, Martin**
Distribution of silver concentration in surface layer of Simax glass.—73-06907; Silver-containing surface layer in Simax glass.—73-10276
**Matousek, Josef**
Isothermal evaporation of some components of industrial glasses.—73-00649; Model concept of vaporization from silicate melts.—73-00665; Volatilization of volatile glass components.—73-10618
**Matralis, H.** See Clarebout, G.
**Matrossov, A.** See Shapilova, M.
**Matsak, R. I.** See Demidenko, L. M.
**Matskiv, I. V.** See Mezhogskikh, M. I.
**Matsko, M. G.** See Randall, C. A.
**Matson, R.** See Ashour, S.
**Matsonashvili, B. N.** See Zasavitskii, I. I.
**Matsubara, Gensoh; Eikyu, Katsumi; Miyazaki, Masayuki; Kimura, Hiroshi; Okabe, Yoichi**
Fabrication of YBCO/PBCO/$SrTiO_3$/PBCO/YBCO layered structure for superconductor-insulator-superconductor tunnel-type Josephson junction.—73-15471
**Matsubara, Hideki** See Akazawa, Toshiyuki
**Matsubara, Ichiro; Ogura, Toru; Tanigawa, Hideo; Yamashita, Hiroshi; Kinoshita, M.; Kawai, Tomoji**
Growth of Bi-Sr-Ca-Cu-O-based superconducting whiskers.—73-01563
**Matsubara, Ichiro; Tanigawa, Hideo; Ogura, Toru; Yamashita, Hiroshi; Kinoshita, Makoto; Kawai, Tomoji**
Superconductor crystal and process for preparing the same.—73-01742
**Matsubara, Kazuo** See Masuda, Yoshio
**Matsubara, Shigeo; Yamada, Toshiro; Hirose, Yusuke; Katayama, Iwao; Miwa, Yukimi; Tanoue, Ryuji**
Zirconia oxygen sensor.—73-11552
**Matsubara, Toshihiro** See Kobayashi, Kenkichiro
**Matsubara, Toshiya** See Shimoyama, Junichi
**Matsubayashi, N.** See Inumaru, Kei
**Matsuda, Atsunori** See Matsuno, Yoshihiro
**Matsuda, Atsunori; Kogure, Toshihiro; Matsuno, Yoshihiro; Katayama, Shinya; Tsuno, Toshio; Tohge, Noboru**
Structural changes of sol-gel-derived $TiO_2$-$SiO_2$ coatings in an environment of high temperature and high humidity.—73-00407
**Matsuda, Atsunori; Matsuno, Yoshihiro; Katayama, Shinya; Tsuno, Toshio; Tohge, Noboru; Minami, Tsutomu**
Alkali passivation mechanism of sol-gel-derived $TiO_2$-$SiO_2$ films coated on soda-lime-silica glass substrates.—73-00304; Alkali passivation mechanism of sol-gel-derived $TiO_2$-$SiO_2$ films coated on soda-lime-silica glass substrates.—73-10355; Changes in physical properties and structure of sol-gel-derived $SiO_2$ films in an environment of high temperature and high humidity.—73-14142; Influences of humidity and temperature on weathering of glass substrates coated with sol-gel-derived films.—73-03794
**Matsuda, D.** See Taguchi, H.
**Matsuda, Hideaki** See Ishihara, Tatsumi
**Matsuda, Hiroto** See Narukawa, Akira
**Matsuda, Isao** See Yamaguchi, Shizuo
**Matsuda, Keiji** See Motomachi, Tsutomu
**Matsuda, Manabu** See Hirata, Yoshihiro; Miyoshi, Shunzou
**Matsuda, Masaaki; Birgeneau, R. J.; Chou, H.; Endoh, Yasuo; Kastner, M. A.; Kojima, Hironao**
Low-energy spin fluctuations in $La_{2-x}Sr_xCu_{1-y}Zn_yO_4$ ($x$=0.14, $y$=0.012).—73-01591
**Matsuda, Masaaki; Birgeneau, R. J.; Endoh, Yasuo; Hidaka, Y.; Kastner, M. A.; Nakajima, Kenji**
Dynamic spin properties of $La_{1.98}Sr_{0.02}CuO_4$.—73-08026
**Matsuda, Motohide; Ogawa, Yoshihisa; Aihara, Yasuhiko; Yamashita, Kimihiro; Umegaki, Takao**
Densification of superconducting $Ba_2YCu_4O_8$ ceramics by two-stage sintering.—73-15411; 73-15412
**Matsuda, Naoya** See Nakamura, Yoshiko Oi
**Matsuda, Ohsaku** See Inoue, Keita; Takeshita, Masaaki; Watari, Takanori
**Matsuda, Ohsaku; Watari, Takanori; Torikai, Toshio; Yamasaki, Y.; Katsuki, Hiroaki**
Effects of $Al_2O_3$ and glass on formation of needlelike mullite from kaolin.—73-13025
**Matsuda, Ohsaku; Watari, Takanori; Torikai, Toshio**
Effects of $Al_2O_3$ and glass on formation of needlelike mullite from kaolin.—73-02803
**Matsuda, S.** See Mitsuhashi, Takefumi; Morita, Mitsuru
**Matsuda, Shin-Pei** See Nabatame, Toshihide
**Matsuda, T.** See Harada, K.
**Matsuda, Toshiaki** See Yoshida, Naomi
**Matsuda, Toshitsugu** See Mitomo, Mamoru
**Matsuda, Y.; Komiyama, S.; Terashima, T.; Shimura, K.; Bando, Y.**
Disappearance of Hall resistance in one-unit-cell thick $YBa_2Cu_3O_{7-\delta}$: evidence of free vortex-antivortex excitation.—73-08020
**Matsuda, Yukihisa** See Oishi, Manabu
**Matsuhiro, Keiji** See Takahashi, Tomonori
**Matsuhiro, Keiji; Sakai, Hitoshi; Yoshida, Manabu**
Yttrium-barium-copper oxide powder and process for manufacturing yttrium-barium-copper oxide superconducting sintered body.—73-01745
**Matsuhisa, Tadaaki; Kato, Shigeki; Iwasaki, Hiroyuki**
Method for producing ceramic sintered article and molding method and molding apparatus to be used therefor.—73-01866
**Matsui, Hideki** See Ikeda, Ko
**Matsui, Hiroshi** See Ishihara, Mari
**Matsui, Isamu** See Nakata, Yoshihisa
**Matsui, M.** See Masuda, Masaaki; Nakabayashi, H.; Nakasuji, Yoshizumi; Tsuruta, Hideyoshi
**Matsui, Minoru** See Yamada, Naohito
**Matsui, Minoru**
Status of research and development on materials for ceramic gas turbine components.—73-05277
**Matsui, Motoyasu** See Tanaka, Keisuke
**Matsui, Noboru** See Yoshida, Tomoyuki
**Matsui, T.** See Kurata, K.
**Matsui, Tatsuji; Komura, Osamu; Miyake, Masaya**
Effect of surface coating and orienting of whiskers on mechanical properties of $SiC(w)/Si_3N_4$.—73-03272
**Matsui, Tatsuji; Yamakawa, Akira; Niihara, Koichi**
Fabrication, microstructure, and some properties of $Si_3N_4$-based nanocomposites.—73-02828
**Matsui, Toshiyuki; Suzuki, Takeshi; Ohi, Akihiko; Kimura, Hiroshi; Mukae, Kazuo**
Fabrication of tunnel junctions with YBCO/insulator/YBCO layered structure using (013)-oriented films as base layer.—73-15469
**Matsukata, Masahiko** See Kojima, Toshinori
**Matsukawa, Takayuki**
Semiconductor device having a capacitor dielectric film of multilayer structure and a method of controlling the same.—73-11543
**Matsukaze, Noriyuki** See Komeya, Katsutoshi
**Matsuki, Kimihiro** See Sakamoto, Masatomi
**Matsuki, Ryuichi** See Niihara, Koichi
**Matsuki, Ryuichi; Takenouchi, Takeyoshi; Ueda, Hisao; Sasaki, Hiroshi**
Ceramic composites and process for manufacturing the same.—73-15937
**Matsumoto, Akihide** See Yamamoto, Yoshiharu
**Matsumoto, Hirokazu** See Honda, Tokuyuki
**Matsumoto, Iwao**
Recycling of glass bottles in Japan.—73-10593
**Matsumoto, Kanji** See Hirata, Shigeru
**Matsumoto, Kiyoshi** See Hayashi, Yasuo
**Matsumoto, Osami** See Nagai, Bin
**Matsumoto, Osamu** See Aoyama, Kazuhiro
**Matsumoto, Roger L. K.** See Lukacs, Alexander, III
**Matsumoto, Roger L. K.; Pier, Julie W.**
Fracture behavior of a silicon nitride ceramic containing a high-temperature ductile phase.—73-06428
**Matsumoto, Roger L. K.**
Crystallization of grain-boundary phases in SiC ceramics through catalytic deoxygenation.—73-12457; Silicon nitride ceramics containing crystallized grain-boundary phases.—73-02138; Silicon nitride ceramics containing crystallized grain-boundary phases.—73-12521
**Matsumoto, S.** See Uwasawa, K.
**Matsumoto, Satoshi** See Fujita, Shizuo
**Matsumoto, Seiichiro** See Mitamura, Hisayoshi
**Matsumoto, Seiichiro; Manabe, Yuji; Hibino, Yukinobu**
Diamond deposition using an *X-Y* stage in a dc plasma jet chemical vapor deposition.—73-02773
**Matsumoto, Shigeru** See Korenaga, Sadayoshi
**Matsumoto, T.** See Kawai, S.; Matsushita, A.
**Matsumoto, Takehiko; Mori, Nobuo; Iida, Junji**
Magnetic properties of the two-dimensional antiferromagnets $RFe_2O_4$ (R=Y, Er) at high pressure.—73-07955
**Matsumoto, Tomohide; Tabata, Kenji; Maki, Masao**
Catalytic composite for deodorizing odorous gases and a method for preparing the same.—73-05195
**Matsumoto, Toshimi** See Okada, Michiya
**Matsumoto, Toshiyuki** See Sonoda, Hideto
**Matsumoto, Y.** See Inoue, Akira; Sasaki, T.
**Matsumoto, Y.; Hombo, J.**
Electrical conductivities of $YBa_2M_3O_y$ (M: Fe, Co) system.—73-02598
**Matsumoto, Yousuke; Hirota, Ken; Yamaguchi, Osamu; Fujii, Souichi; Tamamaki, Masahiro**
Formation and sintering of alkoxy-derived $Al_2O_3$-$TiO_2$ composite powders.—73-09136; Formation and sintering of alkoxy-derived $Al_2O_3$-$TiO_2$ composite powders.—73-16785; Formation and sintering of corundum-rutile composite powders prepared from alkoxides.—73-05811
**Matsumura, Kazuhiro** See Watanabe, Koichi
**Matsumura, Kazuo** See Komorita, Hiroshi
**Matsumura, Kazuo; Tanaka, Tadashi; Tsurutani, Shoji**
Method of manufacturing ceramic circuit board.—73-01060
**Matsumura, Kimio** See Aoto, Sho; Kuroi, Tokio
**Matsumura, Masahiro** See Tou, Hideki
**Matsumura, Masakiyo** See Ishihara, Ryoichi
**Matsumura, Nobuyuki** See Muramatsu, Gyo
**Matsumura, Tatsuo; Sakamoto, Ryoichi; Yoshimoto, Toshikazu; Yokoyama, Yoichi**
Effect of pitch and phenolic resin on the mechanical properties of $Al_2O_3$-C nozzle.—73-00804
**Matsumura, Y.; Maeda, T.**
Pitch-based advanced carbon materials—resourceful utilization technologies of pitch.—73-12439
**Matsumura, Yoshiaki** See Shiomi, Haruhisa
**Matsunaga, Noriaki; Ootuka, Youiti**
Magnetization of Si:P across the metal-insulator transition.—73-07654
**Matsunami, Hiroyuki** See Fuyuki, Takashi; Yoshimoto, Masahiro
**Matsunami, Tadashi** See Iwanaga, Hiroshi
**Matsuno, Shigeru** See Kobayashi, Toshio; Umemura, Toshio
**Matsuno, Takashi; Sakurai, Kiyoko; Koishi, Masumi**
Evaluation of homogeneity for sintered hydroxyapatite by CT [computed tomography] values.—73-02817; Evaluation of homogeneity for sintered hydroxyapatite by CT-values.—73-13396
**Matsuno, Yoshihiro** See Matsuda, Atsunori
**Matsuno, Yoshihiro; Matsuda, Atsunori; Katayama, Shingo; Tohge, Noboru; Minami, T.**
Practical fabrication process of pregrooves on glass disks by the sol-gel method.—73-14465
**Matsuno, Yoshimi** See Enomoto, Ryo
**Matsunuma, Kenji** See Komura, Osamu; Nishioka, Takao; Yamamoto, Takehisa
**Matsuo, Hideki; Funayama, Osamu; Kato, Tomohiro; Kaya, Hiroshi; Isoda, Takeshi**
Crystallization behavior of high-purity amorphous silicon nitride fibers.—73-16100
**Matsuo, M.** See Battle, P. D.
**Matsuo, Masataka** See Morioka, Toshimichi
**Matsuo, Shinji** See Kawamura, Yuichi
**Matsuo, T.; Yagami, T.; Katsumata, T.**
Electric conduction of single-crystal and glass of $Li_2B_4O_7$.—73-11569
**Matsuo, Takasuke** See Fukai, Mari
**Matsuo, Yohtaro** See Akatsu, Takashi; Igsawa, Shigenari; Kimura, Shiushichi; Kitakami, Koichi; Li, J.-X.; Nishimura, Toshiyuki; Ohsawa, Shigenari; Suzuki, Yoshitaka; Tsuru, Yasuhiko; Yasuda, Kouichi
**Matsuo, Yohtaro; Kim, Sang-Dong; Yasuda, Kouichi; Ohsawa, Shigenari; Kimura, Shiushichi**
Fabrication of carbon-fiber-reinforced hBN composites.—73-16771
**Matsuo, Yohtaro; Kitakami, Koichi; Kimura, Shiushichi**
New theory of nondestructive inspection based on fracture mechanics and fracture statistics.—73-06495
**Matsuo, Yohtaro; Nishimura, Toshiyuki; Yasuda, Kouichi; Jinbo, K.; Kimura, Shiushichi**
Forming of silicon carbide powder by cyclic CIP.—73-02836
**Matsuoka, Jun** See Kadono, Kohei; Kamiya, Kanichi; Katagiri, Yuji; Kitamura, Naoyuki; Nasu, Hiroyuki; Sugimoto, Osamu; Yamamoto, Hideki
**Matsuoka, Jun; Hirao, Kazuyuki; Soga, Naohiro**
Evidence of plastic deformation on slow crack growth of borate glass.—73-06410
**Matsuoka, Jun; Kamiya, Kanichi; Yamashita, Hiroshi**
Complex heat capacity of borate glasses.—73-14146
**Matsuoka, Jun; Mizutani, Ryoichi; Kaneko, Syoji; Nasu, Hiroyuki; Kamiya, Kanichi; Kadono, Kohei**
Sol-gel processing and optical nonlinearity of gold colloid-doped silica glass.—73-03889; Sol-gel processing and optical nonlinearity of gold colloid-doped silica glass.—73-10603
**Matsuoka, Jun; Mizutani, Ryoichi; Nasu, Hiroyuki; Kamiya, K.**
Preparation of Au-doped silica glass by sol-gel method.—73-10576
**Matsuoka, Jun; Mizutani, Ryoichi; Nasu, Hiroyuki**
Preparation of Au-doped silica glass by sol-gel method.—73-03871
**Matsuoka, Kaoru** See Forrest, David
**Matsuoka, Kaoru; Forrest, David; Tse, Ming-Kai**
On-line wear monitoring using acoustic emission.—73-08428
**Matsuoka, Saburo**
Intelligent structural metallic materials.—73-03604
**Matsushige, Kazumi** See Kuboyama, Keiichi
**Matsushima, Kazuo** See Ishiguro, Takashi
**Matsushima, Shigenori** See Kobayashi, Kenkichiro
**Matsushima, Shigenori; Kobayashi, Kenkichiro; Okada, Genji; Okuyama, Tetsuya**
TEM observation of Cu particles dispersed in sputtered $SiO_2$ film.—73-17210
**Matsushima, Shigenori; Kunitsugu, Shinsuke; Kobayashi, Kenkichiro; Okada, Genji**
Microstructure and $NO_2$ sensing properties of $Fe_2O_3$ thin films.—73-17161
**Matsushima, Y.** See Horita, Masayoshi
**Matsushita, A.; Uji, S.; Matsumoto, T.**
Electrical resistivity of the as-grown $Gd_{1.92}Ce_{0.08}CuO_4$ single crystal under pressure.—73-16482
**Matsushita, Eiko**
Role of lattice system on ferroelectric phase transition in $PbHPO_4$.—73-07918
**Matsushita, Ikuya**
Method for fabricating a semiconductor integrated circuit device.—73-04520

**Matsushita, Isao; Hamada, Yukitoshi; Suzuki, Takashi; Nomura, Yuji; Moriga, Toshihiro; Ashida, Toshifumi**
Crystal structure of basic calcium carbonate [BCC] and its decomposition process in water.—73-16082
**Matsushita, Isao; Nakanishi, Junichi; Kondo, Toshio; Moriga, Toshihiro; Ashida, Toshifumi; Nakabayashi, Ichiro**
Pyrolysis mechanism of basic calcium carbonate.—73-08714; Pyrolysis mechanism of basic calcium carbonate.—73-16282
**Matsushita, Isao; Suzuki, Takashi; Moriga, Toshihiro; Ashida, Toshifumi; Nakabayashi, Ichiro; Metson, James**
XPS study on the carbonation process of $Ca(OH)_2$.—73-16400
**Matsushita, Junichi; Sano, Akira**
Sinterability of $TiB_2$ ceramics containing Cr and C as the sintering aids.—73-13256
**Matsushita, Junichi; Suzuki, Toshiyuki; Sano, Akira**
High-temperature strength of $TiB_2$ ceramics.—73-17349; Wire electrical discharge machining of $TiB_2$ composite.—73-06135; Wire electrical discharge machining of $TiB_2$ composite.—73-13336
**Matsushita, Kenichi** See Yoshimura, Yasuhiro
**Matsushita, Kenichi**
Dependence of the internal friction and the mechanical properties of ceramics on their grain-boundary structures.—73-03260
**Matsushita, T.** See Kodama, M.
**Matsushita, Takeshi; Sano, Akinobu; Adachi, Shigeyuki; Watanabe, Toshizo**
Magnetic head.—73-04665
**Matsushita, Teruo** See Komori, Mochimitsu
**Matsushita, Teruo; Nakatani, Tatsuhiko; Otabe, Edmund Soji; Yamafuji, Kaoru; Takamuku, Kenji; Koshizuka, N.**
Flux pinning characteristics in Bi-2212 single crystal.—73-15477
**Matsushita, Tomohiro** See Kimura, Akio
**Matsushita, Yasuo** See Takeda, Yukio; Tanaka, Shigeru
**Matsuura, Hiroshi** See Kamada, Toshiro
**Matsuura, K.** See Sugii, Nobuyuki
**Matsuura, K.; Wada, T.; Nakamizo, T.; Yamauchi, Hisao; Tanaka, S.**
Physical properties of a new barium niobium sulfide, $BaNb_2S_5$.—73-02668
**Matsuura, Masamichi** See Chida, Nakaya
**Matsuura, Takashi** See Tanaka, Saburo
**Matsuura, Toshiyuki; Nagataki, Shigeyoshi; Otsuki, Nobuaki; Hisada, Makoto**
Fundamental study on the durability of silica fume concrete in marine environment.—73-09973
**Matsuya, Shigeki; Natsuya, Yoko**
Dissolution of dental zinc phosphate cement in organic acid solutions.—73-16451
**Matsuya, Takashi** See Obta, Hitoshi
**Matsuyama, I.; Susa, K.; Satoh, S.; Goo, J. K.**
Foaming phenomena in sol-gel-derived glasses.—73-10533
**Matsuyama, Tatsuo** See Hirano, Masanori
**Matsuyama, Tetsuo** See Kokubu, Toshinori
**Matsuzaki, Naosuke** See Kishimoto, Akira
**Matsuzawa, Hidenori**
Novel magnetic applications of high-$T_c$ bulk superconductors: lenses for electron beams.—73-11848
**Matsuzawa, Soichiro** See Imaeda, Minoru
**Mattacchini, A.** See Scaglione, S.
**Matteazzi, P.; Basset, D.; La Caer, G.**
Mechanosynthesis of nanophase materials.—73-09205
**Matteazzi, P.; Miani, F.; Basset, D.**
Iron–alumina nanocomposites obtained by mechanosynthesis.—73-13854
**Mattes, R.** See Holz, K.
**Matteson, Abigail; Herron, Michael M.**
End-member feldspar concentrations determined by FTIR spectral analysis.—73-12579
**Mattheiss, L. F.; Hamann, D. R.**
Electronic structure of the high-$T_c$ superconductor $Ba_2YCu_3O_{6.9}$.—73-15454
**Matthes, B.** See Kunz, A.
**Matthes, B.; Broszeit, E.; Zucker, O.; Gauer, P.**
Thin AlN films for piezolayer-field effect transistor applications.—73-04574
**Matthews, A. L.**
Ceramic filters for the cast metals industry.—73-07197
**Matthews, A.** See Fancey, K. S.; Holiday, P.; James, A. S.; Leyland, A.
**Matthews, D. N.; Muller, K.-H.**
Sample size dependence of the critical current density in polycrystalline $YBa_2Cu_3O_{7-\delta}$.—73-11895
**Matthews, James F.** See Krawczyk, Robert J.
**Matthews, Paul J.; Mickelson, Alan R.; Novak, Steven W.**
Properties of proton-exchanged waveguides in lithium tantalate.—73-11606
**Matthews, R. Bruce; Chidester, Kenneth M.; Moore, H. Gene**
Zone sintering of ceramic fuels.—73-15704
**Matthews, Tom; Jacob, K. Thomas**
Phase relations in the system Cu-Ho-O and stability of $Cu_2Ho_2O_5$.—73-05450
**Matthews, Tony M.** See Jackson, James D. J.
**Matthewson, M. John** See Rondinella, Vincenzo V.
**Mattocks, G. R.**
Control of waste gas and air flows through a regenerative system on a cross-fired glass tank furnace.—73-01944
**Mattsson, Bertil; Nilsson, Jan; Collin, Marianne**
Method for isostatic or pseudoisostatic pressing employing a surrounding casing of glass.—73-12084
**Mattus, Alfred J.**
Process for reducing aqueous nitrate to ammonia.—73-05007
**Matulescu, D.** See Burzo, E.
**Matuo, C. Y.; Tourinho, F. A.; Figueiredo Neto, A. M.**
Determination of the minimum concentration of ferrofluid of $CoFe_2O_4$ required to orient liquid crystals.—73-07931
**Matusinovic, T.; Curlin, D.**
Lithium salts as set accelerators for high alumina cement [HAC].—73-06682
**Matusinovic, T.; Vrbos, N.**
Alkali metal salts as set accelerators for high-alumina cement.—73-03434
**Matusita, Kazumasa** See Kim, Hyun-Gyu; Komatsu, Takayuki; Nitta, A.; Sato, Ryuji
**Matutttis, H. G.** See Morgenstern, I.
**Matveenko, A. V.** See Zasavitskii, I. I.
**Matveev, B. A.** See Aidaraliev, M. Sh.
**Matveev, V. A.; Il'yashenko, I. S.; Zhimaiov, A. B.**
Rational fuel use in glass furnaces.—73-01966
**Matveiko, E. N.** See Vasil'ev, V. N.
**Matveyev, I. V.** See Andrianov, D. G.
**Matvienko, V. A.**
Influence of electric field strength on cement durability.—73-00115
**Matyas, M.** See Horak, J.
**Matyja, P.** See Olesky, M.
**Matyushev, V. V.; Stashkevich, A. A.; Lukyanov, A. I.**
Interaction of optical waveguide modes with magnetostatic surface waves in tangentially magnetized finite samples.—73-01217; Interaction of optical waveguide modes with magnetostatic transverse surface eigenmodes in a channel yttrium iron garnet waveguides.—73-07944
**Maude, D. K.** See Pinkse, P. W. H.
**Mauger, A.** See Ravot, D.
**Maul, M.; Schulte, B.; Haussler, P.; Frank, G.; Steinborn, T.; Fuess, H.**
Epitaxial $CeO_2$ buffer layers for $YBa_2Cu_3O_{7-\delta}$ films on sapphire.—73-08062
**Maumus, Jean-Pierre; Giret, Henri**
Electrical heating resistance using resistive elements made of carbon/carbon composite material.—73-01051
**Maung, Win-Naing; Butler, Donald P.; Huang, Cheng-Liang**
Fabrication of NbN thin films by reactive sputtering.—73-05803
**Maupin, H. E.; Rawers, J. C.; Hawk, J. A.**
Layered metal intermetallic composites formed by reaction sintering.—73-05896
**Maurage, R.** See John, D.
**Maurel, P.** See Landesman, J. P.
**Mauri, Cesar** See Letemps, Bernard
**Maurice, E.** See Saissy, A.
**Maurice, J.** See Song, Q. Wang
**Maurin, G.** See Bouroushian, M.; Loizos, Z.
**Maury, Francis** See Nowak, Jean-Francois
**Mauskaar, Ashutosh; Naseem, H. A.; Brown, William D.; Ang, S. S.**
Highly conductive silicon films via plasma-enhanced chemical vapor deposition at low temperatures.—73-09161
**Mavrin, B. N.** See Mikhailov, V. I.
**Mavropoulos, L. T.** See Shanker, K.
**Mawatari, H.** See Kano, Fumiyoshi
**Mawby, P. A.** See Gault, M.
**Maxham, David**
Evolving world of glass and ceramic decorating.—73-09782; Overview of current glass decorating techniques.—73-10571
**Maximou, Y. M.** See Wang, L. L.
**Maximov, I.; Gustafsson, A.; Hansson, H.-C.; Samuelson, L.; Seifert, W.; Wiedensohler, A.**
Fabrication of quantum dot structures using aerosol deposition and plasma techniques.—73-05804
**Maxwell, K. J.** See El-Abbar, A. A.
**Maxwell, Robert; Eckert, Hellmut**
Special equilibria, clustering, and chemical-exchange kinetics in nonoxide glasses and melts. High-temperature $^{31}P$ NMR study of the system phosphorus-selenium.—73-14085
**May, G. B.** See Perry, K. E.
**May, Terry E.**
Compatibility of cathodic protection systems with bentonite containment barriers.—73-17217
**Maya, Leon**
Decomposition of crystalline binary nitride films of tin, copper, and nickel by reactive sputtering.—73-05728; Method of chemical vapor deposition of boron nitride using polymeric cyanoborane.—73-16004
**Maybee, George W.** See Taylor, Timothy E.
**Mayer, A.** See Ajuwa, C. I.
**Mayer, Bruce**
Highly conductive and transparent films of tin- and fluorine-doped indium oxide produced by APCVD.—73-10955
**Mayer, C. A.; Zednicek, W.**
Glass-ceramics: an overview.—73-14400
**Mayer, Christopher R.; Reznikov, Leon**
High-temperature optical probe.—73-12471
**Mayer, H.; Rossler, U.**
Nonparabolicity in the conduction band of II-VI semiconductors.—73-15063
**Mayer, J. E., Jr.; Fang, G. P.**
Diamond grinding of silicon nitride ceramic.—73-05742
**Mayer, J.** See Riedel, R.; Schafer, G. W.
**Mayer, S. T.; Pekala, R. W.; Kaschmitter, J. L.**
Aerocapacitor: an electrochemical double-layer energy storage device.—73-07282
**Mayer, T. M.** See Gorbatkin, S. M.
**Maynard, H. L.** See Ding, J.; Hershkowitz, N.
**Mayne, A. J.** See Briggs, G. A. D.
**Mayo, M. J.** See Chen, D.-J.; Hague, Douglas C.
**Mayo, M. J.; Hague, Douglas C.; Chen, D.-J.**
Processing nanocrystalline ceramics for applications in superplasticity.—73-09279
**Mayo, Santos; Lowney, Jeremiah R.; Roitman, Peter**
Characterization of interface defects in oxygen-implanted silicon films.—73-06142
**Mayo, Santos; Suehle, John S.; Roitman, Peter**
Breakdown mechanism in buried silicon oxide films.—73-07284
**Mayo, William E.** See Lee, Jong-Won
**Mayur, A. J.** See Sciacca, M. Dean
**Maza, J.** See Cabeza, O.
**Mazaki, Hiromasa** See Berastegui, Pedro; Kakihana, Masato; Yasuoka, Hiroshi
**Mazaki, Hiromasa; Yasuoka, Hiroshi; Kakihana, Masato; Yoshimura, Masahiro**
Higher harmonic susceptibilities of Ho ceramic superconductors.—73-01570
**Mazdiyansni, Siamack**
Barriers to applying advanced high-temperature materials.—73-09700
**Mazdiyasni, K. S.** See Morscher, Gregory N.
**Mazel, A.** See Aspar, B.
**Mazen, S. A.** See Wafik, A. H.
**Mazerolles, Leo** See Kahn-Harari, A.; Michel, D.
**Mazilova, T. I.** See Boiko, V. S.
**Mazon Ramos, P.**
Effect of $Fe^{3+}$ concentration on its molar absorptivity in silicate glasses.—73-13965
**Mazul, I.** See Linke, Joachim
**Mazumdar, Chandan; Nagarajan, R.; Godart, C.; Gupta, L. C.; Latroche, M.; Dhar, S. K.**
Superconductivity at 12 K in $YNi_4B$ system.—73-15637
**Mazur, Milan** See Hulinova, Hana; Liska, Marek
**Mazur, Milan; Liptaj, Tibor; Pelikan, Peter**
Sol-gel process study by multinuclear NMR spectroscopy.—73-03757
**Mazur, Milan; Pelikan, Peter; Valko, Marian; Mlynarik, Vladimir; Liska, Marek; Hulinova, Hana**
Application of NMR spectroscopy in the study of glass structures: II.—73-01884
**Mazur, Milan; Pelikan, Peter; Valko, Marian**
Use of NMR spectroscopy for study of glass structures: I, NMR spectroscopy of the silicate solutions[—literature review].—73-01936
**Mazur, Stephen** See Maden, Michele A.
**Mazur, Ursula** See Wang, Xiao-Dong
**Mazur, Yu. I.** See Kriven, S. I.
**Mazurenko, E. A.; Gurko, A. F.; Gerasimchuk, A. L.; Ovsyannikov, V. P.**
Laser chemical deposition of aluminum oxide from the gas phase of beta-diketonate complexes.—73-16849
**Mazurenko, V. G.; Znev, M. G.**
Lattice dynamics of $LaTa_7O_{19}$ crystals.—73-16195; Lattice dynamics of M´-$XTaO_4$ crystals.—73-02316
**Mazuritskii, M. I.** See Kozakov, A. T.; Soldatov, A. V.
**Mazurowski, J.** See Ballingall, J. M.; Chin, Albert; Lee, Sun-Woo; Wang, H. H.
**Mazza, Daniele** See Delmastro, Alessandro
**Mazzarese, D.; Jones, K. A.; Conner, W. C.**
Emission infrared spectroscopy for in situ analysis of the OMVPE growth surface.—73-15796
**Mazzi, G.** See Gonella, F.
**Mazzoldi, P.** See Battaglin, G.; Caccavale, F.
**Mazzoldi, P.**
Discovery of glass surface through analytical techniques.—73-15790
**Mazzoni, A. D.; Aglietti, Esteban F.; Pereira, E.**
Phases and kinetics of β´-SiAlON formation from clays.—73-16269
**Mazzullo, Jim; Alexander, Andrew; Tieh, Thomas; Ding, M. L.**
Effect of wind transport on the shapes of quartz silt grains.—73-15901
**Mbow, B.** See Mezerreg, A.
**Mbow, B.; Rezzoug, N.; Peremarti, C.; Mezerreg, A.; Llinares, C.**
Spectral responses in near-infrared of the mixed compounds III-V, ternary and quaternary, based on GaSb.—73-07803; Spectral responses in near-infrared of the mixed compounds III-V, ternary and quaternary, based on GaSb.—73-15169
**McAlister, S. P.** See McKinnon, R. W.
**McAtee, Daniel S.** See Spiro, Clifford L.
**McAvoy, D. T.** See Zhang, J.-Z.
**McBride, Merle F.; Ault, Russell L.**
Reoriented insulation assembly and method.—73-00762
**McBride, Merle F.; Bulger, Mark L.**
Impact of energy codes on the glass industry.—73-07141
**McCaldin, J. D.** See Liu, Y. X.
**McCallen, C. L.** See Readey, M. J.
**McCallum, R. W.** See Kramer, M. J.
**McCamy, J. W.; Lowndes, Douglas H.; Budai, J. D.; Zuhr, R. A.; Zhang, Xiao**
Epitaxial ZnS films grown on GaAs(001) and (111) by pulsed laser ablation.—73-07509
**McCann, Patrick J.; Fonstad, Clifton G.**
Growth of $PbSe_{0.78}Te_{0.22}$ lattice matched with $BaF_2$.—73-05412
**McCarron, E. M.; Calabrese, J. C.**
Growth and single-crystal structure of a high-pressure phase of molybdenum trioxide: $MoO_3$-II.—73-02280
**McCarten, J. P.** See Maher, M. P.
**McCarter, W. J.; Barclay, S.**
Comparison of two methods for resistivity measurements on repair mortar for cathodic protection systems.—73-13694
**McCarthy, Gerald** See Brennan, John J.
**McCarthy, L. D.; Rossell, H. J.**
Strengthening and toughening of soda-lime glass by a reinforced coating.—73-14500
**McCartney, L. N.** See Morrell, Roger
**McCarty, E. D.; Hackney, S. A.**
Local mechanical stability of the aluminum/carbon (amorphous) and aluminum/$SiO_2$ (amorphous) interface at extrinsic dislocations.—73-00248
**McCauley, Ronald A.** See Joshi, Pankaj N.
**McCauley, Ronald A.; De Jong, Remco**
Ceramic powder useful in the manufacture of green and densified fired ceramic articles.—73-05292

**McClean, I. P.; Thomas, C. B.**
Conductive ZnS:Zn thin films grown by molecular beam deposition.—73-10927
**McClelland, Robert J.** See Perry, Scott S.
**McClung, Robert W.** See Simpson, William A., Jr.
**McClure, John C.** See Singh, Vijay P.
**McClurg, Gary B.**
Fluorspar.—73-12272
**McColl, I. R.** See Harris, S. J.
**McColm, Ian J.** See Jones, D. W.
**McColm, Ian J.**
Dictionary of Ceramic Science and Engineering, Second Edition.—73-17525
**McConnell, Paul D.**
Gunning technology used to speed refractory plastic installation.—73-10732
**McConnell, Robert D.** See Bailey, Richard E.
**McConville, L.** See Ianno, Natale J.
**McCormack, Mark T.** See Graebner, John E.
**McCormick, A. V.** See Lorenzano Porras, C. Francisco
**McCormick, P. G.** See Yang, H.
**McCoy, B. J.** See Chung, G. Y.
**McCracken, Derek J.; Haigh, Mike**
Lithium minerals review.—73-12285; Lithium minerals.—73-12286
**McCray, L. G.** See Metzger, R. A.
**McCulloch, D.; Hoffman, Alon; Prawer, Steven**
Ion-beam-induced compaction in glassy carbon.—73-09473
**McCullough, Richard D.** See Majetich, Sara A.
**McDermid, Joseph R.** See Baik, Young-Min
**McDermott, B. T.; Sesbury, C. W.; Farley, C. W.; Higgins, J. A.**
Highly doped GaInAs using diethylberyllium by MOCVD for InP-based heterostructure bipolar transistor applications.—73-04355
**McDevitt, John T.** See Riley, David R.; Zhou, Ji-Ping
**McDevitt, John W.** See Peterson, George T.
**McDevitt, N. T.** See Zabinski, J. S.
**McDevitt, N. T.; Donley, M. S.; Zabinski, J. S.**
Utilization of Raman spectroscopy in tribochemistry studies.—73-08456
**McDonald, A. G.** See Ahmad, A.
**McDonald, D. B.** See Roberts, T. A.
**McDonough, C.; Barmatz, M.; Jackson, H. W.**
Application of the Boltzmann-Ehrenfest [B-E] principle to containerless microwave processing in microgravity.—73-05696
**McDougall, James; Hollis, David**
Absorption characteristics of Pr(III) and Tm(III) in germanium-based oxide glass.—73-03773
**McDowell, J. C.** See Tweed, J. D.
**McEachron, Roger; Connors, Edward J.; Slutz, David E.**
Multilayer metal-coated diamond abrasives for sintered metal-bonded tools.—73-03697; Multilayer metal-coated diamond abrasives with an electrolessly deposited metal layer.—73-00003
**McElroy, Paul M.** See Willis, Paul B.
**McEnaney, K.** See Doussineau, F.
**McFarlane, R. A.** See Lui, M.
**McFayden, A. A.**
Mullite whisker-reinforced aluminum: novel metal matrix composites.—73-03625
**McFeely, F. R.** See Eklund, E. A.
**McGahan, W. A.** See Nafis, Suraiya; Orloff, Glennis J.
**McGahan, W. A.; Johs, Blaine; Woollam, John A.**
Techniques for ellipsometric measurement of the thickness and optical constants of thin absorbing films.—73-12202
**McGahay, Vincent; Tomozawa, Minoru**
Phase separation in rare-earth-doped $SiO_2$ glasses.—73-06952
**McGarry, D.** See Djuricic, B.
**McGee, T.** See Loiacono, G. M.
**McGeehin, Peter; Moseley, P. T.**
Making resistance gas sensors.—73-11026
**McGill, T. C.** See Collins, D. A.; Grein, C. H.; Liu, Y. X.; Ting, D. Z.-Y.; Wang, M. W.
**McGinn, P. J.** See Varanasi, C.
**McGinnis, Peter B.; Shelby, J. E.**
Dehydroxylation of vitreous silica.—73-13958
**McGivney, T.** See McKee, Mark A.
**McGlauflin, M. L.** See Ives, L. K.
**McGlinn, Peter A.** See Vance, Eric R.
**McGovern, I. T.; Stephens, C.; Fives, K.; Whittle, R.; Cimino, R.; Zahn, D. R. T.**
Anomalous band bending in metal/InP interface formation.—73-01077
**McGowan, Kenneth A.** See Michael, David J.
**McGowan, P. C.; Fontanella, J. J.; Wintersgill, M. C.; Lomax, J. F.; Hayden, L. M.**
Electrical relaxation of dimers in rare-earth-doped calcium fluoride.—73-05388
**McGrail, B. P.** See Pederson, L. R.
**McGrath, Brian**
Used lubricating oil as a fuel for cement kilns.—73-05136
**McGreer, K. A.** See Fallahi, M.
**McGreer, K. A.; Moss, D.; Williams, R. L.; Dion, M.; Landheer, D.**
Wavelength and threshold current variation in inhomogeneously pumped InGaAs/AlGaAs single and double quantum-well ridge waveguide lasers.—73-07860
**McGruer, N. E.; Browning, J.; Meassick, S.; Gilmore, M.; Bintz, W. J.; Chan, C.**
Ion-space-charge initiation of gated field emitter failure.—73-12824
**McGuire, G. E.; Ray, M. A.; Simko, Stephen J.; Perkins, F. Keith; Brandow, Susan L.; Dobisz, E. A.**
Surface characterization.—73-08447
**McHale, A. E.** See Kudesia, R.
**McHargue, C. J.** See Sklad, P. S.
**McHenry, M.** See Kung, Pang-Jen
**McHugh, J. J.; Lieu, G. Z.; Edie, D. D.**
Evaluation of naphthalene-based mesophase as a carbon fiber precursor.—73-13050
**McHugh, K. M.; Key, J. F.**
Use of de Laval nozzles in spray forming.—73-08369
**McIlroy, D.** See Heskett, D.
**McIlveen, T. J.** See Milton, M. J. T.
**McIntyre, P. C.** See Sonnenberg, N.; Westerheim, A. C.
**McKay, John P.** See Kehl, Randall J.
**McKechnie, T. N.** See Mendelson, M. I.
**McKechnie, T. N.; Krotz, P.; Liaw, Y. K.; Zimmerman, F.; Holmes, R.; Poorman, R. M.**
VPS [vacuum plasma spray] forming of refractory metals and ceramics for space furnace containment cartridges.—73-06873
**McKee, Mark A.** See Yoo, Byueng-Su
**McKee, Mark A.; McGivney, T.; Walker, D.; Capuder, K.; Norris, P. E.; Stahl, R. A.**
Multiwafer growth of highly uniform InGaP/GaAs by low-pressure MOVPE.—73-15050
**McKenna, Stephen T.** See Satek, Larry C.
**McKeown, D. A.** See Merzbacher, C. I.
**McKimpson, Marvin G.; Pohlenz, Eric L.; Thompson, Steven R.**
Evaluating the mechanical properties of commercial DRA [discontinuously reinforced alumina].—73-06785
**McKinley, J. T.; Albridge, R. G.; Barnes, A. V.; Ueda, A.; Tolk, N. H.; Coluzza, C.**
Free-electron laser internal photoemission [IPE] measurements of heterojunction band discontinuities.—73-11215
**McKinley, J. T.; Hwu, Y.; Koltenbah, B. E. C.; Margaritondo, G.; Baroni, S.; Resta, R.**
Control of Ge homojunction band offsets via ultrathin GaAs dipole layers.—73-01110
**McKinnon, R. W.; McAlister, S. P.**
Sidegating in GaAs MESFET's: role of stationary Gunn domains.—73-07799
**McKinnon, W. R.** See Jones, R.; Sleigh, A. K.
**McKinstry, Kevin D.** See Truedson, John R.
**McKittrick, Joanna** See Kinsman, Karin M.; Tunaboylu, Bahadir
**McLachlan, Stuart** See O'Neil-Bell, Christopher
**McLain, Stephan J.**
Process for making superconductors and their precursors.—73-11990
**McLane, G. F.** See Meyyappan, M.
**McLane, G. F.; Cole, M. W.; Eckart, D. W.; Cooke, P.; Moerkirk, R.; Meyyappan, M.**
Magnetron-enhanced reactive ion etching of GaAs and AlGaAs using $CH_4/H_2/Ar$.—73-07660
**McLane, G. F.; Meyyappan, M.; Lee, H.; Buckwald, W.**
Magnetron-enhanced etching of GaAs.—73-01237
**McLaren, Malcolm G.; Niesz, Dale E.**
Trends in the research of advanced ceramics.—73-09754
**McLaughlin, David**
Chemical characterization of materials for pyrochemical applications.—73-08287
**McLaughlin, J. C.** See Besmann, Theodore M.
**McLean, A. B.** See Heskett, D.
**McLean, Arnold** See Yu, Ai-Bing
**McLean, F. Barry** See Benedetto, Joseph M.
**McLean, John W.** See Guggenberger, Rainer
**McLevige, W.** See Blazejewski, E. R.
**McMahon, A. W.** See Arlinghaus, H. F.
**McMahon, Arlene** See Ertl, Daniel
**McMahon, Arlene; Ding, Maynard**
Partial conversion of a gas-air-fired television furnace to oxy-fuel combustion.—73-08482
**McMahon, Gregory** See Ying, Jackie Y.
**McMann, Fred C.**
Combustion control, the key to effective firing.—73-08466
**McManus, A. V. P.; Harrison, W. T. A.; Cheetham, Anthony K.**
Synthesis and crystal structure of a new nickel selenite hydrate $Ni_3(SeO_3)_3{\cdot}H_2O$.—73-02480
**McManus, R.**
Working environment: "better safe than sorry."—73-06599
**McMichael, R. D.** See Shull, R. D.
**McMichael, R. D.; Ritter, J. J.; Shull, R. D.**
Enhanced magnetocaloric effect in $Gd_3Ga_{5-x}Fe_xO_{12}$.—73-04609
**McMichael, R. D.; Shull, R. D.; Swartzendruber, L. J.; Bennett, L. H.; Watson, R. E.**
Magnetocaloric effect in superparamagnets.—73-15347
**McMillan, L. D.** See Mihara, Takashi; Paz De Araujo, C. A.; Scott, J. F.
**McMillan, Paul F.** See Cote, Bertrand; Poe, Brent T.; Stebbins, Jonathan F.
**McMillin, Scott** See Griffin, Curtis
**McMinn, John**
Forehearth.—73-15893
**McMonagle, F.** See Baird, Thomas
**McMurtry, Carl H.; Lau, Sa-Kwing; Srinivasan, Gajawalli V.; Chwastiak, Stephen**
Silicon-carbide-reinforced reaction-bonded silicon carbide composite.—73-12525
**McNamara, P. D.** See Readey, M. J.
**McNaney, J. M.** See Ritchie, R. O.
**McNeil, J. R.** See Milner, Lisa M.; Orloff, Glennis J.; Petersen, Gary A., Jr.
**McNeil, Keith R.**
Method of feeding glass batch to a glass-melting furnace.—73-00745; Method of firing glass-melting furnace.—73-01975
**McNeil, L. E.; Grimsditch, M.**
Pressure-amorphized $SiO_2$ α-quartz: an anisotropic amorphous solid.—73-08959
**McNeil, Michael** See Haines, William
**McNelley, T. R.; Kalu, P. N.**
Thermomechanical processing [TMP] and ductility enhancement of a 6061 Al-$Al_2O_3$ metal matrix composite.—73-03655
**McNerney, K. R.** See Reed, C. T.
**McNevin, S. C.; Vitkavage, D. J.; Bredbenner, C. N.**
Bias voltage diagnostics during oxide etch in Drytek 384T.—73-07283
**McNevin, S. C.**
Radio frequency plasma etching of $Si/SiO_2$ by $Cl_2/O_2$: improvements resulting from the time modulation of the processing gases.—73-02987
**McNitt, E. J.** See Yu, T. Q.
**McPheeters, Charles C.** See Singh, Jitendra P.
**McPherson, R.**
Structure and properties of plasma-sprayed alumina coatings[—literature review].—73-02693
**McQueen, H. J.** See Xia, X.
**McRae, Gregory J.** See Knight, Jonathan P.
**McVay, G. L.** See Pederson, L. R.
**McVicker, Gary B.** See Soled, Stuart L.
**McVittie, J. P.** See Islam-Raja, M. M.; Pavelescu, C.
**McWhinnie, Harold**
Cone 1-3 computer glazes.—73-13666
**McWhorter, P. J.** See Warren, W. L.
**Meade, Charles; Hemley, Russell J.; Mao, Ho-Kwang**
High-pressure X-ray diffraction of $SiO_2$ glass.—73-06923
**Mearini, G. T.** See Krus, D., Jr.
**Mearini, G. T.; Hoffman, R. W.**
Tensile properties of aluminum/alumina multilayered thin films.—73-03650
**Meassick, S.** See McGruer, N. E.
**Mecartney, Martha L.** See Derderian, Garo J.
**Mechetin, A. M.** See Beguchev, V. P.
**Mecholsky, J. J., Jr.** See Boonyapiwat, A.; Chen, Z.
**Meckel, Ben B.** See Crownover, Joseph W.
**Mecklenburg, K. R.** See Prasad, S. V.
**Meda, G.; Steif, Paul S.**
Theoretical study of the effect of initial flaw size on the proportional limit.—73-09374
**Meda, L.** See Spaggiari, C.
**Medda, M. P.; Musinu, A.; Piccaluga, G.; Pinna, G.**
$Na^+$ coordination in sodium diborate and triborate glasses by X-ray diffraction.—73-06939
**Medeiros Neto, J. A.; Barbosa, L. C.; Cesar, C. L.; Alves, O. L.; Galembeck, F.**
Growth kinetics study of $CdTe_xS_{1-x}$ quantum dots in a borosilicate glass.—73-14948
**Medeiros, S. S.** See Stern, M. B.
**Medelius, Hannes** See Rowcfliff, David J.
**Medici, M. G.** See Gijs, M. A. M.
**Medina, F. D.** See Leventouri, Theodora
**Medjahed, A.** See Massiani, Y.
**Medvedev, B. K.** See Kotel'nikov, I. N.
**Medvedev, E.; Druzhinin, A.; Sumatokhin, V.; Isgorodin, V.; Ilyushechkin, B.**
Conditions for alkali-borosilicate solution synthesis with europium introduction to manufacture hollow glass microspheres.—73-14342
**Medvedev, L. I.** See Bogdanova, Kh. G.; Timokhova, M. I.
**Medvedeva, L. I.; Nalbandyan, V. B.; Ivleva, T. I.**
Effect of synthesis method and departure from stoichiometry on the phase composition of sodium zircosilicophosphate.—73-13021
**Medvedkin, G. A.** See Kindyak, V. V.; Magomedov, M. A.
**Medvedovskii, E. Ya.; Fedotov, A. V.; Rudnitskaya, V. P.**
Ceramic catalyst carriers and catalysts for carrying out chemical processes and for purifying gaseous discharges.—73-12317
**Medvedovskii, E. Ya.; Fedotov, A. V.; Rudnitskaya, V. P.**
Ceramic catalyst supports and catalysts for chemical processes and scrubbing of gas discharges.—73-08504
**Medvedovskii, E. Ya.; Kharitonov, F. Ya.**
Influence of corrosive media on ceramic insulators.—73-09529
**Meeks, E.** See Napolitano, L. M., Jr.
**Meen, Teen-Hang; Chen, Ying-Chung; Liaw, Ken-Whie; Juang, Fung-Lung; Yang, Hung-Duen**
Substitution effects of Fe and Zn for Cu in $YBa_2(Cu_{1-x}M_x)_4O_8$.—73-11912
**Meera, B. N.; Ramakrishna, J.**
Raman spectral studies of borate glasses.—73-06961
**Meerschaat, A.** See Eriksson, L.; Wiegers, G. A.
**Meese, J. M.** See Stacy, T.
**Megahed, A. A.** See Doweidar, H.
**Meghirditchian, J. J.** See Cable, M.
**Megtert, S.** See Labdi, S.
**Meguid, S. A.** See Xu, P.-C.
**Meguro, T.** See Hara, Shiro; Simko, J. P.
**Meguro, T.; Ishii, M.; Kodama, K.; Yamamoto, Y.; Gamo, K.; Aoyagi, Yoshinobu**
Surface processes in digital etching of GaAs.—73-04495
**Meguro, Takeshi** See Komeya, Katsutoshi
**Mehan, Richard L.** See Nied, Herman F.; Rumaner, Lee E.
**Mehandru, S. P.; Anderson, Alfred B.**
Adsorption of H, $CH_3$, $CH_2$, and $C_2H_2$ on 2×1 restructured diamond (100)—theoretical study of structures, bonding, and migration.—73-02142
**Mehbod, M.** See Bougrine, H.; Diko, Pave
**Mehdi, Imran** See Siegel, Peter H.
**Mehner, H.** See Bruckner, A.
**Mehrotra, Gopal M.** See Dadras, Parviz
**Mehrotra, Pankaj K.** See Beeghly, Craig W.
**Mehrotra, R. C.** See Rai, Jaya
**Mehrotra, R. S.**
Vacuum carbothermic reduction of uranium dioxide microspheres in a static graphite bed.—73-15702
**Mehrotra, Vivek** See Vassiliou, John K.
**Mehrwald, K.-H.**
History and economic aspects of industrial SiC manufacture.—73-12432
**Mehta, S. M.** See Tousley, B. C.
**Mei, Lin-Feng; Wang, Ye-Bin; Chen, Chuang-Tian; Wu, Bo-Chuang**
Nonlinear optical materials based on $MBe_2BO_3F_2$ (M=Na,K).—73-12841

**Meier, Andreas** See Dosinger, Klaus
**Meier, B.** See Spallek, Michael
**Meier, M.; Frischat, G. H.**
High-temperature centrifuge method to study ion exchange in glass melts avoiding convective processes.—73-12144
**Meier, W. M.; Olson, D. H.**
Atlas of zeolite structure types.—73-05360
**Meijerink, A.; Van Heek, M. M. E.; Blasse, G.**
Luminescence of $Ag^+$ in crystalline and glassy $SnB_4O_7$.—73-12827
**Meijerink, Joan** See Cao, Guo-Zhong
**Meijers, P.** See Stam, G. T. M.
**Meikle, Scott G.** See Sandhu, Gurtej S.
**Meilman, M. L.** See Korzhik, M. V.
**Mein, P.** See Hurtado, Antonio M.
**Meina, Dominic G.**
Coating of anatase titanium dioxide particles.—73-12352; Preparation of anatase titanium dioxide.—73-15952
**Meinhold, Richard H.; Atakul, Husnu; Davies, Thomas W.; Slade, Robert C. T.**
Flash calcines of kaolinite: kinetics of isothermal dehydroxylation of partially dehydroxylated flash calcines and of flash calcination itself.—73-12803
**Meisel, W.** See Hanzel, Darko
**Meisel, W.** See Sprenger, D.
**Meissner, E.** See Himmel, B.
**Meissner, K.** See Fluegel, B. D.
**Meissner, P. L.** See Kendelewicz, T.
**Meitin, M. N.** See Aivazov, A. A.
**Meixner, Hans** See Fleischer, Maximilian; Lohwasser, Werner
**Meixner, J.; Hezel, R.**
Rapid pulsed $CO_2$ laser annealing of silicon nitride/silicon interface states.—73-06008
**Mejia, S. R.** See Chau, T. T.
**Mekekechko, A. V.; Kovalenko, A. V.; Chermenko, I. M.; Katkov, V. F.**
Hydrogen sensitivity of ZnSe/GaAs structures.—73-14970
**Mekhemer, G. A. H.** See Zaki, M. I.
**Mekhtiev, E. I.** See Abutalybov, G. I.
**Mekhtieva, S. A.** See Aliev, O. M.
**Mekhtieva, S. I.** See Kazakova, L. P.
**Mel'chakov, E. N.** See Zakharov, G. N.
**Mel'nichuk, A. V.; Pasechnik, Yu. A.**
Effective electron mass anisotropy in silicon carbide.—73-16125
**Mel'nichuk, I. M.** See Bryanov, D. I.
**Mel'nik, M. T.; Filatov, A. M.**
Ferroelectric aluminotitanobarium materials with modifying additives.—73-01411
**Mel'nik, N. N.** See Okonechnikov, A. P.
**Mel'nik, R. B.; Nemov, S. A.; Zhitinskaya, M. K.; Proshin, V. I.**
Indium impurity states in $Pb_{1-x}Sn_xSe$ solid solutions.—73-01197
**Mel'nik, V. V.** See Makhnii, V. P.
**Mel'nikov, A. V.** See Kushkov, V. D.
**Mel'nikov, O. K.** See Yakubovich, O. V.
**Mel'nikova, S. V.** See Berezkina, L. G.; Flerov, I. N.
**Mel'nikova, V. M.** See Agulyanskii, A. I.
**Melebaev, D.** See Konnikov, S. G.
**Melekh, B. T.** See Ryzhov, V. A.
**Melekhin, I.** See Ignatiev, M.
**Melendez, Jose L.; Beck, Jeff**
Role of the insulator in determining $1/f$ noise in $Hg_{1-x}Cd_xTe$ integrating MIS devices.—73-11426
**Melendez, Jose L.; Heims, C. R.**
Process modeling of point defect effects in $Hg_{1-x}Cd_xTe$.—73-13365
**Melentjev, S. M.** See Boiko, B. T.
**Meleshko, S. V.** See Baklanov, M. R.
**Meleta, E. A.; Veresov, L. P.; Kizhin, V. N.**
Luminescence of europium-activated quartz glass irradiated with protons.—73-00510
**Meletis, E. I.; Yan, S.**
Formation of aluminum nitride by intensified plasma ion nitriding.—73-00235
**Mell, H.** See Nickel, N. H.
**Mellander, B.-E.** See Wijayasekera, C. N.
**Mellas, M.** See Ash, J. E.
**Meller, Eberhard**
Current trends in environmental protection legislation in the Federal Republic of Germany and in Europe.—73-03388
**Mellet, R.** See Azoulay, R.
**Mellinger, George B.**
Ceramics Transactions, Volume 39: Environmental and Waste Management Issues in the Ceramic Industry.—73-17524
**Mello, M. D.** See Jenkins, Michael G.
**Melloch, M. R.** See Chang, C. L.
**Melloch, M. R.; Nolte, D. D.; Otsuka, N.; Chang, C. L.; Woodall, J. M.**
Arsenic cluster engineering for excitonic electrooptics.—73-11072
**Melloch, M. R.**
Molecular beam epitaxy for high-electron-mobility modulation-doped two-dimensional electron gases.—73-16874
**Melmed, A. J.** See Ernst, N.
**Melmed, A. J.; Camus, P. P.; Ernst, N.; Schmidt, W. A.; Bozdech, G.; Naschitzki, M.**
Diffusion phenomenon in Y-Ba-Cu-O superconductors.—73-01523
**Melngailis, J.** See Vignaud, D.; Xu, Xin
**Melnick, Brad M.** See Mihara, Takashi; Scott, J. F.
**Melnik, I.** See Bartnitskaya, N.
**Melnik, N. N.** See Demishev, S. V.
**Melnikov, A. V.** See Zaslavskii, A. M.
**Melo, A. A.** See Alves, E.
**Meloncelli, M.** See Dubray, J. J.
**Memon, A.** See Khan, M. N.
**Men'shov, V. N.** See Pankova, N. A.
**Menabue, Ledi** See Bruckner, Sergio
**Menard, A.** See Albiss, B. A.
**Menard, H.** See Dumont, H.
**Menchhofer, Paul A.** See Tiegs, Terry N.
**Mencik, Jaroslav**
Mechanism of delamination of thin films under thermal and residual compressive stresses.—73-13569
**Menczigar, U.** See Brunner, J.
**Mende, N.**
Experiences with the KCS Kiln Control System at a large rotary kiln plant in South Korea.—73-15874
**Mendelson, M. I.; McKechnie, T. N.; Spiegel, L. B.**
Graded thermal barrier coatings [TBC's]: evaluation.—73-13841
**Mendes, J.** See De Oliveira, C. J.
**Mendez, Juan Manual; Muhl, Stephen; Contreras-Puente, G.; Aguilar-Hernandez, J.**
Optical properties of amorphous carbon thin films prepared by plasma deposition in a graphite hollow cathode.—73-12849
**Mendez, M. A.** See Palomares, F. J.
**Mendez, M. A.; Palomares, F. J.; Cuberes, M. T.; Gonzalez, M. L.; Soria, F.**
Characterization of GaAs(100) surfaces by AES and LEED.—73-01100
**Mendik, M.; Frait, Z.; Wachter, P.**
Comparative study of FMR [ferromagnetic resonance] and Brillouin light scattering on FeNiB alloys.—73-11649
**Mendioroz, S.** See Anderson, James A.
**Mendiratta, Sushil Kumar** See Almeida Valente, Manuel; Cadillon Costa, Luis; Valente, M. A.
**Mendiratta, Sushil Kumar**
Inhomogeneities in glass structure: clusters or channels.—73-14012
**Mendoza-Alvarez, J. G.** See Espinoza-Beltran, F. J.; Gonzalez-Hernandez, J.
**Menegazzo, Bruno Acacio; Eiras, Jose Antonio**
Preparation of coprecipitated ferroelectric ceramic powders by two-stage calcination.—73-01427
**Menek, N.** See Yilmaz, V. T.
**Menelle, Alain** See Konstantinovic, Jovan
**Menessier, Erik** See Lespade, Pierre
**Menetrier, M.** See Berger, R.; Rao, K. J.; Shastry, M. C. R.
**Menetrier, M.; Hojjaji, A.; Estournes, C.; Levasseur, A.**
Ionic conduction in the $B_2S_3$-$Li_2S$ glass system.—73-00986
**Meneve, J.** See De Kempeneer, E. H. A.; Smeets, J.
**Meng, B.** See Freeman, S. A.
**Meng, C.** See Huang, M.
**Meng, Fan-Jur; Tang, Ru-Jun; Tagashira, Kohsuke**
Comet-shaped carbides in the uppermost surface layer of bearings.—73-05372
**Meng, Hai-Bin** See Zhao, Xiu-Zhi
**Meng, Jian** See Zeng, Zuo-Tao
**Meng, Jian; Ren, Yu-Fang; Li, Xiao-Guang**
Effect of doping with tantalum on the properties of $YBa_2Cu_3O_{7-y}$.—73-08029
**Meng, Jian; Ren, Yu-Fang; Su, Qiang**
Valence and magnetic properties of $YSr_{2-x}CaV_3O_{9-y}$.—73-15375
**Meng, Jian; Ren, Yu-Fang**
Electrical properties of rare-earth monophosphides.—73-02602
**Meng, Li-Jian; Andritschky, M.; Dos Santos, M. P.**
Effect of substrate temperature on the properties of dc reactive magnetron sputtered titanium oxide films.—73-02798
**Meng, Li-Jian; Dos Santos, M. P.**
Titanium oxide films deposited by dc reactive magnetron sputtering in different sputtering pressures.—73-06124
**Meng, W. J.; Sell, Jeffrey A.; Perry, T. A.; Eesley, G. L.**
Measurement of intrinsic stresses during growth of aluminum nitride thin films by reactive sputter deposition.—73-09200; Real-time stress measurements and elastic constant of aluminum nitride thin films on Si(111).—73-08962
**Meng, Xian-Ren; Shen, De-Yuan; Lin, Ming-Zhu**
Preparation of superconductors of near-single-phase $Tl_2Ba_2Ca_2Cu_3O_{10-\delta}$.—73-08179
**Meng, Xiu-Kun** See Zhang, Guo-Wei
**Meng, Z.** See Seiple, J.
**Menken, M. J. V.** See Drahokoupil, J.
**Mennig, M.** See Spanhel, L.
**Mennig, M.; Fink, C.; Schmidt, H.**
Sol-gel-derived AgCl photochromic coating on glasses.—73-14498
**Mennig, M.; Schmidt, H.; Maetze, G.; Fink, C.; Betzholz, S.**
Decreasing lead exposure from lead crystal by sol-gel coating.—73-00606
**Menon, C. S.** See Pankajakshan, V. S.
**Menon, C. S.; Eldhose, N. V.**
Third-order elastic constants of high-temperature superconductors $YBa_2Cu_3O_7$.—73-01694
**Menon, Mamballykalathil N.; Fang, Ho T.; Wu, David C.; Jenkins, Michael G.; Ferber, Mattison K.; More, Karren L.**
Creep and stress rupture behavior of an advanced silicon nitride: I, Experimental observations.—73-09560
**Menon, Mambalikyalathil N.; Fang, Ho T.; Wu, David C.; Jenkins, Michael G.; Ferber, Mattison K.**
Creep and stress rupture behavior of an advanced silicon nitride: II, Creep rate behavior.—73-09561; Creep and stress rupture behavior of an advanced silicon nitride: III, Stress rupture and the Monkman-Grant relationship.—73-09562
**Menovsky, A. A.** See Drahokoupil, J.
**Menshov, V. N.** See Pankova, N. A.
**Mentus, S.** See Cvjeticanin, N.
**Menushenko, A. P.; Ignatov, A. Yu.; Ivanov, A. A.; Elesin, V. F.; Rudnev, I. A.; Kochubey, D. I.**
Polarized *K*-Cu XANES of epitaxial $Nd_{1.85}Ce_{0.15}CuO_4$ thin films irradiated by $He^+$ ions.—73-01629
**Meny, C.** See Dekoster, J.
**Menzel, W.**
Mechanofusion—a new technology for creating composite material.—73-02891
**Mercera, P. D. L.; Van Ommen, J. G.; Doesburg, E. B. M.; Burggraaf, Anthonie J.; Ross, J. R. H.**
Stabilized tetragonal zirconium oxide as a support for catalysts: evolution of the texture and structure on calcination in static air.—73-02444
**Mercey, B.** See Srivastava, P.
**Merchant, P.** See Ma, Zheng-Xiang
**Merchant, Paul** See Sheats, James R.
**Mercier, Marc** See Pacaud, Bernard
**Mercier, R.** See Rousselot, C.
**Mercier, S.** See Guille, J. L.
**Mercurio, D.; Parry, B. H.; Frit, B.; Harburn, G.; Williams, R. P.; Tilley, R. J. D.**
Series of "infinitely adaptive phases" in the $Bi_2O_3$-$TeO_2$ system.—73-02427
**Mercurio, J. P.** See Souirti, A.
**Mercurio, J. P.; Souirti, A.; Manier, M.**
Phase transitions and dielectric properties in some compounds with bismuth oxide layer structure.—73-04563
**Meredov, M. M.** See Kovalevskaya, G. G.
**Meredov, M. M.; Kovalevskaya, G. G.; Russu, E. V.; Slobodchikov, S. V.**
Electrical and photoelectric properties of heterostructures formed by Au-*p*-InP→Au-*n*-$In_2O_3$-*p*-InP structural transitions.—73-01143
**Mergler, K. W.** See Fleishmann, Bernhard; Muller-Simon, H.
**Meriani, Sergio** See Sergo, Valter
**Merienne, J.**
Energy savings in the brick and tile industry.—73-04916
**Meriloo, I.** See Kyarner, T.
**Merino, J. M.** See Leon, M.
**Merino, R. I.** See Orera, V. M.
**Merino, R. I.; Orera, V. M.**
Site resolution spectroscopy of $Nd^{3+}$ in YSZ.—73-16304
**Merinov, B. V.; Bolotina, N. B.; Baranov, A. I.**
Crystal structure of ferroelastic phase II of $Cs_3H(SeO_4)_2$.—73-02194
**Merinov, B. V.; Shuvalov, L. A.**
Structural aspects of protonic conductivity.—73-16320
**Merkel, Gregory A.; Murtagh, Martin J.**
Fabrication of low-thermal-expansion, high-porosity cordierite body.—73-05213
**Merkel, Ingolf** See Baufeld, Bernd
**Merkin, A. P.; Nikolaenko, N. A.**
Decoration of self-glazing ceramic tiles.—73-00903
**Merkin, A. P.; Tsyrempilov, A. D.; Chimitov, A. Zh.**
Hydromechanical activation of binder hardening.—73-13733
**Merkle, K. L.** See Balachandran, Uthamalingam; Gao, Y.
**Merkle, Larry D.; Gruber, John B.; Seltzer, Michael D.**
Spectroscopic analysis of $Tm^{3+}$:NaLa$(MoO_4)_2$.—73-12689
**Merkle, Ralph C.**
Computational nanotechnology.—73-05717; Proof about molecular bearings.—73-16575
**Merklein, S.** See Sporn, D.
**Merkley, G. P.** See Adkins, D. F.
**Merks, J. W.**
Progress in sampling and on-stream analysis.—73-10105
**Merkt, U.** See Batke, E.; Schilling, M.
**Merkulov, E. B.** See Bayukov, O. A.; Kabun, V. Ya.
**Merkulov, E. B.; Goncharuk, V. K.; Lukiyanchuk, G. D.; Stepanov, S. A.; Usol'tseva, T. I.**
Glass formation in the system $ZrF_4$-$SnF_2$.—73-13996
**Merkulov, E. V.** See Ignatyuk, V. A.; Lukiyanchuk, G. D.
**Merkulov, I. A.** See Mirlin, D. N.; Vergeles, M. V.
**Merle, J. C.** See Bigot, J.-Y.
**Merle, Therese** See Baraton, Marie-Isabelle
**Merle, Therese; Baraton, Marie-Isabelle; Goeuriot, D.; Quintard, P.; Lorenzelli, V.**
Characterization of nitrided high surface gamma-alumina powders.—73-13376; FTIR characterization of an AlN surface.—73-13399
**Merlin, R.** See Kwok, S. H.; Massey, M. J.; Wang, Hai-Lin
**Merlin, R.; Valladares, J. P. L.; Pinczuk, A.; Gossard, A. C.; English, J. H.**
Raman scattering by plasmons in Fibonacci superlattices.—73-05464
**Merlin, V.** See Kritsalis, P.
**Mernaf, T.** See Yamnova, N. A.
**Merrien, N.** See Garg, K. B.
**Merrill, R. A.; Janke, D. S.**
Results of vitrifying Fernald OU-4 wastes.—73-08309
**Merrill, Richard** See Gadepally, Kamesh
**Merrouche, A.; Patarin, J.; Kessler, H.; Soulard, M.; Delmotte, L.; Guth, J. L.**
Synthesis and characterization of cloverite: a novel gallophosphate molecular sieve with three-dimensional 20-membered ring channels.—73-05506
**Mertelj, T.** See Matacotta, F. C.
**Mertelj, T.; Mateev, D.; Matacotta, F. C.; Pal, D.; Stastny, P.; Nozar, P.**
Ir and Raman spectra of the new $Ba_{1.5}Sr_{0.5}CuO_{3+\delta}(CO_3)_y$ carbocuprate.—73-02308
**Mertelj, T.; Sundaresan, A.; Gupta, L. C.; Sharon, M.; Mihailovic, D.**
Frequency shifts of optical phonons due to size-effect-induced charge transfer in $Tl(Ba_{1-x}Sr_xLa)CuO_y$.—73-15488
**Merz, J. L.** See Chang, Ying-Lan; Yokogawa, T.
**Merz, J.** See Smith, R. W.
**Merz, R.** See Weiand, Werner
**Merzbacher, C. I.; McKeown, D. A.**
X-ray absorption studies of Ge and Ga environments in $BaO$-$Ga_2O_3$-$GeO_2$ glasses.—73-06989
**Merzbacher, C.** See Snail, K. A.
**Merzhanov, A. G.** See Fedorov, V. M.; Podlesov, V. V.; Shugaev, V. A.
**Merzhanov, A. G.; Bloshenko, V. N.; Bokii, V. A.**
Titanium-carbide-based porous high-temperature synthesis material.—73-05279

**Meschke, F.** See Azzoni, C. B.
**Meservey, R.** See Moodera, J. S.
**Meshcheryakov, V. F.; Murashov, V. A.**
Magnetic flux distribution over the surface of a superconducting $YBa_2Cu_3O_x$ single crystal measured by ESR.—73-04760
**Meshcheryakov, V. V.**
Lattice deformation by diffusive atomic displacement at melting temperature of elements.—73-17084; True contact area on caryatid boundary of solid bodies.—73-17105
**Meshcheryakov, Yu. G.; Ivanov, O. I.; Opekunov, S. A.**
Production technology of binders made of phosphogypsum.—73-13768
**Meshcheryakova, I. V.; Parvez, Aslam; Shalamova, I. V.**
Effects of underglaze layer on the quality of the surface of glazed ceramic wares.—73-07251
**Meshkov, S. V.** See Samuely, P.
**Meshri, Dayal T.; Kumar, Sampath H.; Bhagat, Sudhir S.; Contractor, Dinshaw B.; Meshri, Sanjay**
Process of producing potassium fluoroaluminates.—73-15931
**Meshri, Sanjay** See Meshri, Dayal T.
**Mesot, J.** See Guillaume, M.; Staub, U.
**Mesot, J.; Allenspach, P.; Staub, U.; Furrer, A.; Mutka, H.**
Neutron spectroscopic evidence for cluster formation and percolative superconductivity in $ErBa_2Cu_3O_x$.—73-15564
**Messaddeq, Y.** See Almeida, R. M.; Cardoso, C. X.; Delben, A.; Poulain, Marcel
**Messaddeq, Y.; Delben, A.; Boscolo, M.; Aegerter, M. A.; Soufiane, A.; Poulain, M.**
New fluoroindate glass compositions.—73-06941
**Messer, P. F.** See Shareef, M. Y.
**Messerschmidt, Ulrich** See Baufeld, Bernd
**Messier, Donald R.; Patel, Parimal J.**
Chemically induced defects in oxynitride glasses.—73-03714
**Messier, R.** See An, Il-Sin; Cong, Yue; Witham, H. S.
**Messina, David J.** See Lassiter, Perry B.
**Messing, Gary L.** See Fujiu, Takamitsu; Huling, Jeffrey C.; Kumar, Suresh; Minehan, W. T.; Piciacchio, Alan; Shaklee, Charles A.; Wu, Mian-Xue
**Messing, Gary L.; Kumagai, Masato**
Low-temperature sintering of α-alumina-seeded boehmite gels.—73-16854
**Messing, Gary L.; Minehan, William T.**
Synthesis of ceramic powders from metal alkoxides.—73-03045
**Messing, Gary L.; Zhang, Shi-Chang; Jayanthi, Gopal V.**
Ceramic powder synthesis by spray pyrolysis [SP].—73-02737
**Messler, Robert W., Jr.; Orling, Timothy T.**
Fundamentals of the SHS joining process.—73-01784
**Messner, George**
Prognosis for MCM-L.—73-06587
**Messner, Jay** See Slemmons, Whit
**Metaxas, A. C.**
Applicators for industrial microwave processing.—73-05100
**Metcalf, P.** See Hayden, S. M.
**Metcalfe, B. L.** See Donald, I. W.
**Metcalfe, B. L.; Donald, I. W.; Bradley, D. J.**
Preparation and properties of an SiC-fiber-reinforced glass-ceramic matrix composite.—73-00682
**Metev, Simeon** See Nowak, Rainer
**Methfessel, M.** See Klepeis, J. E.
**Methfessel, M.; Van Schilfgaarde, M.; Scheffler, Matthias**
Electronic structure and bonding in metallocarbohedrene $Ti_8C_{12}$.—73-16132
**Metikos-Hukovic, M.** See Resetic, A.
**Metlin, Yuri G.** See Strelkov, Alexander V.
**Metselaar, R.** See Cao, G. Z.; Van Hoek, J. A. M.; Willems, H. X.
**Metson, James** See Matsushita, Isao
**Metz, R.** See Gillot, B.
**Metzger, G.** See Blair, A. J.
**Metzger, R. A.** See Brown, A. S.
**Metzger, R. A.; Brown, A. S.; McCray, L. G.; Henige, J. A.**
Structural and electrical properties of low-temperature GaInAs.—73-11459
**Metzger, R. A.; Hafizi, M.; Wilson, R. G.; Stanchina, W. E.; Jensen, J. F.; McCray, L. G.**
Be diffusion at the emitter-base junction of graded AlInAs/GaInAs heterojunction bipolar transistors.—73-07389
**Metzger, R. M.** See Torrance, J. B.
**Metzger, R.** See Zakharov, N. D.
**Metzger, Robert M.** See Bao, Xiao-Hua
**Metzner, Arthur B.** See Tsao, In-Lin
**Meulankamp, E. A.** See Van den Meerakker, J. E. A. M.
**Meulenkamp, E. A.; Kelly, J. J.; Blasse, G.**
Electrochemically induced characteristic luminescence of metal ions at anodic valve metal oxides.—73-04091
**Meunier, G.; Manaud, J. P.; Grall, P.**
Synthesis and characterization of titanium hydride thin films obtained by reactive cathodic sputtering.—73-06081
**Meunier, M.** See Beaudoin, M.; Bouchard, H.; Lecours, A.
**Meuus, Louis**
South Korean installation.—73-14499
**Mevec, Gernot; Turnovszky, Stephan; Graf, Konrad**
Comparative investigation of high-temperature ceramic fiber insulating tile.—73-05163
**Mexmain, Jacques** See Jarrige, Jean
**Meyer, Ernst; Haefke, H.; Guntherod, Hans-Joachim; Anderson, Olaf; Bange, Klaus**
Surface topography of polished and oxide-coated BK-7 glasses investigated by atomic force microscopy [AFM].—73-07081
**Meyer, G.** See Kramer, K.
**Meyer, H.** See Weber, A.
**Meyer, H.-J.; Hoffmann, R.**
Anomalous electronic behavior in the layered halides $Pr_2X_5$ (X=Br, I).—73-01078
**Meyer, Hans** See Hurtado, Antonio M.
**Meyer, J. R.** See Eddy, C. R., Jr.; Hoffman, C. A.
**Meyer, J. R.; Hoffman, C. A.; Bartoli, F. J.; Wojtowicz, T.; Dobrowolska, M.; Furdyna, J. K.**
Magnetic generation of electrons and holes in semimetallic HgTe-CdTe superlattices.—73-07649
**Meyer, L.; Frischat, G. H.**
Kinetics of silver staining in $Na_2O$-CaO-$SiO_2$ glass.—73-00650
**Meyer, R.; Hardtdegen, H.; Carius, R.; Grutzmacher, D. A.; Stollenwerk, M.; Balk, P.**
Optical and structural properties of MOVPE grown $Ga_xIn_{1-x}As/InP$ strained multiple quantum well structures.—73-15069
**Meyer, Richard, Jr.; Weitzing, Holger; Xu, Qi-Chang; Zhang, Qi-Ming; Newnham, Robert E.; Cochran, Joe K.**
Lead zirconate titanate hollow-sphere transducers.—73-10965
**Meyer, Robert A.**
Assessment of carbon-carbon composite research in the Far East.—73-15959
**Meyer, S.** See Harf, C.
**Meyer, W. E.** See Auret, F. D.
**Meyer, Willi**
Trough system.—73-12099
**Meyers, Edward A.** See Nair, M. T. S.
**Meyers, Gail** See Dang, Tuan A.
**Meyers, M. A.** See Shang, S.-S.
**Meyers, M. A.; LaSalvia, J. C.; Hoke, D.; Jamet, J.-M.; Kim, D. K.**
Combustion synthesis/densification of ceramics and ceramic composites.—73-05714
**Meyerson, Bernard S.** See Jaso, Mark A.
**Meyyappan, I.** See Naseem, H. A.
**Meyyappan, M.** See McLane, G. F.
**Meyyappan, M.; McLane, G. F.; Lee, H. S.; Eckart, D.; Namaroff, M.; Sasserath, J.**
Magnetron reactive ion etching of GaAs in $SiCl_4$.—73-07659
**Mezentseva, M. P.** See Trifonova, M. M.
**Mezerreg, A.** See Mbow, B.
**Mezerreg, A.; Llinares, C.; Rezzoug, N.; Mbow, B.**
Characterization of $Ga_{1-x}In_xSb$ thin layers grown on GaAs substrate by infrared reflectivity.—73-07405; Characterization of $Ga_{1-x}In_xSb$ thin layers grown on GaAs substrate by infrared reflectivity.—73-14800
**Mezhilovskaya, L. I.** See Freik, D. M.
**Mezhogskikh, M. I.; Kiselev, A. A.; Pakhomov, A. L.; Matskiv, I. V.**
Cryogenic salt resistance of asbestos cement pile pipes.—73-13699
**Mezinskis, G.**
Thick sol-gel coating preparation by generation in situ metallic particles.—73-14521
**Mhaisalkar, S. G.; Readey, D. W.; Akbar, Sheikh A.; Dutta, P. K.; Sumner, M. J.; Rokhlin, R.**
Infrared reflectance spectra of doped $BaTi_4O_9$.—73-02296
**Mhiri, T.** See Badot, Jean-Claude
**Mhiri, T.; Colomban, P.**
Defect-induced smoothing of the superionic phase transition in $Cs_{1-x}M_xHSO_4$ protonic conductors: II, Lithium substitution.—73-03087; Defect-induced smoothing of the superionic phase transition in $Cs_{1-x}M_xHSO_4$ protonic conductors: III, Rubidium substitution.—73-03088
**Mhiri, T.; Daoud, A.; Colomban, P.**
Defect-induced smoothing of the superionic phase transition in $Cs_{1-x}M_xHSO_4$ protonic conductors: I, Potassium substitution.—73-03086
**Mi, Li-Zhi** See Chen, Chen-Jia
**Mi, X.** See Zhang, Zhi-Guo
**Mi, Z. Y.** See Chu, J. H.
**Miani, F.** See Matteazzi, P.
**Miao, Bai-He; Yin, Sheng; Wen, Tao**
Microstructure of sintered polycrystalline diamond/cemented tungsten carbide doped with Si-Ti-B.—73-06260
**Miao, He-Zhuo; Qi, Long-Hao; Ma, De-Jin; Jiang, Zuo-Zhao**
$Si_3N_4$ ceramic cutting tool materials and their applications.—73-05273
**Miao, Jin-Shan** See Yao, Zhi-Cai
**Miao, Ping** See Li, Li
**Miao, Song-Hua; Zhang, Xian-Li; Wen, Jun-Qiang**
Development of black Tang Jun porcelain.—73-10816
**Miao, Song-Hua**
Application of coal slag in outer wall tiles.—73-10792; Applications of SiC to Jun red glaze.—73-14645; Celadon glaze for Jun ware.—73-07238; Fabrication of plum green glaze of Song Jun ware.—73-10842
**Michael, David J.; Renkey, Albert L.; McGowan, Kenneth A.**
Burned refractories with low soluble chromium.—73-14635
**Michael, G.** See Herrmann, M.
**Michael, Keith W.** See Ballance, David S.; Chandra, Grish; Pernisz, Udo C.
**Michaelis, A.; Schultze, J. W.**
Effect of anisotropy on microellipsometry in the $Ti/TiO_2$ system.—73-13824
**Michaelis, H.** See Zschech, E.
**Michal, C. A.** See Davidson, I.
**Michalczyk, Michael J.**
Silicon carbide precursors and their preparation and use.—73-05337; Silicon carbide precursors.—73-12520
**Michale, A. E.** See Kudesia, R.
**Michalikova, Marianna** See Valko, Pavol
**Michalowsky, L.; Sorge, Georg**
High-temperature superconducting ceramics.—73-11787
**Michaud, Veronique** See Mortensen, Andreas
**Michel, C.** See Caignaert, V.; Huve, M.; Nenien, N.
**Michel, C.; Caignaert, V.; Raveau, B.**
Oxygen-deficient fluorite with a tunnel structure: $Bi_8La_{10}O_{27}$.—73-02368
**Michel, C.; Hervieu, M.; Raveau, B.**
$BaNdCo_{0.9}Fe_{1+y}Cu_{1-y}O_{7-\delta}$: an intergrowth of the $BaYFeCuO_5$-type and $CeO_2$-fluorite-type structures.—73-02149
**Michel, D.** See Kahn-Harari, A.; Schwerk, U.
**Michel, D.; Faudot, Francoise; Gaffet, Eric; Mazerolles, Leo**
Stabilized zirconias prepared by mechanical alloying.—73-03029
**Michel, D.; Faudot, Francoise; Gaffet, Eric**
Ceramic oxides prepared by mechanical processing.—73-16665
**Michel, E. G.** See Alvarez, J.
**Michel, J. P.** See Masson, I.
**Michel, J.** See Ren, F. Y. G.
**Michelet, Jean-Pascal** See Jarrige, Jean
**Michelet, P.**
Magotteaux-Slegten-Sturtevant optimized cement grinding system.—73-10031
**Michelotti, F.; Fazio, E.; Senesi, F.; Bertolotti, M.; Chumash, V.; Andriesh, A.**
Nonlinearity and photostructural changes in glassy $As_2S_3$ thin films.—73-14237
**Michenaud, J. P.** See Gillot, C.
**Michikami, Osamu** See Watanabe, Yoshio
**Michinobu, Mieda** See Junji, Hirokane
**Michishita, Kazuo** See Kubo, Yukio; Shimizu, Noriyuki
**Michishita, Kazuo; Ikuhara, Yumi; Kubo, Yukio; Takahashi, Kenichi; Kamisada, Yoshimasa; Ogawa, Tetsuji**
Low-resistivity contacts to high-$T_c$ superconducting materials.—73-01592
**Michishita, Kazuo; Shimizu, Noriyuki; Sugawara, Yoshihiro; Ito, Wataru; Sasaki, Yukichi; Kubo, Yukio**
Textured Bi-Sr-Ca-Cu-O bulk sample.—73-15651
**Michiue, Yuichi** See Fujiki, Yoshinori
**Micic, Olga I.** See Rajh, Tijana
**Mickelson, Alan R.** See Matthews, Paul J.
**Mickevichius, V.**
Calculation of thermal expansion of gallium arsenide.—73-04258
**Middleman, Stanley**
Role of gas-phase reactions in boron nitride growth by chemical vapor deposition.—73-09308
**Middleton, Thomas R.** See Wang, Da-Yu
**Midgley, Derek**
Glass pH electrodes.—73-11017; Glass pH electrodes.—73-11018
**Midgley, Paul** See Sasaki, Katsuhiro
**Miehe, G.** See Paulus, E. F.
**Mielke, Ingo; Muller, Anette; Stark, Jochen**
Active belite cement.—73-09805
**Mifsud, A.** See Franco, M. J.
**Migachev, S. A.** See Akhmadulin, I. Sh.
**Miglioretti, F.** See Coupelle, Philippe
**Migoni, R.** See Dobry, A.
**Mihac, T. P.** See Nenadovic, T. M.
**Mihai, M.** See Barna, S.
**Mihailescu, I. N.; Chitica, N.; Nistor, L. C.; Popescu, M.; Teodorescu, V. S.; Ursu, I.**
Deposition of high-quality TiN films by excimer laser ablation in reactive gas.—73-12976
**Mihailescu, I. N.; Chitica, N.; Teodorescu, V. S.; Luisa des Giorgi, M.; Leggieri, G.; Luches, A.**
Excimer laser reactive ablation: an efficient approach for the deposition of high-quality TiN films.—73-16767
**Mihailova, V.** See Dimitriev, Y.
**Mihailovic, D.** See Mertelj, T.
**Mihalik, M.** See Kopsansky, P.
**Mihaly, L.** See Leach, D. H.; Mandrus, D.; Romero, D. B.
**Mihara, Morihiro; Torii, Kazuyuki; Kawamura, Mitsunori**
Chloride ion permeability and pore solution compositions of mortars containing silica fume.—73-09854
**Mihara, Takashi** See Paz De Araujo, C. A.; Watanabe, Hitoshi
**Mihara, Takashi; Watanabe, Hitoshi; Yoshimori, Hiroyuki; Paz De Araujo, C. A.; Melnick, Brad M.; McMillan, L. D.**
Process-dependent electrical characteristics and equivalent circuit model of sol-gel-based PZT capacitors.—73-11604
**Mihashi, H.; Nomura, N.; Niiseki, S.**
Influence of aggregate size on fracture process zone of concrete detected with three-dimensional acoustic emission technique.—73-00111
**Mihashi, Hirozo; Numao, Tatsuya**
Influence of temperature on water loss and shrinkage of hardened cement paste.—73-10015
**Mihelis, Angela** See Saptaru, Nicolae
**Mihora, Dennis J.** See Adler, William F.
**Miihkinen, Veijo**
Heat strengthening vs tempering.—73-07136
**Miikeda, Osamu; Nakagawa, Zenbee; Hamano, Kenya**
Formation process of sinterable MgO powder prepared from $Mg(OH)_2$ containing magnesium chloride.—73-09143; Formation process of sinterable MgO powder prepared from $Mg(OH)_2$ containing magnesium chloride.—73-17137
**Mijlhoff, F. C.** See Fu, W. T.
**Mika, Martin; Sasek, L.; Rada, Miroslav**
Solid electrolytes with high ionic conductivity.—73-04172; Superionic conducting glasses with $Cu^+$ ions.—73-14735
**Mikami, N.** See Makita, T.
**Mikata, Yuuichi; Moriya, Takahiko**
Method of manufacturing silicon nitride film.—73-02116
**Mikeska, Kurt R.; Schaefer, Daniel T.**
Method for reducing shrinkage during firing of ceramic bodies.—73-04992
**Mikhail, S. A.** See Feldman, D.
**Mikhailin, A. V.** See Il'yasov, A. Z.
**Mikhailov, A. V.** See Lipovskii, A. A.
**Mikhailov, F. A.** See Allakhverdiev, K. R.
**Mikhailov, G. V.** See Starukhin, A. N.
**Mikhailov, M. D.** See Dmitrikova, E. Yu.; Lapin, Yu. K.
**Mikhailov, V. I.; Mavrin, B. N.; Ivanov-Shits, A. K.; Sigarev, S. E.**
Raman scattering in superionic conductors $Li_3Sc_{2-x}Fe_x(PO_4)_3$ ($0 \le x \le 2$).—73-16288

**Mikhailov, V. P.** See Demchuk, M. I.
**Mikhailov, V.** See Onishchukov, G.
**Mikhailova, A. Ya.** See Kvardakov, A. M.
**Mikhailova, M. P.** See Bresler, M. S.
**Mikhailova, N. L.** See Govorukhina, O. A.
**Mikhailova, Yu. V.** See Zaitsev, R. O.
**Mikhalev, O. I.** See Petropavlov, M. V.
**Mikheeva, M. G.** See Rastsvetaeva, R. K.; Yamnova, N. A.
**Mikheeva, M. G.; Yamnova, N. A.; Rastsvetaeva, R. K.; Pushcharovskii, D. Yu.; Sorokina, S. L.**
Crystal structure of $K_2Gd[Si_6O_{15}]$.—73-16085
**Mikhnevich, A. S.** See Koretskaya, L. S.
**Mikhnevich, V. V.; Bashkirov, L. A.; Shkrob, I. A.**
Thermodynamic model for reducing $ABO_3$ perovskites by converted methane.—73-08779
**Mikhnevich, V. V.; Shut, V. N.; Syrkov, S. R.**
Production and study of lead germanate-based glass-ceramics {GC} with oriented surface layers.—73-02981
**Mikhnov, S. A.; Kalinov, V. S.; Ovseichuk, S. I.; Saltanov, A. V.**
Spectroscopy of the simplest intrinsic defects in γ-irradiated NaF crystals.—73-03112
**Miki, A.** See Sakaue, H.
**Miki, Hiroshi; Ohji, Yuzuru; Tachi, Shinichi**
Subnanometer-equivalent PZT thin films fabricated by low-temperature MOCVD.—73-04573
**Miki, Tetsurou** See Hirasaka, Masao
**Miki, Toshikatsu** See Murata, Takuya
**Mikkelsen, H.** See Stephens, D. J.; Zettler, J.-T.
**Mikla, V. I.; Baganich, A. A.; Sokolov, A. P.; Semak, D. G.; Shebanin, A. P.**
Raman scattering in amorphous $As_xSe_{100-x}$ layers. Anomaly of concentration dependence.—73-15138
**Mikoc, M.** See Matkovic, B.
**Mikulan, P. I.** See Awadelkarim, O. O.
**Mikulenok, A. V.** See Abramov, A. A.
**Mil'man, I. I.** See Portnyagin, A. S.
**Mil'ner, A. A.; Kharchenko, N. F.; Miloslavskaya, O. V.**
Magnetic circular dichroism in $YBa_2Cu_3O_{7-x}$ films.—73-08125
**Mil'vidskaya, A. G.** See Bublik, V. T.
**Mil'vidskii, M. G.** See Govorkov, A. V.; Kalinin, A. A.; Vdovin, V. I.
**Milani, C.** See Morazzoni, Franca
**Milani, E.** See Balestrino, G.; Bottiglione, A.
**Milanova, M. M.** See Andreev, V. M.
**Milat, O.** See Gladic, J.
**Milat, O.; Krekels, T.; Van Tendeloo, G.; Amelinckx, S.**
Ordering principles for tetrahedral chains in Ga- and Co-substituted YBCO intergrowth.—73-05443
**Milburn, Diane R.; Davis, Burtron H.**
Comparison of surface areas calculated from nitrogen adsorption and mercury porosimetry.—73-08384
**Mileiko, S. T.** See Glushko, V. I.
**Miler, Leon**
Electrical characteristics of the materials used in the fabrication of low-temperature transfer tape.—73-04084
**Milestone, N. B.** See Whittington, B. I.
**Milhailescu, I. N.** See Dinescu, Maria
**Milhoan, James D.** See Schwab, Stuart T.
**Milinkovic, S.; Aleksic, R.; Mitrakovic, D.; Sadibasic, A.**
Characterization of the optical fiber drawing process.—73-10507
**Miljak, M.; Zlatic, V.; Kos, I.; Thompson, J. D.; Canfield, P. C.; Fisk, Z.**
Temperature-dependent anisotropy of normal-state magnetic susceptibility of metallic copper oxides.—73-08979
**Milkie, W. Eugene; Schieferstein, William**
Achieving quality satisfaction by utilizing full employee participation.—73-17459
**Mili, B. V.** See Belokoneva, E. L.; Genkina, E. A.; Hadjiiskii, Yu. A.; Stefanovich, S. Yu.
**Mill, B. V.; Stefanovich, S. Yu.; Butashin, A. V.**
Phase transitions in new ferroelectric of $KTiOPO_4$ family.—73-01424
**Milla, P.** See Fourment, J.
**Millan, M.** See Conde, C. F.
**Millar, C.** See Feuillard, G.
**Millar, Graeme J.; Rochester, Colin H.; Bailey, Stephen; Waugh, K. C.**
Combined temperature-programmed desorption and FTIR spectroscopy study of $CO_2$, CO, and $H_2$ interactions with model ZnO/$SiO_2$, Cu/$SiO_2$, and Cu/ZnO/$SiO_2$ methanol synthesis catalysts.—73-12552
**Millard, M. L.** See Dunyak, Thomas J.
**Miller, Brad J.** See Corbin, N. D.
**Miller, Charles W., Jr.** See Knapp, Vincent A.
**Miller, D. J.; Holesinger, T. G.; Routbort, J. L.; Goretta, K. C.; Chumbley, L. S.**
Crystallization and stability of the $Bi_2Sr_2CaCu_2O_x$ superconductor.—73-11718
**Miller, D. L.** See Kim, J.; Zhang, Kai
**Miller, D.** See Napolitano, L. M., Jr.
**Miller, Gary A.** See French, Jonathan D.
**Miller, Homer E.** See Smith, Richard L.
**Miller, J. D.** See Hackett, C. M.
**Miller, J. N.** See Houng, Yu-Min
**Miller, James H.** See Besmann, Theodore M.
**Miller, Kelly T.; Zukoski, Charles F.**
Osmotic consolidation of suspensions and gels.—73-16891
**Miller, M. S.; Weman, H.; Pryor, C. E.; Krishnamurthy, M.; Petroff, P. M.; Kroemer, Herbert**
Serpentine superlattice quantum-wire arrays of (Al,Ga)As grown on vicinal GaAs substrates.—73-07795
**Miller, Naomi F.**
Laboratory profile: Museum Applied Science Center for Archaeology (MASCA), The University Museum, The University of Pennsylvania, Philadelphia, Pennsylvania.—73-03423
**Miller, Robert A.** See Lee, Kang N.
**Miller, Robert A.; Brindley, William J.; Rouge, Carl J.; Leissler, George**
Plasma spraying ceramics onto smooth metallic substrates.—73-06838
**Miller, Robert A.; Doychak, Joseph**
Plasma-sprayed ceramic thermal barrier coating for NiAl-based intermetallic alloys.—73-10335
**Miller, Roger A.** See Hares, George B.
**Miller, Ronald S.** See Gavigan, William J.
**Miller, Theodore A.** See Finnemore, Douglas K.
**Millers, T.**
Materials synthesis on the basis of ultrafine refractory compound powders.—73-13128
**Millers, Talis** See Kuzjukevics, Anatolijs
**Millet, P.** See Martinez, S.
**Millet, P.; Seeger, O.; Enjalbert, R.; Galy, J.**
Preferential crystallographic site substitution and oxygen migration in $Bi_2(Sr, Ca, La)_3Cu_2O_8$, $Bi_2(Sr, Ca, Yb)_3Cu_2O_8$ related to rare-earth ion size.—73-03109
**Millini, Roberto; Carati, Angela; Bellussi, Giuseppe**
Synthesis of a new porous borosilicate with the levyne structure.—73-06087
**Million, A.** See Bouchut, P.
**Mills, A. J.; Monien, H.**
Spin gaps and spin dynamics in $La_{2-x}Sr_xCuO_4$ and $YBa_2Cu_3O_{7-\delta}$.—73-15625
**Mills, Brian J.** See Bratton, Graham J.
**Mills, David**
Leaching of ceramic materials.—73-15946
**Mills, K. C.** See Yan, F. Y.
**Mills, Lynne K.** See Guiton, Theresa A.; Weimer, Alan W.
**Millstein, M.** See Neff, G. C.
**Milman, Victor Y.** See Kruse, Carsten
**Milne, Steven J.** See Calzada, Maria L.; Phillips, Nicolas J.; Yang, Y. X.
**Milner, Lisa M.; Bishop, Ken P.; Naqvi, S. S. H.; McNeil, J. R.**
Stepper focus characterization using diffraction from latent images.—73-12199
**Milosavljevic, Z.; Milosevic, O.; Uskokovic, D.; Vasovic, D.; Poleti, D.; Karanovic, L. J.**
Novel approach to control of ZnO-based varistor microstructures at the nanometer level.—73-11354
**Milosevic, O.** See Milosavljevic, Z.
**Milosevic, O.; Uskokovic, D.; Karanovic, L. J.; Tomasevic-Canovic, M.; Trontelj, Marija**
Synthesis of ZnO-based varistor precursor powders by means of the reaction spray process.—73-11474
**Milosevic, O.; Uskokovic, D.**
Synthesis of $BaTiO_3$ and ZnO varistor precursor powders by reaction spray pyrolysis.—73-11473
**Miloslavskaya, O. V.** See Mil'ner, A. A.
**Milov, I. V.** See Aksenov, V. S.
**Milovanov, A. F.**
Calculation of concrete humidity in reinforced concrete constructions.—73-13685
**Milton, M. J. T.; McIlveen, T. J.; Hanna, D. C.; Woods, P. T.**
High-efficiency ir generation by difference-frequency mixing using tangential phase matching.—73-08878
**Milvidskii, M. G.** See Gogoladze, D. T.
**Mima, Hiroyuki** See Saitoh, Hidetoshi
**Mimgroglu, A.** See Childs, T. H. C.
**Min'ko, N. I.** See Volkova, S. N.
**Min'ko, N. I.; Chernovaya, N. F.**
Effect of additions of oxides of calcium, magnesium, and aluminum on the crystallization of aegirine in glasses of the $Na_2O$-$Fe_2O_3$-$SiO_2$ system.—73-00613
**Min'ko, N. I.; Miroshnichenko, I. I.; Adigamov, B. Ya.**
Glass forming processes in silicate systems under the action of a beam of accelerated electrons.—73-07133
**Min'ko, N. I.; Vasil'eva, O. I.**
Silicomanganese slag as a glass-melting accelerator.—73-07171
**Min'ko, V. I.** See Dan'ko, V. A.
**Min, B.-S.** See Baik, S.
**Min, Eungi** See Hashiguchi, Shoichi
**Min, K.-S.; Choi, J.-W.; Choi, S.-H.**
Synthesis of ultrafine hydroxyapatite powders by hydrothermal reaction.—73-13313
**Min, K.-S.; Choi, S.-H.**
Synthesis of ultrafine calcium phosphate powders from $Ca(OH)_2$ suspension and various phosphoric aqueous solutions.—73-03058
**Min, S.-K.** See Kim, Seong-Il; Kim, T.-W.
**Min, Wei-Min** See Huang, Shao-Hua
**Min, Xin-Hin** See Cai, Ke-Feng
**Minadzhiev, D. Ya.** See Riskiev, T. T.
**Minaev, V. S.** See Kadyrov, D. I.
**Minagawa, Kazuhiro** See Kojima, Shoichi
**Minai, Kiichi** See Tanaka, Kenji
**Minakova, A. A.; Borul'ko, V. I.; Parfenov, V. Z.**
Effect of production parameters on strength and manufacture of plate glass.—73-00615; Sheet glass strength in relation to production parameters.—73-00700
**Minakuchi, Hiroyoshi** See Osafune, Haruo
**Minami, Fujio** See Ichimura, Koichi
**Minami, T.** See Matsuno, Yoshihiro; Sato, H.; Tatsumisago, Masahiro; Umesaki, N.; Yamasaki, Seiji
**Minami, T.; Tatsumisago, Masahiro; Machida, Nobuya**
Development of new glass-based superionic conductors.—73-14690
**Minami, Tadatsugu** See Sato, H.
**Minami, Tsutomu** See Kishida, Kazuo; Kowada, Yoshiyuki; Lee, Sang-Ki; Machida, Nobuya; Matsuda, Atsunori; Tatsumisago, Masahiro
**Minami, Tsutomu; Machida, Nobuya**
Ionic conductivity and structure of cuprous-halide-containing glasses.—73-14713
**Minamigawa, S.** See Nakahigashi, K.
**Minamisawa, Kazuyoshi** See Yamagishi, Chitake
**Minamiyama, Hideaki** See Muroya, Masaaki
**Minarik, Stanislav** See Labas, Vladimir
**Minazhdinov, M. S.** See Gusakov, G. M.
**Minchev, Kh. I.** See Tarasevich, Yu. I.
**Minden, H. T.** See Albertinetti, N.
**Mindess, Sidney** See Diamond, Sidney
**Mindess, Sidney; Diamond, Sidney**
SEM investigation of fracture surfaces using stereo pairs: II, Fracture surfaces of rock-cement paste composite specimens.—73-10146
**Mindlina, N. A.** See Krylov, A. V.
**Mineeva, R. M.; Bershov, L. V.; Petrov, I.**
EPR of surface bound $Fe^{3+}$ ion in polycrystalline quartz.—73-02268
**Mineeva, R. M.; Bershov, L. V.; Speranskii, A. V.**
Ordering of manganese ions in calcite structure.—73-08682
**Minehan, W. T.; Schaefer, M. R.; Messing, Gary L.**
Sintering of titania–silica powder compacts with a bimodal pore size distribution.—73-13268
**Minehan, William T.** See Messing, Gary L.
**Minelli, G.** See Porta, P.
**Minematsu, Kenichi**
Characterization of surface topography of glass substrates for LCD by atomic force microscope.—73-07001
**Miner, C. J.** See Akano, U. G.; Springthorpe, A. J.
**Miner, C. J.; Watt, B.; Moore, W. T.; Majeed, A.; Springthorpe, A. J.**
Wafer-scale temperature mapping for molecular beam epitaxy and chemical beam epitaxy.—73-11508
**Miner, J. F.** See Pai, C. S.
**Minesita, Osamu** See Kimura, Yutaka
**Mineta, Shinya** See Ren, Feng
**Ming, L. C.** See Jayaraman, A.
**Minh, Phan-Ngoc** See Hong, Nguen-Minh
**Minichelli, Dino; Polizzotti, G.**
Raw materials for the single firing of tiles.—73-07268
**Mininzon, Yu. M.** See Dem'yanets, L. N.; Genkina, E. A.; Zvereva, O. V.
**Minkov, B. I.** See Baryshevsky, V. G.; Kimaev, A. E.; Korzhik, M. V.
**Minkov, B.** See Onishchukov, G.
**Minkov, G. M.** See Germanenko, A. V.
**Minkov, I. M.**
Effect of substrate on optical characteristics of polarizationally isotropic coatings.—73-02588
**Minoda, Hiroki** See Yagi, Katsumichi
**Minoda, Masahiko** See Tanahashi, Masami
**Minor, D. B.** See Wang, Pu-Sen
**Minoshima, K.** See Komai, K.; Schulte, K.
**Minowa, Kenji** See Kawabata, Shoichi
**Minson, Roy** See Slemmons, Whit
**Mintairov, A. M.** See Andreev, V. M.
**Mintairov, A. M.; Smekalin, K. E.; Ustinov, V. M.; Khvostikov, V. P.**
Phonon-plasmon modes in the Raman light-scattering spectra of epitaxial *n*-type $Al_xGa_{1-x}As$ films[—review].—73-07712
**Minter, J. P.** See De la Houssaye, P. R.
**Minton, S. M.** See Shelby, J. E.
**Mintova, S.; Valtchev, V.; Kanev, I.**
Correlation between the fundamental properties of templates and the kinetics of ZSM-5 crystallization.—73-08582
**Mintova, S.; Valtchev, V.**
Crystallization mechanism of zeolite ZSM-5: I, Kinetic compensation effect for the synthesis with some diamines.—73-09053
**Mioc, U.; Davidovic, M.; Tjapkin, N.; Colomban, P.; Novak, A.**
Equilibrium of the protonic species in hydrates of some heteropolyacids at elevated temperatures.—73-00964
**Miossi, C.** See Gendry, M.
**Miotello, A.** See Battaglin, G.; Elena, M.; Laidani, N.
**Mir, Jose M.** See Chatterjee, Dilip K.; Hung, L. S.
**Mirabelli, E.** See Yang, K.
**Miranda Salvado, I. M.; Fernandez Navarro, J. M.**
Characterization of $ZrO_2$-$SiO_2$ glasses prepared with silicium and zirconium alkoxides.—73-13937
**Miranda, A. S.** See Silva, R. F.
**Miranda, E.** See Faigon, A.
**Miranda, F. A.** See Bhasin, Kul B.
**Miranda, Peter** See Pawar, Prakash K.
**Miranda, R.**
Characterization of new materials by surface-sensitive techniques.—73-01890
**Miranda, Salvado I. M.; Fernandez Navarro, J. M.**
$TiO_2$-$SiO_2$ glasses prepared by the alkoxide route.—73-10609
**Miranzo, Pilar** See Nieto, M. Isabel
**Miranzo, Pilar; Moya, J. S.**
Starting powder characteristics/fired compact properties relationships in reaction-sintered mullite/$ZrO_2$ composites.—73-06068
**Mirchandani, Prakash K.; Kastura, Laszlo J.; Friederichs, John W.**
Nonmagnetic nickel tungsten cemented carbide compositions and articles made from the same.—73-05321
**Mirdamadi, M.; Johnson, W. S.**
Thermomechanical response of a crossply titanium matrix composite subjected to a generic hypersonic flight profile.—73-03656
**Mirebeau, I.; Bellouard, C.; Hennion, M.; Caignaert, V.; Suard, E.**
Antiferromagnetic phase diagram of $YBa_2(Cu_{1-x}Fe_x)_3O_y$.—73-05357
**Mirets, A. L.** See Lashkarev, G. V.
**Mirin, R.** See Tan, I.-H.
**Miringzakhodzhaev, A. A.** See Suleimenov, S. T.
**Mirlin, D. N.; Merkulov, I. A.; Perel, V. I.; Reshina, I. I.; Sirenko, A. A.; Planel, R.**
Magnetic field enhancement of Raman scattering on folded acoustic phonons in GaAs-AlGaAs superlattice.—73-07648; Temperature dependence of Raman scattering by acoustic phonons in a superlattice GaAs/AlGaAs in strong magnetic fields.—73-01343

**Mirlin, D. N.; Sapega, V. F.; Sirenko, A. A.; Cardona, M.; Ploog, K.**
Energy dependence of the polarization parameters of the hot photoluminescence in quantum well structures.—73-14888
**Mironenko, O. I.** See Atkarskaya, A. B.
**Mironov, K. E.** See Andrukhiv, A. M.; Tsypishka, D. I.
**Mironov, S. P.** See Akhmadulin, I. Sh.
**Mironov, V. L.**
Heat exchange in ribbon glass annealing lehrs.—73-15877
**Mironova, G. M.** See Balagurov, A. M.
**Mironova, N.; Skvortsova, V.; Smirnov, A.; Ulmanis, U.**
Effect of stoichiometry of magnesium aluminum spinel on possibility of hole localization.—73-16123
**Miroshnichenko, I. I.** See Kazikaev, D. M.; Min'ko, N. I.; Volkova, S. N.
**Miroshnichenko, L. V.** See Novikov, V. L.
**Mirovitskii, V. Yu.**
Space group and phonon symmetry of $(RE1Ba_2Cu_3O_7)_m(RE2Ba_2Cu_3O_7)_n$ superlattices.—73-05482
**Mirskikh, L. L.** See Varshal, B. G.
**Mirti, P.; Casoli, A.; Appolonia, L.**
Scientific analysis of Roman glass from Augusta Practoria.—73-06618
**Miryuk, O. A.** See Akhmetov, I. S.
**Mirza, K. A.** See Loram, J. W.
**Mirzaev, Sh. R.** See Malinskii, E. N.
**Mirzakhodzhaev, A. A.** See Yumankov, A. P.
**Mirzapour, S.** See Rozati, S. M.
**Misak, Nasr Z.; Ghoneimy, Hussein F.; Shabana, El-Said I.; Shafik, S. S.**
Interdiffusion in alkali ion sorption by hydrous stannic oxide: mechanism and effect of co-ion.—73-06164
**Misawa, M.** See Kamiya, Kanichi
**Misawa, S.** See Hara, Shiro
**Miseo, Sabato** See Soled, Stuart L.
**Mishak, A.** See Kikineshi, A.
**Mishchenko, A. S.** See Kikoin, K. A.
**Mishchenko, I. N.** See Dubovik, Ya.
**Mishchuk, O. N.** See Borkovskaya, O. Yu.
**Mishima, Masaaki; Sato, Yutaka; Ueki, Masanori**
Relation between microstructure and color tone of skin layer and bulk area of silicon nitride ceramics.—73-06277; Relation between microstructure and color tone of skin layer and bulk area of silicon nitride ceramics.—73-13444
**Mishima, Naofumi; Ota, Rikuo; Wakasugi, Takashi; Fukunaga, Jiro**
Crystallization behavior of $Li_2O$-$2SiO_2$ melt and a melt model.—73-13951
**Mishima, S.** See Majima, Kazuhiko
**Mishima, Tsuneo; Tanaka, Rieko; Kohsaka, Shoji; Koga, Kazunori**
Grain-boundary analysis of silicon nitride materials.—73-03147
**Mishin, Yu. M.; Borchardt, Gunter**
Theory of oxygen tracer diffusion along grain boundaries and in the bulk in two-stage oxidation experiments: I, Formulation of the model and analysis of type A and C regimes.—73-06177; Theory of oxygen tracer diffusion along grain boundaries and in the bulk in two-stage oxidation experiments: II, Analysis of type-B regime.—73-09423
**Mishina, Tomobumi; Masumoto, Yasuaki**
Coherent propagation of fs optical pulses in a monoclinic $ZnP_2$ single crystal.—73-14811
**Mishkel, Y. I.** See Kimaev, A. E.
**Mishra, A. K.; Davidson, J. A.**
Zirconia/zirconium: a new, abrasion-resistant material for orthopedic applications.—73-13912
**Mishra, B.; Moore, John J.**
Combustion synthesis of LiAl intermetallics.—73-06754
**Mishra, K. C.; Johnson, K. H.; Schmidt, P. C.**
Comparative study of the electronic structure of titanium dioxide and strontium titanate.—73-05537
**Mishra, S. K.** See Rao, M. V.; Singh, A. P.
**Mishra, S. K.; Sarkar, A.; Ray, S. K.; Bhattacharya, D.; Chopra, K. L.; Das, S. R.**
Langmuir probe diagnostics of a radio-frequency magnetron discharge for deposition of high-$T_c$ YBCO films.—73-15530
**Mishra, U. K.** See Hashemi, M. M.; Ibbetson, J. P.
**Mishra, V. D.** See Puri, R. K.
**Mishra, W. K.** See Pond, K.
**Misiewicz, J.** See Bryja, L.
**Misiewicz, J.; Wrobel, J. M.; Jezierski, K.**
Interband transitions in $Zn_3As_2$.—73-08893
**Misochko, O. V.** See Arslanbekov, A. Kh.
**Misono, M.** See Mizuno, Noritaka
**Misono, Makoto** See Inumaru, Kei
**Misono, Makoto**
Chemical technologies for global environment.—73-03386
**Misono, Takahisa** See Goto, Hitoshi; Gunji, Takahiro; Kasgoz, Ahmet
**Misra, Chanakya** See Fishkis, Maya
**Misra, Chanakya; Genito, Joseph R.**
Alumina coated with a layer of carbon as an absorbent.—73-05187
**Misra, Chanakya**
Crystalline zeolites and method of preparation from amorphous silica particles.—73-12360
**Misra, K. C.; Borthakur, P. C.**
Role of mineralizers in alite formation in a rice husk ash–$CaCO_3$ raw mix.—73-10143
**Misra, M. S.** See Kustas, F. M.
**Misra, R.; Strong, R.; Greve, D. W.; Schlesinger, T. E.**
Characterization of undoped multiple quantum well structures.—73-11105
**Misra, S. K.; Kahrizi, M.; Kotlinski, J.; Steinitz, M. O.; Razavi, F. S.**
Single-crystal EPR and thermal expansion studies of the high-$T_c$ superconductor $Bi_2Sr_2CaCu_2O_{8+\delta}$.—73-01658
**Misra, V.** See Xu, X.-L.
**Misselwitz, F. M.** See Hellmold, P.
**Missous, M.** See Dobaczewski, L.
**Misyul, S. V.** See Flerov, I. N.
**Mitachi, Seiko** See Tick, Paul A.
**Mitamura, Hisayoshi; Matsumoto, Seiichiro; Stewart, Martin W. A.; Tsuboi, Takashi; Hashimoto, Masaaki; Vance, Eric R.**
Alpha α-decay damage effects in curium-doped titanate ceramic containing sodium-free high-level nuclear waste.—73-15697
**Mitamura, T.** See Kuramochi, Hideto
**Mitamura, Takashi** See Kobayashi, Hidehiko; Kubota, Yoshitaka; Kuramochi, Hideto; Mori, Toshiyuki; Shimosaka, Kenichi
**Mitamura, Takashi; Hayashi, Nobuhiko; Kobayashi, Hidehiko**
Impregnation and firing of $Al_2O_3$ compact with $CrO_3$ saturated solution.—73-02857
**Mitamura, Takashi; Masuda, Tomoyuki; Kobayashi, Hidehiko; Katayama, Keiichi; Akiba, Tokuji**
Corrosion of sintered high-purity mullite in molten KF salt.—73-03218; Corrosion of sintered high-purity mullite in molten KF salt.—73-13472
**Mitani, Katsura** See Kadono, Kohei
**Mitani, Tadaoki** See Terashima, Taichi
**Mitani, Yoshio; Teshima, Takanori; Yoshida, Yasuo; Yamazoe, Noboru**
Dispersibility of fumed silica in simple media.—73-16715
**Mitchel, W. C.** See Evwaraye, A. O.
**Mitchell, A. W.** See Lightfoot, P.
**Mitchell, Brian S.; Yon, Kyung-Yoi; Dunn, Stanley A.; Koutsky, James A.**
Phase identification in calcia–alumina fibers crystallized from amorphous precursors.—73-02384
**Mitchell, David L., Jr.** See Zurecki, Zbigniew
**Mitchell, Dean L.** See Gubser, Donald U.
**Mitchell, I. V.** See Akano, U. G.; Huang, L. J.
**Mitchell, Michael D.**
Manville plant gets a boost from oxygen-gas firing.—73-12229
**Mitchell, Terence E.** See Lagerlof, K. Peter D.; Reimanis, Ivar E.; Suematsu, H.; Unal, Ozer
**Mitchell, W. C.** See Li, S. H.
**Mitkevich, V. V.** See Kislov, I. A.
**Mitkova, E.** See Spirov, K.
**Mitkovets, A. I.** See Sobolev, A. B.
**Mito, K.** See Okada, A.
**Mitomi, Osamu** See Kawano, Kenji
**Mitomo, Mamoru** See Hirosaki, Naoto
**Mitomo, Mamoru; Ikegami, Takayasu**
Intelligent structural ceramics.—73-05172
**Mitomo, Mamoru; Saito, Shinichi; Matsuda, Toshitsugu; Yonezawa, Takao**
Sintering anisotropy in slip-cast SiC-whisker/$Si_3N_4$-powder compacts.—73-13262
**Mitomo, Mamoru; Tajima, Yo**
Sintering, properties, and applications of silicon nitride and SiAlON ceramics.—73-03014
**Mitomo, Tohru** See Kondoh, Eiichi
**Mitra, B. L.; Biswas, N. C.; Aggarwal, P. S.**
Thermal and hydrothermal properties and microstructure of zirconia-alumina-mullite.—73-17445
**Mitra, Nita** See Chaudhuri, S. P.
**Mitra, S.** See Wolden, C.
**Mitra, Sumita B.; Culler, Scott R.; Wang, Bing**
Method for treating fluoroaluminosilicate glass.—73-14551
**Mitrakovic, D.** See Milinkovic, S.
**Mitric, M.** See Guillot, M.
**Mitroaica, G.** See Dafinei, I.
**Mitrofanov, V. V.; Khuzhakulov, E. S.; Bogdanov, V. L.; Nasredinov, F. S.; Khalilev, V. D.**
States of admixed iron atoms in glasses of the system $CdGeO_3$-$CdF_2$-$AlF_3$ according to data from Mossbauer spectroscopy.—73-00403
**Mitrokhin, S. V.** See Yartys, V. A.
**Mitsas, C. L.; Siapkas, D. I.**
Phonon and electronic properties of $TlBiSe_2$ thin films.—73-08948
**Mitsis, A.** See Loizos, Z.
**Mitsoulis, Evan** See Loest, Hagen
**Mitsuda, Takeshi** See Ishida, Hideki; Isu, Norifumi; Okada, Yoshihiko; Sasaki, Kaori
**Mitsuda, Takeshi** See Yamamoto, Takeyuki
**Mitsudo, Hiroyuki**
Ceramics center indigenous to Okayama [Japan].—73-03385
**Mitsuhashi, Etsuo** See Komeya, Katsutoshi
**Mitsuhashi, Hiroshi** See Uemoto, Tsutomu
**Mitsuhashi, Masahiko; Karasawa, Shiro; Ohya, S.; Togashi, Funitaka**
Relation between the dislocations in chemically vapor-deposited diamond and the linewidth of the Raman spectrum.—73-05473
**Mitsuhashi, Takefumi** See Lee, Soo-Young; Watanabe, Akio
**Mitsuhashi, Takefumi; Ikegami, T.; Watanabe, Akio; Matsuda, S.**
Thermodynamics of zirconia system with a possibility of intelligent characters.—73-05518
**Mitsuhashi, Tsuyoshi** See Seguchi, Tadao
**Mitsuhashi, Yoshinobu**
Present status and future of optical and magnetic disks (including those of glass substrates).—73-15362
**Mitsuki, Kuniharu** See Konishi, Masahiro
**Mitsumatsu, Masato** See Ohsato, Hitoshi
**Mitsushio, T.** See Nishizawa, H.
**Mitsuyu, Tsuneo** See Tanahashi, Ichiro
**Mitterer, C.** See Losbichler, P.
**Mittov, O. N.; Sysoev, B. I.; Bezryadin, N. N.**
Growth and properties of thin $Al_2O_3$ films.—73-05829
**Mittsev, M. A.** See Krachino, T. V.
**Mitwalski, A.** See Treichel, H.
**Mityagin, N. V.** See Genkina, E. A.
**Mityanskii, I. P.** See Lashkarev, G. V.
**Mityushin, V. V.** See Kuznetsova, Tamara V.
**Mitzi, D. B.** See Safar, H.
**Mitzutani, Nobuyasu** See Lee, Seok-Keun
**Miura, Kazunori** See Morikawa, Asao
**Miura, M.** See Sugama, T.
**Miura, Masashi; Yogo, Toshinobu; Hirano, Shinichi**
Mechanical and thermal properties of SiC-AlN ceramics with modulated texture.—73-17377; Microstructure and mechanical properties of SiC-AlN ceramics after phase separation treatment.—73-09483; Microstructure and mechanical properties of SiC-AlN ceramics after phase separation treatment.—73-17158; Phase separation and toughening of SiC-AlN solid-solution ceramics.—73-09236
**Miura, N.** See Aguekian, V. F.; Deshimaru, Yuichi; Nagamune, Y.; Osada, T.; Sasaki, S.; Teraoka, Y.
**Miura, Noboru** See Kamata, Norihiko; Nicholas, R. J.; Yokoi, Hiroyuki
**Miura, Norio** See Nagase, Katsumi
**Miura, T.** See Muranushi, Y.
**Miura, Tadao; Ishizuka, Yoshiki**
Initial growth mechanism of Bi-Sr-Ca-Cu-O thin films on $SrTiO_3$(110) surfaces studied by in situ reflection high energy electron diffraction observation.—73-04746
**Miura, Takashi; Sano, Isao**
Effects of deicing salts on alkali-aggregate reaction.—73-09933
**Miura, Teruyuki** See Sugiyama, Osamu
**Miura, Toshihiko** See Ryoke, Katsumi
**Miura, Yoshinari** See Ding, Yong; Fu, Jie; Fu, Jin; Hayashi, Satoshi; Osaka, Akiyoshi; Yoshimatsu, Hideyuki
**Miura, Yoshinari; Takahashi, K.**
Electrochemical behavior of molybdenum in molten glass.—73-15872
**Miwa, Kenji** See Kobayashi, Keizo
**Miwa, Kenji; Ikeda, Takashi; Mizuno, Kouji; Ohashi, Teruo**
Preparation of SiC whisker-reinforced Al alloy composites by compocasting process.—73-03633
**Miwa, Takao** See Shibaoka, Kazuo
**Miwa, Yukimi** See Matsubara, Shigeo
**Miya, Masaru** See Akai, Tomoko; Kadono, Kohei; Kineri, Tohru
**Miyachi, M.** See Tazaki, Kazue
**Miyagawa, Ryohei** See Yamashita, Hirofumi
**Miyagawa, S.; Saitoh, K.; Niwa, H.**
Growth of epitaxial TiN films on MgO(100) by high current discharge plasma.—73-13081
**Miyagawa, Saburoh** See Tsunetsugu, Kunio
**Miyagi, H.** See Iguchi, Eisuke
**Miyahara, Kaoru** See Oka, Akihiro
**Miyahara, Kazuhiro**
Method of firing ceramic honeycomb structure.—73-04993
**Miyahara, Mitsuo; Kawashima, Hisakazu; Nagahata, Tutomu; Yagi, Juki**
Thermal stress analysis on the refractories at the bottom part of top and bottom blowing BOF (basic oxygen furnace).—73-14630
**Miyahara, Nobuyuki** See Mutoh, Yoshiharu
**Miyahara, Nobuyuki; Mutoh, Yoshiharu; Yamaishi, K.; Uematsu, Keizo; Inoue, Makoto**
Effect of grain size on strength, fracture toughness, and static fatigue crack growth in alumina.—73-03265
**Miyahara, Nobuyuki; Mutoh, Yoshiharu; Yamaishi, K.**
Fracture toughness and transition of fracture behavior of silicon nitride at elevated temperatures.—73-13537
**Miyairi, Masumi**
Using databases—personal computer communication and CD-ROM peripheral.—73-09757
**Miyairi, Yukio** See Ozawa, Tadao
**Miyaji, Fumiaki** See Sakka, Sumio
**Miyaji, Fumiaki; Tadanaga, Kiyoharu; Sakka, Sumio**
Properties and structure of binary $PbO$-$GaO_{1.5}$ glasses as the base of nonlinear optical multicomponent glasses.—73-03808
**Miyaji, Fumiaki; Yoko, Toshinobu; Sakka, Sumio**
Structure of sodium gallotitanate glass in relation to glass formation.—73-14112
**Miyaji, Yoshiyuki** See Izawa, Hajime; Ohyanagi, M.
**Miyajima, Hideki** See Taketomi, Susamu; Tenya, Kenichi
**Miyajima, Tatsuya** See Sakai, Mototsugu; Yamauchi, Yukihiko
**Miyajima, Tatsuya; Sakai, Mototsugu**
Fiber pullout and fracture energy of C-fiber/C-matrix composites.—73-06420
**Miyajima, Yoshiaki** See Onishi, Masashi
**Miyakawa, K.** See Nonaka, K.
**Miyakawa, Naohisa** See Yui, Toshio
**Miyakawa, Nobuaki** See Ohuchi, Masahiko
**Miyake, Akiko** See Hara, Tatsuo; Yazawa, Tetsuo
**Miyake, Kazuyuki** See Kitajima, Kunio
**Miyake, Keita** See Takeda, Kaoru
**Miyake, M.; Yoshikawa, Y.; Suzuki, T.**
Cation-exchange characteristics of $K_2W_4O_{13}$ in molten nitrate salts.—73-08817
**Miyake, Masaya** See Kawai, Chihiro; Komura, Osamu; Matsui, Tatsuji; Shimoda, Kouhei; Yamakawa, Akira; Yamamoto, Takehisa
**Miyake, Natsumi** See Nishi, Tokumitsu
**Miyake, S.; Honda, K.; Kohno, T.; Setsuhara, Y.; Satou, M.; Chayahara, Akiyoshi**
Rutile-type $TiO_2$ formation by ion beam dynamic mixing.—73-09311
**Miyake, S.; Kobayashi, T.; Satou, M.; Fujimoto, F.**
Titanium oxide formation by dynamic ion beam mixing.—73-03064
**Miyake, Shojiro** See Miyamoto, T.; Murakawa, Masao
**Miyake, Shuji** See Kusaka, Tadaoki
**Miyake, Yasunari; Hirayama, Hideki; Kudo, K.; Tamura, Shigehisa; Arai, Shigehisa; Asada, M.**
RT operation of GaInAs/GaInAsP/InP SCH lasers with quantum-wire size active region.—73-15153
**Miyakoshi, Toshinobu** See Ninomiya, Hideaki
**Miyama, Yasuyuki** See Ikabata, Tatsuo

**Miyamoto, Akio** See Furusawa, Shinichi
**Miyamoto, Hiroki** See Hirota, Ken; Ishida, Koji; Kimoto, Shinya; Saiki, J.; Tanihara, M.; Yamakata, Koji
**Miyamoto, I.; Ezawa, T.; Itabashi, K.**
Ion beam fabrication of diamond probes for a scanning tunneling microscope.—73-05881
**Miyamoto, K.** See Tanihara, M.
**Miyamoto, Katsuyoshi** See Morita, Mitsuru
**Miyamoto, Kuniaki** See Miyoshi, Shunzou
**Miyamoto, M.** See Inamura, Suguru
**Miyamoto, Masaki** See Yamana, Kazuo
**Miyamoto, Nobuo** See Abe, Toshimi
**Miyamoto, T.** See Donkai, N.
**Miyamoto, T.; Miyake, Shojiro; Kaneko, R.**
Wear resistance of $C^+$-implanted silicon investigated by scanning probe microscopy.—73-09698
**Miyamoto, Takeaki** See Tanahashi, Masami
**Miyamoto, Tomoyuki** See Uchida, Takashi
**Miyamoto, Yoshiko; Ishiyama, Koichi**
Measurement of spontaneous electric polarization in magnetite ($Fe_3O_4$) at 4.2 K.—73-16536
**Miyamoto, Yoshiko; Shindo, Mikio**
Magnetoelectric measurement of magnetite ($Fe_3O_4$) at low temperatures and direct evidence for nonexistence of ac mirror plane.—73-07965
**Miyamoto, Yoshinari** See Ma, Xiang-Feng
**Miyamoto, Yoshinari; Ohyanagi, M.**
Development of functional ceramic composites by SHS routes.—73-16704
**Miyamoto, Yoshinari**
Economic process for rapid densification of ceramics, metals, and functionally gradient materials.—73-15718
**Miyamoto, Yoshiyuki** See Saito, Susumu
**Miyamoto, Yutaka** See Aizawa, Mamoru
**Miyamoto, Yutaka; Kishioka, Akira; Itatani, Kiyoshi**
Sintering and properties of $CaTi_4(PO_4)_6$ prepared [CTP] by sol-gel process.—73-03006
**Miyamoto, Yutaka; Takahashi, Hiroshi; Kinoshita, Makio; Kishioka, Akira**
Sintering and properties of $MgTi_4(PO_4)_6$ prepared by sol-gel process.—73-03007; Sintering and properties of $MgTi_4(PO_4)_6$ prepared by sol-gel process.—73-13260
**Miyanaga, Akiharu** See Ohtani, Hisashi
**Miyano, K. E.** See Herrera-Gomez, A.; Kendelewicz, T.
**Miyao, M.** See Nomura, Takashi
**Miyaoka, Satoshi** See Furusawa, Shinichi
**Miyarita, K.** See Noguchi, M.
**Miyase, Akira** See Wong, Ming-Shih
**Miyashita, Masayori** See Kim, Jin-Young
**Miyashita, Masayori; Kim, Jin-Young; Kato, Zenji; Uchida, N.; Uematsu, Keizo**
Effect of compaction pressure on the internal structure of sintered alumina.—73-13001
**Miyashita, Masayori; Kim, Jin-Young; Kato, Zenji**
Effect of compaction pressure on the internal structure of sintered alumina.—73-05756
**Miyashita, Satoru; Kanbe, Sadao; Toki, Motoyuki; Takeuchi, Tetsuhiko; Kitabayashi, Hirohito**
Method of preparing silica glass.—73-00748
**Miyashita, Shoji** See Umemura, Toshio
**Miyashita, Tadashi** See Sun, Cheng-Ko J.
**Miyashita, Takahiro; Noguchi, Hideyuki; Yamato, Kohji; Yoshio, Masaki**
Preparation of layered $LiNiO_2$ by alcoholate method and its behavior as a cathode in lithium secondary battery.—73-14724
**Miyata, Hidenori** See Koyasu, Shigeji
**Miyata, Hiroshi** See Maekawa, Ichiro
**Miyata, K.; Dreifus, David L.**
Metal/intrinsic diamond/semiconducting diamond junction diodes fabricated from polycrystalline diamond films.—73-01245
**Miyata, Koichi** See Inoue, Takayoshi
**Miyata, N.; Akada, S.; Omura, H.; Jinno, H.**
Microcrack toughening mechanism in brittle matrix composites.—73-06489
**Miyata, Noboru** See Yamagishi, Chitake; Yoshida, Hideto
**Miyata, T.** See Sato, H.
**Miyata, Takeshi** See Hosaka, Masahiro
**Miyata, Y.** See Karasawa, T.
**Miyatani, Kazuo** See Fukuda, Masahide
**Miyauchi, Shigeaki** See Kobashi, Koji
**Miyawaki, Nobuhiko** See Kimura, Yukihiro
**Miyawaki, Yasuo** See Iwahara, Hiroyasu
**Miyayama, Masaru** See Bae, Seung-Young; Hikita, Kazuyasu; Ishida, Atsumu; Ito, Hidetaka; Muto, Norio; Pan, Guang; Seo, Yong-Gyo; Ushio, Yoshijiro
**Miyazaki, Hirokazu** See Ikuhara, Yuichi
**Miyazaki, Kenji** See Takano, Satoshi
**Miyazaki, M.** See Watanabe, Y.
**Miyazaki, Masayuki** See Matsubara, Gensoh
**Miyazaki, Matsuo** See Itoh, Yoshiyasu
**Miyazaki, Mitsuharu** See Kojima, Kunihiko
**Miyazaki, T.** See Ishikawa, Shin
**Miyazaki, Takashi** See Nakashima, Kunihiko
**Miyazaki, Toru** See Doi, Minoru
**Miyazaki, Toshiyuki**
Laser machining of ceramics.—73-04927
**Miyazaki, Yuji; Harada, Hiroshi; Sakamaki, Shozo; Haglo, T.**
Microstructure of pressureless-sintered hBN.—73-06259
**Miyazaki, Yuzuru** See Yamane, Hisanori
**Miyazawa, K.; Suzuki, K.; Sakuma, Taketo**
HREM observation of domain boundaries in tetragonal zirconia.—73-06227
**Miyazawa, Shingo** See Tazawa, Eiichi
**Miyazawa, Shintaro** See Mukaida, Masashi
**Miyazawa, Yasuto** See Morita, Shoji
**Miyazawa, Yuki** See Kishioka, Akira
**Miyoshi, Kazuhisa; Honecy, Frank S.; Abel, Phillip B.; Pepper, S. V.; Spalvins, T.; Wheeler, D. R.**
Vacuum ($10^{-9}$ torr) friction apparatus for determining friction and endurance life of $MoS_2$ films.—73-08457
**Miyoshi, Kazuhisa; Wu, Richard L. C.; Garscadden, Alan; Barnes, Paul N.; Jackson, Howard E.**
Friction and wear of plasma-deposited diamond films.—73-13542
**Miyoshi, Shunzou; Matsuda, Manabu; Enomoto, Sae; Miyamoto, Kuniaki; Kawata, Yousuke**
Application and development of CAE/CAD [computer-aided engineering/computer-aided design] system in refractory industry.—73-14568
**Miyoshi, Tadahiko** See Yasutomi, Yoshiyuki
**Mizeris, R.; Sueta, A.; Urbonavichyus, V.**
Microwave studies of dielectric properties of $Rb_3H(SeO_4)_2$ superionic crystals.—73-00996
**Mizobata, Masatoshi** See Amano, Koshi
**Mizobe, Arito** See Harada, Masahiro
**Mizogami, Shigeyoshi** See Tanaka, Kazuyoshi
**Mizoguchi, Akira** See Takahashi, Kenichi
**Mizoguchi, Kenji; Oda, Hatsujiro; Beppu, Kiyoshi; Fujii, Kazuaki**
Improvement activities of life prolongation at Nakayama No. 2 blast furnace [Osaka, Japan].—73-14594
**Mizoguchi, Kohji** See Agui, Akane
**Mizoguchi, Y.; Kagawa, Masaki; Syono, Y.; Hirai, T.**
Deposition of $TiO_2$ on heated substrates by the spray–inductively coupled plasma technique.—73-16697
**Mizuguchi, Hiroyuki; Tanaka, Junichi; Tanaka, Nobuyuki**
Effect of vibration on rheological properties of fresh concrete.—73-09926
**Mizuhara, Kazuyuki** See Enomoto, Yuji
**Mizuhara, Yukako; Ono, Hiroshi; Ishihara, Tatsumi; Takita, Yusaku**
Preparation of $Si_3N_4$ whiskers from various natural resources.—73-16932
**Mizuhashi, Mamoru** See Noguchi, Satosi
**Mizuhata, M.** See Deki, Shigehito
**Mizukami, Fujio** See Kojima, Kunihiko; Maeda, Kazuyuki; Nishide, Toshikazu; Sano, T.
**Mizuki, Junichiro** See Tanigaki, Katsumi
**Mizuma, Yoshie** See Mutsukura, Nobuki
**Mizunami, Toru; Iwashita, Hiroyuki; Takagi, K.**
Gain saturation characteristics of Raman amplification in silica and fluoride glass optical fibers.—73-06920
**Mizuno, Fumio; Sato, Manabu**
BaO-x-$TiO_2$ dielectric ceramic composition.—73-04188
**Mizuno, H.; Morifuji, M.; Taniguchi, K.; Hamaguchi, C.**
Theoretical calculation of impact ionization rate in $SiO_2$.—73-08982
**Mizuno, Kenichi; Tajima, Yo**
Silicon nitride sintered product excellent in wear resistance.—73-16016
**Mizuno, Koichi** See Kohiki, Shigemi
**Mizuno, Kouji** See Miwa, Kenji
**Mizuno, Mineo** See Awaji, Hideo; Suwa, Yoshiko
**Mizuno, Mineo; Nagano, Yasuo; Usami, Hatsuhiko; Ito, Takuji; Kagawa, Yutaka**
Effect of specimen shape on fracture toughness and effective fracture energy in SiC-SiC composite.—73-15793
**Mizuno, Mineo**
Microstructure and microchemistry of highly pure mullite ceramics.—73-03168; Microstructure, microchemistry, and flexural strength of mullite ceramics.—73-13431
**Mizuno, Mitsukuni** See Tsubaki, Junichiro
**Mizuno, Noritaka; Fujii, Hiroaki; Igarashi, Hiroshi; Misono, M.**
Formation of $LaCoO_3$ highly dispersed on $ZrO_2$.—73-16790
**Mizuno, Toshiaki** See Yokoi, Koji
**Mizuno, Toshiaki; Yamagishi, Takashi; Yokoi, Koji; Doushita, Kazuhiro**
Process for producing flakes of glass.—73-10658
**Mizuno, Yasuo** See Ikeda, Masaki
**Mizuno, Yasuo; Ikeda, Masaki; Yoshida, Akihiko**
Application of tellurite bonding glasses to magnetic heads.—73-03775
**Mizuno, Yasuo; Ikeda, Masaki**
Preparation and properties of bonding glass for amorphous magnetic head.—73-00533; Preparation and properties of bonding glass for amorphous magnetic head.—73-10473
**Mizunoya, Nobuyuki** See Komorita, Hiroshi
**Mizunuma, Tatsuya; Yamato, Fujio**
Role of surfactants in concrete and ceramic fields.—73-00186
**Mizusaki, Junichiro; Yasuda, Isamu; Shimoyama, Junichi; Yamauchi, Shigeru; Fueki, Kazuo**
Electrical conductivity, defect equilibrium, and oxygen vacancy diffusion coefficient of $La_{1-x}Ca_xAlO_{3-\delta}$ single crystals.—73-09402
**Mizushima, Kihou; Horiuchi, Michio**
Mullite ceramic compound.—73-12388
**Mizushima, Yasuyuki; Sekine, Masahiro; Hori, Makoto**
Preparation of alumina-fiber-type catalyst for methane combustion by sol-gel method.—73-16915
**Mizuta, Hiroyuki** See Oda, Kiichi; Sano, Saburo
**Mizuta, Susumu** See Manabe, Takaaki
**Mizutani, Nobuyasu** See Funakubo, Hiroshi; Ikeda, Masaki; Kanda, Hajime; Kieda, Nobuo; Kim, Bok-Hee; Lee, Seok-Keun; Nishiyama, Shin; Otsu, Masato; Saiki, Atsushi; Sakurai, Osamu; Sumino, Hiroyasu; Wakiya, Naoki; Yamamoto, Hiroki
**Mizutani, Nobuyasu; Ikeda, Masaki; Lee, Seok-Keun**
Preparation of monodispersed hydrous aluminum oxide powders.—73-02957
**Mizutani, Ryoichi** See Matsuoka, Jun
**Mizutani, Tatsumi** See Yonogami, Takashi
**Mizutani, Tatsumi**
Densification and crystallization of amorphous $SiO_2$ by neutral beam bombardment.—73-05731
**Mizutani, Toshiaki; Tsuge, Akihiko**
Effects of metallic boride dispersion on fracture toughness and oxidation resistance in SiC ceramics.—73-03275; Effects of metallic boride dispersion on fracture toughness and oxidation resistance in SiC ceramics.—73-13518; SiC sintered body.—73-05336
**Mizutani, Uichiro** See Koyano, Tamotsu
**Mizutani, Yosifumi** See Hiraishi, Shinya
**Mizuuchi, Kiminori** See Yamamoto, Kazuhisa
**Mizuuchi, Kiminori; Yamamoto, Kazuhisa**
Characteristics of periodically domain-inverted $LiTaO_3$.—73-12750
**Mjwara, P. M.** See Botha, P. J.; Stoddart, P. R.
**Mlayah, A.** See Hillel, R.
**Mlynarik, Vladimir** See Mazur, Milan
**Mo, Chi-Mei** See Xie, Cun-Yi; Zhang, Li-De
**Mo, Chi-Mei; Yuan, Z.; Zhang, L.-De**
Infrared absorption spectra of nano-alumina.—73-05422
**Mo, Chi-Mei; Zhang, Li-De; Xie, Cun-Yi**
Luminescence of nanometer-sized amorphous silicon nitride solids.—73-02632
**Mo, Ji-Mei** See Wang, Tao
**Mo, S.-D.** See Lin, L.-B.
**Moalem, M.; Olander, D.R.; Balooch, M.; Fluss, M. J.**
Cluster formation in the vapor produced by laser pulsing of the $Y_1Ba_2Cu_3O_7$ superconducting solid.—73-08001
**Mobasher, Barzin** See Cohen, Menashi D.
**Mobius, Hans-Heinrich** See Kampfer, Kersten
**Mocaer, D.** See Christin, Francois; Pillot, J. P.; Villeneuve, J. F.
**Mocaer, D.; Chollon, G.; Pailler, R.; Filipuzzi, Ludovic; Naslain, R.**
Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: V, Oxidation kinetics of model filaments.—73-09318
**Mocaer, D.; Pailler, R.; Naslain, R.; Richard, C.; Pillot, J. P.; Dunogues, J.**
Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: I, The organic/inorganic transition.—73-09314; Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: II, Effect of oxygen curing on properties of ex-PCSZ monofilaments.—73-09315; Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: III, Effect of pyrolysis conditions on the nature and properties of oxygen-cured derived monofilaments.—73-09316; Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: IV, Oxygen-free model monofilaments.—73-09317
**Mochalov, I. V.** See Kopp, V. I.
**Mochida, Norio** See Sekiya, Takao
**Mochizuki, Keisuke** See Oishi, Shuji
**Mochizuki, Yoshihisa** See Sata, Toshiyuki
**Mocsy, A.** See Neda, Z.
**Modes, Christina** See Burckhardt, Hans-Georg
**Modest, Michael F.** See Bang, Se-Yoon; Roy, Subhransu; Trubelja, Mladen E.
**Modica, Fabio** See Vallana, Franco
**Modine, F. A.; Lubben, D.; Bates, J. B.**
Electrical conduction in $CaF_2$ and $CaF_2$-$Al_2O_3$ nanocomposite films on $Al_2O_3$ substrates.—73-07313
**Modone, E.** See Baricco, M.
**Moeggenborg, K. J.** See Collias, George J.
**Moel, A.** See Chu, W.
**Moeller, J.** See Schmelzer, J.
**Moerkirk, R.** See McLane, G. F.
**Moerman, I.** See Vermaerke, F.
**Mogab, C. J.** See Olowolafe, J. O.
**Moghadam, Farhad** See Moinpour, Mansour
**Mogilevsky, P.; Gotman, I.; Gutmanas, E. Y.; Kaysser, W. A.**
Microstructure and thermal stability of coatings obtained by interaction of SiC and $B_4C$ with Cr and Ti powders.—73-13874
**Mogilevsky, R.** See Soni, K. K.
**Mogoda, A. S.; Heakal, F. El-Taib; Ghoneim, A. A.**
Formation and dissolution behavior of $ZrO_2$ film in $H_3PO_4$ acid solutions.—73-10231
**Mogro-Campero, A.; Turner, L. G.; Kadin, A. M.**
Film thickness dependence of microwave surface resistance for $YBa_2Cu_3O_7$ thin films.—73-01551
**Mogus-Milankovic, A.; Day, Delbert E.**
Thermally stimulated polarization and dc conduction in iron phosphate glasses.—73-07088
**Mogutnov, B. M.** See Zaitsev, Alexander I.
**Mohai-Toth, I.** See Szepvolgyi, J.
**Mohammad, M.** See Malik, S.
**Mohammed-Brahim, T.** See Kechouane, M.
**Mohan Ram, R. A.; Clearfield, Abraham**
Synthesis and intercalation chemistry of $K[Ca_2(Ca,Sr)_{n-3}Nb_1Ti_{n-3}O_{3n+1}]$ ($n$=4, 5).—73-02486
**Mohan, H.; Shaikh, I. A.; Kulkarni, R. G.**
Mossbauer and magnetization study of the mixed spinel $CoFe_{2-x}Cr_xO_4$.—73-11667
**Mohan, K.** See Ghosh, S. P.
**Mohan, K.; Ghosh, S. P.**
Evaluation of physicochemical and hydration characteristics of supersulfated cement.—73-13720
**Mohan, Lata** See Laxmi, S.
**Mohan, S.** See Al-Robaee, Mansour S.; Ghanashyam, Krishna M.; Krishna, M. Ghanashyam; Narashimha Rao, K.; Suhail, M. H.
**Mohan, T. R. Rama** See Ranjbar, Khalil
**Mohanova, Pavla** See Rybarikova, Ludmila
**Mohanova, Pavla; Maryska, Martin; Rybarikova, Ludmila**
ESCA study of the surface layers on bioactive glass after the interaction with simulated body fluid.—73-13980

**Mohapatra, B. N.** See Goswami, G.
**Mohney, S. E.** See Lin, C. F.
**Mohney, S. E.; Chang, Y. Austin**
Interfacial reactions in Pt/InP contacts.—73-10242
**Mohnkern, L. M.** See Gold, Jeffrey S.; Harris, K. A.; Myers, T. H.; Yanka, R. W.
**Mohr, R. K.** See Bowan, B. W.
**Mohri, Fumihiko; Kobune, Masafumi; Tsuri, Hisashi**
Present state and future outlook of electrofused magnesia.—73-00838
**Mohri, H.** See Komatsu, Takayuki
**Mohri, Masahide** See Nishida, Yasunori
**Mohri, Masashi** See Nishiyama, Katsuhiro
**Mohri, T.** See Nakamura, M.
**Mohsine, Abdelkrim** See Lecloux, Andre J.; Pirard, Jean-Paul
**Moilanan, George L.; Van Kalsbeek, Bauke**
Process modification for $NO_x$ control.—73-03877
**Moilanen, Hannu** See Zhang, Hong-Xue
**Moin, M. D.** See Kirilova, S. I.
**Moine, G.** See Gegout, P.
**Moini, Ahmad**
Vacancy titanates intercalated with cationic hydroxy aluminum complexes.—73-03704
**Moinpour, Mansour; Chu, John; Lubic, Karen; Moghadam, Farhad**
Reliability issues of a crack-resistant passivation layer process for submicron nonvolatile memory technology.—73-03883
**Moir, G. K.; Glasser, Fredrick P.**
Mineralizers, modifiers, and activators in the clinkering process.—73-10053
**Moisan, J. Y.** See Ennouri, A.
**Moise, F.** See Zaharescu, Maria
**Moise, T. S.** See Celii, F. G.
**Moiseenko, V. N.; Sharaichuk, V. N.; Volnyanskii, M. D.**
Characteristics of the thermal evolution of the ferroelectric soft mode in $Li_2Ge_7O_{15}$ crystals.—73-01393
**Moiseev, G. K.; Zaitseva, S. I.; Il'inykh, N. I.**
Thermodynamic stability of 34 compounds of the Y-Ba-Cu-O system.—73-05516
**Moiseev, N. V.** See Blinder, A. V.; Sirota, N. N.
**Moiseev, Y. N.** See Antonenko, V. I.
**Moiseeva, G. A.** See Andrianova, T. N.
**Moizhes, B. Ya.** See Krasinkova, M. V.
**Mojab, E.** See Petrov, I.
**Mokerov, V. G.** See Kotel'nikov, I. N.
**Mokhosoev, M. V.** See Bazarova, Zh. G.; Murzakhanova, I. I.
**Mokhosoev, M. V.; Khal'baeva, K. M.; Tsyrenova, G. D.**
Systems $M_2MoO_4$-$Bi_2(MoO_4)_3$ (M=Ag, Tl).—73-12716
**Mokhov, E. N.** See Garshin, A. P.; Petrenko, T. L.; Verenchikova, R. G.; Vodakov, Yu. A.
**Mokhov, E. N.; Gornushkina, E. D.; Didik, V. A.**
Phosphorus diffusion in silicon carbide.—73-17092
**Mokhtar, M. O. A.** See Naga, S. A. R.
**Mokienko, I. Yu.** See Korolev, N. E.
**Mokin, N. K.** See Livshits, V. Ya.
**Mokler, S. M.; Watson, P. R.; Ungier, L.; Arthur, J. R.**
Adsorption and thermal desorption of chlorine from GaAs(100) surfaces.—73-07377
**Mol, J. C.** See Robinson, W. R. A. M.
**Molchanov, V. N.** See Tamazyan, R. A.
**Moldovan, N.** See Lang, W.
**Mole, Cecil J.; Male, Alan T.; Carr, Walter J., Jr.; Jones, Clifford K.**
Cryoconducting superconducting composites.—73-01513
**Mole, R.** See Christy, R. K.
**Molecke, Martin A.** See Wicks, George G.
**Molecke, Martin A.; Wicks, George G.**
Details of in situ sample retrievals and test completion for the Materials Interface Interactions Test (MITT).—73-08292
**Molenda, Janina; Stoklosa, Andrzej; Soliman, Hussein M.**
Transport properties of manganese-doped ferrous oxide at high temperature.—73-02717
**Molian, A. M.** See Molian, P. A.
**Molian, P. A.; Janvrin, B.; Molian, A. M.**
Laser chemical vapor deposition of fluorinated diamond thin films for solid lubrication.—73-08534
**Molina, C.** See Joshi, R. P.
**Molina, S. I.; Aragon, G.; Garcia, R.; Gonzalez, Y.; Gonzalez, L.; Briones, F.**
Evolution process of antiphase boundaries in GaAs on Si.—73-04335
**Molinaro, James S.** See Grant, Robert W.
**Molla, J.; Heidinger, R.; Ibarra, A.; Link, G.**
Dielectric properties of alumina/zirconia composites at millimeter wavelengths.—73-07299
**Mollaev, A. Yu.** See Aliev, Sh. M.
**Mollah, M.** See Yousuf, A.
**Mollah, S.; Som, K. K.; Bose, K.; Chaudhuri, B. I.**
Ac conductivity in $Bi_4Sr_3Ca_3Cu_4O_y$ (y=0–5) and $Bi_4Sr_1Ca_{3-z}Li_zCu_4O_y$ (z=0.1–1) semiconducting oxide glasses.—73-07984
**Molliard, P.** See Sarda, C.
**Moller, P.** See Rager, H.
**Moller, Wolfhard**
Modeling and computer simulation of ion-beam- and plasma-assisted film growth.—73-05929
**Molloy, B. T.** See Mangat, P. S.
**Molnar, B.; Kennedy, T. A.; Glaser, E. R.; Dietrich, H. B.**
Ion-implantation–damage-created *n*-type conductivity in InP after high-temperature annealing.—73-07624
**Molnar, J.** See Szabo, I.
**Molnar, Sh. B.** See Vysochanskii, Yu. M.
**Molochko, A. P.** See Solovei, N. P.
**Molochko, A. P.; Solovei, N. P.; Bodnar, I. V.; Kotov, S. G.; Stavrov, A. A.**
Spectroscopic studies of silicate glasses activated by solid-state solutions.—73-14278
**Molodkin, A. K.** See Kurilkin, V. V.
**Molodkin, A. K.** See Safronenko, M. G.
**Moloni, Katerina; Dahlberg, E. Dan**
Remanent magnetization in single crystals of $YBa_2Cu_3O_7$.—73-04800
**Molotkov, S. N.; Nazin, S. S.; Smirnova, I. S.**
Theory of scanning tunneling microscopy of the (110) surface of GaAs based on the method of quasi-stationary states in the tight binding method.—73-07834
**Mombelli, B.** See Barriere, A. S.
**Momma, Akihiko; Numata, Hiroo; Haruyama, Shiro**
Mechanism of YSZ/metal, $O_2$ electrode [studied] by the application of harmonics current measurement.—73-04134: Mechanism of YSZ/metal, $O_2$ electrode [studied] by the application of harmonics current measurement.—73-14717
**Momma, T.** See Osaka, Tetsuya
**Mommsen, H.** See Kerschner, M.
**Momoda, Leslie A.** See Dai, H
**Momoda, Leslie A.; Dunn, Bruce S.**
Synthesis and optical properties of ß´´-alumina single crystals doped with divalent lanthanide ions.—73-13295
**Momose, T.** See Takahashi, Y.
**Momozawa, Nobuyuki; Yamaguchi, Yasuo**
Field-induced commensurate intermediate phases in helimagnet $(Ba_{1-x}Sr_x)_3Zn_2Fe_{12}O_{22}$ (x=0.748).—73-07937
**Monahan, Beth C.** See Beall, George H.
**Monahan, T. P.** See Lin, Chi-Hsien
**Monceau, D.; Petot, C.; Petot-Ervas, G.**
Kinetic demixing profile calculation in oxide solid solutions under a chemical potential gradient.—73-02311
**Monch, B.** See Reetz, Teja
**Monch, J. I.** See Bruckner, W.
**Monch, W.** See Baier, H.-U.; Linz, R.
**Moncorge, Richard** See Guyot, Yannick
**Moncorge, Richard; Li, C.; Souriau, J. C.; Wyon, C.**
Efficient 2.05-µm RT $Y_2SiO_5$:$Tm^{3+}$ cw laser.—73-12780
**Mondal, J. K.; Roy, S. K.**
Spectrophotometric method for the determination of hafnium and aluminum in zirconia and zircon sand after separation of zirconium with the tri-*n*-butyl phosphate.—73-05087
**Mondalski, P.** See Sodolski, H.
**Mondello, N.** See Arena, F.
**Monecke, J.** See Irmer, G.
**Moneger, S.** See Benyattou, T.
**Monemar, B.** See Chen, W. M.; Godlewski, M.; Lundstrom, T.
**Monerie, M.** See Allain, J. Y.; Gomes, A. S. L.
**Moneyron, J. E.; De Roy, A.; Besse, J. P.**
Protonic conductivity of hydrotalcite-type compound thick films: application to a humidity sensor.—73-01292
**Monge, A.** See Bueno, I.
**Monge, M. A.** See Aliev, F. G.; Campa, J. A.
**Monien, H.** See Mills, A. J.
**Monji, Hideto; Kuribayashi, Kiyoshi; Umetani, Makoto; Kawata, Noriyuki**
Method of manufacturing glass optical element.—73-10645
**Monji, Tono**
Effect of consolidating condition on compressive strength of concrete.—73-09902
**Monk, David J.; Soane, David S.; Howe, Roger T.**
Review of the chemical reaction mechanism and kinetics for hydrofluoric acid etching of silicon dioxide for surface micromachining applications.—73-14079
**Monma, Hideki; Nishikawa, Harumitsu**
Thermal behavior of octacalcium phosphate intercalated with ß-dihydromuconate.—73-05653; Thermal behavior of octacalcium phosphate intercalated with ß-dihydromuconate.—73-12889
**Monma, Hideki**
Electrochemical deposition of calcium-deficient apatite on stainless steel substrate.—73-06778; Electrochemical deposition of calcium-deficient apatite on stainless steel substrate.—73-13831; Influence of octacalcium phosphate [OCP] addition on hydraulic properties of apatitic cement.—73-13739
**Monnier, G.** See Segaud, J. P.
**Monnier, J. D.** See Giordano, N.
**Monnom, G.** See Saissy, A.
**Monroe, D.** See Fitzgerald, E. A.
**Monroe, Eugene A.** See Chen, Wie-Shi
**Monroe, Eugene A.; Chen, Wei-Shi**
Phosphate glass cement.—73-12392
**Monros, G.** See Cantavella, V.; Carda, J.; Cordoncillo, E.; Sales, M.
**Monros, G.; Carda, J.; Tena, M. A.**
Synthesis and characterization of $V_2O_5$-$SiO_2$-$ZrO_2$ pigments by sol-gel method.—73-13293
**Monros, G.; Marti, M. C.; Carda, J.; Tena, M. A.; Cantavella, V.; Alarcon, J.**
Encapsulating efficiency for vanadium of $ZrO_2$-$SiO_2$ gels prepared from alkoxides to give V-$ZrSiO_4$ blue colored stains.—73-08614
**Monros, G.; Marti, M. C.; Carda, J.; Tena, M. A.; Escribano, P.; Anglada, M.**
Effect of hydrolysis time and type of catalyst on the stability of tetragonal zirconia-silica composites synthesized from alkoxides.—73-14359
**Monson, William L.** See Bruno, Salvatore A.
**Montaner, D.** See Montgomery, P. C.
**Montani, R. A.; Bazan, J. C.**
Electronic conductivity and chemical diffusion coefficient of cadmium-doped cuprous iodide.—73-03093
**Monteil, A.** See Cormier, G.; Vergara, I.
**Monteil, C.** See Cros, B.
**Monteiro, Paulo J. M.** See Scrivener, Karen L.
**Monteiro, R. C. C.; Silva, F. I. F.; Lima, M. M. R. A.**
Effect of the addition of $TiO_2$ and $ZrO_2$ on the crystallization of calcium aluminosilicate glasses.—73-14362; Sintering and crystallization of cordierite glass powders.—73-14491
**Monteith, Jennifer** See Li, Ying-Jeng James
**Montenero, A.** See Avramov, I.; Gusmano, Gualtiero; Lan, Luo; Lottici, Pier Paolo
**Monter, Burghardt** See Zahn, Ingo
**Montero, I.; Galan, L.; Laurent, A.; Perriere, J.; Spousta, J.**
X-ray photoelectron spectroscopy and X-ray-excited Auger electron spectroscopy studies of the initial deposition of hydrogenated amorphous carbon.—73-05523
**Montero, I.; Galan, L.; Pivin, J. C.; Sanchez, O.; Albella, J. M.**
Infrared absorption and X-ray photoelectron spectroscopy studies of the anodic oxidation of plasma silicon nitride.—73-02877
**Montesperelli, Giampiero** See Gusmano, Gualtiero
**Montgomery, D. G.; Wang, G.**
Instant-chilled steel slag aggregate in concrete—strength-related properties.—73-00127
**Montgomery, Lionel C.**
Nonaqueous composition for slip casting or cold forming refractory material into solid shapes.—73-01873
**Montgomery, P. C.; Vabre, P.; Montaner, D.; Fillard, J. P.**
Characterization of III-V materials by optical interferometry.—73-07407; Characterization of III-V materials by optical interferometry.—73-14802
**Monthioux, M.** See Cojeau, D.
**Montreuil, Clifford; Gandhi, Haren S.; Chattha, Mohinder S.**
Method for purification of lean-burn engine exhaust gas.—73-12383
**Montuori, M.** See Bottiglione, A.
**Monty, C.** See Boussetta, H.
**Monzo, J.** See Peris Mora, E.
**Moodera, J. S.; Meservey, R.; Hao, X.**
Variation of the electron-spin polarization in EuSe tunnel junctions from zero to near 100% in a magnetic field.—73-16646
**Moodle, Alec F.** See Bastow, Timothy J.
**Moody, Kenneth J.** See MacZura, George
**Mook, H. A.** See Mason, T. E.; Yethiraj, M.
**Mook, H. A.; Chakoumakos, B. C.; Mostoller, M.; Boothroyd, A. T.; Paul, D. M.**
Phonons and superconductivity in $Bi_2Sr_2CaCu_2O_8$.—73-08164
**Mook, H. A.; Yethiraj, M.; Aeppli, G.; Mason, T. E.; Armstrong, T.**
Polarized neutron determination of the magnetic excitation in $YBa_2Cu_3O_7$.—73-15582
**Mook, H. A.; Yethiraj, M.; Wignall, G. D.; Forgan, E. M.; Lee, S. L.; Cubitt, R.**
Neutron measurements of the vortex lattice in $YBa_2Cu_3O_7$.—73-04777
**Moon, Anthony R.; Phillips, Matthew R.**
Defect clustering and color in Fe,Ti: α-$Al_2O_3$.—73-05540
**Moon, B. M.** See Koga, T.
**Moon, B. M.; Korenivskii, V. N.; Rao, K. V.; Kim, Y. J.**
Microstructural and magnetic studies of sinter-forged (Bi, Pb)$_2Sr_2Ca_2Cu_3O_x$ superconductor.—73-15554
**Moon, B.** See Kordas, G.
**Moon, E. E.** See Chu, W.
**Moon, H.-S.** See Park, Jong-Wan
**Moon, Hwan-Goo** See Park, Jin-Seong
**Moon, Jong-H.** See Jang, Hyun-M.
**Moon, Jong; Ito, Toshimichi; Hiraki, Akio**
Growth and characterization of thin SiN films grown on Si by electron cyclotron resonance nitrogen plasma treatment.—73-09153
**Moon, K. S.** See Ingle, S. G.
**Moon, Sung-Hoon** See Kim, Byong-Ho
**Moon, Sung-Whan** See Park, Jeong-Hyun
**Mooney, John B.; Sher, A.**
Method of forming shaped superconductor materials by electrophoretic deposition of superconductor particulate coated with fusible binder.—73-01716
**Moons, Ellen; Engelhard, Tina; Cahen, David**
Ohmic contacts to *p*-$CuInSe_2$ crystals.—73-07700
**Moore, Arthur W.**
Process for forming a crack-free boron nitride coating on a carbon structure.—73-12509
**Moore, Clyde H.** See Heydari, Ezat
**Moore, Doug** See Tuson, G. B.
**Moore, Edmund H.; Andrews, Kimberly**
Carbon coating of ceramic materials by pyrolysis of polymeric-based systems.—73-16662
**Moore, Edmund H.; Clark, David E.; Hutcheon, Ronald M.**
Removal of polymethyl methacrylate binder from alumina using conventional and/or microwave heating.—73-06019
**Moore, Edmund H.; Mah, Tai-Il; Keller, Kristin A.**
3-D composite fabrication through matrix slurry pressure infiltration.—73-17059
**Moore, F.** See Tadayon, Bijan
**Moore, G. A.** See Rabin, B. H.
**Moore, H. Gene** See Matthews, R. Bruce
**Moore, J.** See Robertson, A., Jr.
**Moore, John J.** See Chen, Ning-Wei; Feng, H. J.; Mishra, B.; Perkins, N. R.
**Moore, John J.**
First International Conference on Advanced Synthesis of Engineered Structural Materials.—73-16783
**Moore, M. W.** See Szebesta, D.
**Moore, Patrick J.**
Monitoring wastewater takes a fistful of technologies.—73-08422
**Moore, Randall A.** See Benedetto, Joseph M.
**Moore, Scott P.** See Bronson, Lance A.
**Moore, Stephen; Samdani, Gulam**
New materials set endurance records.—73-00253
**Moore, Taylor**
Superconductors are still hot.—73-11919
**Moore, W. J.**
Identification and active energies of shallow donor in cubic SiC.—73-08884
**Moore, W. T.** See Miner, C. J.; Springthorpe, A. J.
**Moores, Geoffrey M.** See Connally, Patricia
**Moorhead, Arthur J.** See Kim, Hyoun-Ee

**Moorhead, Arthur J.; Lochman, Ronald E.; Johnson, Sylvia M.**
Ceramic Transactions, Volume 35: Structural Ceramics Joining II.—73-17518
**Moorhead, Arthur J.; Simpson, William A., Jr.**
Effect of surface preparation on strength of ceramic joints brazed with active filler metal.—73-03582
**Morach, Eugen** See Schwarz, Martin
**Morachevskii, A. G.** See Galitskii, I. N.
**Moradi, B.** See Knox, R. D.
**Moraes, Fernando** See De Miranda-Neto, J. A.
**Morales, J.** See Hernan, L.; Mateos, J. M. J.
**Moran, E.** See Senaris-Rodriguez, M. A.
**Moran, Kelly L.; Gier, Thurman E.; Harrison, William T. A.; Stucky, G. D.; Eckert, H.; Eichele, K.**
Synthesis and characterization of mixed ZnSe/GaP semiconductor species included in the sodalite structure.—73-15196
**Moran, O.** See Prieto, P.
**Morancho, Roland** See Nowak, Jean-Francois
**Morandi, Roberto** See Narducci, D.
**Morante, J. R.** See Bota, S. A.; Peiro, F.; Scheid, E.
**Moranville-Regourd, Micheline; Boikova, Alexandra I.**
Chemistry, structure, properties, and quality of clinker.—73-09853
**Morar, J. F.** See Northrop, G. A.
**Morar, J. F.; Batson, P. E.**
Measurements of critical point energies in the conduction band structure of $Si_{1-x}Ge_x$.—73-08664
**Morariu, M.** See Pavel, E.
**Moravec, Thomas J.; Eden, Richard C.; Schaefer, Dean A.**
Use of diamond substrates for implementing 3-D MCM's [multichip modules].—73-04182
**Morazzoni, Franca** See Narducci, D.
**Morazzoni, Franca; Scotti, Roberto; Di Nola, Patrizia; Milani, C.; Narducci, D.**
EPR study of the interaction of the ZnO surface with air and air-reducing gas mixtures.—73-08617
**Morazzoni, France** See Di Nola, Patrizia
**More, Karren L.** See Ding, Jow-Lian; Menon, Mamballykalathil N.; Sumakeris, J.
**Moreau, Jean** See Mottet, Leon-Philippe
**Moreau, Michel** See Fely, Daniel
**Moreau, Patrick** See Backhaus-Ricoult, Monika
**Moreira, A. P.** See Silva, R. F.
**Moreira, M. V. B.; Py, M. A.; Ilegems, M.**
Molecular beam epitaxial growth and characterization of modulation-doped field effect transistor heterostructures using InAs/GaaS superlattice channels.—73-11323; Photoluminescence and Hall characterization of pseudomorphic GaAs/InGaAs/AlGaAs heterostructures grown by molecular beam epitaxy.—73-11383
**Morelissen, H. W.; Rikken, A. H. M.; Verhappen, P. J. M.**
Batch handling for glass furnaces.—73-14330
**Morelli, D. T.** See Heremans, J.
**Morena, Robert M.** See Aitken, Bruce G.; Francis, Gaylord L.
**Morena, Robert M.**
Pollucite via low-temperature reaction of glassy frits.—73-14461
**Moreno, S.** See Escardino, A.
**Moreno-Marin, J. A.; Gras-Marti, A.; Auciello, O.**
Transport of sputtered species in plasma sputter deposition systems.—73-06127
**Moretto, P.** See Baxter, D. J.
**Morgan, D. C.** See Hardy, W. N.
**Morgan, D.** See Richardson, J. T.
**Morgan, David L.** See Cukan, Vladimir
**Morgan, David W.** See Araujo, Roger J.; Borrelli, Nicholas F.; Kerko, David J.
**Morgan, J. S.** See Bryden, W. A.
**Morgan, Peter E. D.** See Neurgaonkar, R. R.
**Morgan, Peter E. D.; Marshall, David B.**
Functional interfaces for oxide/oxide composites.—73-15926
**Morgan, S.** See Burshtein, Z.
**Morgart, James R.; Filson, James L.; Peters, Jeffery J.; Bhave, Ramesh R.**
Bacteria removal by ceramic microfiltration.—73-02021
**Morgeneier, K.-D.; Purand, J.**
CAQ [computer-aided quality assurance]—a system concept for the glass industry and a part of computer-aided process control systems.—73-01764
**Morgensen, Gurli; Kindl, Bruno**
Ceramic binder and use thereof.—73-04961
**Morgenstern, I.; Husslein, T.; Singer, J. M.; Matuttis, H. G.**
Double-layer Hubbard model: off-diagonal long-range order in the nodeless *d*-wave channel.—73-04697
**Mori, Daisuke; Ikenaga, Hirotake; Ishigami, Shinobu; Yamada, Masaaki**
Drying shrinkage of high-strength concrete.—73-09893
**Mori, H.** See Shiragami, Tsutomu; Toyama, Shigeki
**Mori, H.; Yasuda, H.; Sumida, N.; Fujita, H.**
Foreign atom implantation by high-energy electron irradiation.—73-16784
**Mori, Hideo** See Yamashita, Hiroshi
**Mori, Hideo; Yamashita, Hiroshi; Nakamura, Kunihiko; Maekawa, Takashi**
Synthesis of spherical porous silica particles.—73-14512; Synthesis of spherical porous silica particles.—73-14513
**Mori, Hidetsugu; Igarashi, Jun; Sakata, Hironobu**
Electrical properties of $V_2O_5$-ZnO-$TeO_2$ glasses.—73-14177
**Mori, Hidetsugu; Kitami, Takashi; Sakata, Hironobu**
Electrical conductivity of $V_2O_5$-$Bi_2O_3$-$TeO_2$ glasses.—73-04305; 73-14173
**Mori, Hiroshi** See Tanigawa, Yasuo; Zhu, Zi-Qiang
**Mori, Hirotaro** See Komatsu, Masao
**Mori, Junichirou; Yoshimura, Matsuichi; Oguchi, Yukio; Kawakami, Tatsuo; Ohishi, Izumi**
Effect of slag composition on wear of alumina-spinel castable for steel ladle.—73-14588
**Mori, Kaname; Yoshinari, Hiromi; Nenno, Soji**
Effect of surface grinding on flexural strength of alumina.—73-09581
**Mori, Katsumi** See Nakashima, Kunihiko
**Mori, Koichiro** See Watari, Takanori
**Mori, Masami** See Kineri, Tohru
**Mori, Masashi; Yoshikawa, Masahiro; Itoh, Hibiki; Abe, Toshio**
Effect of alumina on sintering behavior and electrical conductivity of high-purity yttria-stabilized zirconia.—73-14693
**Mori, Natsuki**
Superconductivity in transparent Sn-doped $In_2O_3$ films.—73-01679
**Mori, Nobuo** See Adachi, Seiji; Matsumoto, Takehiko
**Mori, Norihisa** See Muto, Norio
**Mori, Norihisa; Muto, Norio; Yanagida, Hiroaki**
Improvement of output voltage in ir sensor using semiconductive fiber by treatment of high-voltage pulse.—73-07576; 73-14973
**Mori, Shigeto** See Takenaka, Takashi
**Mori, T.** See Yasuda, Kouichi
**Mori, Takeshi** See Sasaki, Katsuhiro
**Mori, Toru; Furuya, Mitsuru; Ochi, Atsushi**
Ceramic composition.—73-11003
**Mori, Toru; Ochi, Atsushi; Utsumi, Kazuaki; Yoshimoto, Tetsuo; Sugano, Souichiro; Abe, Shinji**
Dielectric ceramic compositions.—73-04205
**Mori, Toshiaki; Horiuchi, Tatsuro; Iga, Takeo; Murase, Y.**
Large surface area of $SiO_2$-coated fibrous crystals of alumina after heating at >1573 K.—73-13114
**Mori, Toshiyuki** See Hoshino, Hirokuni; Kobayashi, Hidehiko; Kubota, Yoshitaka; Kuramochi, Hideto
**Mori, Toshiyuki; Hoshino, Hirokuni; Ishikawa, Yoshimitsu; Yamaguchi, T.; Yamamura, Hiroshi; Kobayashi, Hidehiko**
Preparation of $ZrSiO_4$ powder using sol-gel process: IV, Preparation from $ZrOCl_2$ and colloidal $SiO_2$.—73-02978
**Mori, Toshiyuki; Yamada, Yoshiyasu; Yamamura, Hiroshi; Kobayashi, Hidehiko; Mitamura, Takashi**
Reactivity of high-purity $ZrSiO_4$ sintered bodies for alkaline glass melts.—73-00849; 73-13489
**Mori, Toshiyuki; Yamamura, Hiroshi; Kobayashi, Hidehiko; Mitamura, Takashi**
Sintering of high-purity $ZrSiO_4$ powder.—73-03008
**Mori, Toshiyuki; Yamamura, Hiroshi; Kobayashi, Hidehiko**
Formation mechanism of $ZrSiO_4$ powders.—73-13064
**Mori, Toshiyuki; Yamamura, Hiroshi; Ogino, Hiroyuki; Kobayashi, Hidehiko; Mitamura, Takashi**
Influence of oxygen ion conduction on nitric oxide decomposition.—73-16519; Synthesis and mechanical properties of alumina–MgO-stabilized zirconia–zircon composite.—73-06082; 73-17021
**Mori, Tsutomu** See Sato, Kazunori
**Mori, Y.** See Izumi, T.
**Mori, Yoshifumi** See Narui, Hironobu
**Mori, Yusuki; Deguchi, Masahiro; Okada, Takashi; Eimori, Nobuhiro; Yagi, Hiromasa; Hatta, Akimitsu**
Electrical properties of boron-implanted homoepitaxial diamond films.—73-16478
**Moriarty, P.; Murphy, B.; Hughes, G.**
Scanning tunneling microscopy study of the ambient oxidation of passivated GaAs(100) surfaces.—73-07784
**Moriceau, H.** See Villegier, J. C.
**Morifuji, M.** See Mizuno, H.
**Moriga, Toshihiro** See Matsushita, Isao
**Moriga, Toshihiro; Takemoto, Shoichi; Tsukaguchi, Hirokazu; Nakabayashi, Ichiro; Koto, Kichiro**
Preparation and superconductivity of the T*-type $(PrGd_{0.8}A_{0.2})CuO_z$ compounds (A=Ca, Sr).—73-15589; Preparation and T*-type characterization of superconductor in the Pr-Gd-A-Cu-O system (A=Ca, Sr).—73-08174
**Moriguchi, Hideki; Kobayashi, Mitsunori; Nomura, Toshio; Nakamata, Tosiaki**
Method for manufacturing a cutting tool insert made of a silicon nitride body.—73-12485
**Morii, K.** See Kawano, H.
**Morikawa, Asao; Kondo, Kazuo**
Process for producing ceramic sintered body having metallized via hole.—73-14760
**Morikawa, Asao; Miura, Kazunori; Kondo, Kazuo**
Composition for metallizing ceramics.—73-03680
**Morikawa, H.** See Kawamoto, Y.
**Morimitsu, Hideki** See Suzuki, Hiroshi
**Morimiya, Osami** See Noda, Etsuo
**Morimoto, Kenji** See Yashima, Masatomo
**Morimoto, S.** See Sueda, M.
**Morimoto, Shigeki** See Nakajima, Hiroshi; Tabuchi, Heiji
**Morimoto, Takeshi** See Shimoyama, Junichi
**Morin, D.** See Santa-Cruz, P.
**Morin, G. F.** See Hutcheon, Ronald M.
**Morinaga, Kenji** See Chu, Judy; Hayashi, Koichi; Kuromitsu, Yoshirou; Nageno, Yoshikazu; Takebe, Hiromichi
**Morioka, Toshimichi; Hirano, Yasuhisa; Iwahashi, Akira; Matsuo, Masataka; Kurayoshi, Kazuyoshi; Ishii, Akio**
Continuous kiln.—73-01974
**Moriroto, Hiroaki; Iwamoto, Takahiro; Koyanagi, Wataru**
Effect of temperature on stress relaxation of concrete at early ages.—73-09920
**Morishita, Masao** See Koyama, Koichiro
**Morishita, Tadataka** See Hase, Takashi; Kamei, Masayuki
**Morita, Akihiro** See Asano, Sadame
**Morita, Hiroyuki** See Funayama, Masahiro
**Morita, Kazuki** See Uo, Motohiro
**Morita, Masao** See Kobayashi, Toshio
**Morita, Mitsuru** See Takizawa, Takeo
**Morita, Mitsuru; Miyamoto, Katsuyoshi; Murakami, Masato; Matsuda, S.**
$YBa_2Cu_3O_{7-y}$-type oxide superconductive material containing dispersed $Y_2BaCuO_5$ phase and having high critical current density.—73-12007
**Morita, Mitsuru; Miyamoto, Katsuyoshi; Sawano, Kiyoshi; Matsuda, S.**
Oxide superconductor and process for preparation thereof.—73-04861
**Morita, Naofumi**
Technical innovations in dinnerware manufacturing.—73-04048
**Morita, Noboru; Kuwata, Takashi**
Influence of defocus length on hole features in laser drilling of ceramics.—73-16836
**Morita, Noboru**
Crack-free processing of hot-pressed silicon nitride ceramics using pulsed YAG laser.—73-05721; Generation and propagation behavior of laser-induced thermal cracks.—73-05571; 73-16500
**Morita, Shoji; Sekiwa, Hideyuki; Toshima, Hiroaki; Miyazawa, Yasuto**
Growth of $Al_2O_3$ single crystals by the Czochralski method.—73-05830; Growth of $Al_2O_3$ single crystals by the Czochralski method.—73-13079
**Morita, Toshifumi; Yamashita, Hiroshi; Maekawa, Takashi**
$Ce^{4+}/Ce^{3+}$ equilibrium in mixed alkali borate melts.—73-13949
**Moritz, H.; Rosen, B.; Popovic, S.; Rizzi, A.; Luth, H.**
Si(111)/$FeSi_2$ heterostructures: formation and properties of the low-temperature metallic (gamma) and semiconducting (beta) disilicide phases.—73-07798
**Moritz, Heiko** See Rizzi, A.
**Moriya, Takahiko** See Mikata, Yuuichi
**Moriya, Yoshihiro; Sonoyama, Mikako; Nishikawa, Fuyuki; Hino, Ryoji**
Preparation of polymer hybrids of the $SiO_2$-PVA or $SiO_2$-PEG system and porous materials made from hybrid gels.—73-03874; 73-16929
**Moriyama, Minoru** See Suzuki, Mineo
**Moriyama, Minoru; Aoki, Hiroo; Kobayashi, Yoshikazu; Kamata, Kiichiro**
Mechanical properties of hot-pressed TiN ceramics with various additives.—73-06480; 73-17386
**Moriyama, Minoru; Ichino, Tadasu; Hayashi, Noriyuki; Kamata, Kiichiro**
Thermal stability of $SiN_xC_y$ films prepared by plasma CVD.—73-08776; Thermal stability of $SiN_xC_y$ films prepared by plasma CVD.—73-17212
**Moriyama, Minoru; Kamata, Kiichiro; Kobayashi, Yoshikazu**
Mechanical and electrical properties of hot-pressed TiN ceramics without additives.—73-06477
**Moriyama, Minoru; Maeda, Yuuji; Kamata, Kiichiro**
Dc electrical conductivity of $Si_3N_4$-SiC films prepared by plasma CVD.—73-16437
**Moriyoshi, Yusuke** See Ishigaki, T.; Komatsu, Shojiro
**Morizono, Yasuhiro; Nishida, Minoru; Chiba, Akira**
Joining of chromized carbon steel and $Si_3N_4$.—73-13855
**Morjan, I.** See Borsella, E.
**Morkel, P. R.; Jedrzejewski, K. P.; Taylor, E. R.**
*Q*-switched Nd-doped phosphate glass fiber lasers.—73-14264
**Morkoc, H.** See Lin, M. E.; Mui, D. S. L.; Shen, T. C.; Strite, S.; Zhou, G. L.
**Morlier, Pierre** See Benaissa, Abdelatif
**Morooka, Hisao** See Yano, Yoshihiko
**Morooka, Hitoshi** See Honda, Kinya
**Morooka, Shigeharu** See Okubo, T.; Tsugeki, Keiichi
**Morosini, M. B. Z.; Herrera-Perez, J. L.; Loural, M. S. S.; Von Zuben, A. A. G.; Da Silveira, A. C. F.; Patel, N. B.**
Low-threshold GaInAsSb/GaAlAsSb double heterostructure lasers grown by LPE.—73-15025
**Moroz, I. Kh.** See Shmeleva, V. I.
**Morozenko, Ya. V.** See Estropov, V. V.; Lin'kov, I. Yu.
**Morozov, A. I.** See Grebnik, V. G.
**Morozov, A. N.** See Bublik, V. T.
**Morozov, I. I.** See Gal'tseva, E. V.
**Morozov, N. V.** See Babinskii, A. V.; Golovenchits, E. I.
**Morozov, S. V.; Dubrovskii, Yu. V.**
Nonlinear behavior of the Shubnikov-de Haas oscillations on short-channel $Al_xGa_{1-x}As/GaAs$ heterostructures subjected to strong electric fields.—73-11352
**Morozova, E. V.** See Roskova, G. P.
**Morozova, E. V.**
Effect of antimony oxide on phase separation in sodium borosilicate glass.—73-00329; 73-00330; Kinetic peculiarity of isothermal particle growth of dispersed phase in phase-separated sodium borosilicate glass.—73-14023; Peculiarities in the kinetics of isothermal growth of particle size of the dispersed phase in liquifying sodium borosilicate glass.—73-00384; Phase separation in sodium borosilicate glass with additions of the oxides $ZrO_2$ and CaO.—73-00386; Phase separation in sodium borosilicate glass with $ZrO_2$ and CaO additives.—73-00387
**Morozova, L. V.; Glushkova, V. B.**
Physicochemical aspects of a limiting oxide-based solid solution in the $In_2O_3$-$TiO_2$ system and indium titanate.—73-16568
**Morozova, N. K.** See Gribkovskii, V. P.
**Morozova, O. V.** See Roginskaya, Yu. E.
**Morozova, O. V.; Roginskaya, Yu. E.; Varlamova, T. V.**
Structure and forming processes of coatings based on the oxides of iridium, titanium, and tin.—73-16330
**Morozova, V. I.** See Syrbu, N. N.
**Morral, J. E.; Romig, A. D., Jr.**
Computer programs for modeling diffusion-controlled processes.—73-13343
**Morrell, Roger; Gee, Mark**
Ceramic activities in Vamas [Versailles Project on Advanced Materials and Standards].—73-06560
**Morrell, Roger; McCartney, L. N.**
Measurement of properties of brittle matrix composites.—73-03323
**Morrell, Roger**
Thermal shock testing and the problem of standardization.—73-05672
**Morris, A.** See Flowers, Michael C.
**Morris, Donald E.** See Nickel, Janice H.
**Morris, Douglas** See Hoang, Truc G. N.
**Morris, G. C.** See Das, S. K.

**Morris, I. L.; Jenkins, T. E.; Goodes, S. R.**
Characterization of GaAs on Si using polarized laser light.—73-07406
**Morris, M.; Dixon, A. G.; Sacco, A.; Thompson, R. W.**
Relative effectiveness of some tertiary alkanolamines in the synthesis of large-crystal zeolite NaA.—73-09302
**Morris, P. A.; Crawford, M. K.; Jones, B.**
Infrared study of $OH^-$ defects in $KTiOPO_4$ crystals.—73-13355
**Morris, P. J.; Luthy, W.; Weber, H. P.**
Operation of resonantly pumped Tm:Ho:YAG in active mirror mode.—73-12843
**Morris, R. C.** See Gualtieri, D. M.
**Morris, R. E.; Harrison, W. T. A.; Stucky, G. D.; Cheetham, Anthony K.**
Syntheses and crystal structures of two novel aluminum selenites, $Al_2(SeO_3)_3{\cdot}6H_2O$ and $AlH(SeO_3)_2{\cdot}2H_2O$.—73-02475
**Morris, Winfred L.; Cox, Brian N.; Marshall, David B.; Inman, Richard V.; James, Michael R.**
Fatigue mechanisms in graphite/SiC composites at room and high temperature.—73-06419
**Morrison, C. T.; Routbort, J. L.; Scattergood, R. O.; Warren, R.**
Erosion of an aligned alumina-stainless steel composite.—73-06782
**Morrison, Clyde A.** See Seltzer, Michael D.
**Morrison, D. W.** See Chen, C. H.
**Morrison, Philip W.; Haigis, John R.**
In situ infrared measurements of film and gas properties during the plasma deposition of amorphous hydrogenated silicon.—73-05855
**Morrissey, V.** See Lonergan, J.
**Morrow, Mark**
Fiber partitions meet new packaging demands.—73-14379
**Morrow, Marvin S.** See Holcombe, Cressie E.
**Morscher, Gregory N.** See Goldsby, Jon C.
**Morscher, Gregory N.; Chen, K. C.; Mazdiyasni, K. S.**
Creep resistance of developmental polycrystalline yttrium aluminum garnet fibers.—73-17268
**Morscher, Gregory N.; Di Carlo, J. A.; Ning, X. J.; Pirouz, P.**
Effect of heat treatment on the stress relaxation and microstructure of CVD SiC fibers.—73-09576
**Mortensen, Andreas; Koczak, Michael J.**
Status of metal matrix composite research and development in Japan.—73-06859
**Mortensen, Andreas; Michaud, Veronique; Flemings, Merton C.**
Pressure infiltration processing of reinforced aluminum.—73-06843
**Morterra, Claudio** See Bolis, Vera
**Morterra, Claudio; Bolis, Vera; Fubini, Bice; Orio, L.; Williams, T. B.**
FTIR and HREM study of some morphological and adsorptive properties of monoclinic $ZrO_2$ microcrystals.—73-03145
**Morterra, Claudio; Emanuel, Cristina; Cerrato, Guiseppina; Magnacca, Giuliana**
Ir study of some surface properties of boehmite ($\gamma$-$AlO_2H$).—73-08652
**Morterra, Claudio; Magnacca, Giuliana; Cerrato, Guiseppina; Del Favero, N.; Filippi, F.; Folonari, C. V.**
XRD, HRTEM, and FTIR study of Ca-doped $Al_2O_3$.—73-12738
**Mortier, W. J.** See Lievens, Jan L.
**Mortimer, M.** See Berry, Frank J.
**Mortuza, M. G.** See Holland, D.
**Morucchio, P.** See Guadagnino, Emanuel
**Moschelle, W. R.** See Headinger, M. H.; Klacka, R. W.
**Moschelle, W. R.**
Load ratio effects on the fatigue behavior of silicon carbide fiber-reinforced silicon carbide.—73-17373
**Mosci, Ricardo A.**
Rotary kiln with a polygonal lining.—73-12251
**Moseichuk, G. S.** See Blazhku, A. I.
**Mosel, G.; Hubert, T.; Blau, W.**
X-ray absorption study of the Ti coordination in glasses of the system $SrO$-$B_2O_3$-$Al_2O_3$-$TiO_2$.—73-14126
**Moseley, P. T.** See Macklin, W. J.; McGeehin, Peter; Pienkowski, M. C.
**Moser, Horst**
Recycling waste laminated glass.—73-15750; Spanish batch plant success.—73-00704
**Moses, Daniel** See Marchywka, Mike
**Moshchalkov, V. V.** See Aliev, F. G.; Marin, C.
**Moshchalkov, V. V.**
High-$T_c$ cuprates as 2-D quantum antiferromagnets.—73-08093
**Moshchenko, I. N.** See Prisyazhny, V. D.
**Moshegov, N. T.** See Shegai, O. A.
**Mosher, Paul** See Heredia, Fernando E.
**Moshnikov, V. A.** See Andreeva, E. V.
**Mosin, Yu. M.** See Bendovskii, E. S.; Leonov, V. G.; Mal'kov, M. A.
**Mosin, Yu. M.; Leonov, V. G.**
Rheological properties of plastic aluminum nitride mixes containing anhydrous binders.—73-02999
**Mosin, Yu. M.; Zakharov, I. A.; Lavrova, E. O.**
Effect of some factors on centrifugal casting of oxide ceramics.—73-12026
**Mosjouama, Latsijorp; Taguchik, Keisuke; Tagagi, Kenichi; Ozaki, Shinya**
Friction and wear characteristics of $B_4C$-$TiB_2$ ceramics and $Mo_2FeB_2$-Fe-type cermets.—73-13839
**Moskalenko, A. M.** See Samkova, L. G.
**Moskalets, N. B.** See Batalin, B. S.
**Moskvin, A. L.** See Chernov, S. V.; Gan'shina, E. A.
**Moskvin, A. S.** See Karnachev, A. S.; Valiev, U. V.
**Moskvin, A. S.; Artem'ev, G. G.; Kadomtseva, A. M.; Ledneva, T. M.; Leekina, M. M.; Ovchinnikova, T. L.**
Weak ferrimagnetism in neodymium ferrite chromites.—73-01484
**Mosnier, Francis** See Blandin, Yannick
**Mosoni, L.** See Tosan, Jean-Luc
**Moss, D.** See Halliday, D. P.; Kakasaki, B. W.; McGreer, K. A.; Ye, F.
**Moss, Renny N.** See Griffin, Christopher J.
**Moss, Rodney H.** See Walling, Richard H.
**Mossakowska, Agnieszka; Szczepanski, P.; Wolinski, Wieslaw**
Influence of spatial hole burning effects on relaxation oscillations in waveguide-distributed feedback $Nd^{3+}$:YAG lasers.—73-16520
**Mossang, E.** See Hudner, J.
**Mosset, A.; Enjalbert, R.; Lecante, P.; Galy, J.**
New glasses in the As-V-O system, LAXS and EXAFS studies.—73-14051
**Mostafa, M. Z.; Kassem, A. S. A.**
Effect of cobalt oxide base coats on the process parameters of direct-on porcelain enameling.—73-10220; Effect of manganese oxide base coats on the process parameters of direct-on porcelain enameling.—73-10221
**Mostaghimi, J.** See Jankovic, M.
**Mostoller, M.** See Mook, H. A.
**Mostowicz, Ryszard** See Tavolaro, Adalgisa
**Motakef, S.** See Becia, P.
**Motkov, V. A.** See Lipovskii, A. A.
**Moto, Teruyuki** See Osaka, Shigemi
**Motoe, Akihiro** See Hasegawa, Akihiro
**Motohira, N.** See Chikumoto, N.
**Motoie, Katsuhiko** See Sasaki, Kazunori
**Motokawa, Mitsuhiro** See Ohta, Hitoshi
**Motomachi, Tsutomu; Kanatani, Toshio; Matsuda, Keiji; Shoji, Shigeo**
Techniques to extend campaign life of blast furnace at Mizushima Works [Kurashiki, Japan].—73-14627
**Motowaki, Shigehisa** See Nakanishi, Kazuki
**Motowidlo, L. R.** See Haldar, Pradeep
**Motoyama, Atsushi** See Hata, Kazuo
**Motoyama, Muneyuki** See Kawai, Susumu; Kohzuki, Hidenori
**Motrya, S. F.** See Perechinskii, S. I.
**Mott, N. F.** See Alexandrov, A. S.
**Mott, N. F.**
Bipolaron model of high-$T_c$ superconductivity: a discussion of overdoping.—73-11696; Spin-age effects in the resistivity of copper oxide superconductors.—73-11904
**Mottet, Leon-Philippe** See Robyn, Pierre
**Mottet, Leon-Philippe; Zvosec, Charles M.; Cherico, Stephen D.; Zivkovic, Alexandre; Van Marcke de Lummen, Guy; Moreau, Jean**
Ceramic welding process.—73-02031
**Mottet, S.** See Ripoche, G.
**Mottret, C.** See Larive, M.
**Motzet, H.** See Oberste-Padtberg, R.
**Moudgil, Brij M.** See Kulkarni, Nagraj; Pradip,
**Moudgil, Brij M.; Behl, Sanjay**
Characterization techniques for agglomerate structures.—73-08380
**Moukwa, M.; Brodwin, M.; Christo, S.**
Influence of the hydration process upon microwave properties of cements.—73-00126
**Moukwa, M.; Lewis, B. G.; Shah, Surendra P.; Ouyang, Cheng-Sheng**
Effects of clays on fracture properties of cement-based materials.—73-03458
**Moukwa, M.; Sarkar, Shondeep L.; Luke, Karen; Grutzeck, Michael W.**
Ceramic Transactions, Volume 37: Cement-Based Materials: Present, Future, and Environmental Aspects.—73-13651
**Moukwa, M.; Youn, D.; Hassanali, M.**
Effects of degree of polymerization [DP] of water-soluble polymers on concrete properties.—73-03459
**Moulin, E.** See Smillie, S.
**Moulson, A. J.** See Iddles, D. M.
**Moune, O. K.** See Faucher, M.
**Moure, C.** See Gonzalez, M.; Villegas, Maria Angeles
**Mouri, Motoya** See Takeuchi, Tatsuro
**Mouri, T.** See Sano, T.; Sato, H.
**Mouron, P.** See Bobrysheva, N. P.
**Mourou, Gerard A.** See Gupta, S.
**Mousa, M. S.**
Effect of an internally conductive coating on the electron emission from glass tips.—73-00951
**Moussa, F.** See Dolino, Gerard
**Moussa, R.** See Saadi, L.
**Moustakas, Theodore D.** See Lei, T.
**Moustakas, Theodore D.**
Defect-induced control of the structure of boron nitride.—73-12461
**Moutinho, H. R.** See Abou-Elfotouh, Fouad A.; Ashour, S.
**Moutonnet, D.** See Barriere, A. S.; D'Avitaya, F. Arnaud; Favennec, P. N.
**Movchan, Boris A.; Chevychelov, Alexander A.; Decker, Raymond F.**
Apparatus and method for producing carbide coatings.—73-01841
**Moxey, D. E.** See Zhang, Tong
**Moy, A. M.** See Chen, A. C.
**Moy, A. M.; Chen, A. C.; Jackson, S. L.; Liu, X.; Cheng, K. Y.; Stillman, G. E.**
Optimization of interfaces in arsenide-phosphide compounds grown by gas-source [GS] molecular beam epitaxy.—73-11363
**Moya, E.** See Zaldo, C.
**Moya, E.; Zaldo, C.; Briat, B.; Topa, V.; Lopez, F. J.**
Optical, magnetooptical, and EPR study of chromium impurities in $Bi_4Ge_3O_{12}$ single crystals.—73-16241
**Moya, J. S.** See Barba, M. F.; Callahan, D. L.; Liu, Kuo-Chung; Miranzo, Pilar; Nieto, M. Isabel; Torrecillas, Ramon
**Moyer, John R.; Hughes, Neal N.**
Catalytic process for mullite whiskers.—73-09030
**Moyer, John R.; Rudolf, P. R.**
Stoichiometry of fluorotopaz and of mullite made from fluorotopaz.—73-08744
**Moyer, R. O.** See Lindsay, R.
**Moynihan, C. T.** See Hasz, W. C.; Schroeder, John
**Moynihan, C. T.; Schroeder, John**
Anomalous light scattering in the glass transition region.—73-06997; Nonexponential structural relaxation, anomalous light scattering, and nanoscale inhomogeneities in glass-forming liquids.—73-06946
**Moyoshi, Tadahiko** See Kodama, Hironori
**Moze, O.; Greaves, C.; Bouree, Vigneron F.; Cockayne, B.; Macewan, W. R.; Smith, N. A.**
Magnetic structure of $Fe_3GaAs$.—73-15029
**Mozhaev, A. P.; Chernyaev, S. V.; Udal'tsova, T. I.**
Kinetics of oxidation of $YBa_2Cu_3O_{6+y}$.—73-15528
**Mozol, P. E.** See Artamonov, V. V.; Baidullaeva, A.
**Mrkva, Frantisek**
Creeping and temperatures in the forming gob.—73-03829; Kinetics of the forming gob.—73-03853; Properties of the flow line as a score.—73-00691
**Mrnikova, Miroslava; Machova, Gabriela; Plsko, Alfonz; Durcanska, Edita**
Titanium nitride coatings created by nitriding titanium dioxide coatings on corundum cutting tools.—73-03063
**Mrnikova, Miroslava; Plsko, Alfonz; Durcanska, Edita**
Preparation of $Al_2O_3$-$TiO_2$ coatings by sol-gel method and their nitridation.—73-03868
**Mroz, Cathleen**
Processing TiZrC and $TiZrB_2$.—73-08538; Titanium diboride.—73-12304; Zirconium diboride.—73-12308
**Mroz, Thomas J.** See Groat, Eric A.
**Mroz, Thomas J.; Groat, Eric A.; Buckner, John P.; Prinzbach, Joseph M.**
Improved carbon coatings for silicon carbide whiskers.—73-16831
**Mroz, Thomas J.; Groat, Eric A.**
Fabrication and properties of AlN-SiC whisker composites.—73-09126
**Mroz, Thomas J.**
Aluminum nitride.—73-12255; Oxidation of AlN matrix composites containing discrete SiC whiskers.—73-17232; Stability of AlN-SiC whisker composites containing sintering aids.—73-17008
**Msall, M. E.** See Weilert, M. A.
**Mu, Bai-Chun**
Application of silica sol to permeable cermet.—73-06738
**Mu, R.** See Burshtein, Z.
**Mu, Xiao-Dong; Shao, Z.-S.; Chen, Jun; Yue, Xue-Feng; Zhou, Zhuang**
Theoretical analysis of Cerenkov second harmonic generation [CSHG] in proton-exchanged $c$-cut $MgO$:$LiNbO_3$ optical waveguides.—73-07922
**Muccillo, R.** See Cosentino, I. C.
**Muck, G.** See Lang, W.
**Mudrakovski, Igor L.** See Terskikh, Victor V.
**Mueller, Brian L.** See Laine, Richard M.
**Mueller, Carl A.** See Bednorz, J. G.
**Mueller, Carl H.** See Holloway, Paul H.
**Mueller, D.** See Gabrovsek, R.
**Mueller, E. R.** See Goodhue, W. D.
**Mueller, E. R.; Larsen, D. M.; Waldman, J.; Goodhue, W. D.**
Definite identification of $D^-$ centers in GaAs quantum wells by tilt-induced splitting in a magnetic field.—73-07439
**Mueller, F. M.** See Fowler, C. M.
**Mueller, P.; Schvoerer, M.; Berger, R.; Jacquet-Francillon, N.**
Coupled thermostimulated luminescence/electron spin resonance study in pure vitreous silica: application to alpha radiation damage study.—73-07006
**Mueller, U.** See Smith, R. W.
**Muenchausen, Ross E.** See Kung, Pang-Jen; Luo, J.; Wu, X.-D.; Wu, Xin-D.
**Muhamad, M. N.; Barnes, Paul; Fentiman, C. H.; Hausermann, D.; Pollmann, H.; Rashid, S.**
Time-resolved synchrotron energy dispersive diffraction [EDD] of the dynamic aspects of the synthesis of ettringite during mine packing.—73-00199
**Muhl, Stephen** See Mendez, Juan Manual
**Muhling, I.** See Ullmann, J.
**Mui, D. S. L.; Wang, Z.; Morkoc, H.**
Review of III-V semiconductor-based metal-insulator-semiconductor structures and devices.—73-15149
**Muir, Z. A.; Schmalzried, H.**
Effect of external fields on mass-transport and defect-related phenomena.—73-13348
**Mujica, A.; Munoz, A.**
Self-consistent tight-binding calculations of band offsets in GaAs/$Al_xGa_{1-x}As$-(110) and GaSb/$Al_xGa_{1-x}Sb$-(110) heterojunctions. Theoretical evidence for a new common-anion rule.—73-07792
**Mukae, Kazuo** See Matsui, Toshiyuki; Tsuda, Koichi
**Mukae, Kazuo; Tsuda, Koichi**
$c$-$t$ characteristics of Pr-doped ZnO varistors.—73-01088; 73-11087; Effect of interface states on applied voltage dependence of double Schottky barrier: I, Theoretical calculation.—73-14850; 73-16460; Interface states at grain boundaries and their effects on the $I$-$V$ characteristics in ZnO:Pr varistors—theoretical calculation.—73-11279
**Mukai, Hidehito** See Sato, Kenichi
**Mukai, Kusuhiro** See Yu, Zhong-Da
**Mukai, Takashi** See Nakamura, Shuji; Tanaka, Katsuhisa
**Mukai, Yasuo** See Takeda, Yasuo
**Mukai, Yasuo; Takeda, Yasuo; Imanishi, Nobuyuki; Yamamoto, Osamu**
Electrochemical oxidation and superconductivity of the system $La_{2-x}A_xCuO_{4+\delta}$ (A=Cd, Pb).—73-15450

**Mukaida, Masakazu** See Watanabe, Akio

**Mukaida, Masakazu; Osato, Kazuo; Watanabe, Akio; Imai, Y.; Kameyama, T.; Fukuda, K.**
Densification of $Ta_2O_5$ film prepared by KrF excimer laser CVD.—73-16696

**Mukaida, Masashi; Miyazawa, Shintaro**
Nature of preferred orientation of $YBa_2Cu_3O_x$ thin films.—73-11843; Preferential axis control of $YBa_2Cu_3O_x$ thin films by quasi-lattice-match engineering.—73-08171

**Mukaihara, Katsuji** See Funayama, Masahiro

**Mukaiyama, Takashi** See Taneda, Naoki

**Mukas'yan, A. S.; Rogachev, A. S.; Figush, V.**
Regularities of structure formation at ignition of titanium in nitrogen.—73-13443

**Mukerji, J.** See Das, T.

**Mukhamedbaev, A. A.** See Akhmedov, M. A.

**Mukhamedzhanova, M. T.; Irkakhodzhaeva, A. P.**
Synthesis of colored, nonfritted glazes based on mining-ore waste products.—73-00925

**Mukhametshina, Z. B.; Polyakov, O. G.; Chekmarev, A. M.**
Application of the model of quasi-ideal solutions for consideration of the phase equilibria in the system Zr-$ZrI_4$.—73-16033

**Mukherjee, Amiya K.** See Chokshi, Atul H.

**Mukherjee, Binu K.** See Ahmad, A.; Sherrit, Stewart

**Mukherjee, K.** See Yoo, J. M.

**Mukherjee, M. K.** See Santra, K.

**Mukherjee, P. S.** See Simon, A.

**Mukherjee, P. S.; Simon, A.; Sarma, M. S.; Damodaran, Alathoor D.**
Oriented grain growth in $YBa_2Cu_3O_{7-\delta}$ by alkali metals (Li, Na, and K) substitution.—73-01622

**Mukherjee, P.; Sakthivel, P.; Ahmed, K.; Witanachchi, S.**
Ion activation in the in situ low-temperature laser deposition of superconducting $YBa_2Cu_3O_{7-\delta}$ films.—73-08114

**Mukherjee, S. N.; Alta, Carolyn Rubin**
Cyclic annealing-induced microstructural and crystallographic changes in crystalline yttria films on silica.—73-09056; Kinetics of morphological change during annealing of amorphous yttria.—73-09189

**Mukherjee, S.** See Das, A. C.

**Mukherjee, S.; Maiti, A.; Ghosh, U. S.; Basu, C.**
Ultrasonic investigations of $V_2O_5$-$GeO_2$ glass.—73-07094

**Mukhin, A. A.; Prokhorov, A. S.**
Effect of longitudinal relaxation on dynamic [magnetic] susceptibility of antiferromagnets.—73-15318

**Mukhitdinov, A. M.; Stafeev, V. I.**
Lifetime of the minority carriers in *p*-type epitaxial $Cd_xHg_{1-x}Te$ films.—73-07636

**Mukhitdinova, I. A.** See Yanush, O. V.

**Mukhopadhyay, A. K.; Chakraborty, D.; Datta, S. K.**
High-temperature failure mechanisms of sintered silicon nitride [SSN].—73-06451

**Mukhopadhyay, A. K.; Mai, Yiu-Wing**
Grain size effect on abrasive wear mechanisms in alumina ceramics.—73-06447

**Mukhopadhyay, D. K.; Suryanarayana, C.; Froes, F. H.; Yolton, C. F.**
Combined mechanical alloying and thermochemical processing approach to synthesize titanium aluminides.—73-05712

**Mukhopadhyay, S. M.; Chen, C. S.**
Understanding surface activity of oxides from oxide-metal interface formation.—73-10294

**Mukhortov, V. M.; Tolmachev, G. N.; Mashchenko, A. I.**
Capacitive transverse rf discharges in oxygen at elevated pressures for producing thin films of complex oxides.—73-04678

**Mukhutdinova,** N. G. See Khasanova, N. M.

**Mukoed, G. M.** See Loseva, G. V.

**Mukopadhyay, P. K.** See Suryanarayanan, R.

**Mukoyama, Takeshi** See Ito, Yoshiaki

**Mulenkov, S. Yu.** See Voronkov, V. P.

**Mulerova, A. V.** See Grinberg, V. Ya.

**Mulgrew, P. P.** See Tennant, D M.

**Muller, A. B.** See Reinhardt, F.; Scholz, S. M.

**Muller, A. B.; Reinhardt, F.; Resch, U.; Richter, W.; Rose, K. C.; Rossow, U.**
Hydrogen-terminated Si(100) surfaces investigated by reflectance anisotropy spectroscopy.—73-14971

**Muller, Anette** See Mielke, Ingo; Stark, Jochen

**Muller, B.** See Lutz, H. D.

**Muller, Bernd; Hennicke, Hans-Walter**
Glaze defects and dry application processes.—73-10851

**Muller, C.** See Hanni, W.

**Muller, Dirk** See Seefeld, Verena

**Muller, E.; Heide, K.; Zanotto, E. D.**
Molecular structure and nucleation in silicate glasses.—73-00376

**Muller, Franz** See Boike, Martin

**Muller, G.** See Hirt, G.

**Muller, Gerd** See Sternitzke, Martin; Winter, Wolfgang

**Muller, Gerd; Sternitzke, Martin**
Computer modeling of structure and thermal expansion of ß-quartz- and keatite-type aluminosilicates.—73-02564

**Muller, H.-L.; Nebel, Jurgen**
Problems of slurry formation and processing of ceramic casting bodies caused by raw material quality.—73-00922

**Muller, Horst W.** See Houben, Heinz

**Muller, J.** See Collomb, A.

**Muller, Jean-Claude** See Ventura, Laurent

**Muller, K. A.; Blazey, K. W.; Kool, T. W.**
Tetrahedrally coordinated $Cr^{5+}$ in $SrTiO_3$.—73-05510

**Muller, K.-H.** See Matthews, D. N.

**Muller, Olivier; Joeckle, Rene**
Morphological and electrical modifications in silicon submitted to high-intensity laser irradiation.—73-11339

**Muller, P.** See Kleiner, R.; Staufer, T.

**Muller, R.** See Rybalchenko, L. F.

**Muller, R.; Thamm, D.; Pannhorst, Wolfgang**
Nature of nucleation sites at cordierite glass surfaces.—73-14049

**Muller, S.** See Wang, F.

**Muller, Thomas** See Voltzke, Dieter

**Muller, U.** See Eschnauer, H.

**Muller, Vera** See Leroux, Roland

**Muller, W.** See Isard, J. O.

**Muller, W.**
Corrosion phenomena of medieval stained glasses.—73-14149

**Muller-Sebert, W.** See Samlenski, R.

**Muller-Simon, H.; Ernas, T.**
Influence of chromium on the oxidation state of an industrially melted amber glass.—73-14409

**Muller-Simon, H.; Mergier, K. W.; Schaeffer, H. A.**
Redox control in industrial glass melting by means of zirconia-based sensors.—73-01968

**Muller-Simon, Hayo** See Zink, Marianne

**Muller-Warmuth, Werner** See Buckermann, Wilhelm-August; El-Damrawi, G.

**Mullinger, Peter**
Development by simulation.—73-05108; Simulated heat improves kiln performance.—73-05130

**Mullins, William M.** See Fischer, Traugott E.

**Multani, M. S.** See Hingorani, S.; Palkar, V. R.

**Mulvaney, P.** See Yurgartis, S. W.

**Mumm, Daniel R.; Faber, K. T.**
Micromechanical aspects of fiber debonding and frictional sliding in brittle matrix composites.—73-09649

**Mumtaz, K.; Echigoya, J.; Hirai, T.; Shindo, Yasuhide**
Iridium coatings on carbon-carbon composites produced by two different sputtering methods: a comparative study.—73-10245

**Mun, Chong-Soo** See Park, Han-Soo

**Munakata, F.; Nozaki, A.; Kawano, Takashi; Yamauchi, Hisao**
Electrical conduction in $BaBiO_{3-x}$ at high temperatures.—73-02596

**Munchaev, A. I.** See Bagdasarov, Kh. S.

**Mundi, L. A.; Yaculla, L.; Haushalter, R. C.**
Hydrothermal synthesis, structure, and sorption properties of $Cs(H_3O)[Mo_2O_2(PO_4)_2(HPO)_4]$.—73-02289

**Mundon, C. C.; Flavell, D.**
Thermal processing for TV tube manufacture: process modeling.—73-00711

**Mundschau, M.** See Bauer, E.

**Mundy, J. N.** See Balachandran, Uthamalingam

**Munekata, H.** See Heskett, D.; Ohno, H.

**Munguia, P.** See Kesan, V. P.

**Munidasa, Mahendra** See Mandelis, Andreas

**Munir, Z. A.** See Halverson, D. C.; Wang, L. L.

**Munir, Z. A.**
Theoretical predictions of the synthesis by self-propagating combustion.—73-06113

**Munjone, F. W.; Irons, G.**
Evolution of thermal spray automation.—73-08335

**Munne, V.** See Ohlinger, W. L.

**Munns, G. O.** See Chen, W. L.; Sherwin, M. E.

**Munns, G.** See Nichols, D.

**Munoz, A.** See Mujica, A.

**Munoz, J. M.** See Torres, L.

**Munshi, M. Z. A.; Smyrl, W. H.; Schmidtke, C.**
Insertion reaction of $V_6O_{13}$ electrodes reversibly incorporating divalent cations.—73-04119

**Munshi, M. Z. A.; Smyrl, W. H.**
Insertion reactions of sodium in $V_6O_{13}$ single crystals from a solid polymeric electrolyte.—73-00980

**Munstedt, Rainer**
Use of EDP [electronic data processing] for the development and selection of porcelain enamels.—73-10295

**Muntean, Marcela; Dinulescu, M.; Bedo, Maria**
White belitic portland cements.—73-06732

**Muntean, Marcela; Gutul, Melania**
MgO-ammonium polyphosphate systems.—73-14604

**Munuera, G.** See Gonzalez-Elipe, A. R.

**Munz, Dieter** See Bahr, Hans-Achim; Fett, Theo; Bruckner-Foit, Angelika; Fett, Theo

**Munz, W.-D.** See Hultman, L.

**Munz, W.-D.; Hurkmans, T.; Keiren, G.; Trinh, T.**
Comparison of TiAlN coatings grown by unbalanced magnetron and arc bond sputtering techniques.—73-16681

**Muqtader, S. A.; Sidhu, R. K.; Nagabhushan, E.;**

**Muzaffaruddin, K.; Samdani, S. G.**
Destabilization behavior of ceria-stabilized tetragonal zirconia polycrystals by sodium sulfate and vanadium oxide melts.—73-08596

**Mura, A.** See Anedda, Alberto

**Muradyan, A. M.** See Klimenko, V. I.

**Muradyan, L. A.** See Maksimov, B. A.; Radaev, S. F.

**Murai, Ichiro**
Semiconductor memory device.—73-01385

**Murai, Takeshi** See Shinohara, Kunio

**Murai, Teruyuki** See Yamamoto, Susumu

**Muraka, S. P.** See Cramer, J. Kalpathy

**Murakami, H.** See Kani, Keiko

**Murakami, Hirohiko; Nishino, Junya; Yaegashi, Seiji;**

**Shiohara, Y.; Tanaka, Shoji**
Method of producing $YBa_2Cu_4O_x$-type superconducting metal oxides.—73-11978

**Murakami, Hirohiko; Ohno, Hideo**
Stability of metastable tetragonal zirconia.—73-02442

**Murakami, Hirohiko; Okamura, Osamu; Noda, Tamotsu; Shiohara, Y.; Tanaka, S.**
Fabrication of $YBa_2Cu_3O_{7-x}$ thick films on Ag substrate by gas deposition using ultrafine powders.—73-01549

**Murakami, Hisayoshi**
Thickness of parison layer formed in blow method.—73-00714; Thickness of parison layer formed in blow method.—73-10608

**Murakami, Kenji** See Dong, Dun-Zhuo; Nomura, Takashi; Yagi, Isao

**Murakami, Masato** See Morita, Mitsuru

**Murakami, S.; Sakachi, Y.; Nishino, H.; Saito, T.; Shinohara, K.; Takigawa, H.**
Growth of uniform HgCdTe by metallorganic chemical vapor deposition system.—73-07555

**Murakami, Takeshi** See Ioku, Koji; Ochiai, Shouichi; Imai, Hisao

**Murakami, Yasushi; Imai, Hisao**
Synthesis and thermal changes of calcium phenylphosphate and calcium phenylphosphate.—73-13301; Synthesis and thermal changes of calcium phenylphosphate and calcium phenylphosphonate.—73-05507

**Murakami, Yoshio** See Ikegaya, Akihiko

**Murakami, Yuichiro; Yamamoto, Hirokazu**
Phase equilibria and properties of glasses in the $Al_2O_3$-$Yb_2O_3$-$SiO_2$ system.—73-14066; 73-14067; Phase equilibria in $Al_2O_3$-$Y_2O_3$-$SiO_2$ system and phase separation and crystallization behavior of glass.—73-02376; Phase relations of $Al_{2-x}Y_xO_3$-$SiO_2$-$Si_3N_4$ system ($x$=0.75 and 1.06) and properties of oxynitride glasses.—73-00385; 73-12656; Properties of oxynitride glasses in the Ln-Si-Al-O-N systems (Ln=rare earth).—73-14261

**Murakawa, Masakazu** See Horita, Susumu

**Murakawa, Masao; Hirose, Yoichi; Komaki, Kunio; Hirose, Yoichi**
Apparatus for vapor-phase synthesis of diamond and method for vapor-phase synthesis of diamond.—73-05284

**Murakawa, Masao; Watanabe, Shuichi; Miyake, Shojiro**
Optical properties of cubic boron nitride films made by a reactive ion plating method.—73-05604

**Murakawa, Norihiro; Nakajima, Mutsuo**
Agglomeration property of SiC powders prepared from fine $SiO_2$-C mixed powders.—73-02724; Synthesis of SiC from fine $SiO_2$-C mixed powders.—73-03056

**Murakawa, Norihiro**
Method of extracting binders by rubber pressing method.—73-02894; Method of extracting binders by rubber pressing method.—73-13134

**Murakhtanov, V. V.** See Osadchii, M. S.

**Muraki, Koji** See Takahashi, Yutaka

**Muraleedharan, R. V.** See Ramanathan, S.

**Muralidhar, M.** See Kishore, K. Nanda

**Muralidhar, M.; Satyavathi, S.; Babu, V. Hari; Pena, O.; Sergent, M.**
Effect of $Ca_2PbO_4$ on the formation of the (2223) phase in the Bi-Pb-Sr-Ca-CuO system.—73-08028

**Muralidhar, S. K.; Roberts, Gordon J.; Shaikh, Aziz S.;**

**Leandri, David J.; Hankey, Dana L.; Vlach, Thomas J.**
Low-dielectric, low-temperature-fired glass-ceramics.—73-04215

**Muramatsu, Gyo; Abe, Akira; Yoshida, Kiyohide; Sumiya, Satoshi; Matsumura, Nobuyuki; Takahashi, Yoshikazu**
Exhaust gas cleaner [with ceramic powder layer] and method of cleaning exhaust gas.—73-15943

**Muramatsu, Yuji** See Aoki, Aiko

**Muranaka, Shigetoshi; Bando, Yoshichika**
Reactive deposition of W-, Mo-, and V-doped $SnO_2$ films.—73-05626

**Muranaka, Shigetoshi; Hirooka, Hagato; Bando, Yoshichika**
Influence of oxygen pressure on the structure of reactively deposited indium oxide films.—73-06234

**Muranaka, Shigetoshi; Yamamoto, Naoichi**
Influence of oxygen pressure on the electrical and optical properties of reactively evaporated indium oxide films.—73-08888

**Muranaka, Shigetoshi**
Mossbauer studies of reactively deposited tin oxide films.—73-09217; 73-16223; Reactive deposition of $In_2O_3$ films on nucleated-crystallite substrates.—73-13233

**Muranevich, E.** See Benguigui, L.

**Muranoi, T.; Hirose, M.; Razip, Mohamad; Akasaka, T.;**

**Ohno, K.**
Characterization of vapor phase epitaxial ZnSe films.—73-04268

**Muranushi, Y.; Miura, T.; Kishi, T.**
Characteristics of a rechargeable cell constructed by coupling $Na_{x-y}WO_3$ and $Na_{1-x}Pd_yO_6$.—73-04063

**Muraoka, Susumu; Baba, Tsunetaka**
Progress of research and development of high-level radioactive waste materials.—73-12011

**Murarka, S. P.** See Li, S. C.

**Murarka, S. P.; Li, S. C.; Guo, X. S.**
Capacitance-voltage characteristics and hydrogen concentration in phosphosilicate glass films: relation to phosphorus concentration and annealing effects.—73-10420

**Murasawa, Sadao** See Kumashiro, Yoshimasa

**Murase, K.** See Takaoka, S.; Toyama, Shigeki

**Murase, Y.** See Mori, Toshiaki

**Murase, Yoshio** See Kusumoto, Keiji

**Murase, Yoshio; Iga, Takeo**
Method for production of needlelike crystalline particles.—73-12382

**Murashev, S. V.; Ezhovskii, Yu. K.**
Structure formation in Cd chalcogenide films produced from atomic-molecular beams.—73-15187

**Murashov, V. A.** See Meshcheryakov, V. F.

**Murashov, V. V.; Porotnikov, N. V.**
Physicochemical investigation of phase development in the system $LiFeO_2$-$Li_4TiO_4$.—73-12659

**Murashova, E. B.** See Velikodnyi, Yu. A.

**Murashova, E. V.; Velikodnyi, Yu. A.; Trunov, V. K.**
Crystal structures of double pseudopyrovanadates $PbM'V_2O_7$ (M'=Mg,Zn).—73-02219

**Murat, M.** See Curtil, L.

**Murat, M.; Al Cheik, A.**
Dissolution kinetics of E-glass fiber in different basic solutions.—73-10362

**Murata, Katsuyuki** See Kaneko, Katsumi

**Murata, M.** See Sutoh, K.

**Murata, Osamu** See Nishiyama, Yukio
**Murata, S.** See Nido, Masaaki
**Murata, Shigeo** See Kawamura, Osamu
**Murata, Takuya; Miki, Toshikatsu**
Trapped-hole centers in irradiated $Li_3VO_4$.—73-03117
**Murata, Tsuyoshi; Itatani, Kiyoshi; Howell, F. Scott; Kishioka, Akira; Kinoshita, Makio**
Preparation of magnesium nitride powder by low-pressure chemical vapor deposition.—73-02953
**Murata, Y.** See Klauser, Ruth
**Murav'eva, K. K.; Smirnov, Ya. S.**
Synthesis of zinc oxide films for gaseous sensors.—73-03060
**Murav'eva, T. M.** See Maksimov, I. L.
**Murawala, P. A.; Sawai, M.; Tatsuta, T.; Tsuji, O.; Fujita, S.; Fujita, S.**
Interface properties and deep level defects in $Ta_2O_5$ grown on Si by plasma-enhanced liquid-source CVD.—73-04122
**Murawski, L.** See Gazda, M.; Szaniawska, K.
**Murawski, L.; Trzebiatowski, K.; Barczynski, R. J.; Gazda, M.; Kusz, B.; Gzowski, O.**
Properties of $Bi_2O_3$-CaO-SrO-CuO glasses.—73-15602
**Murayama, Norimitsu** See Sakaguchi, Shuji; Wakai, Fumihiro
**Murayama, Norimitsu; Kodama, Yasuharu; Sakaguchi, Shuji; Wakai, Fumihiro**
Densification of Bi-Pb-Sr-Ca-Cu-O bulk superconductor by hot-press sintering and critical current density.—73-11723; 73-01516
**Murayama, Yoichi; Kashiwagi, Kunihiro; Yoshida, Yasuhiko**
Thin-film capacitor and apparatus for manufacturing [the] same.—73-04238
**Murden, D. G.; Holme, J. D.**
Near net shaping engineering ceramics by injection molding.—73-02899
**Murin, D. I.** See Kalinushkin, V. P.
**Murin, I. V.** See Chernov, S. V.
**Murina, T. M.** See Asatryan, G. R.
**Murk, V. V.** See Ismailov, K. M.
**Murnane, R. A.**
Glass flow in a tubing bowl.—73-14393
**Muromtseva, M. E.** See Chekhovskii, V. G.
**Muromtseva, M. E.; Khalilev, V. D.**
Glass formation and structure of glasses containing $Fe_2O_3$ and $Gd_2O_3$.—73-13994
**Murota, J.** See Yokoo, Kuniyoshi
**Muroya, Masaaki; Minamiyama, Hideaki**
Effect of impregnation of $ZrO_2$ on the chemical stability and the superconductivity of Y and Bi systems.—73-11733
**Murphy, B.** See Moriarty, P.
**Murphy, D. S.** See Larsen, D. C.
**Murphy, D. W.** See James, A. C. W. P.
**Murphy, N. A.** See Ball, M. J.
**Murphy, Walter P.** See Bazant, Zdenek P.
**Murr, L. E.** See Li, Wang-Pei
**Murray, C. A.** See Hess, H. F.
**Murray, D. A.**
Forming tableware.—73-03845
**Murtagh, M.** See Lynch, S.
**Murtagh, Martin J.** See Merkel, Gregory A.
**Murthy, P. L. N.; Hopkins, D. A.; Chamis, C. C.**
Parametric study of a ceramic-fiber/metal-matrix composite.—73-06836
**Murthy, V. R. K.** See Raju, K. C. James
**Murugakoothan, P.; Jayavel, R.; Venkateswara Rao, C. R.**
Textured growth and orientation dependence of hardness measurement on superconducting $Bi_2Sr_2CaCu_2O_y$.—73-04820
**Muryzhnikova, O. N.** See Kulkova, S. E.
**Murzakhanova, I. I.; Kozhevnikova, N. M.; Mokhosoev, M. V.**
Synthesis and roentgenographic investigation of the ternary molybdates of $K_{1-x}A_{1-x}R_{1+x}(MoO_4)_3$ [A=Mg, Mn, Co, Ni; R=Yb, L, Sc].—73-02489
**Murzin, V. N.** See Bryanov, D. I.
**Musasa, Mamoru** See Sugimoto, Makoto
**Muscat, D.; Drew, Robin A. L.**
Effect of pore size on the infiltration kinetics of aluminum in titanium carbide preforms.—73-06775
**Muscat, D.; Shanker, K.; Drew, Robin A. L.**
Al/TiC composites produced by melt infiltration.—73-13796
**Muschik, T.** See Beaudoin, M.
**Mushinskii, V. P.** See Karaman, M. I.
**Music, S.; Popovic, S.; Czako-Nagy, I.; Gashi, F.**
Formation of oxide phases in the system $Fe_2O_3$-$Gd_2O_3$: II.—73-12586
**Musikhin, L. A.** See Zhukovets, V. F.
**Musil, C. R.** See Vignaud, D.
**Musil, J.** See Hultman, L.; Musil, J.
**Musil, J.; Stepanek, I.; Musil, J.; Kolega, M.; Blahova, O.; Vyskocil, J.**
Properties of TiN, ZrN, and ZrTiN coatings prepared by cathodic arc evaporation.—73-09503
**Musil, J.; Vlcek, J.; Jezek, V.; Kubasek, M.; Cerstvy, R.; Toig, T.**
Plasma nitriding of sputtered Ti films.—73-09243
**Musin, F. F.** See Imaev, M. F.
**Musinu, A.** See Medda, M. P.
**Muslimov, B. A.** See Eminov, Aschrap M.
**Mustafaev, N. M.** See Akhmedova, N. A.
**Mustoe, G. G. W.; DePoorter, G. L.; Greening, D. R.**
Methodology for discrete numerical modeling of powder compaction processes.—73-05911
**Mustre de Leon, J.; Batistic, I.; Bishop, A. R.; Conradson, S. D.; Trugman, S. A.**
Polaron origin for anharmonicity of the axial oxygen in $YBa_2Cu_3O_7$.—73-08168
**Muta, Kenichi** See Awazu, Koichi
**Mutka, H.** See Mesot, J.
**Muto, Junichiro** See Edamura, Tadataka
**Muto, Norio** See Mori, Norihisa; Pan, Guang
**Muto, Norio; Miyayama, Masaru; Yanagida, Hiroaki; Mori, Norihisa; Kajiwara, T.; Imai, Y.**
Infrared sensing by semiconducting ceramic monofiber.—73-02622
**Muto, Norio; Yanagida, Hiroaki; Miyayama, Masaru; Nakatsuji, Teruyuki; Sugita, Minoru; Ohtsuka, Yasushi**
Foreseeing of fracture in CFGFRP composites by the measurement of residual change in electrical resistance.—73-12140; 73-06425
**Muto, Norio; Yanagida, Hiroaki; Nakatsuji, Teruyuki; Sugita, Minoru; Ohtsuka, Yasushi; Arai, Yasuhiro**
Self-diagnosing performance for fracture in [carbon fiber–glass fiber-reinforced plastic] CFGFRP-reinforced concrete.—73-13775; Self-diagnosing performance for fracture in CFGFRP [carbon fiber–glass fiber-reinforced plastics]-reinforced concrete.—73-06714; Self-diagnosis of fracture in CFGFRP composites and CFGFRP-reinforced concrete.—73-01928
**Muto, Shunichi** See Haraguchi, Masanobu
**Mutoh, A.** See Kohno, T.
**Mutoh, Yoshiharu** See Miyahara, Nobuyuki
**Mutoh, Yoshiharu; Yamaishi, K.; Miyahara, Nobuyuki; Oikawa, T.**
Brittle-to-ductile transition in silicon nitride.—73-06336
**Mutsudy, Beebhas C.**
Injection molding of ceramic composites.—73-01792
**Mutsukura, Nobuki; Tomita, Shotaro; Mizuma, Yoshie**
Mechanical properties of hydrogenated hard carbon films.—73-09639
**Mutti, P.** See Elena, M.
**Mutz, Alec N.** See Saha, Bijay S.
**Muysenberg, Hendrikus P. H.** See Beerkens, Rudd G. C.
**Muysenberg, Hendrikus P. H.; Simonis, F.; Van der Heijden, T. C. M.**
Use of numerical flow models in the glass-melting process.—73-14525
**Muzaffaruddin, K.** See Muqtader, S. A.
**Muzichka, Y. U.; Goremychkin, E. A.; Sashin, I. V.; Divis, M.; Nekvasil, V.; Nevriva, M.**
Crystal field in $Nd_2CuO_4$.—73-08584
**Myachin, V. E.** See Karpov, S. Yu.
**Myakin, V. K.** See Konaicheva, N. V.
**Myakisheva, N. A.** See Uzberg, L. V.
**Myasnikov, A. M.** See Gerasimenko, N. N.
**Myasnikova, E. A.** See Chistyakov, V. V.; Ivanovskaya, I. S.
**Myasoedov, A. V.** See Buinov, N. S.
**Myburg, G.** See Auret, F. D.
**Mycielski, A.** See Jouanne, M.
**Mycielski, W.; Staryga, E.; Lipinski, A.**
Electron drift mobility in DLC [diamondlike carbon] thin films.—73-12794
**Myers, E. R.** See Sudhama, C.
**Myers, John D.; Jiang, Shibin**
A thermal laser glass compositions with high thermal loading capacity.—73-14532
**Myers, Joseph F.** See Scheps, Richard
**Myers, K. E.** See Rogers, C. T.
**Myers, T. H.** See Gold, Jeffrey S.; Harris, K. A.; Yanka, R. W.
**Myers, T. H.; Harris, K. A.; Yanka, R. W.; Mohnkern, L. M.; Williams, R. J.; Dudoff, G. K.**
Dopant diffusion in HgCdTe grown by photon-assisted molecular beam epitaxy.—73-07453
**Myhra, S.** See Zhao, Ru-Peng
**Myhre, Bjorn**
Strength development of bauxite-based ultralow-cement castables.—73-10771
**Myles, Charles W.** See Ekpenuma, Sylvester N.
**Myles, Charles W.; Ekpenuma, Sylvester N.**
Microhardness of Hg-containing II-VI alloys.—73-08917
**Myles, Kevin M.** See Krumpelt, Michael
**Myles, P. T.** See Hnat, J. G.
**Myles, Thomas A.** See Cockcroft, Steven L.
**Myshlyaev, M. M.** See Bashkin, I. O.
**Myslinski, P.** See Simkin, D. J.
**Mysyrowicz, A.** See Fortin, E.; Gomes, A. S. L.
**Mythen, C.** See Soriano, L.
**Mytilineou, E.; Lin, Zha-Chui; Taylor, P. C.**
Photoluminescence in $Ge_{25}Se_{75-x}Bi_x$ sputtered films.—73-08951
**Na, H.-K.** See Kim, T.-W.
**Na, Hoon-Kyun; Shon, Pong-Kyun**
Raman scattering study of CdTe/*p*(111)InSb heterointerfaces grown by rf sputtering in high vacuum.—73-04460
**Na, J.-G.; Lee, T.-D.; Kim, E.-C.; Park, S.-J.**
Mossbauer study on the distribution change and charge conversion of cations in $CoFe_2O_4$.—73-07967
**Na, J.-G.; Lee, T.-D.; Park, S.-J.**
Effects of cation distribution on magnetic properties in cobalt ferrite.—73-07933
**Na, Yong-Han** See Kim, Byung-Hoon
**Naba, Takayuki** See Komorita, Hiroshi
**Nabakhtiani, G. N.; Barsukova, M. L.; Kuznetsov, V. A.; Zibrov, I. P.; Sulaimankulov, K.; Dabranov, M. D.**
Crystal growth of compounds of Zn, Co, and Li sulfates with carbamide.—73-16079
**Nabatame, Toshihide** See Koike, Shuichi
**Nabatame, Toshihide; Saito, Yukio; Aihara, Katsuzo; Kamo, Tomoichi; Matsuda, Shin-Pei**
Comparison of transport properties between Tl-(1223) and Tl-(2223) phases of Tl-Ba-Ca-Cu-O systems.—73-15401
**Nabeya, Hiroshi** See Shoya, Masami
**Nabhan, A.** See Ojo, Adeola F.
**Naburg, E. P.** See La Via, F.
**Nabutovsky, V. M.** See Tenne, R.
**Nacer, B.** See Tetot, R.
**Naclerio, Nicholas J.** See Carpenter, Joseph A., Jr.
**Nada, R.; Stuart, J.; Price, G. D.; Catlow, C. Richard A.; Dovesi, R.**
Comparative study of all-electron and core pseudopotentials basis sets for periodic ab initio Hartree-Fock calculation: the case of $MgSiO_3$-ilmenite.—73-05373
**Nadaud, Nicolas; Nanot, Monique; Boch, Philippe**
Sintering and electrical properties of titania- and zirconia-containing $In_2O_3$-$SnO_2$ (ITO) ceramics.—73-04169
**Nadella, R. K.** See Martin, Jaime M.; Vellanki, Jayadev
**Nadezhina, T. N.** See Sokolova, E. V.
**Nadezhina, T. N.; Rastsvetaeva, R. K.; Pobedimskaya, E. A.**
Crystal structure features of natural hydroxyl-containing cancrinite.—73-02184
**Nadkarni, S. K.; Raghavan, Narasimha S.**
Method for producing composite ceramic structures using dross.—73-03690
**Nadkarni, S. K.**
Coloring aluminum flakes.—73-03678
**Nadtoka, I. V.; Solntsev, S. S.**
Nature of failure and thermal properties of the composites based on glasses reinforced by high-strength fibers.—73-14231
**Naeem, Z.** See Smith, A. B.
**Naessens, Georges** See Diko, Pave
**Nafis, Suraiya; Ianno, Natale J.; Snyder, P. G.; McGahan, W. A.; Johs, Blaine; Woollam, John A.**
Electron cyclotron resonance etching of semiconductor structures studied by in situ spectroscopic ellipsometry.—73-14879
**Naga, J. O.** See Mager, P.
**Naga, S. A. R.; Naga, S. M. H.; Mokhtar, M. O. A.**
Kinetic frictional behavior of aluminosilicate ceramics.—73-17368
**Naga, S. M. H.** See Naga, S. A. R.
**Nagabhushan, E.** See Muqtader, S. A.
**Nagae, Hajime** See Toriyama, Motohiro
**Nagae, Hajime; Ito, Akio; Toriyama, Motohiro; Sobata, Kaoru; Kiriyama, Seiji**
Centrifugal casting of alumina-zirconia mixed powder.—73-16664
**Nagae, Hajime; Ito, Akio; Toriyama, Motohiro**
Effect of particle size distribution of raw powder on the uniformity of alumina body formed by centrifugal casting.—73-02790; Effect of particle size distribution of raw powder on the uniformity of alumina body formed by centrifugal casting.—73-13013
**Nagafune, Mari** See Ishi, Hiroaki
**Nagahama, Shinichi** See Nakamura, Shuji
**Nagahata, Tsutomu; Taniguchi, Sinichiro; Kitamura, Tsutomu; Doura, Koji; Hayase, Masahiro; Hihara, Fumiaki**
Application of ceramic fiber to reheating furnace for hot strip mill.—73-00775
**Nagahata, Tutomu** See Miyahara, Mitsuo
**Nagai, Bin; Inoue, Akira; Kitai, Tsuneo; Nishiwaki, Hitoshi**
Textural changes of materials containing diaspore through firing.—73-00878
**Nagai, Bin; Matsumoto, Osami; Isobe, Toshihiro; Nishiumi, Yoshinobu**
Wear mechanism of castable for steel ladle by slag.—73-14632
**Nagai, H.; Oshima, Y.; Hirano, K.; Kato, Akio**
Sintering behavior of aluminum oxides derived from aluminum hydroxides with various morphologies.—73-09324
**Nagai, Hiroki** See Majima, Kazuhiko
**Nagai, Hiroki; Yamamoto, Shigeru**
Alumina package for hermetically containing an electronic device therein.—73-11000
**Nagai, Hiroshi** See Katsuyama, Shigeru; Majima, Kazuhiko
**Nagai, Masayuki; Hibino, M.; Nishino, Tadashi; Noda, K.**
Effect of γ-ray radiation on $Li_2O$ ceramics.—73-02575
**Nagai, Masayuki; Ogawa, Kenji; Nishino, Tadashi**
Preferred orientation of ß-lead fluoride grains formed within micropores of porous alumina.—73-16905
**Nagai, N.** See Sadamura, H.
**Nagai, S.** See Seino, Y.
**Nagaishi, Tatsuoki** See Ota, Nobuhiro; Tanaka, Saburo
**Nagaishi, Tatsuoki; Hattori, Hisao; Itozaki, Hideo**
Process for preparing a superconducting thin oxide film.—73-01731
**Nagaishi, Tatsuoki; Nakanishi, Hidenori; Tanaka, Saburo; Itozaki, Hideo**
Laser evaporation method for forming high-$T_c$ superconducting films.—73-04841; Laser evaporation method for preparing a superconducting oxide thin film.—73-04842
**Nagaishi, Tatsuoki; Ota, Nobuhiro; Fujimori, Naoji**
Laser ablation process for preparing oxide superconducting thin films.—73-15681
**Nagamatsu, Seiki** See Sato, Yoshiaki
**Nagamine, Yoshinobu** See Nakajima, Toshio
**Nagamori, M.; Leblanc, R.; Courtemanche, R.**
Power consumption in the Acheson process for producing SiC.—73-09248
**Nagamoto, H.** See Kumar, Krishnankutty-Nair P.
**Nagamune, Y.; Arakawa, Y.; Tsukamoto, S.; Nishioka, M.; Sasaki, S.; Miura, N.**
Photoluminescence spectra and anisotropic energy shift of GaAs quantum wires in high magnetic fields.—73-07730
**Nagano, M.** See Ichinose, Hiromichi
**Nagano, Takayuki; Wakai, Fumihiro**
Fabrication of zirconia-alumina functionally gradient material by superplastic diffusion bonding.—73-15924; Superplastic diffusion bonding in ceramics.—73-06072; 73-13289
**Nagano, Yasuo** See Awaji, Hideo; Mizuno, Mineo
**Nagano, Yoshihisa** See Fujii, Tatsuhiko
**Naganuma, M.** See Kawano, Kenji
**Nagao, Kakuhiro; Nakane, Sunao**
Influences of various factors on physical properties of concretes heated to high temperature.—73-10017
**Nagao, M.** See Taguchi, H.; Yoda, M.
**Nagao, Yosihiko** See Tanaka, Hiroshi
**Nagao, Yukinori** See Goto, Hitoshi; Gunji, Takahiro

**Nagaoka, Takaaki** See Hirao, Kiyoshi; Kumazawa, Takeshi; Nakamura, Kazuo; Ohashi, Masayoshi

**Nagaoka, Takaaki; Watari, Koji; Yasuoka, Masaki; Hirao, K.; Kanzaki, Shuzo**
Interrelationship between two- and/or three-dimensional grain morphology and fracture toughness of $Si_3N_4$ ceramics.—73-13558; Interrelationship between two- and/or three-dimensional grain morphology and fracture toughness of $Si_3N_4$ ceramics.—73-03158

**Nagaoka, Takaaki; Yasuoka, Masaki; Hirao, Kiyoshi; Kanzaki, Shuzo**
Effects of TiN particle size on mechanical properties of $Si_3N_4$/TiN particulate composites.—73-06401; 73-13520

**Nagaoka, Yoshinori** See Udagawa, Masayuki

**Nagaraj, Bangalore A.** See Duderstadt, Edward C.

**Nagarajan, R.** See Mazumdar, Chandan; Rao, C. N. R.

**Nagarajan, R.; Pavate, Vikram; Rao, C. N. R.**
Structure and superconducting properties of $Pr_{1-x}Ca_xBa_2Cu_3O_{7-\delta}$, $PrBa_{2-x}La_xCu_3O_{7-\delta}$, and $Pr_{1-x}Ca_xBaLaCu_3O_{7-\delta}$.—73-01670

**Nagarajan, R.; Rao, C. N. R.**
Structure and superconducting properties of Ga-substituted $YBa_2Cu_3O_{7-\delta}$ and $YBaSrCu_3O_{7-\delta}$ systems.—73-08213

**Nagarajan, V. S.; Rao, K. J.**
Preparation and thermal evolution of the microstructure of sol-gel-derived cordierite and cordierite-zirconia powders.—73-03185

**Nagasaka, K.** See Nogami, Masayuki

**Nagasaka, Keigo** See Sato, Masayuki

**Nagasaka, Takashi; Nakagawara, Hideki**
Process for manufacturing ceramic multilayer substrate.—73-11045

**Nagasaki, Shunsuke; Saito, Kajin; Tamou, Takuya**
Golden yellow pigment.—73-02041

**Nagasaki, Takashi** See Umegaki, Takao

**Nagasawa, Hiroshi** See Mala, Takashi

**Nagasawa, Hiroyuki; Yamaguchi, Yohichi**
Atomic level epitaxy of 3C-SiC by low pressure vapor deposition with alternating gas supply.—73-06190; Method for forming a silicon carbide film.—73-05310

**Nagasawa, Mitsuru** See Suyama, Yoko

**Nagasawa, S.** See Tateno, M.

**Nagase, Hiroshi** See Yasutomi, Yoshiyuki

**Nagase, Katsumi; Shimizu, Youichi; Miura, Norio; Yamazoe, Noboru**
Preparation of vanadium-titanium oxide thin films by sol-gel method and their electrochromic properties.—73-16941

**Nagase, M.; Ishii, H.; Machida, K.; Akiya, H.**
Silicidation using electron cyclotron resonance plasma.—73-09320

**Nagashima, N.** See Colaianni, M. L.

**Nagashima, Satoko** See Kato, Akio

**Nagashima, Satoko; Ogawa, Tomoshige; Kato, Akio**
Sinterability of $Al_2TiO_5$ powder synthesized by homogeneous precipitation technique.—73-16990

**Nagashima, Satoko; Yoshida, Takeshi; Nakamura, Hiroyuki; Kato, Akio**
Synthesis of YSZ-coated SiC particles and their sintering behavior.—73-09367; 73-17049

**Nagashima, Seiichi; Ogura, Iwao**
Auger electron spectroscopy, low-energy electron diffraction, and electron energy loss spectroscopy studies of Se overlayers grown on Cu(111) surfaces.—73-05362

**Nagashima, Yukihito** See Inaka, Yoshiyuki

**Nagashima, Yukihito; Sakaguchi, Kouichi; Nakagaki, Shigeki; Manabe, Seiichiro; Inaka, Yoshiyuki; Sunada, Takashi**
Vertical glass-melting furnace.—73-01976

**Nagasoe, Atsumi; Tsurumoto, Shinichiro; Kitamura, Akane**
Refractory characteristics of spinels with various MgO contents.—73-00855

**Nagata, Hiroshi** See Sagawa, Masato

**Nagata, Hirotoshi; Kiuchi, Kazumasa**
Temperature dependence of dc drift of Ti:$LiNbO_3$ optical modulators with sputter-deposited $SiO_2$ buffer layers.—73-01437

**Nagata, Hirotoshi**
Preliminary consideration of the growth behavior of $CeO_2$, $SrTiO_3$, and $SrVO_3$ films on Si substrate.—73-05955

**Nagata, Hiroya** See Kuramochi, Hideto

**Nagata, K.** See Susa, M.

**Nagata, Koichi**
Dynamic viscoelastic measurements of suspension for the drying process in tape casting.—73-05747; 73-12994; Effect of functionalities of binders on rheological behavior of alumina suspensions and properties of green sheets.—73-09077; 73-16726; Effect of heat treatment on properties of alumina green sheet.—73-02784; Rheological behavior of suspension and properties of green sheet—effect of compatibility between dispersant and binder.—73-02998

**Nagata, M.; Iwahara, Hiroyasu**
Preparation of oxide film by the oxidation plating method.—73-02961

**Nagata, Masanori** See Sata, Toshiyuki

**Nagata, Masaya** See Fujimoto, Manabu; Shintaku, Hidetaka

**Nagata, Masayuki; Yokota, Minoru; Sato, Kenichi**
Ceramic oxide superconductive composite material.—73-04832

**Nagata, Norifumi; Yogoro, Takayuki; Yuhda, Sadayuki; Ueda, Masahiko**
Medical or dental hardening compositions.—73-10639

**Nagata, Shoichi** See Shimono, Isao

**Nagata, T.** See Sato, K.

**Nagataki, Shigeyoshi** See Hashiuchi, Hiroshi; Kamada, Toshiro; Matsuura, Toshiyuki; Otsuki, N.; Saeki, Tatsuhiko

**Nagatani, Takashi**
Aggregation at early stage of growth in thin films.—73-09011

**Nagatome, Tomoo; Enomoto, Naoya; Hwang, Chii-Shyang; Nakagawa, Zenbee**
Preparation of alumina ceramics with uniformly dispersed micropores.—73-16913

**Nagayama, Masatoshi** See Ohzuku, Tsutomo

**Nagayama, Tetsuji** See Sugahara, Yoshiyuki

**Nagayoshi, Ryoichi** See Kanashima, Takeshi

**Nagel, A.** See Jaschinski, W.

**Nagele, E.** See Schneider, U.

**Nagele, E.**
Correlation between zeta potential and mechanical properties for cementitious materials.—73-00051

**Nageno, Yoshikazu** See Takebe, Hiromichi

**Nageno, Yoshikazu; Takebe, Hiromichi; Morinaga, Kenji**
Correlation between radiative transition probabilities of $Nd^{3+}$ and composition in silicate, borate, and phosphate glasses—correction.—73-06895; Correlation between radiative transition probabilities of $Nd^{3+}$ and composition in silicate, borate, and phosphate glasses.—73-00313

**Nagirnyak, V. N.** See Kabychenkov, A. F.

**Nagl, Iris** See Bayer, Michael

**Nagle, J.** See Larive, M.

**Nagler, S. E.** See Zhang, J.

**Nagornyi, P. G.; Kapshuk, A. A.; Stus, N. V.; Slobodyanik, N. S.; Chernega, A. N.**
Synthesis and structure of the double phosphate of lithium and titanium, $LiTiOPO_4$.—73-02494

**Nagornyi, S. A.** See Sham, P. I.

**Nagpal, K. C.** See Upadhyay, P. L.

**Nagy, J. B.** See Tavolaro, Adalgisa

**Nagy, Ladislav Turi; Liska, Marek**
Glass networks via semiempirical quantum chemical methods.—73-01901

**Nahar, R. K.; Vyas, P. D.**
Electrical properties of the thermal-induced degradation in $TiSi_2$/TiW/AlSi layered structures.—73-08857

**Nahm, Kyun** See Lee, Kyeong-Bock

**Naidenov, Valerii**
Rapid hardening cement-gypsum composites for shotcreting on the base of Bulgarian raw materials: I, Introduction, materials, design of the compositions, strength, and deformability.—73-00179; Rapid hardening cement-gypsum composites for shotcreting on the base of Bulgarian raw materials: II, Structural investigations, tests in production conditions, conclusions.—73-00180

**Naidu, B. Srinivasulu** See Aparma, Y.

**Nailor, Brian**
True vit: vitrified-bond cBN grinding wheels offer unique benefits.—73-05280

**Nair, K. M.** See Bhalla, Amar S.

**Nair, K. M.; Guha, J. P.; Okamoto, A.**
Ceramic Transactions, Volume 32: Dielectric Ceramics: Processing, Properties, and Applications.—73-09762

**Nair, K. Ravondran** See Paulose, K. V.

**Nair, M. T. S.** See Nair, P. K.

**Nair, M. T. S.; Alvarez-Garcia, G.; Estrada-Gasca, C. A.; Nair, P. K.**
Chemically deposited $Bi_2S_3$-$Cu_xS$ solar control coatings.—73-04065

**Nair, M. T. S.; Nair, P. K.; Zingaro, Ralph A.; Meyers, Edward A.**
Enhancement of photosensitivity in chemically deposited CdSe thin films by air annealing.—73-07504

**Nair, P. K.** See Nair, M. T. S.; Sebastian, P. J.

**Nair, P. K.; Nair, M. T. S.; Campos, J.**
Photoconductive $SnO_2$ thin films from thermal decomposition of chemically deposited SnS thin films.—73-07350; SnS-$SnO_2$ conversion of chemically deposited SnS thin films.—73-09336

**Naito, H.** See Arashi, Haruo; Imafuji, Osamu; Yoshida, Hideto

**Naitoh, Takashi; Namekawa, Takashi; Katoh, Akira; Maeda, K.**
Effect of $Sb_2O_3$ addition on water durability of $V_2O_5$-$P_2O_5$ glass.—73-00333; 73-10367

**Najafi, S. I.** See Wang, W. J.

**Naka, Jun** See Komori, Kiyotaka

**Naka, M.**
Ceramic-metal interfaces brazed with Al-base alloys.—73-03563

**Naka, Reishi** See Arai, Kiyoshi

**Naka, Tsutoma** See Sentoka, Eiichi

**Nakabayashi, H.; Doi, Minoru; Matsui, M.; Doyama, M.**
Crystallization process of $Fe_{73.5}Cu_1Nb_3Si_{13.5}B_9$.—73-04598

**Nakabayashi, Ichiro** See Matsushita, Isao; Moriga, Toshihiro

**Nakabeppu, Tetsuya** See Ohara, Taigen

**Nakada, Shinji** See Takeda, Shinichi

**Nakae, Hidehiko** See Asakura, Etsuro

**Nakaga, Hiroshi** See Fujii, Hironobu

**Nakagaki, Shigeki** See Nagashima, Yukihito

**Nakagawa, Heisaburou** See Awaji, Hideo

**Nakagawa, Koji** See Ishida, Hiroshi

**Nakagawa, Mikio** See Kohno, Osamu; Sugimoto, Tsunemi

**Nakagawa, Mitsuo** See Lam, David C. C.; Ookouchi, Takahiko

**Nakagawa, Nobuyoshi** See Takarada, Takayuki

**Nakagawa, Seiichi; Okamoto, Kuninori; Taylor, Barry E.; Tsuchiya, Motohiko**
Partially crystallizable low melting glass.—73-10655

**Nakagawa, T.** See Komatsu, Takayuki; Suzuki, K.

**Nakagawa, Takeo** See Anzai, Masahiro; Kawaguchi, Takeo; Takahashi, Seizo

**Nakagawa, Teruhisa; Ohtsu, Masayasu**
Evaluation of concrete properties by use of elastic waves due to Schmidt hammer impact.—73-09950

**Nakagawa, Y.** See Tsuzuki, K.; Yamasaki, H.

**Nakagawa, Yasuaki** See Iida, Junji; Koyano, Mikio

**Nakagawa, Yoshiro; Itami, Masao**
Production of a dense metal-ion stream for ion coating by a pulsed vacuum arc in a strong magnetic field.—73-16956

**Nakagawa, Yumi**
Zeolite SSZ-37.—73-05348

**Nakagawa, Zenbee** See Enomoto, Naoya; Hamano, Kenya; Hwang, Chii-Shyang; Miikeda, Osamu; Nagatome, Tomoo; Ochi, Hideo

**Nakagawara, Hideki** See Nagasaka, Takashi

**Nakagiri, Yasushi; Gyoten, Hisaaki; Nishiwaki, Fumitoshi; Yamamoto, Yoshiaki**
Thermoelectric properties and microstructure of Fe-Si-O thin films prepared by ICB [ionized cluster beam] method.—73-02714; 73-12899

**Nakaguchi, Kunio; Sunada, Takashi; Toshikiyo, Yoshikazu**
Glass panes for vehicles.—73-03923

**Nakahara, Hirohiko; Pai, Chui-Hoon; Koumoto, Kunihito; Yanagida, H.**
Nonlinear current-voltage characteristics generated from $TiN/TiO_2$ composite.—73-05598; 73-12840

**Nakahara, I.** See Hara, N.

**Nakahara, Katumasa** See Sunahara, Kazuo

**Nakahara, Masae** See Kondo, Yoshihito; Kono, Yoshihito

**Nakahara, Masae; Hashizuka, Yutaka; Kondo, Yoshihito; Hamano, Kenya**
Behavior of talc in formation of cordierite ceramics.—73-17109

**Nakahara, Muneo** See Ishizaki, Futoshi; Senoo, Tatsuya

**Nakahara, Shohei** See Jin, Sung-Ho; Katz, A.

**Nakahara, Sumio** See Owaki, Shigehiro

**Nakahara, Yuichi; Kojo, Katsuhiko**
TiC-base cermet alloy.—73-00300

**Nakahata, Hideaki; Hachigo, Akihiro; Shikata, Shinichi; Fujimori, Naoji**
Surface acoustic wave device.—73-11548

**Nakahigashi, K.; Ishibashi, H.; Minamigawa, S.**
Electron density distribution in AlN from powder X-ray diffraction data by the maximum-entropy method.—73-05389

**Nakahira, Atsushi** See Iwata, M.; Niihara, Koichi; Sekino, Tohru; Xu, Yue-Ping

**Nakahira, Atsushi; Niihara, Koichi**
Microstructure and fracture behaviors at high temperatures for $Al_2O_3$-SiC nanocomposites.—73-06491; Sintering behavior and consolidation process for $Al_2O_3$/SiC nanocomposites.—73-06051; 73-13263

**Nakai, H.** See Qiu, Hong

**Nakai, Hidemi**
Architectural glasses produced by surface-treatment processes.—73-03821

**Nakai, Masato** See Kurata, K.

**Nakai, Tetsuo** See Iguchi, Takahisa

**Nakai, Yusuke** See Agui, Akane

**Nakajima, Akira; Suzuki, Ryou; Sagawa, Hideo**
Ceramic substrate for sputtered alloy film developed with required as-sintered density for use in construction of video heads.—73-12321

**Nakajima, Akira**
$SnO_2$-based gas sensors affected by addition of several metal oxides.—73-15164

**Nakajima, Hiroaki** See Hamano, Kenya

**Nakajima, Hiroshi; Morimoto, Shigeki**
Window glasses for amenity life.—73-00582

**Nakajima, Kaoru** See Odagawa, Tetsufumi

**Nakajima, Keihachiro** See Okada, Kaoru

**Nakajima, Kenji** See Matsuda, Masaaki

**Nakajima, Kensuke; Taki, Kensuke; Takata, Masasuke; Okamoto, S.**
Effort on preparing sintered bodies of $Fe_4N$.—73-05785

**Nakajima, M.** See Choi, Y.-K.

**Nakajima, Mutsuo** See Murakawa, Norihiro

**Nakajima, S.** See Takeshita, S.

**Nakajima, Satoru** See Takei, Humihiko

**Nakajima, Shigeharu; Shinomiya, Genichi; Takeda, Mizuho; Chikutei, Satoru**
Phosphor which emits light by the excitation of X-ray, and an X-ray intensifying screen using the phosphor.—73-04529

**Nakajima, Shigeo** See Furukawa, Katsuki

**Nakajima, T.**
Synthesis, structure, and application of fluorine-graphite intercalation compound.—73-13317

**Nakajima, Toshio; Hayashi, Yuji; Tachibana, Satoru; Takariki, Kazuhiko**
Quartz glass crucible for pulling a single crystal.—73-10662

**Nakajima, Toshio; Ito, Tohru; Nagamine, Yoshinobu**
Quartz glass crucible for pulling a semiconductor single crystal.—73-10661

**Nakajima, Yoji; Sato, Takashi**
Method for detecting small vibrations of particles by LDV [Laser Doppler Velocimeter] for particle size and electrostatic charge measurements.—73-12164

**Nakajoh, S.** See Yamagishi, Chitake

**Nakamata, Tosiaki** See Moriguchi, Hideki

**Nakamichi, Hiroshi** See Yazawa, Tetsuo

**Nakamichi, Takenori** See Hosokawa, Kiyoshiro

**Nakamizo, T.** See Matsuura, K.

**Nakamota, Ichiro; Shimmura, Kohji; Kawasaki, Kiyoshi; Gamo, K.; Aoyagi, Yoshinobu; Namba, Susumu**
Characteristics of GaAs molecular layer etching [MLE].—73-04905

**Nakamura, A.** See Nogami, Masayuki

**Nakamura, Akihiro; Seki, Kohji; Suzuki, Takashi**
New preparation method of raw materials for high-purity and heat-resistant quartz glass.—73-02904

**Nakamura, Akira** See Yamakawa, Akira

**Nakamura, E.** See Itoh, K.

**Nakamura, Hiroshi** See Horikawa, Takeshi; Saitou, Yoshiaki

**Nakamura, Hiroshi**
Lightweight optical glass of fluorophosphate.—73-00737

**Nakamura, Hiroyuki** See Nagashima, Satoko

**Nakamura, Hiroyuki; Kato, Akio**
Preparation of alumina-hydrate-coated SiC whisker—effect of reaction condition on the morphology of coated body.—73-17415; 73-09256

**Nakamura, Ichiro** See Uemura, Ryuzo

**Nakamura, K.** See Kobayashi, H.

**Nakamura, Kazunori** See Oyobe, Akira

**Nakamura, Kazuo; Kumazawa, Takeshi; Ohashi, Masayoshi; Yasuoka, Masaki; Hirao, Kiyoshi; Kanzaki, Shuzo**
Effect of chemical composition of matrix on oxidation behavior of mullite/20 vol% SiC whisker composites.—73-03223

**Nakamura, Kazuo; Okashiro, Yasuharu; Ohashi, Masayoshi; Hirao, Kiyoshi; Nagaoka, Takaaki; Watari, Koji**
Effect of intergranular phase on mechanical properties of $Si_3N_4$-$Si_2N_2O$ composites.—73-03268; 73-13509

**Nakamura, Kazuo**
Porous glass carrier for DNA synthesis.—73-03752

**Nakamura, Kazutaka** See Ueno, Yasushi

**Nakamura, Keikichi** See Narita, Hideo

**Nakamura, Kenichi; Kimura, Kunio**
Exhaust gas filter [with ceramic fiber] and method for making the same.—73-15944

**Nakamura, Kousuke** See Takeda, Yukio

**Nakamura, Kozo**
Substrate of single crystal of oxide, superconductive device using said substrate, and method of producing said superconductive device.—73-01738

**Nakamura, Kunihiko** See Mori, Hideo

**Nakamura, M.** See Toyama, Shigeki

**Nakamura, M.; Kimizuka, Noboru; Mohri, T.**
Phase relations in the $In_2O_3$-$Ga_2ZnO_4$-ZnO system at 1350°C.—73-02386

**Nakamura, Makoto** See Ichikawa, Kenji

**Nakamura, Makoto; Kikuchi, Yoshio; Kuwamura, Masahiro; Yoshida, Masamichi**
Effect of silicon surface treatments on thin silicon nitride growth.—73-05770

**Nakamura, Mamoru** See Shigematsu, Ichinori

**Nakamura, Mamoru; Saitoh, Kazuo; Ikeyama, Masami; Kozuka, Teruyuki; Shigematsu, Ichinori**
Utilization of an electroconductive surface layer on an $Si_3N_4$ ceramic formed by ion implantation as a crack gage and a strain gage.—73-04184

**Nakamura, Mamoru; Shigematsu, Ichinori; Kanayama, Kouzou; Hirai, Yukio**
Heat resistance of $Si_3N_4$ joined with Ni-Cr alloy interlayer.—73-00238;I Joining of $Si_3N_4$ ceramics with nickel and Ni-Cr alloy laminated interlayers.—73-06811

**Nakamura, Masahiko** See Shiomi, Haruhisa

**Nakamura, Masahiko; Fukushima, Takahiro; Kamitani, Masataka**
Microstructure and frost durability of cementitious building materials reinforced with nonasbestos fibers.—73-00142; 73-10049

**Nakamura, Masahiko; Ohnishi, Takaaki; Kamitani, Masataka**
Quantitative analysis of pore structure on frost durability of inorganic building materials.—73-03188

**Nakamura, Masahiko; Ohnishi, Takaaki**
Frost susceptibility of fiber-reinforced cement building materials based on the three-dimensional pore structure.—73-13727; 73-13728

**Nakamura, Masanori**
Lithium niobate waveguide.—73-11632

**Nakamura, N.; Gu, G.-D.; Koshizuka, N.**
Field-induced 3-D to 2-D crossover of shield current path in $Bi_2Sr_2CaCu_2O_8$.—73-15472

**Nakamura, O.** See Fullerton, Eric E.; Saito, Yuria

**Nakamura, O.; Mambrim, J. Silvo T.; Pastore, H. O.; Vichi, E. J. S.; Gandra, F. G.; Da Silva, E. C.**
EPR study of chromosilicalite.—73-08616

**Nakamura, Ryouhei; Tsukuda, Yasuo; Nitanda, Humio**
Optical properties of ceramic scintillator for X-ray CT equipment: I, Analysis about quality response characteristic.—73-16557; 73-16558; Optical properties of ceramic scintillator for X-ray CT equipment: II, Analysis about distribution of light output.—73-16559

**Nakamura, S.** See Gong, J. R.

**Nakamura, S.-I.** See Takeno, S.

**Nakamura, Seiichirou** See Yoshimura, Hironori

**Nakamura, Shin-Ya** See Deki, Shigehito

**Nakamura, Shin; Soeya, Susumu; Ikeda, Naoshi; Tanaka, Midori**
Spin-glass behavior in amorphous $BiFeO_3$.—73-11674

**Nakamura, Shintaro** See Goto, Hideaki

**Nakamura, Shizuo; Hayashi, Yoshishige; Kawanishi, Takuya; Komatsu, Toshiteru; Takeuchi, Masashi**
Numerical analysis of deposition rates of zirconium thin films by thermal chemical vapor deposition.—73-02913; 73-13155

**Nakamura, Shuji; Mukai, Takashi; Senoh, Masayuki; Nagahama, Shinichi; Iwasa, Naruhito**
$In_xGa_{1-x}N/In_yGa_{1-y}N$ superlattices grown on GaN films.—73-07588

**Nakamura, Shuji**
Crystal growth method for gallium-nitride-based compound semiconductor.—73-11516

**Nakamura, Sizuo** See Kitagawa, Kazuichi

**Nakamura, T.** See Inaguma, Yoshiyuki; Itoh, Mitsuru; Li, P.; Sawabe, A.

**Nakamura, Tadashi; Itoh, Hideaki; Iwahara, Hiroyasu**
Surface topographical variation of single-crystalline diamond grown in Co-$H_2$ plasma.—73-03203

**Nakamura, Takao; Inada, Hiroshi; Iiyama, Michitomo**
Superconducting device having an extremely thin superconducting channel formed of oxide superconductor material.—73-01740

**Nakamura, Takashi** See Tanahashi, Masami; Yoshimura, Yasuhiro

**Nakamura, Tetsuro** See Kim, In-Seon

**Nakamura, Toshio; Aoki, Takafumi; Okumura, Hisatake; Kondo, Yoshiyuki**
Immersion nozzle for prevention of alumina clogging.—73-00822

**Nakamura, Tsutomu** See Iguchi, Takahisa

**Nakamura, Y.** See Tamasaku, K.; Yoshizawa, M.

**Nakamura, Yoshihide** See Yamana, Kazuo

**Nakamura, Yoshikazu** See Aruga, Atsushi; Suefuji, Yoshihito; Tamaki, Kazunori

**Nakamura, Yoshikazu; Watanabe, Yoshihisa; Suefuji, Yoshihito; Hirayama, Shigekazu**
Observation of hydrogenated amorphous carbon films by atomic force microscopy.—73-08679

**Nakamura, Yoshiko Oi; Matsuda, Naoya; Shiina, Yasushi**
Pair breaking effect in the substitution for Cu in high-$T_c$ copper oxides.—73-08159

**Nakamura, Yoshinobu; Ishikawa, Shigeki; Koyama, Ryuji; Yanagida, Hiroaki**
$NO_x$ sensing characteristics of SiC/ZnO heterocontact.—73-15056; Oxidizing gas sensing by SiC/ZnO heterocontact—$NO_x$ sensing.—73-01269

**Nakamura, Yoshinobu**
Science and technology of composite materials: optical fibers made by fluoride glasses.—73-00699

**Nakamura, Yoshio** See Okamoto, Tamotsu

**Nakamura, Yoshio**
Classification and properties of various liquids.—73-16420

**Nakamura, Yuichiro** See Shimizu, Yasuhiro

**Nakane, Hideaki** See Hasegawa, Haruhiro

**Nakane, Hideki** See Suzuki, Suguru

**Nakane, Sunao** See Nagao, Kakuhiro

**Nakane, Yuji; Sato, Kazushi; Takahashi, Hideaki**
Development of solidification technique for recycling of concrete wastes by hydrothermal hot-pressing and its mechanical property.—73-15714

**Nakanishi, H.** See Tanino, Hiroshi

**Nakanishi, Hidenori** See Nagaishi, Tatsuoki; Tanaka, Saburo

**Nakanishi, Hidenori; Shikata, Shinichi; Itozaki, Hideo**
Process for preparing a superconducting thin film of compound oxide.—73-04867

**Nakanishi, Junichi** See Matsushita, Isao

**Nakanishi, Kazuki** See Li, P.; Soga, Naohiro

**Nakanishi, Kazuki; Motowaki, Shigehisa; Soga, Naohiro**
Preparation of $SiO_2$-$TiO_2$ gels with controlled pore structure via sol-gel route.—73-05980

**Nakanishi, Kazuki**
Principles and applications of sol-gel method: network formation and phase separation processes.—73-07164

**Nakanishi, Makoto** See Yoshimura, Kazuyoshi

**Nakanishi, Masahito** See Kohsaka, Shoji

**Nakanishi, Norihiki** See Machida, Nobuya

**Nakanishi, Y.** See Tatsuoka, H.

**Nakano, Aichiro; Bi, Ling-Song; Kalia, Rajiv K.; Vashishta, P.**
Structural correlations in porous silica: molecular dynamics simulation on a parallel computer.—73-14283

**Nakano, H.** See Yanagawa, T.

**Nakano, Hiromi** See Nishida, Toshihiko

**Nakano, Hiroshi** See Suzuki, Morio

**Nakano, Kazumi** See Kadono, Kohei

**Nakano, Kikuo** See Kamiya, Akira; Nawa, Masahiro

**Nakano, Kikuo; Kamiya, Akira; Ogawa, Hiroyuki; Nishino, Y.**
Fabrication and mechanical properties of carbon fiber-reinforced silicon carbide composites.—73-06413; 73-13529

**Nakano, Kikuo; Kamiya, Akira; Yamauchi, Shinji; Kobayashi, T.**
Fracture toughness of carbon-fiber-reinforced ceramic composites.—73-06440

**Nakano, Kikuo; Oshima, Kenji; Iwata, Misao; Yamada, Takao**
Method of producing fiber-reinforced and particle-dispersion-reinforced mullite composite material.—73-12386

**Nakano, Masayoshi** See Yoshida, Takeshi

**Nakano, Minoru; Nomura, Toshio**
Coated cement carbides and processes for the production of [the] same.—73-12451

**Nakano, Motoo** See Yamada, Masao

**Nakano, Ryotaro** See Higuchi, Masatoshi

**Nakano, S.**
Internal textures and chemical compositions of anti-rapakivi mantled feldspars from the Oki-Dogo Island, Japan.—73-15906

**Nakano, Shoichi** See Kamino, Maruo

**Nakano, T.; Baba, S.; Kobayashi, A.; Kinbara, A.; Kajiwara, T.; Watanabe, K.**
Structure modification of radio frequency sputtered $LaB_6$ thin films by internal stress.—73-03030

**Nakano, Tadashi; Ohta, Tomohiro**
Process for depositing titanium nitride film by CVD.—73-12508

**Nakano, Yoshinori** See Sato, Kazunori

**Nakano, Yukie** See Nomura, Takeshi

**Nakano, Yutaka** See Ishikawa, Makoto

**Nakao, F.; Takenaka, Y.; Asai, H.**
Surface characterization of carbon fibers and interfacial properties of carbon fiber composites.—73-13454

**Nakao, H.** See Furuta, Sachiko

**Nakao, Hiroshi** See Sakaida, Yoshihisa

**Nakao, Jun** See Asano, Keisuke

**Nakao, S.** See Shimizu-Iwayama, Tsutomu

**Nakao, Yasumasa** See Kushitani, Hideki; Maeda, K.

**Nakasako, T.** See Sakaue, H.

**Nakase, Hirofumi** See Sasaki, Gen

**Nakashima, Hiroko** See Kandori, Kazuhiko

**Nakashima, Kenshiro**
Er doping in silicon by pulsed laser irradiation.—73-04324

**Nakashima, Kunihiko; Takihira, Kenji; Miyazaki, Takashi; Mori, Katsumi**
Wettability and interfacial reaction between molten iron and zirconia substrates.—73-00275

**Nakashima, Masazumi** See Takebe, Hiromichi

**Nakashima, S.** See Masafumi, Kobune

**Nakashima, Shigehiro** See Kobune, Masafumi

**Nakashima, Tadao; Shimizu, Masataka; Kukizaki, Masato**
Mechanical strength and thermal resistance of porous glass.—73-00514

**Nakashima, Tadao; Shimizu, Masataka**
Liquid permeability of porous glass membrane and its microstructure.—73-03797; 73-14215

**Nakashima, Takeru** See Tsuji, Kazuwo

**Nakashita, K.** See Otsuki, N.

**Nakasone, Sigeru** See Kodama, Katsumi

**Nakasuji, Yoshizumi** See Masuda, Masaaki; Tsuruta, Hideyoshi

**Nakasuji, Yoshizumi; Yamada, Naohito; Tsuruta,, H.; Masuda, Masaaki; Matsui, M.**
Fracture behavior of nonoxide ceramics under biaxial stresses.—73-06433

**Nakata, F.** See Shigenaka, K.

**Nakata, Jyoji** See Chang, S.-J.; Taguchi, Akihito

**Nakata, M.** See Shimizu, K.

**Nakata, Michitoshi** See Yagi, Hideaki

**Nakata, R.** See Tanaka, Katsumi

**Nakata, Yoshihisa; Kasai, Yoshio; Matsui, Isamu; Yuasa, Noboru**
Accuracy of test method for cement content in hardened concrete by sodium gluconate.—73-09802

**Nakata, Yoshiki** See Kumuduni, Wanniarachchi K. A.

**Nakata, Yoshinori** See Okutani, Takeshi; Suzuki, Masaaki

**Nakatani, Isao; Hijikata, M.; Ozawa, K.**
Iron nitride magnetic fluids prepared by vapor-liquid reaction and their magnetic properties.—73-07945

**Nakatani, Seiichi; Nishimura, Tsutomu; Yuhaku, Satoru; Hakotani, Yasuhiko**
Multilayered ceramic substrate and method of manufacturing the same.—73-04224

**Nakatani, Tatsuhiko** See Matsushita, Teruo

**Nakato, Y.** See Ishida, T.; Kobayashi, H.

**Nakatsu, K.; Higaki, T.; Negishi, K.; Yamazaki, Y.**
New low-heat cement made with CaO-$Al_2O_3$-$SiO_2$ glass.—73-10065

**Nakatsuji, Takeshi** See Shima, Hiroshi

**Nakatsuji, Teruyuki** See Muto, Norio

**Nakatsuka, Katsuto** See Jeyadevan, Balachandran

**Nakaue, Akimitsu** See Inoue, Takayoshi

**Nakaune, K.** See Sakaue, H.

**Nakaya, Syunsuke** See Wada, Nobuyuki

**Nakayama, Akinori** See Ueno, Yasushi

**Nakayama, Chiaki** See Watanabe, Toshiya

**Nakayama, H.** See Sato, K.

**Nakayama, Hideaki** See Tanaka, Tsuneshichi

**Nakayama, Hironori** See Sekido, Masakatsu

**Nakayama, M.; Imazawa, K.; Tanaka, Isao; Nishimura, H.**
Γ-X mixing effects on photoluminescence intensity in GaAs/AlAs type-II superlattices.—73-14936

**Nakayama, Masaaki** See Ikuma, Yasuro

**Nakayama, Shin** See Uno, Tomoko

**Nakayama, Susumu** See Sakamoto, Masatomi

**Nakayama, Susumu; Kuroshima, Hiroshi; Sadaoka, Yoshihiko; Sakai, Yoshiro**
Humidity sensor using porous ceramics $xLi_2O$-$Al_2O_3$-$2SiO_2$.—73-01191; 73-11253

**Nakayama, Susumu; Kuroshima, Hiroshi**
$Si_3N_4$-TiN porous ceramics: I, Microstructure and electrical properties in a humid atmosphere.—73-03193; 73-13446

**Nakayama, Susumu; Sadaoka, Yoshihiko**
Ionic conductivity of ceramics prepared by sintering of $M_2O$-$Ln_2O_3$-$2SiO_2$ mixtures (M=Li, Na, K, Rb, Cs; Ln=La, Nd, Sm, Gd, Dy, Y, Ho, Er, Yb).—73-14714

**Nakayama, Susumu; Sakamoto, Masatomi**
Microstructure and electrical properties for $LiXSiO_4$ (X=Al, Y, La, Nd, Sm, Gd, Dy, Ho, Er, Yb).—73-13423; 73-03176; Preparation of perovskite-type oxide, $LaCrO_3$ by thermal decomposition of $La[Cr(CH_2(COO)_2)_3]\cdot 6H_2O$ [at RT–1000°C].—73-02962; 73-13198

**Nakayama, Susumu; Shiranita, Akira; Ayuzawa, Nobuo; Sakamoto, Masatomi**
Oxidation behavior of RE-α-SiAlON ceramics (RE=Nd, Sm, Gd, Dy, Y, Ho, Er, Yb).—73-17228; 73-17229

**Nakayama, Takahiro** See Onisawa, Kenichi

**Nakayama, Tsuneyoshi** See Tanda, Satoshi

**Nakayama, Y.** See Ikuta, H.; Kawano, H.

**Nakayama, Yasushi** See Kumuduni, Wanniarachchi K. A.

**Nakayama, Yoshitaka** See Ookouchi, Takahiko

**Nakayama, Yusuke** See Sakamoto, Masatomi

**Nakazato, Koji** See Onishi, Masashi

**Nakazawa, Hidenobu; Yamane, Hisanori; Hirai, Toshio**
Preparation of $BaTiO_3$ films by CVD.—73-05969

**Nakazawa, Hiromoto** See Fujita, Taketoshi

**Nakazawa, Tadahisa; Ogawa, Masahide; Abe, Kiyoshi; Suzuki, Kazuhiko; Tokita, Takashi; Ito, Toshio**
Amorphous silica spherical particles.—73-02020; Preparation of amorphous silica-alumina particles by acid-treating spherical P-type zeolite particles crystallized from a sodium aluminosilicate gel.—73-02057

**Nakazawa, Takao; Imai, Fujio; Yokota, Hiroshi**
Considerations for the deterioration of reinforced concrete structures.—73-09866

**Nakhapetyan, R. A.** See Livshits, V. Ya.

**Nakhodnova, A. P.** See Ditrikh, I. V.

**Nakoshi, Yoshiyuki** See Ota, Rikuo

**Nakua, A.; Yun, H.; Reimers, J. N.; Greedan, J. E.; Stager, C. V.**
Crystal structure, short-range and long-range magnetic ordering in $CuSb_2O_6$.—73-02218

**Nakwaski, Włodzimierz; Osinski, Marek**
Thermal analysis of GaAs-AlGaAs etched-well surface-emitting double heterostructure lasers with dielectric mirrors.—73-15205

**Nalbandyan, V. B.** See Medvedeva, L. I.

**Nalepka, Raymond** See Lingle, Philip J.

**Nalkina, Z. A.** See Talipov, N. Kh.

**Nam, B. P.** See Vysotskii, S. L.

**Nam, H. G.; Chung, I; Bene, R. W.**
Dependences of titanium silicide properties on the ratio of silicon to titanium used for electron-beam coevaporation onto heated substrates.—73-05736

**Nam, J. D.; Seferis, James C.**
Initial polymer degradation as a process in the manufacture of carbon-carbon composites.—73-09183
**Nam, S.-T.** See Kim, Kun-Ho
**Nam, Seung-Hee; Kim, Ho-Gi**
Effect of heat treatment on the $SrTiO_3$ thin films prepared by radio-frequency magnetron sputtering.—73-13006
**Nam, Young W.**
Catalyst composition for improving combustion efficiency of liquid fuels.—73-02024
**Nam, Yun-Woo** See Yoon, Ki-Hyun
**Namaroff, M.** See Meyyappan, M.
**Namavar, Fereydoon; Buchanan, B.; Kalkhoran, N. M.**
Formation of ultrathin SIMOX structures by low-energy implantation.—73-04106
**Namavar, Fereydoon; Kalkhoran, N. M.; Claverie, A.; Lilental-Weber, Z.; Weber, E. R.; Sekula-Moise, P. A.**
Lateral and vertical isolation by arsenic implantation into MOCVD-grown GaAs layers.—73-15011
**Namba, S.** See Takaoka, S.
**Namba, Seitaro; Kim, Jong-Ho**
Synthetic zeolites and their catalyses—highly active catalysts with molecular size recognizability.—73-12333
**Namba, Susumu** See Nakamota, Ichiro
**Namba, Tokuro** See Fu, Jie
**Namba, Yoshikatsu**
Attempt to grow diamond phase carbon films from an organic solution.—73-09021
**Namboodri, Shannon L.; Kander, R. G.; Hooker, Matthew W.; Wise, Stephanie A.; High, J. W.; Tran, S. Q.**
Electromagnetic shielding characteristics of polymer/superconductor composites.—73-11744
**Namboodri, Shannon L.**
Virginia Tech fosters elementary classes.—73-03411
**Nambu, Shinji** See Koyasu, Shigeji
**Namedov, S. B.; Aksenov, N. D.; Makarov, L. L.**
X-ray spectral investigation of glasses and crystals of the Ge-Se system.—73-16396
**Namegaya, T.** See Fukushima, Toru
**Namegaya, Takeshi** See Kasukawa, Akihiko
**Namegaya, Takeshi; Katsumi, Ryuichi; Iwai, Norihiro; Namiki, S.; Kasukawa, Akihiko; Hiritani, Y.**
1.48-μm high-power GaInAsP-InP graded-index separate-confinement heterostructure multiple quantum well laser diodes.—73-15067
**Namekawa, Takashi** See Naitoh, Takashi
**Namerikawa, Masahiko** See Masumoto, Hiroshi
**Namikawa, Hiroshi** See Yamamoto, Kazunao
**Namiki, S.** See Namegaya, Takeshi
**Namiki, Shu** See Ohkubo, Michio
**Nampoori, V. P. N.** See Rajasree, K.
**Nan, Ce-Wen** See Cai, Ke-Feng
**Nan, S.** See Rusu, E.
**Nanao, Tsutomo** See Yokoyama, Masao
**Nanataki, Tsutomu** See Abe, Masahiro
**Nanataki, Tsutomu; Shibata, Kazuyoshi**
Electrochemical element and method of producing [the] same.—73-11014
**Nanazashvili, V. I.; Germanskii, G. I.**
Monolithic coverings for floors with increased service strength on the basis of VNV modified by a polymer.—73-00146
**Nanba, T.** See Fu, Jin; Kishimoto, Akira; Osaka, Akiyoshi
**Nanba, T.; Takano, S.; Yasui, Itaru; Kudo, Tetsuichi**
Structural study of peroxopolytungstic acid prepared from metallic tungsten and [aqueous] hydrogen peroxide.—73-02454
**Nanba, Takao** See Ohta, Hitoshi
**Nanba, Tokuro** See Egi, Toshio; Endo, Kazuyo; Kusano, Yoshihiro; Takada, Jun
**Nanba, Yasutoshi; Kanamaru, Kozo; Kurashina, Yukinobu**
Multistepped submerged nozzle for continuous casting.—73-14605
**Nanbu, K.; Uchida, S.; Yoshida, H.**
Computer simulation of growth of thin films fabricated by the sputtering method: comparison with experiment.—73-05718
**Nanda, A. K.** See Roy, P. K.
**Nandi, A. K.; Chaudhuri, A. K.; Thiagarajan, S.; Ghosh, S.**
New approach to the preparation of ir transparent $Ca_{12}Al_{14}O_{33}$ material.—73-09222
**Naniwae, Kohichi** See Nido, Masaaki
**Nanko, Makoto; Ishizaki, Kozo; Fujikawa, Takao**
Porous ceramic filters produced by hot isostatic pressing.—73-16901
**Nanko, Makoto; Yamamoto, Shin; Konakawa, Yasuhiro; Briceno, Jose; Ishizaki, Kozo**
Computer simulation of a sintered filter.—73-16684
**Nannichi, Y.** See Sugahara, Hirohiko
**Nanot, Monique** See Nadaud, Nicolas
**Nantoh, Masashi** See Kawasaki, Masashi
**Naoumidis, Aristides** See Drazic, G.; Garcia-Rosales, Carmen
**Napier, Norm**
Color matching without computers.—73-08382
**Napolitano, L. M., Jr.; Daily, M. R.; Meeks, E.; Miller, D.; Norwood, D. P.; Peterson, D. W.**
Development of a power electronics multichip module on synthetic diamond substrates.—73-04072
**Nappa, Pauli** See Turunen, Aimo
**Nappi, Jari** See Zhang, Gou-Dong
**Nappi, Jarmo**
Problem-free batch plant for Finnish fibermaker.—73-14479
**Naqvi, S. J.** See Konecny, L.
**Naqvi, S. S. H.** See Milner, Lisa M.
**Naraev, V. N.** See Pronkin, A. A.
**Narang, K. C.**
Portland and blended cement.—73-10086
**Narashimha Rao, K.; Mohan, S.; Hegde, M. S.; Balasubramanian, T. V.**
Chemical composition of electron-beam evaporated $TiO_2$ films.—73-05368
**Narasimhan, Sundaram L.** See Dennis, Roger D.
**Narayan, J.** See Chen, X.; Singh, Jogender; Vaidyanathan, K. Ranji
**Narayanamurthy, C. S.; Dainty, J. C.**
Real-time holographic photoelasticity using BSO.—73-05082
**Narayanan, P. S. A.** See Balakrishna, P.
**Narayanan, Sankarasubbier; Sreekanth, Gutala**
Problems involved in the reducibility of the NiO-MgO system as evidenced by XRD, EPR, and electron spectroscopy for chemical analysis and adsorption techniques.—73-12661
**Narayanasamy, K.** See Gowri, S.
**Narbutovskih, M.** See Amano, Jun
**Narducci, D.** See Di Nola, Patrizia; Morazzoni, Franca
**Narducci, D.; Morandi, Roberto; Morazzoni, Franca; Bruni, Silvia; Cariati, F.; Russo, U.**
Electronic conductivity in copper- and iron-based phosphate glasses exhibiting clustering and spinodal decomposition.—73-14180
**Narisawa, M.** See Shioyama, H.
**Narisawa, Masanori** See Shimoo, Toshio
**Narisawa, Toshiaki** See Arato, Toshiaki
**Narishige, Shinji** See Soeya, Susumu
**Narita, Hideo; Hatano, Takeshi; Nakamura, Keikichi**
Synthesis and characterization of $Bi_2Sr_2Ca_{n-1}Cu_nO_y$ ($n$=1–7) thin films grown by off-axis, three-target magnetron sputtering.—73-11923
**Narita, Toshio** See Takashima, Toshiyuki
**Narkiewicz-Michalek, J.; Rudzinski, W.; Partyka, S.**
Calorimetric studies of the surface aggregation of adsorbed molecules in ionic surfactant adsorption onto the heterogeneous oxide surfaces.—73-16418
**Narosimha Rao, K.** See Ghanashyam, Krishna M.
**Narsaiah, E. Laxmi; Rao, U. V. Subba; Pena, O.; Perrin, C.**
Magnetism and superconductivity in $Bi_2Sr_2Ca_{1-x}Dy_xCu_2O_{8+\delta}$.—73-04763
**Narui, Hironobu; Hirata, Shoji; Mori, Yoshifumi**
Submilliampere-threshold multi-quantum-well AlGaAs laser without facet coating using single-step MOCVD.—73-01329
**Narukawa, Akira; Watanabe, Mitsuyoshi; Matsuda, Hiroto**
Removal method for glass adhered to sintered object during hot isostatic pressing process.—73-05010
**Narukawa, Yutaka** See Sawai, Yuichi
**Narula, Chaitanya K.; Maricq, M. Matti; Demczyk, Brian G.; Salmeen, Irving T.; Weber, Willes H.**
Preparation of composite particles by pulsed Nd-YAG laser decomposition of $[(CH_3)_2N]_4Ti$ to TiN-coat $TiO_2$, $Al_2O_3$, or $Si_3N_4$ powders.—73-02950
**Narula, Chaitanya K.; Watkins, William L. H.; Chattha, Mohinder S.**
Binary La-P oxide catalyst and method of making the catalyst.—73-02022
**Narushima, Takayuki; Goto, Takashi; Hagiwara, Jun; Iguchi, Yasutaka; Hirai, Toshio**
High-temperature oxidation of chemically vapor deposited silicon nitride in a carbon monoxide-carbon dioxide atmosphere.—73-17222
**Narushima, Takayuki; Goto, Takashi; Yokoyama, Yoshio; Hagiwara, Jun; Iguchi, Yasutaka; Hirai, Toshio**
High-temperature active oxidation and active-to-passive transition of chemically vapor deposited silicon nitride in $N_2$-$O_2$ and Ar-$O_2$ atmospheres.—73-17221
**Narushima, Takayuki; Goto, Takashi; Yokoyama, Yoshio; Takeuchi, Masahito; Iguchi, Yasutaka; Hirai, Toshio**
Active-to-passive transition and bubble formation for high-temperature oxidation of chemically vapor deposited silicon carbide in CO-$CO_2$ atmosphere.—73-09523
**Narutaki, N.; Usuki, H.; Itoh, T.**
Wear characteristics and cutting performance of diamond coated ceramic tools.—73-03376
**Nasar, A.** See Shamsuddin, M.
**Nasby, R. D.** See Seager, C. H.
**Naschitzki, M.** See Ernst, N.; Melmed, A. J.
**Naseem, H. A.** See Ang, S. S.; Mauskaar, Ashutosh; Palsule, C.; Sidhwa, A. J.
**Naseem, H. A.; Meyyappan, I.; Prasad, C. S.; Brown, William D.**
Metallization of diamond substrates for multichip module applications.—73-04137
**Nash, Jon M.** See Chen, Ming
**Nasibov, A. S.** See Korostelin, Yu. V.
**Naslain, R.** See Dugne, O.; Fedou, R.; Filipuzzi, Ludovic; Lamouroux, Franck; Mocaer, D.; Villeneuve, J. F.
**Nasrallah, M. M.** See Carini, G. F.
**Nasrallah, M. M.; Anderson, H. U.**
Compensation modes in counterdoped rutile.—73-02166
**Nasredinov, F. S.** See Masterov, D. F.; Masterov, V. F.; Mitrofanov, V. V.; Seregin, N. P.
**Nasser, Karim W.** See Makrides-Saravanos, Elli
**Nassetti, G.**
EEC finances energy saving.—73-17475; Energy efficiency in the ceramic industry.—73-17476; New technologies for the rational use of energy in the ceramic industry.—73-04935; 73-04936
**Nassiopoulos, A. G.; Tambouris, D.; Travlos, A.**
Titanium disilicide formation by interdiffusion of titanium/amorphous silicon multilayers: influence of the bilayer silicon to titanium thickness ratio on the film properties.—73-13327
**Nastal, E. G.** See Dokuchaev, V. G.; Zhilin, A. A.
**Nastasi, Michael** See Cooper, Elizabeth A.
**Nastro, A.** See Tavolaro, Adalgisa
**Nasu, Hiroyuki** See Kamiya, Kanichi; Katagiri, Yuji; Matsuoka, Jun; Sugimoto, Osamu; Yamamoto, Hideki
**Nasu, Hiroyuki; Kaneko, Shoji; Keiji, Tsunetomo**
Preparation and optical properties of CuCl-doped $Na_2O$-$B_2O_3$-$SiO_2$ glasses.—73-00681
**Nasu, Hiroyuki; Kaneko, Shoji; Matsuoka, Jun; Kamiya, Kanichi**
Microstructure and optical properties of CdSe-microcrystal-doped $SiO_2$ glass thin films prepared by rf sputtering.—73-03802; 73-14227
**Nasu, Hiroyuki; Matsuoka, Jun; Sugimoto, Osamu; Kida, Minoru; Kamiya, Kanichi**
Nonresonant-type third-order optical nonlinearity of rare-earth-oxide-containing $GeO_2$ glasses.—73-03805; 73-10461
**Nasu, Hiroyuki; Sugimoto, Osamu; Kamiya, Kanichi**
Preparation and third-order optical nonlinearity of organic dye-doped glasses.—73-03867; 73-10575
**Nasu, Saburo** See Tanaka, Isao
**Nasu, Shoichi** See Tanaka, Hironao
**Natansohn, S.** See Pasto, Arvid E.
**Natarajan, S.; Sampath Kumar, T. S.; Arumugam, S.**
High-pressure studies on superconducting materials.—73-11784
**Nateprov, A. N.** See Dvorkin, A. A.
**Natesaiyer, Kumar C.; Hover, Kenneth C.**
Chemical agents for reducing solubility of silica in 1*N* sodium hydroxide.—73-09849
**Nathan, G. J.** See Manias, C. G.
**Nathan, M.** See Ben-Shalom, A.
**Nathan, M.; Anderson, C. R.; Ahearn, J. S.**
Interfacial reactions of thin titanium aluminide films with $Al_2O_3$ films and with sapphire.—73-13851
**Nathan, R. C.** See Das, S. K.
**Natig, B. A.** See Dzhafarova, S. Z.
**Nation, J. A.** See Ivers, J. D.; Schachter, L.
**Natoli, C. R.** See Gota, S.
**Natorff, Mieczyslaw; Happich, Carl-Christoph; Schaaf, Franz-Peter**
Method of making curved insulating glazing panes.—73-10643
**Natsik, V. D.** See Dolgin, A. M.; Lirtsman, V. G.; Pal-Val, L. N.
**Natsume, Y.; Sakata, Hironobu; Hirayama, Toru**
Low-temperature conductivity of ZnO films prepared by chemical vapor deposition.—73-12826
**Natsuoka, Morita; Hoshino, Koichi; Ono, Kenichi**
Diamond synthesis by sputtering.—73-16709
**Natsuya, Yoko** See Matsuya, Shigeki
**Natural, C.**
Fused-cast high-zirconia blocks in an electric furnace for lead crystal glass.—73-10730
**Naudzhius, K.** See Lideikos, T.
**Nauka, K.** See Kamins, T. I.
**Naumenko, N. F.**
Quasi-horizontally polarized quasi-bulk surface acoustic waves in piezoelectric crystals.—73-15284
**Naumenko, V. A.; Talakuev, N. P.; Norkin, B. F.**
Controlling the solidification process of baddeleyite-corundum products.—73-03995
**Naumov, A.** See Stanzl, H.
**Naumov, A.; Stanzl, H.; Wolf, K.; Lankes, S.; Gebhardt, W.**
Exciton recombination in Te-rich $ZnSe_xTe_{1-x}$ epilayers.—73-11203
**Naumov, I. I.; Velikokhatnyi, O. I.; Ol'khovik, G. A.; Aparov, N. N.**
Theoretic interpretation of characteristic electron energy loss spectra in $ZnO_2$.—73-16369
**Naumov, N. G.; Samoilov, P. P.; Fedorov, V. E.**
Formation of solid solutions of $Bi_2Sr_{2-x}Ba_xCa_{1-y}Nd_yCu_2O_{8+\delta}$.—73-15481
**Naumov, V. N.** See Bibik, E. E.
**Navaneethakrishnan, K.** See Elangovan, A.
**Navarrete, R. C.** See Glasrud, G. G.
**Navarro, C.** See Cortes, R.
**Navarro, J. M.** See Da Silva, M. G. Ferreira
**Navarro, J. M.; Fuertes, A.; Gomez-Romero, P.; Rodriguez-Carvajal, J.**
Crystal structure of $La_{1.85}Ba_{0.15}CaCu_2O_{6+y}$ determined by neutron powder diffraction.—73-08588
**Navarro, J. M.**
Brief overview on glass industry and glass research in Spain.—73-07110
**Navinsek, B.** See Hanzel, Darko; Panjan, P.
**Navinsek, B.; Panjan, P.**
Oxidation of $CrN_x$ hard coatings reactively sputtered at low temperature.—73-00255
**Navio, J. A.** See Macias, M.
**Navio, J. A.; Macias, M.; Sanchez-Soto, P. J.**
Influence of chemical processing in the crystallization behavior of zirconium titanate materials.—73-05863
**Navlikar, A. V.** See Dutta, P. K.
**Navratil, Karel** See Ohlidal, Ivan
**Navrotsky, A.** See Bularzik, J.
**Nawa, Masahiro** See Niihara, Koichi
**Nawa, Masahiro; Makio, Keizo; Ishihara, Masayuki; Kamiya, Akira; Nakano, Kikuo**
Mechanical properties of whisker-reinforced cordierite glass-ceramic composites.—73-03338; 73-10455
**Nawar, N.** See Youssef, A. M.
**Nawrocki, M.** See Gaj, J. A.
**Nayar, V.; Pickering, C.; Pidduck, A. J.; Carline, R. T.; Leong, W. Y.; Robbins, D. J.**
Surface roughness and optical properties of high-quality Si epitaxial layers.—73-17205
**Naylor, D. L.** See Lee, S. B.
**Naylor, D. L.; Tam, P. W.; Hellwarth, R. W.**
Fidelity of optical phase conjugation by photorefractive degenerate four-wave mixing in barium titanate.—73-12802
**Nazarenko, L. I.** See Gladush, V. M.
**Nazarian, D.** See Lo, G. Q.
**Nazarov, N.** See Evstropov, V. V.
**Nazarova, T. I.** See Kashcheev, I. D.
**Nazarova, V. N.** See Entelis, F. S.
**Nazarova, V. Ya.** See Chmel, A. E.
**Nazeri, Azar; Bescher, Eric; Mackenzie, John D.**
Ceramic composites by the sol-gel method—a review.—73-09031

**Nazeri, Azar; Kahn, Manfred; Bender, Barry A.; Allen, Carlton**
Microstructure of $KTa_xNb_{1-x}O_3$ thin films on MgO(100) single crystals.—73-17171
**Nazin, S. S.** See Molotkov, S. N.
**Naziripour, Ali; Hermann, Allen M.**
Method of forming smooth, uniform thallium-based superconducting films.—73-11971
**Nazzal, A. I.** See Lacorre, P.
**Nebel, A.; Beigang, R.**
Tunable ps pulses below 200 nm by external frequency conversion of cw mode-locked Ti:$Al_2O_3$ laser radiation.—73-09002
**Nebel, Jurgen** See Muller, H.-L.
**Nebo, Jon F.** See Leung, Roger Y.
**Nebosis, R. S.; Steinke, R.; Lang, P. T.**
Picosecond $YBa_2Cu_3O_{7-\delta}$ detector for far-infrared radiation.—73-11864
**Nechiporenko, I. N.** See Anders, E. E.
**Nechiporuk, B. D.** See Artamonov, V. V.
**Neda, Z.; Mocsy, A.; Bako, B.**
Structures obtained by mechanical fragmentation of glass plates.—73-10487
**Neddermeyer, H.** See Hanbucken, M.
**Nedeogio, D. D.** See Blazhku, A. I.; Dzhuadi, D.
**Neder, R.** See Lerch, M.
**Nedil'ko, S. A.; Lishko, T. P.; Golubeva, I. V.; Anshukova, N. V.**
Oxide superconducting compositions containing antimony.—73-01623
**Nedon, Wolfgang** See Schicht, Heinz
**Nedosvitii, V. P.** See Antonov, G. I.
**Neducin, Radmila M.** See Djuric, Mirjana
**Needs, R. J.** See Charlesworth, J. P. A.
**Neelakandan, K.** See Pankajakshan, V. S.
**Nefedov, A.** See Chaplanov, Victor A.; Galkin, Igor M.
**Neff, G. C.; Joshi, M. L.; Millstein, M.**
Advantages of oxy-fuel melting.—73-01943
**Neff, Glenn C., Sr.** See Shamp, Donald E.
**Neff, Glenn C., Sr.; Joshi, M. L.; Tester, M. E.**
Will a natural gas "cracker" technique reduce $NO_x$ emissions.—73-12246
**Neff, Glenn, Jr.** See Shamp, Donald E.
**Negami, Takayuki** See Kohiki, Shigemi; Nishitani, Mikihiko
**Negas, Taki** See Christoffersen, Roy
**Negas, Taki; Yeager, Glenn J.**
Dielectric ceramic compositions.—73-04206
**Negishi, Akira** See Kaneko, Hiroko
**Negishi, K.** See Nakatsu, K.
**Negodaev, M. A.** See Bagulya, A. V.
**Negre, F.** See Barba, A.
**Negre, F.; Barba, A.; Amoros, J. L.; Escardino, A.**
Oxidation of black core during the firing of ceramic ware: II. Process kinetics.—73-14565
**Negrii, V. D.**
Asymmetry of the screw dislocation core structure in cadmium sulfide crystals.—73-11075; Piezospectroscopy of screw dislocation emission in CdS.—73-17094
**Negriu, R. M.**
Superaluminous ceramics in the wood industry—possibilities and outlooks.—73-12331
**Nei, Bao-Min** See Ma, Y.-Z.
**Neikirk, D. P.** See Block, T. R.; Shih, Y.-C. A.
**Neill, James H.** See Neill, Ronald H.
**Neill, Ronald H.; Whychell, Donald T., Sr.; Neill, James H.**
Continuous in-line debinding and sintering of aluminum nitride parts.—73-02753
**Neilson, D. T.** See Ehrlich, J. E.
**Neilson, G. F.** See Podlesny, J.
**Neira, J.** See Agudo, Antonio Lopez
**Neirste, Dan**
EDM in new places.—73-15719
**Neiser, R. A.; Dykhuizen, R. C.; Smith, M. F.; Hollis, K. J.**
Use of a computer model to assist in VPS [vacuum plasma spray] parameter development.—73-09382
**Nelses, A.** See Konig, W.
**Neisser, Mark** See Flaitz, Philip L.
**Nekhaev, D. V.** See Demishev, S. V.
**Nekipelov, S. V.** See Vinogradov, A. S.
**Neklyudov, I. M.** See Shevyakova, E. P.
**Nekrasova, I. M.** See Vlokh, O. G.
**Nekvasil, V.** See Muzichka, Y. U.
**Nellis, W. J.** See Tunaboylu, Bahadir
**Nelson, Arthur J.** See Abou-Elfotouh, Fouad A.; Pugh, J. Richard
**Nelson, Arthur J.; Frigo, Sean P.; Rosenberg, Richard**
Surface-type conversion of InP by $H_2S$ plasma exposure: a photoemission investigation.—73-07826
**Nelson, Arthur J.; Swartzlander, A. B.; Tuttle, J. R.; Noufi, R.; Patel, R.; Hochst, Hartmut**
Photoemission investigation of the electronic structure at polycrystalline $CuInSe_2$ thin-film interfaces.—73-11377
**Nelson, C.; White, William B.**
Transition metal ions in silicate melts: III, Nickel in quenched oxide glasses.—73-10412
**Nelson, Elizabeth H.**
Ion beam etching of metal oxide ceramic.—73-01860
**Nelson, J. G.** See Neurgaonkar, R. R.
**Nelson, J. S.** See Hemstreet, L. A.
**Nelson, J.; Paxman, M.; Barnham, K. W. J.; Roberts, J. S.; Button, C. C.**
Steady-state carrier escape from single quantum wells.—73-15177
**Nelson, John C.** See Tsai, Chung-Hsien; Wang, Hsin-Fu
**Nelson, Shelby F.**
Status of two-dimensional Si/SiGe heterostructures.—73-07810
**Nemanich, R. J.** See Stoner, B. R.; Van der Weide, J.
**Nemat-Nasser, S.** See Subhash, G.
**Nemati, Z. Ali; Tabib-Azar, M.; De Guire, M. R.**
Effects of cerium doping on the resistivity of PTCR barium lead titanate.—73-07468
**Nemchenko, K. E.** See Anders, E. E.
**Nemec, Lubomir** See Chmelar, Josef
**Nemec, Lubomir; Lubas, Jaroslav**
Simple model of refining in glass-melting furnace with vertical flow and covered level.—73-07172
**Nemec, Lubomir; Luxova, Ida**
Selecting the character of glass melt flow in tank melting zones.—73-08486
**Nemec, Lubomir; Schill, Petr; Chmelar, Josef**
Glass refining at reduced pressures.—73-10544; Mathematical simulation in glass melting.—73-00659
**Nemec, Lubomir**
Analysis and modeling of glass melting.—73-14318
**Nemeth, Noel N.** See Choi, Sung-R.; Szatmary, S. A.
**Nemeth, Noel N.; Gyekenyesi, John P.; Manderscheid, J. M.**
Computing reliabilities of ceramic components subject to fracture.—73-12120
**Nemeth, Noel N.; Powers, Lynn M.; Janosik, Lesley A.; Gyekenyesi, John P.**
Designing ceramic components for durability.—73-06567; Time-dependent reliability analysis of monolithic ceramic components using the CARES/LIFE integrated design program.—73-17446
**Nemets, I. I.; Bel'maz, N. S.; Semykina, L. N.**
Friction-chemical activation of polycrystalline aluminum and zirconium oxides in water dispersions.—73-02837; Heat-resistant compositions based on a three-component binder suspension.—73-10733; Tribochemical activation of polycrystalline alumina and zirconia in aqueous suspensions.—73-03066
**Nemets, I. I.; Bel'maz, N. S.; Trubitsyn, M. A.**
Tribochemical aspects of producing binders for refractory coatings.—73-00881
**Nemets, I. N.** See Zlatkovskii, V. B.
**Nemetschek, R.** See Staufer, T.
**Nemilov, S. V.** See Komarova, N. V.
**Nemilov, S. V.; Komarova, N. V.**
Viscosity and elastic properties of glasses of the system $BaO-B_2O_3-Al_2O_3$ and $CdO-B_2O_3-Al_2O_3$.—73-14309
**Nemilov, S. V.; Volkova, N. E.; Anis'kova, I. V.**
Viscosity of glasses of the $BaO-P_2O_5-Al_2O_3$ system at glass-transition and annealing temperatures.—73-00572
**Nemilov, S. V.; Volkova, N. E.**
Viscosity of glasses of the system $K_2O-P_2O_5-Al_2O_3$ in the temperature region of softening and annealing.—73-14310
**Nemilov, S. V.**
Genesis of the vitreous state: three variant approaches to the problem.—73-14391
**Neminskii, A. M.** See Gantmakher, V. F.
**Nemirovsky, Y.** See Ruzin, A.
**Nemirovsky, Y.; Ruzin, A.; Bezinger, A.**
Uv photon-assisted control of interface charge between CdTe substrates and metallorganic chemical vapor deposition CdTe epilayers.—73-11497
**Nemirovsky, Y.; Unikovsky, A.**
Tunneling and 1/*f* noise currents in HgCdTe photodiodes.—73-07844
**Nemkovich, I. K.; Nevar, O. V.; Formago, I. A.**
Low-melting glass for sealing thick-film microcircuits.—73-00653; Low-melting glasses for the potting of thick film microcircuits.—73-00654
**Nemoto, H.** See Kishimoto, T.
**Nemoto, Y.** See Hirohata, Y.
**Nemov, S. A.** See Berezin, A. V.; Gavrikova, T. A.; Mel'nik, R. B.
**Nemov, S. A.; Ravich, Yu. I.; Berezin, A. V.; Gasumyants, V. E.; Zhitinskaya, M. K.; Proshin, V. I.**
Transport phenomena on $Pb_{0.78}Sn_{0.22}Te$ with high impurity concentrations.—73-15217
**Nemov, S. A.; Ravich, Yu. I.; Zhitinskaya, M. K.; Proshin, V. I.**
Self-compensation of electrically active impurities by intrinsic defects in $Pb_{0.8}Sn_{0.2}Te$ solid solutions.—73-01312
**Nemtsev, G. Z.** See Ignat'ev, A. S.
**Nemudry, A. P.** See Bokhonov, B. B.
**Nenadovic, T. M.; Mihac, T. P.; Rakocevic, Z. L.**
Photodeposition sputtering of titanium and TiN thin films.—73-13163
**Nender, C.** See Carlsson, P.
**Nenno, Soji** See Mori, Kaname
**Nenoff, Tina M.; Harrison, William T. A.; Gier, Thurman E.; Nicol, J. M.; Stucky, G. D.**
Structural characterization of a dehydrated magnesium/sodium beryllophosphate faujasite phase.—73-12697
**Neogi, Jayant; Neogi, Suneta S.; Sankar, Jagannathan; Vaidyanathan, K. Ranji**
High-resolution electron microscopy of precycled samples of a sintered silicon nitride.—73-17143
**Neogi, Suneta S.** See Neogi, Jayant
**Nepomnyashchii, O. A.** See Dubovik, V. N.; Raikhel, A. M.
**Nepomnyashchikh, A. I.** See Figura, P. V.
**Nerrien, N.; Studer, F.; Michel, C.; Srivastava, P.; Sekhar, B. R.; Saini, N. L.**
XAS and XPS study of electronic structure of the trivalent cuprate $La_2Li_{0.5}Cu_{0.5}O_{4-\delta}$.—73-05525
**Nerz, J. E.** See Steeper, T. J.
**Nesheva, D.** See Georgieva, I.
**Nesheva, D.; Aneva, Z.; Gospodinov, M.**
Traps and recombination centers in pure and Co-doped $Bi_{12}SiO_{20}$ crystals.—73-16643
**Neshpor, V. S.** See Golovko, E. I.
**Ness, Eric A.; Rafaniello, William**
Origin of density gradients in sintered ß-silicon carbide parts.—73-16890
**Nessler, W.** See Welp, U.
**Nesterchuk, N. I.** See Korytkova, E. N.
**Nesterenko, N. M.** See Kislov, I. A.
**Nesterenko, S. N.** See Putyatin, A. A.
**Nesterov, A. V.** See Davydov, I. V.
**Nestertsov, A. I.; Skomorovskaya, L. A.; Khusnutdinova, I. M.**
Extension of the raw material base for keramzit production.—73-15903
**Nestiorkin, O. P.** See Dooghin, A. V.
**Nesvizhskii, A. I.** See Aliev, G. P.
**Neswal, M.; Gresslehner, K. H.; Lischka, K.; Lubke, K.**
Dry etching of CdTe/GaAs epilayers using $CH_4/H_2$ gas mixtures.—73-11146
**Netiksis, V.; Homerlage, B.; Weil, R.; Loison, J. L.; Grun, J. B.; Levy, R.**
Picosecond dynamics of absorption bleaching in polycrystalline ZnCdTe films.—73-11394
**Netsch, Alfred**
Use of quasi-isostatic pressing technology in the tableware industry.—73-01836
**Netter, Paul L.**
Glasses made of pink borosilicates, their manufacture, and articles made of such glasses.—73-10633
**Netterfield, R. P.** See Bendavid, A.
**Netyaga, V. V.** See Koz'mik, I. D.
**Netyaga, V. V.; Grigorchak, I. I.; Kovalyuk, Z. D.**
Effect of intercalation with sodium and potassium nitrites on physical properties of indium monoselenide.—73-16459; Physical properties of $GaSe(MeNO_3)$ (Me=Na, K) and of biintercalates based on them.—73-11393
**Neu, G.** See Chen, Y.
**Neuber, J.** See Bonnet, J. P.
**Neudeck, G. W.** See Yen, H.
**Neudert, U.** See Disam, J.
**Neugebauer, G. T.** See Vydyanath, H. R.
**Neugebauer, Robert B.**
Value of ASTM to the commercial fatigue testing laboratory and its customers.—73-06597
**Neuhaus, Herbert J.**
MCM-D substrate fabrication cost model: comparing dry etch, wet etch, and photosensitive dielectrics.—73-04131
**Neuhausen, S.** See Braunisch, W.
**Neumann, Bruno**
Criteria for the optimization of screw feed conveyors.—73-01771
**Neumann, Christian; Suzuki, Katsumi; Enomoto, Youichi; Tanaka, Shoji**
Fabrication of YBaCuO Josephson junctions on MgO substrates damaged by a focused ion beam prior to film deposition.—73-15470
**Neumann, H.** See Syrbu, N. N.; Zegadi, A.
**Neumayer, Deborah A.** See Han, Bin; Schulz, D. L.
**Neumayer, Deborah A.; Schulz, D. L.; Richeson, D. S.; Marks, T. J.; DeGroot, D. C.; Schindler, J. L.**
Metallorganic chemical-vapor-deposition-derived lead- and bismuth-doped high-$T_c$ superconducting Tl-Ba-Ca-Cu-O films.—73-11831
**Neumeier, Franz** See Mannl, Reinhard
**Neumeier, J. J.** See Almasan, C. C.
**Neumuller, H. W.** See Gerhauser, W.
**Neupert, Richard H.; Seidensticker, David G.**
Fastener Development Program for TMC [titanium matrix composite] applications.—73-13619
**Neurgaonkar, R. R.; Santha, I. S.; Oliver, J. R.; Nelson, J. G.; Cheung, J. T.; Morgan, Peter E. D.**
Grain-oriented ferroelectric PZT thin films on lattice-matched substrates.—73-07892
**Neustroev, L. N.** See Beguchev, V. P.
**Neuville, D.** See Guillemet, C.
**Nevar, O. V.** See Nemkovich, I. K.
**Neville, David I., Jr.** See Lasday, Stanley B.
**Nevin, W. A.; Yamagishi, H.; Tawada, Y.**
Wide-band-gap hydrogenated amorphous silicon carbide prepared from a liquid aromatic carbon source.—73-13335
**Nevol'nichenko, B. I.** See Gaidash, B. I.
**Nevriva, M.** See Muzichka, Y. U.
**Newcomb, Stephen A.; Tressler, Richard E.**
High-temperature fracture toughness of sapphire.—73-17346; Slow crack growth in sapphire fibers at 800° to 1500°C—correction.—73-17432
**Newcombe, Gayle; Ralston, John**
Wetting dynamics studies on silica surfaces of varied hydrophobicity.—73-14312
**Newhouse, Mark A.** See Aitken, Bruce G.
**Newkirk, Marc S.** See Aghajanian, Michael K.; Kennedy, Christopher R.; Luszcz, Stanley J.
**Newkirk, Marc S.; Dizio, Steven F.**
Ceramic materials.—73-12347
**Newkirk, Marc S.; Johnson, William B.**
Process for preparing self-supporting bodies and products produced thereby.—73-00296
**Newkirk, Marc S.; Kantner, Robert C.; Park, Eugene S.**
Method for surface bonding of ceramic bodies.—73-01867
**Newkirk, Marc S.; Kantner, Robert C.**
Shaped ceramic composites with a barrier.—73-02068
**Newkirk, Marc S.; Urquhart, Andrew W.; Lesher, H. D.**
Inverse shape replication method of making ceramic composite articles and articles obtained thereby.—73-10319
**Newkirk, Marc S.; Urquhart, Andrew W.; Zwicker, Harry R.**
Ceramic articles with a modified metal-containing component and methods of making [the] same.—73-03674
**Newkirk, Marc S.; White, Danny R.; Dwivedi, Ratnesh K.**
Method for producing composite ceramic structures.—73-04990
**Newman, Harvey S.** See Bhasin, Kul B.; Culbertson, James C.
**Newman, J. D.; Walsh, L.; Evans, R.; Tholen, T.; Andrade, Octavio M.; Iskander, Magdy F.**
Experimental validation of numerical simulations of the microwave sintering process.—73-05796
**Newman, John J.** See Tong, Hua-Ching
**Newman, M. J.** See Chaney, J. H.
**Newman, N.** See Jager, N. D.
**Newman, Nathan; Kapitulnik, A.; Cole, Brady F.; Simon, Randy W.**
Method of preparing high-temperature superconductor films on opposite sides of a substrate.—73-11975

**Newman, P. J.** See MacFarlane, Douglas R.
**Newnham, Robert E.** See Kuromitsu, Yoshirou; Meyer, Richard, Jr.; Suzuki, Yoji; Takada, Takahiro; Troilo, Louis M.; Trolier-McKinstry, S.
**Newnham, Robert E.; Xu, Qi-Chang; Yoshikawa, Shoko**
Metal-electroactive ceramic composite actuators.—73-11633
**Newns, D. M.** See Tsuei, Chang-C.
**Newsam, J. M.; Treacy, M. M. J.**
Zeofile: a stack of zeolite structure types.—73-08797
**Newson, D. D.** See Pollinger, John P.
**Newton, Crystal H.**
Standards for computerization of composite material data.—73-06594
**Ng, Daniel**
Multiwavelength pyrometry to correct for reflections.—73-08424
**Ng, J. T. C.** See Singh, R.
**Ng, K. Y. S.** See Halasz, I.
**Ng, K.-W.** See Wu, Si-Jia
**Ng, W.** See Ray-Chaudhuri, A. K.
**Ngai, K. L.** See Bohmer, R.
**Ngai, K. L.; Strom, Ulrich; Kanert, O.**
Nature of the linear frequency-dependent alternating current conductivity interpolating between conductivity relaxational and vibrational responses in alkali oxide glasses.—73-03804
**Ngai, K. L.**
Absence of difference between $^{11}B$ nuclear spin relaxation and Li ion conductivity relaxation in $(LiCl)_{0.6}$-$(Li_2O)_{0.7}$-$(B_2O_3)_1$ superionic glasses.—73-06882
**Ngai, Wan-Fung** See Liu, Hai-Feng
**Ngoepe, P. E.** See Botha, P. J.; Stoddart, P. R.
**Nguyen, B. C.** See Hoinkis, M.
**Nguyen, Chanh** See Kroemer, Herbert
**Nguyen, Chanh; Brar, Berinder; Bolognesi, C. R.; Pekarik, J. J.; Kroemer, Herbert; English, J. H.**
Growth of InAs-AlSb quantum wells having both high mobilities and high concentrations.—73-04353
**Nguyen, Chanh; Brar, Berinder; Kroemer, Herbert**
Surface-layer modulation of electron concentrations in InAs-AlSb quantum wells.—73-11470
**Nguyen, Chanh; Kroemer, Herbert; Hu, E. L.**
Anomalous Andreev conductance in InAs-AlSb quantum wells with Nb electrodes.—73-07380
**Nguyen, Du B.; Rathore, Hazara S.**
Method for producing interlevel stud vias.—73-04218
**Nguyen, H. T.** See Carter, J. B.
**Nguyen, Hien-V.** See An, Il-Sin; Collins, R. W.
**Nguyen, Hien-V.; Collins, R. W.**
Analysis of critical points in semiconductor optical functions from in situ and real-time spectroscopic ellipsometry [SE].—73-16408
**Nguyen, Khanh Q.** See Cole, Barrett E.
**Nguyen, N. V.** See Pellegrino, J. G.
**Nguyen, N. X.** See Ibbetson, J. P.; Yin, L.-W.
**Nguyen, Nguyet M.** See Cogan, Stuart F.
**Nguyen, Tai D.; Nguyen, Tue; Ho, Herbert L.; Gronsky, R.**
Interactions in and interfacial structure of annealed Co/a-$Si_3N_4$ studied by HRTEM.—73-03605
**Nguyen, Tue** See Nguyen, Tai D.
**Ni, Bao-Rong; Kitagawa, Hajime; Wakuda, Tsuyoshi; Shigemitsu, Takashi; Funaki, Kazuo; Yamafuji, Kaoru**
Force-displacement characteristics of fluxoid lattice and pinning potential in Y-Ba-Cu-O bulk superconductor.—73-15478
**Ni, Jun; Gu, Bing-Lin**
Metastable phase transition of the alloy $(GaAs)_{1-x}Si_x$ and its electronic properties.—73-04402
**Niarchos, D.** See Jen Wang, l.
**Niay, P.** See Xie, W. X.
**Nicholas, M. G.**
Promoting the wetting and brazing of ceramics.—73-03635
**Nicholas, Paul**
Self-referencing DSC (differential scanning calorimetry).—73-12192
**Nicholas, R. J.; Barnes, D. J.; Miura, Noboru; Foxon, C. T.; Harris, J. J.**
Spin split cyclotron resonance in a 2-D electron system at very high magnetic fields.—73-07806
**Nicholas, Theodore** See Butkus, Lawrence M.
**Nicholls, J. E.** See Hagston, W. E.
**Nichols, D.; Sherwin, M.; Munns, G.; Pamulapati, J.; Loehr, John P.; Singh, J.**
Theoretical and experimental studies of the effects of compressive and tensile strain on the performance of InP-InGaAs multi-quantum-well lasers.—73-01348
**Nichols, F. A.** See Ajayi, O. O.
**Nichols, K.** See Liliental-Weber, Z.
**Nichols, M. C.** See Breunig, T. M.
**Nicholson, Patrick S.** See Bissinger, Melinda; Kuo, Chu-Kun; Sarkar, Partho; an, Aichun; Whitehead, M.; Xu, Gu; Zhu, Wen
**Nicholson, Patrick S.; Sarkar, Partho; Haung, X.**
Electrophoretic deposition and its use to synthesize $ZrO_2/Al_2O_3$ microlaminate ceramic/ceramic composites.—73-16760
**Nick, J. J.** See Pollinger, John P.
**Nickel, Hubertus** See Deschka, S.; Dinges, H. W.; Garcia-Rosales, Carmen
**Nickel, Janice H.; Morris, Donald E.; Ager, Joel W., III**
Locus of pairing interaction in $YBa_2Cu_3O_7$ by site-selective oxygen isotope shift: $^{18}O$ in the $CuO_2$ plane layers.—73-15536
**Nickel, N. H.; Fuhs, W.; Mell, H.; Beyer, W.**
Silicon nitride for amorphous silicon thin-film transistors [TFT's].—73-04167
**Nicol, J. M.** See Nenoff, Tina M.
**Nicolaescu, Ion V.; Tardos, Gabriel; Riman, Richard E.**
Thermogravimetric determination of carbon, nitrogen, and oxygen in aluminum nitride.—73-15855
**Nicolas, M.** See Van Huong, C. Nguyen
**Nicolas, M.; Dubon, A.; Vetter, G.; Conrad, J.**
Effect of Li doping on the superconducting properties of $EuBa_2Cu_3O_7$ by ac susceptibility measurement and Li NMR.—73-04703
**Nicolet, M. A.** See Chen, J. S.
**Nicoletti, S.** See Bianconi, M.
**Nicoletto, G.; Tucci, A.; Esposito, Leonardo**
Comparative dry wear behavior of hard coatings.—73-06755
**Nicolini, R.** See Biasiol, G.
**Nicoll, A. R.** See Barbezat, G.
**Nicoll, John** See Lavin, Philip A.
**Nicolopoulos, S.; Vincent, H.; Bekka, A.; Gonzalez-Calbet, J. M.**
Defect study by HREM of the hydrated sodium ß´´-alumina-like ferrite and derived (Li, Zn) spinel ferrite.—73-01451
**Nicotra, Maria Concetta** See Di Giulio, Massimo
**Nido, Masaaki; Naniwae, Kohichi; Shimizu, Junichi; Murata, S.; Suzuki, A.**
Analysis of differential gain in InGaAs-InGaAsP compressive and tensile strained quantum-well lasers and its application for estimation of high-speed modulation limit.—73-14770
**Nie, Man-Yun; Liu, Tong-Rong; Gao, Li-Ming**
Matte glaze of anorthite.—73-10866
**Nie, Man-Yun; Wu, Yun-Tong; Xie, Shi-Guang**
Preparation of low-cost opal glaze for colored tile.—73-10884
**Nie, Wen-Jiang** See Paz-Pujalt, Gustavo R.
**Niebauer, Kenneth L.** See Beeghly, Craig W.
**Nied, Herman F.; Mehan, Richard L.**
Metal-ceramic structure with intermediate high temperature reaction barrier layer.—73-10323
**Nieder, L. B.** See Sampson, E. R.
**Niedermayer, C.; Bernhard, C.; Binninger, U.; Gluckler, H.; Tallon, J. L.; Ansaldo, E. J.**
Muon spin rotation study of the correlation between $T_c$ and $n_s/m^*$ in overdoped $Tl_2Ba_2CuO_6$.—73-15561
**Nieh, Kai-Wei** See Josefowicz, Jack Y.
**Nieh, T. G.** See Chou, T. C.; Wadsworth, J.
**Nieh, T. G.; Wadsworth, J.; Sherby, O. D.**
Superplasticity in ceramics and ceramic composites, and high strain rate superplasticity in metal matrix composites.—73-03647
**Nielsen, H.-J.** See Phuvoravan, S.
**Nielsen, L. F.**
Strength development in hardened cement paste: examination of some empirical equations.—73-06722
**Nielsen, M.** See Norby, P.
**Niemi, K. J.** See Vuoristo, P. M. J.
**Niemi, K. J.; Vuoristo, P. M. J.; Mantyla, T. A.**
Properties of alumina-based coatings deposited by plasma and high-velocity combustion processes.—73-09502
**Nieminen, P. J.** See Karvinen, R.
**Nieminen, P. J.; Pylkkanen, K. P. K.**
Properties of very fine blast-furnace slags manufactured by jet mill.—73-06707
**Niepce, J. C.** See Caboche, G.
**Niesz, Dale E.** See McLaren, Malcolm G.; Zutshi, Ajoy
**Nieto, M. Isabel; Miranzo, Pilar; De Aza, Salvador; Moya, J. S.**
Effect of atmosphere on microstructural evolution of pressureless-sintered $Al_2O_3$/SiC composites.—73-05752; 73-12997
**Nieto, M. L.; Pena, P.; Mari, E. A.**
Glass formation in the systems: $SiO_2$-$ZrO_2$-CaO-MgO and $SiO_2$-$ZrO_2$-$Al_2O_3$-CaO. Structure and alkali resistance.—73-13997
**Niftiev, N. N.; Rustamov, A. G.; Tagiev, O. B.**
Electrical properties of layered $MnGaInS_4$ single crystals.—73-14868
**Niftiev, N. N.; Tagiev, O. B.**
Injection and thermostimulated currents in $MnIn_2S_4$ single crystals.—73-08890
**Nigmanov, B. S.** See Gulamova, D. D.
**Nigo, Seisuke** See Yoshikawa, Fumiaki
**Nii, Keita**
Solid-state imaging device having silicon carbide crystal layer.—73-11052
**Niihara, Koichi** See Iwata, M.; Kotani, Takao; Koyama, Takashi; Matsui, Tatsuji; Nakahira, Atsushi; Sasaki, Gen; Sawaguchi, Akihiro; Sekino, Tohru; Suganuma, Katsuaki; Tanaka, Isao; Xu, Yue-Ping; Yasuda, Eiichi; Zeng, Jian-Ren
**Niihara, Koichi; Hirano, Takeshi; Nakahira, Atsushi; Izaki, Kansei**
Correlation between interface structure and mechanical properties for silicon-nitride-based nanocomposites.—73-03248
**Niihara, Koichi; Nakahira, Atsushi; Sekino, Tohru**
New nanocomposite structural ceramics.—73-05933
**Niihara, Koichi; Nawa, Masahiro; Nakahira, Atsushi; Sekino, Tohru**
Sintered ceramic-metal composite product and method of fabricating the same.—73-10350
**Niihara, Koichi; Ueda, Hisao; Matsuki, Ryuichi; Takenouchi, Takeyoshi; Sasaki, Hiroshi**
Ceramic composite and process for its production.—73-15936
**Niihara, Koichi**
New design concept of structural ceramics—ceramic nanocomposites.—73-02900
**Niiler, Andrus** See Kecskes, Laszlo J.
**Niilisk, A.; Laisaar, A.; Gorban, I. S.; Slobdyanyuk, A. V.**
Large-pressure effect on photoluminescence lines in 6H SiC:Ti crystals.—73-16529
**Niimi, Hideaki** See Yamamoto, Hiroshi
**Niimi, Tetsuji** See Shimizu-Iwayama, Tsutomu
**Niinae, Toshinobu** See Ikeda, Yasunori; Kusano, Yoshihiro
**Niinae, Toshinobu; Takada, Jun; Ikeda, Yasunori; Bando, Yoshichika**
Mechanical grinding and reforming process of the Bi-2201 phase: II, Comparing the various Bi-2201 solid solutions.—73-15551
**Niinisto, L.** See Ritala, Mikko
**Niino, M.** See Kumakawa, Akinaga; Wakamatsu, Yoshio
**Niinuma, Tetsuro** See Hanehara, Shunsuke
**Niiseki, S.** See Mihashi, H.
**Nijhawan, S.** See Royle, M.
**Niki, Kazuya** See Takai, Minoru
**Nikiforov, A. I.; Kanter, B. Z.; Stenin, S. I.**
Structures with Sb ß-layers obtained by Si-MBE.—73-06294
**Nikiforov, A. V.** See Lebed, B. M.
**Nikishin, S. A.** See Andreev, A. M.
**Nikishkin, V. A.; Sevenyuk, A. A.; Sukhov, A. V.**
Anisotropic thermoelectric effect in Y-Ba-Cu-O thin films during time-varying laser heating.—73-04671
**Nikitenko, A. V.**
Relaxation properties of enamel slips.—73-06851
**Nikitenko, V. A.** See Dem'yanets, L. N.
**Nikitin, I. P.** See Garin, B. M.
**Nikitin, M. S.** See Lashkarev, G. V.
**Nikitin, V. G.** See Brunkov, P. N.
**Nikitin, V. R.** See Tomil'tsev, E. A.
**Nikitina, L. P.; Ovchinnikov, N. O.; Khil'tova, E. Yu.**
Real structure and thermodynamic properties of olivine solid solutions of $(Fe_{1-x}Ni_x)_2SiO_4$.—73-05471
**Nikitina, T. D.** See Bumai, Yu. A.
**Niklasson, G. A.** See Brantervik, Kjell
**Niklasson, G. A.**
Adsorption on fractal structures: applications to cement materials.—73-13673
**Nikol'skaya, L. V.** See Simanova, S. A.
**Nikol'skaya, L. V.; Ivanov, I. P.**
Cleavage cracks in iceland spar.—73-17117
**Nikol'skii, A. V.** See Kozakov, A. T.
**Nikolaenko, N. A.** See Merkin, A. P.
**Nikolaev, A. V.; Kostrubov, Yu. N.; Andreev, B. V.**
Electron structure of metal phase and metal-to-insulator transition in $VO_2$.—73-16130
**Nikolaev, E. I.** See Grishin, A. M.
**Nikolaev, V. I.** See Zakrevskii, V. A.
**Nikolaev, V. I.; Pertsev, N. A.; Smirnov, B. I.**
Electroplastic effect in polarized ferroelectric $NaNO_2$ crystals.—73-01408
**Nikolaeva, R. B.** See Pashkov, G. L.
**Nikolopoulos, Panagio** See Tsoga, Anna
**Nikonorov, N. V.** See Ashtakhova, V. V.; Dokuchaev, V. G.; Dotsenko, A. V.; Evstrop'ev, S. K.; Glebov, L. B.; Kuchinsky, S. A.; Zhilin, A. A.
**Nikonova, Nadia S.** See Kuznetsova, Tamara V.; Vulkov, V.
**Nikorich, A. V.** See Andronik, K. I.; Khokhlov, D. R.
**Nikulin, E. I.** See Kavokin, K. V.
**Nikulin, M. Ya.** See Andrianova, T. N.
**Nikutowski, Enrique A.; Adam, Randall E.; O'Neill, David G.**
Coated orthodontic archwire.—73-10307
**Niles, David W.** See Rioux, Dennis
**Niles, David W.; Rioux, Dennis; Hochst, Hartmut**
Photoemission investigation of the $SnO_2$/CdS interface: a front contact interface study of CdS/CdTe solar cells.—73-02664
**Nilius, Ulf** See Felgner, Karl-Heinz
**Nilsen, A. Ulrik; Aitcin, Pierre-Claude**
Properties of high-strength concrete containing light-, normal-, and heavyweight aggregate.—73-06704; Static modulus of elasticity of high-strength concrete from pulse velocity tests.—73-06720
**Nilsen, Kevin J.** See Weimer, Alan W.
**Nilsson, Boo J. L.** See James, Timothy W.
**Nilsson, Jan** See Mattsson, Bertil
**Nilsson, K.** See Brodersen, K.
**Nilsson, L.** See Stenstrom, S.
**Nilsson, Lars-Olof** See Tang, Lu-Ping
**Nimmer, Ronald R.; Bankert, R. J.; Russell, Edward S.**
Micromechanical modeling of fiber/matrix interface effects in transversely loaded SiC/Ti-6-4 metal matrix composites.—73-00251
**Ning, X. J.** See Morscher, Gregory N.
**Ning, X.-G.; Li, J.-H.; Pan, J.; Hu, K.-Y.; Ye, H.-Q.; Fukunaga, H.**
Whisker-matrix interfacial reactions in SiC, $Si_3N_4$, and $Al_{18}B_4O_{33}$ whisker-reinforced aluminum-matrix composites.—73-13910
**Ning, Y. B.** See Gong, W. H.
**Ninomiya, Hideaki; Miyakoshi, Toshinobu; Kondo, Ryoichi; Kamiya, Takashi**
Overcoating inorganic composition.—73-05236
**Ninomiya, Koichi** See Maruta, Toshihisa
**Ninomiya, Toshiyuki** See Yamaguchi, Atsuko
**Niori, Yusuke** See Ushikoshi, Ryusuke
**Niou, C.-S.** See Li, Wang-Pei
**Nipan, G. D.** See Kvardakov, A. M.
**Nipan, G. D.; Koneshova, T. I.**
Tensimetric investigation of solid solutions $Cr_{2.83}Fe_{0.1}Te_x$.—73-16363
**Nipan, G. D.; Marushkin, K. N.; Lazarev, V. B.**
Phase diagram of the system $ZrO_2$-$HfO_2$.—73-05448
**Niroomand, Ardavan** See Mathews, Viju K.
**Nisaev, I. P.; Grudinskii, V. I.**
Choice of optimum compositions of soil-concrete mixtures.—73-00039
**Nishanova, M. M.** See Gan'shina, E. A.
**Nishev, T.** See Pelovsky, Y.
**Nishi, Kenichi; Usui, Akira; Sakaki, Hiroyuki**
In situ optical characterization of GaAs and InP surfaces during chloride atomic layer epitaxy [ALE].—73-04364
**Nishi, Kouichi** See Hosokawa, Kiyoshiro
**Nishi, Makoto** See Oguma, Noriyasu
**Nishi, Masaaki** See Yamamura, Takashi
**Nishi, Tokumitsu** See Okuda, Koji
**Nishi, Tokumitsu; Okuda, Koji; Takai, Hiroshi; Hoshino, Hisakiyo; Numano, Masashi; Miyake, Natsumi**
Electric joining method of material including ceramics.—73-10310
**Nishi, Toshihiro** See Ohishi, Yasutake

**Nishi, Y.; Nozaki, K.; Kurotaki, T.; Aida, T.**
Formation of high-$T_c$ $Bi_{1.6}Pb_{0.4}Sr_2Ca_2\cdot(Cu_{0.9}Ti_{0.1})_3O_x$.—73-11770

**Nishi, Yoshitsugu** See Shiogai, Tatsuya

**Nishibayashi, Yoshiki** See Shiomi, Hiromu

**Nishida, A.; Horai, K.**
In-field logarithmic relaxation of microwave absorption in superconducting $Tl_2Ba_2Ca_2Cu_3O_{10}$ and flux pinning properties.—73-04740

**Nishida, Akio; Fukuda, Shinji; Kohtoku, Yasuhiko; Terai, Kenji**
Grain size effect on mechanical strength of MgO-$ZrO_2$ composite ceramics.—73-06448; 73-13543

**Nishida, Akio; Terai, Kenji**
Effects of annealing on properties of MgO-$ZrO_2$ composite ceramics.—73-02804; Effects of annealing on properties of MgO-$ZrO_2$ composite ceramics.—73-13027

**Nishida, Hirofumi** See Ono, Yukiyoshi

**Nishida, Kazuhisa**
Helix-type traveling wave tube structure with supporting rods covered with boron nitride or artificial diamond.—73-05302; 73-10316; Ion laser tubes.—73-15998; Ion-laser including a silicon carbide discharge tube having a small arithmetic roughness.—73-15999

**Nishida, Masamitsu** See Fujimaru, Takuya; Ohuchi, Hiromu

**Nishida, Minoru** See Mashimo, Tsutomu; Morizono, Yasuhiro; Tomoshige, Ryuichi

**Nishida, Tetsuaki; Ichii, Tomoko; Takashima, Yoshimasa**
FTIR investigations of the crystallization of ir-transmitting glasses: application to calcium gallate glass.—73-10377

**Nishida, Toshihiko** See Pezzotti, Giuseppe

**Nishida, Toshihiko; Hanaki, Yoshikazu; Pezzotti, Giuseppe**
Effect of notch-root radius on the fracture toughness of a fine-grained alumina.—73-06387

**Nishida, Toshihiko; Kameyama, Ichiro**
*R*-curve properties of alumina measured by stable fracture test in bending.—73-06509; Evaluation of fracture toughness for structural ceramics using SEPB specimens: IV, Fracture behavior of α-alumina polycrystals with different grain sizes.—73-03283; 73-13526

**Nishida, Toshihiko; Kinoshita, Masahiko; Okoshi, Sadafumi; Jindai, Hitoshi**
Treatment of sintered SiC by fluorine.—73-06301; 73-17214

**Nishida, Toshihiko; Noda, Kazuya; Pezzotti, Giuseppe; Saito, Shinichi; Yonezawa, Takao**
Attempt at measuring the crack extension resistance of ceramics by fracture test in bending.—73-03239; 73-13494

**Nishida, Toshihiko; Yamada, Kazuya; Nakano, Hiromi; Urabe, Kazuyori**
TiC/SiC ceramic composite prepared by SHS/HP processing.—73-17061

**Nishida, Toshikazu** See Thompson, Scott E.

**Nishida, Yasunori; Mohri, Masahide**
Method for producing zirconia-based sintered body.—73-12381

**Nishida, Yoshiki** See Fujiura, K.; Ohishi, Yasutake

**Nishide, Toshikazu** See Uemura, Ryuzo

**Nishide, Toshikazu; Mizukami, Fujio**
Preparation and properties of $TiO_2$ films by complexing agent-assisted sol-gel method.—73-02935; 73-13178

**Nishido, Hirotsugu** See Okada, Yoshihiko

**Nishiguchi, K.** See Takahashi, K.

**Nishihara, Yoshikazu** See Ha, Dong-Han; Iga, Fumitoshi

**Nishihara, Yoshiyuki** See Tanabe, Ryuichi

**Nishii, Masanobu** See Okamura, Kiyohito

**Nishijima, A.** See Inumaru, Kei

**Nishijima, M.; Takeda, Yasuo; Imanishi, Nobuyuki; Yamamoto, Osamu; Takano, M.**
Li deintercalation in lithium transition metal nitride, $Li_3FeN_2$.—73-10966

**Nishikawa, Fuyuki** See Moriya, Yoshihiro

**Nishikawa, Harumitsu** See Monma, Hideki

**Nishikawa, Hiroyuki** See Kitagawa, Manabu

**Nishikawa, Kazuhiro** See Yoshitake, Masaaki

**Nishikawa, T.; Suzuki, K.; Ito, S.; Sato, K.; Takebe, T.**
Decomposition of synthetic ettringite by carbonation.—73-03448

**Nishikawa, T.; Takahashi, J.; Hattori, A.; Takatsu, Manabu**
Cyclic fatigue of electrically poled piezoelectric ceramics.—73-06365

**Nishikawa, Tadahiro** See Gao, Tie

**Nishikawa, Tadahiro; Gao, Tie; Kosakai, Mamoru**
Thermal fatigue behavior of alumina ceramics by water quenching method.—73-13603

**Nishikawa, Tadahiro; Kamiya, Hidehiro; Kawabe, Kouji; Takatsu, Manabu**
Sliding wear properties of sintered mullite ceramics.—73-13590; 73-03352

**Nishikawa, Tadahiro**
Microstructure and mechanical properties of hardened cement paste incorporating ground granulated blast-furnace slag.—73-10050

**Nishikawa, Takashi** See Sera, Masafumi

**Nishikawa, Takashi; Ono, Tsuyoshi; Yano, Mototake; Ogo, Yoshiaki**
Estimation of poor size distribution in different structural cylindrical porous ceramic filters from gas permeability.—73-15797

**Nishikawa, Takashi; Ootsuki, Atsuyuki; Ooi, Hiroshi; Yano, Morotake**
Structure of aggregated NiO particles in NiO/$SiO_2$ particles prepared by CVD method.—73-17201

**Nishikawa, Tomozo** See Hayashi, Kunio

**Nishikawa, Y.** See Itaya, Kazuhiko

**Nishikawa, Yoshinori; Ota, Rikuo; Wakasugi, Takashi; Fukunaga, Jiro**
Gel region and gelation behavior of alkoxide solutions in the $B_2O_3$-$Na_2O$ system.—73-05824; 73-16801

**Nishikubo, K.; Imamura, T.; Yamada, Y.**
Formation and microstructure of nodular filamentous carbon.—73-13398

**Nishimoto, Akihiko** See Hirata, Yoshihiro

**Nishimoto, Yuko** See Maeda, Kazuo

**Nishimura, H.** See Nakayama, M.

**Nishimura, Hideki** See Komorita, Kazunori

**Nishimura, Hisashi** See Wakayama, Shuichi

**Nishimura, Kozo** See Kobashi, Koji

**Nishimura, Kozo**
Diamond Schottky-gate-type field effect transistor.—73-11520

**Nishimura, Makoto** See Suzuki, Mineo

**Nishimura, Satoshi** See Tsunematsu, Kinue

**Nishimura, Toshiyuki** See Kimura, Shiushichi; Matsuo, Yohtaro

**Nishimura, Toshiyuki; Matsuo, Yohtaro; Jinbo, K.; Kimura, Shiushichi**
Forming of ceramic powders by cyclic-CIP—quantitative evaluation of densification behavior.—73-16799

**Nishimura, Tsutomu** See Nakatani, Seiichi

**Nishimura, Yukio; Tokunaga, Kyoji; Tsuji, Masaharu**
Deposition of tantalum oxide films by ArF excimer laser chemical vapor deposition.—73-05738

**Nishino, A.** See Tanahashi, Ichiro

**Nishino, Atsushi** See Hiraka, Masahiro; Ikeda, Masaki; Numoto, Hironao

**Nishino, H.** See Murakami, S.

**Nishino, J.** See Kanno, Yoshinori

**Nishino, Junichi** See Kamata, Kiichiro

**Nishino, Junya** See Murakami, Hirohiko

**Nishino, Junya; Shiohara, Y.; Tanaka, Shoji**
Effect of low-temperature preheating on properties of superconducting $YBa_2Cu_3O_x$ ceramics prepared by chemical solution process.—73-04704; 73-11735

**Nishino, Tadashi** See Nagai, Masayuki

**Nishino, Tadashi; Sakurai, Tadashi**
Dissolution of sparingly soluble inorganic compound in aqueous suspension containing ion-exchange resin: VIII, Hydration products of tricalcium silicate ($Ca_3SiO_5$).—73-16717

**Nishino, Tadashi**
Chemical separation of MgO from dolomite ore.—73-01979; Dissolution of sparingly soluble inorganic compound in aqueous suspension containing ion-exchange resin: VII, Calorimetric measurement of dissolution of portland cement and its related compounds.—73-13705; 73-06648; Reexamination of dissolution heat of gypsum and anhydrite in water at 25°C.—73-13773

**Nishino, Toshikazu** See Hasegawa, Haruhiro; Saitoh, Shinichiroh

**Nishino, Toshikazu; Hasegawa, Haruhiro; Kawabe, Ushio**
High-$T_c$ superconducting device with weak link between two superconducting electrodes.—73-01707

**Nishino, Toshikazu; Kawabe, Ushio; Tarutani, Yoshinobu; Kominami, Shinya; Aida, Toshiyuki; Fukazawa, Tokuumi**
Superconducting device with *C*-axis orientation perpendicular to current flow.—73-15695

**Nishino, Y.** See Nakano, Kikuo

**Nishio, Hiroaki** See Torizuka, Shiro; Yabuta, Kazuya

**Nishio, Hiroaki; Watanabe, Keiji; Sato, Michitaka**
Method of producing ceramic sintered body having dense ceramic membrane.—73-05233

**Nishio, Kazuyuki** See Masuda, Hideki

**Nishio, Kozi** See Sakai, Takenobu

**Nishio, Noriyuki** See Li, Jing-Feng

**Nishio, Toshiyuki** See Fujiki, Yoshinori

**Nishio, Toshiyuki; Fujiki, Yoshinori**
Preparation of mullite fiber by sol-gel method.—73-02958; Preparation of $Na_{1-x}Ti_{2+x}Al_{5-x}O_{12}$ ($x$=0.2) fiber by precursor method.—73-02959; 73-13195; Preparation of superconducting $YBa_2Cu_3O_{7-x}$ fibers through metal citrate gel as a precursor.—73-08178

**Nishio, Toshiyuki; Kijima, Kazunori; Kajiwara, Kanji; Fujiki, Yoshinori**
Influence of preparation procedure in the mullite preparation by solution method to the mixing of Al and Si and the crystallization behavior.—73-16840

**Nishioka, M.** See Nagamune, Y.; Yanagisawa, K.

**Nishioka, Masao; Yamada, Hirotake**
Process for producing solid oxide fuel cells.—73-11046

**Nishioka, Takamune**
Glass fact database INTERGLAD.—73-09717

**Nishioka, Takao** See Yamakawa, Akira; Yamamoto, Takehisa

**Nishioka, Takao; Kuibira, Akira; Matsunuma, Kenji; Takano, Yoshishige; Higuchi, Matsuo; Honda, Masaaki**
High-strength silicon nitride sintered body and process for producing [the] same.—73-02098; 73-15993

**Nishioka, Takao; Matsunuma, Kenji; Yamakawa, Akira**
Method of machining silicon nitride ceramics and silicon nitride ceramic products.—73-12493

**Nishioka, Toshio** See Itatani, Kiyoshi

**Nishitani, Mikihiko** See Kohiki, Shigemi

**Nishitani, Mikihiko; Negami, Takayuki; Kohiki, Shigemi; Terauchi, M.; Wada, Takahiro; Hirao, Takashi**
Homojunction diode of $CuInSe_2$ thin film fabricated by nitrogen implantation.—73-09163

**Nishiumi, Yoshinobu** See Nagai, Bin

**Nishiwaki, Fumitoshi** See Nakagiri, Yasushi

**Nishiwaki, Hitoshi** See Hosokawa, Kiyoshiro; Nagai, Bin

**Nishiwaki, Ryou** See Okada, Michiya

**Nishiwaki, Shiro** See Takahashi, Junichi

**Nishiyama, Akio** See Koyama, Takashi

**Nishiyama, Akio; Koyama, Takashi; Aikawa, Yasutaka; Ohshima, Hideo; Terao, Yuichiro; Kato, Munenori**
$Al_2O_3$-based ceramic.—73-12337

**Nishiyama, Katsuhiro; Mohri, Masashi; Umekawa, Sokichi**
Fabrication and mechanical properties of $C_f$/NiAl and $SiC_w$/NiAl composites.—73-03587

**Nishiyama, Katsuhiro; Ogawa, Toshiharu; Takagi, Kenichi; Omori, Mamoru; Umekawa, Sokichi**
Mechanical properties of Mg-based composites reinforced with B, $AlB_2$, and $MgB_2$.—73-13867

**Nishiyama, Shin** See Hattori, Takeo

**Nishiyama, Shin; Sakurai, Osamu; Shinozaki, Kazuo; Mizutani, Nobuyasu**
Electrical conduction of $La_2Cu_{1-x}Zn_xO_{4+\delta}$ at high temperature.—73-05556; 73-12788

**Nishiyama, Toshikazu** See Tomishima, Hiroshi

**Nishiyama, Toshiki; Hamaji, Yukio; Sakabe, Yukio**
Nonreducing dielectric ceramic composition.—73-04858

**Nishiyama, Y.** See Torii, Kazuo

**Nishiyama, Yukio; Kawai, Shichio; Kawai, Tomoji; Tabata, Hitoshi; Murata, Osamu; Fujioka, Junzo**
Production of oxide superconducting films by laser sputtering using $N_{22}$.—73-01737

**Nishizaka, Tsuyoshi; Hane, Akira; Kato, Kazuhiko; Kotaka, Hirohumi; Hoshino, Kazutomo**
Effect of the cooling rate on superconductivity of Bi-system superconductor.—73-15435

**Nishizaki, T.** See Fukami, T.

**Nishizato, Osamu** See Takahashi, Minoru

**Nishizawa, H.; Okumoto, K.; Mitsushio, T.**
Preparation and thermal decomposition of yttrium hydroxide fluorides.—73-02404

**Nishizawa, Junichi; Sakuraba, Hiroshi; Oyama, Yutaka**
Molecular layer epitaxy of GaAs.—73-01251

**Nishizawa, Junichi**
Apparatus for growing a GaAs single crystal by pulling from GaAs melt.—73-01370

**Nishizawa, K.** See Toriyama, Motohiro

**Nishizawa, Kenichi; Kodama, Tatsuya; Tabata, Masahiro; Yoshida, T.; Tsuji, M.; Tamaura, Y.**
Adsorption of $CO_2$ on oxygen-deficient magnetite: adsorption enthalpy and adsorption isotherm.—73-16028

**Nishizawa, Manabu** See Kushitani, Hideki

**Nishnevich, M. B.** See Bunkin, A. Yu.

**Niska, J.; Babushki, O.; Loberg, B.**
High-temperature X-ray diffraction of the PbBi-2223 phase superconductor in different atmospheres.—73-08096

**Nissen, H. U.** See Cartlidge, S.

**Nissen, Timothy A.** See Flaugher, Jeffrey R.

**Nistor, L. C.** See Mihailescu, I. N.

**Nistor, L. C.; Van Landuyt, J.; Barton, J. D.; Hole, D. E.; Skelland, N. D.; Townsend, P. D.**
Colloid size distribution in ion-implanted glass.—73-06890

**Nitanda, Humio** See Nakamura, Ryouhei

**Nitobe, K.** See Takahashi, Y.

**Nitta, A.; Satou, M.; Komatsu, Takayuki; Matusita, Kazumasa**
Interface reactions of Fe-Al-Si and Fe-Ga-Si magnetic alloys with oxide glasses.—73-14209

**Nitta, H.** See Yonemoto, Toshikuni

**Nitta, Hideo** See Arai, Yasuo; Jackson, John E.

**Niu, C.-M.** See Qian, Y.-T.

**Niu, C.-M.; Tsagaropoulos, G.; Baglio, J.; Dwight, K.; Wold, A.**
Nucleation and growth of diamond on Si, Cu, and Au substrates.—73-03180

**Niwa, H.** See Miyagawa, S.

**Niwa, Koichi** See Suzuki, Hitoshi; Tanaka, Atsushi; Yokouchi, Kishio; Yokoyama, Hiromitsu

**Niwa, Koichi**
Science and technology in composite materials—multilayer (ceramic) substrate.—73-04162

**Niwa, Shuichi** See Maeda, Kazuyuki

**Niwa, T.; Saito, T.; Kinbara, A.**
Reactive sputtering of Ta under gradient oxygen pressure.—73-16970

**Niwa, Tomonori** See Iio, Satoshi

**Niwa, Tomonori; Urashima, Kazuhiro; Tajima, Yo; Watanabe, M.**
Effects of crack size on fatigue behavior in silicon nitride.—73-06393

**Nixon, S.**
Melter control systems.—73-01956

**Niyogi, S. K.** See Das, A. C.

**Nizamiev, I. P.** See Bogdanova, Kh. G.

**Nizamutdinov, N. M.** See Khasanova, N. M.

**Nizknikova, G. P.** See Gegeshidze, K. R.

**Nizomov, Kh. A.** See Strukov, B. A.

**Njakshev, K. F.** See Vendik, O. G.

**Nkinamubanzi, P.-C.** See Simard, M.-A.

**Nnodimele, Remi** See Franklin, Thomas C.

**No, K.-S.** See Kim, Sang-Ho

**No, K.; Berard, M. F.**
Electrical switching of two-phase ZnO-$PrCoO_3$ threshold switching materials.—73-03140

**No, Kwang-Soo** See Cho, Chang-Hyun; Kim, Chang-Jung; Shin, Woo-Suck

**No, Kwang-Soo; Shin, Woo-Suck; Bae, Sung-Joon; Cho, Chang-Hyun; Jang, Gun-Eik; Kim, Won-Baek**
Effects of pulling direction on directional growth of $YBa_2Cu_3O_{7-x}$ superconductors.—73-11741

**Nobili, Maurizio; Lazzari, C.; Schirone, Antonio; Faetti, Sandro**
Azimuthal anchoring energy at an $SiO_x$-nematic interface.—73-16412

**Noble, D. B.** See Kamins, T. I.

**Noble, R.** See Wang, X. W.

**Noboa, Gabriel** See Herrera F., Carlos

**Nobori, Kazuhiro** See Ushikoshi, Ryusuke

**Nobrega, M. C. S.; West, Jon K.**
Densification and defect chemistry related to the varistor performance of ZnO-based ceramics.—73-14827

**Nobrega, M. C. S.; Zolotav, M. S.; Mannheimer, W. A.**
ZnO varistors produced using colloidal-gel powders.—73-11512

**Nobuhara, H.** See Odagawa, Tetsufumi

**Nobuhara, Hiroyuki** See Yamamoto, Tsuyoshi

**Nobunaga, T.** See Teraoka, Y.

**Noche, Orlando L.** See Schwartz, Ira C.

**Noczun-Wczelik, W.** See Rajczyk, Krystyna

**Noda, Etsuo; Suzuki, Setsuo; Morimiya, Osami; Hayashi, Kazuo**
Method for manufacturing an oxide superconductor thin film.—73-11966

**Noda, K.** See Nagai, Masayuki
**Noda, Kazuya** See Nishida, Toshihiko; Pezzotti, Giuseppe
**Noda, Naotake**
Thermal stresses in materials with temperature-dependent properties.—73-05677
**Noda, Satoshi** See Yamane, Masayuki
**Noda, T.** See Araki, H.
**Noda, T.; Suzuki, H.; Araki, H.; Abe, F.; Okada, M.**
Microstructure and growth of SiC film by excimer laser chemical vapor deposition at low temperatures.—73-09209
**Noda, Tamotsu** See Murakami, Hirohiko
**Noda, Yoshiro** See Watanabe, Masakazu
**Noel, H.** See Saint-Paul, M.
**Noel, J.-P.** See Houghton, D. C.
**Noel, J.-P.; Rowell, N. L.; Houghton, D. C.; Wang, A.; Perovic, D. D.**
Photoluminescence [PL] properties of strained molecular beam epitaxy $Si_{1-x}Ge_x$/Si multiquantum wells [MQW's].—73-11381
**Nofz, M.** See Himmel, B.; Rager, H.; Stosser, R.
**Nofz, M.; Stosser, R.; Herrmann, W.**
Indication and characterization of Fe(II) and Fe(III) species in silicate and aluminosilicate glasses.—73-14408
**Noga, J. O.** See Jankovic, M.
**Noga, John**
Refractory recycling developments.—73-07221
**Nogami, Katsunori** See Azuma, Yasuo
**Nogami, Masayuki** See Li, Guang-Ming
**Nogami, Masayuki; Kato, A.; Tanaka, Y.**
Sol-gel preparation of $CdS_xSe_{1-x}$ solid solution microcrystal-doped glasses.—73-07173
**Nogami, Masayuki; Nakamura, A.**
Emission spectra of microcrystalline CdS doped in sol-gel-derived glasses.—73-10370
**Nogami, Masayuki; Sugiura, T.**
Photochromism of spiropyran doped in $Al_2O_3$-$SiO_2$ gels prepared by the sol-gel process.—73-12858
**Nogami, Masayuki; Yamada, Keiko; Watabe, Michie; Nagasaka, K.**
Formation of CdS crystals in small-sized CdS-doped glasses prepared by the sol-gel process.—73-00630
**Nogami, Masayuki**
Effect of matrix glass composition on the oxidation of small-sized CdS crystal doped glasses.—73-11159
**Nogar, N. S.** See Wu, X.-D.
**Noge, Hiroshi; Shimizu, Akira; Sakaki, Hiroyuki**
Possibilities and problems of semiconductor quantum microstructures.—73-15107
**Nogi, K.** See Chen, J.-H.
**Nogi, K.; Tsujimoto, M.; Ogino, K.; Iwamoto, N.**
Wettability of MgO single crystals by liquid pure Pb, Sn, and Bi.—73-13907
**Noguchi, Hideyuki** See Miyashita, Takahiro
**Noguchi, Junichi** See Okafuji, Masaharu
**Noguchi, Kazumi** See Iwata, Hitoshi; Yamazaki, Masanobu
**Noguchi, Kenichi** See Oishi, Manabu
**Noguchi, Kesao**
Thin-film transistor with excellent stability for liquid crystal display.—73-11549
**Noguchi, M.; Miyarita, K.; Endo, M.**
Characteristics of heat-treated polyparaphenylene (PPP) at 973 K as an anode of lithium battery.—73-10920
**Noguchi, Satosi; Mizuhashi, Mamoru; Sakata, Hironobu**
Optical properties of $In_2O_3$-coated cover glass for solar collectors.—73-10466
**Noguchi, Takehiko**
Melting and forming system for high-quality glass products.—73-01957
**Noguchi, Yasunari** See Harada, Hiroshi
**Noguchi, Yoshio** See Yasaka, Hiroshi
**Nogueira, Gesse Eduardo Calvo** See Maldonado, Edison Puig
**Nogueira, M.** See Carvalho, M. G.
**Nogueira, R. E.; Edirisinghe, M. J.; Gawne, D. T.**
Fabrication of engineering ceramics by injection molding a suspension with optimum powder properties: I, Processing and microstructure.—73-09132; Fabrication of engineering ceramics by injection molding a suspension with optimum powder properties: II, Mechanical properties and wear behavior.—73-09595; Selection of a powder for ceramic injection molding.—73-06030
**Noguera, C.** See Bordier, G.
**Noh, Hyun-Sik** See Lee, Kyeong-Bock
**Noh, S.-K.** See Kim, T.-W.
**Noiray, J. C.** See Eggenkamp, M. E. W.
**Noji, T.** See Koike, Y.
**Nojima, Hideo** See Fujimoto, Manabu; Kataoka, Shoei; Shintaku, Hidetaka
**Nolan, Theodore A.** See Ferber, Mattison K.; Volkl, E.
**Nolte, D. D.** See Melloch, M. R.
**Noltemeyer, Tony**
Process centering—the Taguchi loss function.—73-15745
**Noma, H.** See Hara, N.
**Noma, M.** See Sohn, S. H.
**Noma, Tatsuo** See Yashima, Masatomo
**Noma, Tatsuo; Shoji, Noriyuki; Wada, Satoshi; Suzuki, Takeyuki**
Preparation of spherical $Al_2O_3$ particle-dispersed hydroxyapatite ceramics.—73-09269; 73-16936; Sintering of hydroxyapatite powders with SiC platelet dispersion.—73-03009; 73-13267
**Nomaki, T.** See Takeno, S.
**Nomerovannaya, L. V.; Makhnev, A. A.; Kirillova, M. M.**
Optical study of the doping effect of oxygen in $YBa_2Cu_3O_y$ and $Bi_2Sr_2CaCu_2O_{8+\delta}$ single crystals.—73-11851
**Nomura, Aki** See Beppu, Henry
**Nomura, Eiichi** See Okuyama, Ryoichi
**Nomura, Hiroshi** See Iwamoto, Yuji; Sugiura, Isao
**Nomura, I.** See Kishino, Katsumi
**Nomura, Junichi** See Yamamoto, Hiroshi
**Nomura, Junji** See Kawano, Fusao
**Nomura, Kazuo** See Hashimoto, Noboru
**Nomura, Kazushige** See Ichimura, Koichi
**Nomura, Kenji** See Kobayashi, Toshio
**Nomura, Mamoru** See Baba, Toshihide
**Nomura, Masaharu** See Patnaik, S.
**Nomura, N.** See Mihashi, H.
**Nomura, Shintaro; Kobayashi, Takayoshi**
Exciton-La and -Ta phonon couplings in spherical semiconductor microcrystallite.—73-07520
**Nomura, Shintaro; Segawa, Yusaburo; Kobayashi, Takayoshi**
Magnetooptical effects in $CdS_xSe_{1-x}$ microcrystallites.—73-15032
**Nomura, Takashi; Murakami, Kenji; Ishikawa, Kenji; Miyso, M.; Yamaguchi, T.; Sasaki, A.**
Structure of GaAs heteroepitaxial layer grown on GaP(001) by molecular beam epitaxy.—73-01327
**Nomura, Takehiko; Suzuki, Ryouichi**
Six-axis-controlled nanometer-order positioning stage for microfabrication.—73-15848
**Nomura, Takeshi** See Horino, Kenji; Kubo, Hiroyuki; Sato, Bunryo
**Nomura, Takeshi; Hitomi, Atsushi; Satoh, Akira; Nakano, Yukie**
Effect of $SiO_2$ on the reliability of multilayer ceramic capacitors with Ni electrode.—73-07306
**Nomura, Takeshi; Nakano, Yukie; Satoh, Akira; Hitomi, Atsushi**
Multilayer ceramic chip capacitor [with ceramic coatings].—73-14755
**Nomura, Takeshi**
Science and technology of composite materials—ferrite materials.—73-07976
**Nomura, Toshio** See Kawai, Chihiro; Moriguchi, Hideki; Nakano, Minoru; Omori, Naoya
**Nomura, Yoshiyuki** See Konishi, Masahiro
**Nomura, Yuji** See Matsushita, Isao
**Nonaka, Hidehiko; Shimizu, Takashi; Ichimura, S.; Arai, Kazuo**
In situ observation of growing surface of oxide films by reflection high-energy electron diffraction beam-excited Auger electron spectroscopy.—73-17146
**Nonaka, K.; Takase, A.; Miyakawa, K.**
Raman spectra of sol-gel-derived tungsten oxides.—73-02414
**Nonaka, Shigehiko**
Gypsum boards and their fire resistance.—73-09978
**Nonaka, Shinpei** See Saitou, Yoshiaki
**Nonaka, Yasuhiko** See Arato, Toshiaki
**Nonobe, Kazuo** See Watanabe, Akira
**Noordermeer, A.** See Van der Zaag, P. J.
**Norberg, R. E.** See Jeong, Eun-Kee
**Norbut, Theodore J.**
NASP engine materials/structures update synopsis.—73-13631
**Norby, P.; Christensen, A. N.; Fjellvag, H.; Nielsen, M.**
Crystal structure of $Cr_8O_{21}$ determined from powder diffraction data: thermal transformation and magnetic properties of a chromium-chromate tetrachromate.—73-02192
**Norby, P.; Fjellvag, H.**
Preparation, structural, and thermal properties of $MAlSiO_4$ (M=Li, Na, K, Rb, Cs, Tl, Ag) of ABW-type.—73-08958
**Norby, Truls** See Velle, Ole Jacob
**Nordblad, P.** See Hudner, J.
**Norden, Hans** See Halvarsson, Mats
**Nordheden, K. J.** See Chin, Albert
**Nordman, James E.** See Yang, Yi-Feng
**Norekrans, Ann-Sofie** See Westberg, Helena
**Norenberg, Agnes** See Nutzenadel, Peter
**Norkin, B. F.** See Naumenko, V. A
**Norman, B. J.; Jaras, A. C.; Ashall, J.**
Measurement of silicon carbide fiber strength in composites from studies of their fracture surfaces.—73-09630
**Norman, C. J.** See Turrillas, Xavier
**Norman, Louis J.** See Krawczyk, Robert J.
**Normandin, Martine Simard**
Ceramics in microelectronics.—73-04061
**Normandin, R.** See Dai, H.; Fallahi, M.
**Noro, Yoshihisa** See Sekido, Masakatsu
**Norris, Jeffrey J.**
Stable color dispersions, their preparation and use in ceramic glazes.—73-00928
**Norris, P. E.** See Liu, H.; McKee, Mark A.
**North, John G.** See Zurecki, Zbigniew
**Northrop, G. A.** See Gilliland, G. D.; Grutzmacher, D. A.
**Northrop, G. A.; Morar, J. F.; Wolford, D. J.; Bradley, J. A.**
Photoluminescence from pseudomorphic $Si_{1-x}Ge_x$ quantum wells grown by molecular beam epitaxy: variation of the band gap with high pressure.—73-07726
**Northrup, John E.; Froyen, Sverre**
Energetics of GaAs(100)-(2×4) and -(4×2) reconstructions.—73-14887
**Norton, M. Grant; Carter, C. Barry**
Nucleation and heteroepitactic growth of $YBa_2Cu_3O_{7-\delta}$ thin films on MgO.—73-01620
**Norton, M. Grant**
Indirect-bonded metallization of aluminum nitride.—73-00979
**Norton, P. W.** See Tobin, S. P.
**Norwood, D. P.** See Napolitano, L. M., Jr.
**Norwood, R. G.** See Jundt, D. H.
**Nosaka, Toshikazu** See Yoshitake, Masaaki
**Nosaki, K.** See Inoue, A.
**Nose, Shuichi**
Computer simulation of glass transition.—73-03717
**Noshiro, Hideyuki; Otani, Seigen**
Method of forming oxide superconductor patterns.—73-01715
**Noskov, A. G.** See Semenova, O. I.
**Noskov, E. S.; Il'mer, G. P.; Kuznetsov, G. I.**
Pressing of crucibles with an elastic die.—73-01819
**Noskova, L. M.**
Hybridization features in density of states of $Y_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$ superconducting compounds.—73-15505
**Nosolev, I. K.** See Alekseyenko, V. I.
**Nosyreva, E. B.** See Galant, V. E.
**Notari, A. C.; Schrappe, B. J.; Basmaji, Pierre**
Electrical properties of DX centers in heavily Se-doped $Al_xGa_{1-x}As$.—73-01147
**Notario, J.** See Garcia, J.
**Noteboom, Dirk** See The, Kwat I.
**Notis, Michael R.** See Dravid, Vinayak P.
**Notzel, Richard** See Ploog, Klaus H.
**Notzel, Richard; Ploog, Klaus H.**
Surface and interface ordering on non-(100)-oriented GaAs substrates.—73-07821
**Noudomi, Satoru** See Yoshida, Shuji
**Nouet, G.** See Hillel, R.
**Noufi, R.** See Nelson, Arthur J.; Qu, Y.
**Nouguier, H.** See Seveque, J. L.
**Novak, A.** See Mioc, U.
**Novak, I. I.; Krivda, A. A.; Krivobodrov, V. S.**
Brillouin scattering investigation of elastic constants in strained quartz glass.—73-14139
**Novak, Ladislav** See Bernard, Vladimir
**Novak, Richard E.** See Grant, Robert W.
**Novak, Steven W.** See Matthews, Paul J.
**Nover, Christoph** See Hurtado, Antonio M.
**Novik, V. K.** See Esengaliev, A. B.
**Novikov, A. A.** See Bush, A. A.
**Novikov, A. G.** See Govorkov, A. V.
**Novikov, B. V.** See Grigor'ev, S. R.
**Novikov, E. B.** See Bessolov, V. N.; Kudryavtsev, Yu. A.
**Novikov, S. V.** See Ber, B. Ya.; Bystrov, S. D.; Kreshchuk, A. M.; Tuan, L.
**Novikov, V. I.; Gropyanov, A. V.; Gropyanov, V. M.**
Evaluation of parameters and form of kinetic equation of the sintering process.—73-16765
**Novikov, V. L.; Abbakumov, V. G.; Ashkinadze, G. Sh.**
Investigating sintering of magnesia obtained by chemical beneficiation.—73-02881
**Novikov, V. L.; Abbakumov, V. G.; Miroshnichenko, L. V.**
Effect of temperature on nitridization of silicon.—73-16745
**Novikov, V. N.** See Isakov, S. L.; Malinovskii, V. K.
**Novikova, I. P.** See Orentlikchr, L. P.
**Novikova, M. S.; Tamazyan, R. A.; Simonov, V. I.**
X-ray diffraction study of high-temperature modification of $Rb_2ZnBr_4$, $T$=368 K.—73-02543
**Novikova, N. I.; Pletnev, P. M.; Stepanova, S. A.**
Modification of ferrite products using additives derived from aqueous salt solutions.—73-01474
**Novikova, T. P.** See Benderskaya, L. P.
**Novikova, V. M.** See Gogoladze, D. T.
**Noville, Francis** See Lecloux, Andre J.
**Novitskaya, G. N.; Polyanetskaya, S. V.; Flis, V. S.; Pan, V. M.; Flis, A. A.; Elshanskii, V. A.**
Formation of strontium metatitanate in the system $SrCO_3$+$TiO_2$, SrO+$TiO_2$+$H_2O$.—73-16793
**Novitskii, O. A.** See Troyanchuk, I. O.
**Novosad, P. V.** See Yashchishin, I. N.
**Novoselova, S. N.** See Gulamova, D. D.
**Novotny, D. B.** See Kopanski, Joseph J.
**Novotny, Frantisek**
Heat transfer by alkali metals and the possibilities of use in the glass furnace heating system.—73-05118; New concept of semiproduct clamping in processes of utility glassware finishing.—73-14436
**Novotny, K.** See Skvor, Z.
**Novotny, V. I.**
Characterization techniques and properties of nonaqueous magnetic colloids.—73-07927
**Novotny, Vladimir; Vojtech, Ales**
Calculation of the dynamic bending strength of glass measured by impact.—73-00436
**Novotny, Vladimir**
Annealing, toughening, strengthening, obscuring, and creating layers on glass.—73-14320; Internal stress stabilities investigated in tempered glass over 22 years.—73-14210
**Novototskii-Ulasov, Yu. F.** See Shemelina, O. S.
**Nowack, A.** See Klug, J.
**Nowacki, J.; Klimek, L.**
Mechanism of reaction sintering of iron–iron boride cermets.—73-06822
**Nowak, C.; Zahn, D. R. T.; Rossow, U.; Richter, W.**
In situ Raman studies during the epitaxial growth of ZnSe layers on GaAs(110).—73-07582
**Nowak, J.; Rauluszkiewicz, J.**
Spin-dependent electron tunneling between ferromagnetic films.—73-15365
**Nowak, Jean-Francois; Maury, Francis; Oquab, Djarollah; Morancho, Roland**
Deposition process of a ceramic coating on a metallic substrate.—73-10309
**Nowak, John D.** See Garvey, Garry J.
**Nowak, P.; Ueno, Kazuo; Kinoshita, M.**
Indentation fracture of pure and MeV energy ion-implanted sapphire.—73-06456
**Nowak, Rainer; Metev, Simeon; Sepold, Gerd; Grosskopf, Klaus**
Excimer laser processing of BK7 and BGG31 glasses.—73-10530
**Nowakowski, M.; Su, K.; Sneddon, L.; Bonnell, D.**
Synthesis, processing, and phase evolution of $TiN/TiB_2$ composites from polymeric precursors.—73-06104
**Nowinski, J. L.** See Abrahams, I.
**Noworyta, G.** See Vernet, C.
**Nowotny, J.** See Begg, B. D.
**Noyori, Y.** See Uekusa, Shinichiro
**Nozai, P.** See Matacotta, F. C.
**Nozaki, A.** See Munakata, F.

**Nozaki, Hiroshi** See Lee, Soo-Young
**Nozaki, Hiroshi; Shibata, K.; Ohhashi, N.**
Metallic hole conduction in CuS.—73-02327
**Nozaki, K.** See Nishi, Y.
**Nozaki, Koji** See Kawaguchi, Masayuki
**Nozaki, Shinji** See Wu, Albert T.
**Nozaki, Shinji; Takahashi, Kiyoshi**
Design of 21st-century electron devices with intelligent materials.—73-04544
**Nozaki, Shunkichi; Suzuki, Yasuhiko; Tatematsu, Kazuho; Iwai, Masakazu; Horiki, Kiminori**
Ceramic heater.—73-05291
**Nozar, P.** See Mertelj, T.
**Nozato, R.** See Tsubakino, Harushige
**Nozawa, K.** See Sudersena Rao, T.
**Nozawa, Kashuhiko; Horikushi, Yoshiji**
Low threading dislocation density GaAs on Si(100) with InGaAs/GaAs strained-layer superlattice grown by migration-enhanced epitaxy.—73-15017
**Nozawa, Tetsuo** See Wada, Akira
**Nozik, A. J.** See Wang, W. B.
**Nozik, Yu. Z.; Kuklina, E. S.; Shuster, G.**
Neutron diffraction study of high-$T_c$ superconducting ceramics $YBa_2Cu_3O_{6.9}$.—73-01611
**Nozoye, H.** See Imai, F.
**Nozue, Yasuo** See Kodaira, Tetsuya
**Nozue, Yasuo; Kodaira, Tetsuya; Goto, Takenari**
Ferromagnetism in potassium clusters incorporated into zeolite LTA.—73-07936
**Nukaya, Michio** See Sekido, Masakatsu
**Nukui, Akihiko** See Inoue, Satoru
**Nukui, Akihiko; Shimizugawa, Yutaka; Inoue, Satoru; Maeseto, T.; Oosumi, K.**
Structural study of binary tellurite glasses by X-ray radial distribution analysis.—73-14101
**Nukui, Hideki** See Kuninishi, Kenji
**Nukui, Hideki; Kuninishi, Kenji; Yamasita, Suminari; Uchida, Kiyohiko**
Production of concrete piles using cements with adjusted particle size distribution.—73-10103
**Nuller, T. A.** See Kalinin, A. A.
**Nulman, Jaim**
Formation of titanium nitride on semiconductor wafer by reaction of titanium with nitrogen-bearing gas in an integrated processing system.—73-01372
**Numano, Masashi** See Nishi, Tokumitsu
**Numao, Tatsuya** See Mihashi, Hirozo
**Numao, Tatsuya; Fukuzawa, Kimio; Chen, Tsung-Yu**
Influence of physical properties of impregnating paints on permeability into mortar.—73-10010
**Numata, Hideji; Shinohara, Nobuhiro**
Properties and application of dense silicon carbide.—73-02085
**Numata, Hiroo** See Momma, Akihiko
**Numata, Kouichi** See Taneda, Naoki
**Numata, Masahiko** See Uo, Motohiro
**Nummila, K.** See Agrawala, S.; Ballegeer, D. G.
**Numoto, Hironao; Nishino, Atsushi; Ono, Yukiyoshi**
Method for producing a honeycomb-shaped ceramic.—73-04988
**Nunes, F.; Lamas, A. G.; Almeida, M.**
Influence of deflocculants on the characteristics of alumina bodies obtained by slip casting.—73-05865
**Nunes, L. A.** See Cardoso, C. X.
**Nunes, M. R.** See Thomas, H. M.
**Nunez, L.** See Duchowicz, R.
**Nunn, Stephen D.** See Baskaran, Suresh; Tiegs, Terry N.
**Nunn, Stephen D.; Omatete, Ogbemi O.; Walls, Claudia A.; Barker, Dixie L.**
Tensile strength of dried gel-cast green bodies.—73-17444
**Nunn, Stephen D.; Tiegs, Terry N.; Ploetz, Kristin L.; Walls, Claudia A.; Bell, Nelson**
Silicon nitride containing rare-earth-silicate intergranular phases.—73-06043
**Nunziante, Patrizia** See Gusmano, Gualtiero
**Nurishi, Y.** See Hashiba, M.
**Nurmikko, A. V.** See Ding, J.; Gunshor, R. L.; Han, J.
**Nurmikko, A. V.; Gunshor, R. L.; Kobayashi, Masakazu**
Quantum wells, excitons, and lasers at blue-green wavelengths in ZnSe-based heterostructures.—73-07757
**Nuss, Martin C.** See Planken, Paul C. M.
**Nutt, Steven R.** See Chien, F. R.; Sun, Ellen Y.; Tunaboylu, Bahadir
**Nutt, Steven R.; Lipetzky, P.**
Creep deformation of whisker-reinforced alumina.—73-09563
**Nutter, William A.; Siwierka, William A.; Ruth, Alan J.**
Ceramic fiber insulation structure with readily repairable perimeter insulation.—73-14637
**Nutzel, J.** See Brunner, J.
**Nutzenadel, Peter; Norenberg, Agnes**
Calcium silicate hydrates as clay substitute in porcelain enamel suspensions.—73-10200
**Nuzziello, S.** See Carani, G.; Esposito, Leonardo
**Nyatikshis, V.** See Iodkazis, S.
**Nygren, Mats** See Persson, J.; Westin, G.
**Nyhus, P.** See Cooper, S. L.
**Nykanen, Erja** See Kattelus, H.; Ritala, Mikko
**Nykolak, Gerald** See Kim, Hong-Koo
**Nyssen, Peter R.; Wagner, Wolfram; Christoph, Geert**
Glass fibers with improved biological compatibility.—73-14540
**O'Brien, R. W.; Rowlands, W. N.**
Measuring the surface conductance of kaolinite particles.—73-08915
**O'Brien, R. W.**
Determination of particle properties from electroacoustic measurements.—73-08390
**O'Brien, T. Kevin** See Gardner, Mickey R.
**O'Brien, W. L.** See Lee, Sun-Woo
**O'Bryan, Henry M.** See Powell-Dogan, Cynthia A.
**O'Bryan, Henry M.; Gallagher, Patrick K.; Berkstresser, G. W.**
Thermal expansion of $Y_2SiO_5$ single crystals—correction.—73-12892
**O'Connell, W.** See Ellingson, William A.,
**O'Conner, Brian H.** See Li, De-Yu
**O'Conner, C. J.** See Jung, J.-S.
**O'Connor, Kurt F.**
Method of making a core/pattern combination for producing a gas-turbine blade or component.—73-04994
**O'Connor, M.** See Lynch, S.
**O'Donnell, K. P.** See Yang, Fang
**O'Donnell, R. G.**
Deformation energy of Kelvar backing plates for ceramic armors.—73-12763
**O'Donnelly, Brien E.**
Sealing glass composite.—73-10663
**O'Handley, Robert C.** See Yamamoto, Tatsuya
**O'Hanlon, J. F.** See Collins, S. M.
**O'Keefe, M.** See Marin, S. J.; Partin, D. E.
**O'Keefe, Michael A.**
Using coherent illumination to extend HRTEM resolution: why we need an FEG-TEM for HREM.—73-05096
**O'Malley, P. J.** See Ojo, Adeola F.
**O'Neil, D.** See Selverian, J. H.
**O'Neil-Bell, Christopher; McLachlan, Stuart**
Articles including a ceramic member and a metal member bonded together.—73-03671
**O'Neill, David G.** See Nikutowski, Enrique A.
**O'Reilly, E. P.** See Jones, G.
**O'Reilly, K. P. J.; Cole, M.; Hampshire, S.; Redington, M.**
Local structural distortions of Yb-α′-SiAlON's determined by extended X-ray absolution fine structure spectroscopy.—73-02320
**O'Reilly, K. P. J.; Redington, M.; Hampshire, S.; Leigh, M.**
Parameters affecting pressureless sintering of α′-SiAlON's with lanthanide-modifying cations.—73-05944
**O, Beom-Hoan** See Chechersky, Vladimir
**Obana, Hiroshi** See Jang, Young
**Obara, H.** See Hase, M.
**Obara, Kozo** See Hirose, Toshikazu
**Obara, Kozo; Hirose, Toshikazu**
Complex admittance of surface oxide on metastable niobium superfine particles.—73-05538
**Obenchain, William A.**
Department of Energy's research and development program for the glass manufacturing industry.—73-07115
**Ober, Christopher K.** See Park, Dong-Gon
**Ober, Joyce A.**
Strontium.—73-12302
**Oberacker, Rainer** See Kuhne, Arnd
**Oberle, J.** See Bigot, J.-Y.
**Oberle, J.; Kippelen, B.; Daunois, A.; Grun, J. B.; Walker, A. C.**
Single-wavelength pulsed optical logic based on dichroism in CdS.—73-01315
**Oberle, Lawrence G.** See Sayir, Ali
**Oberste-Padtberg, R.; Roeder, A.; Motzet, H.**
Alinite cement, a hydraulic cementitious material made of incinerator wastes.—73-09810
**Obertelli, S. D.** See Liu, R. S.
**Obitsu, Masamichi; Yoshinari, Makoto; Kimura, Yutaka**
Preparation of zirconia sintered body.—73-02058
**Obitsu, Toshio** See Ohsawa, Fumiyuki
**Obodnikov, V. I.** See Gerasimenko, N. N.
**Obolenskii, M. A.** See Belyaeva, A. I.
**Oborina, E. I.** See Voronkov, V. P.
**Obradors, X.** See Barbeta, V. B.; Grey, I. E.; Martinez, Benjamin.; Rouco, A.; Sandiumenge, F.; Steren, L. B.
**Obst, F.** See Holz, K.
**Obukhov, V. T.** See Startsev, V. S.
**Obukhovskii, V. V.** See Lemeshko, V. V.
**Obukhovskii, V. V.; Odoulov, S. G.; Karabekian, S. I.**
Backward conical photorefractive scattering on $LiNbO_3$.—73-11555
**Obvintseva, I. E.** See Yanovskaya, M. I.
**Ocai, C.** See Alvarez, J.
**Ochertyanova, L. I.** See Ezerskaya, N. A.
**Ochi, Atsushi** See Mori, Toru
**Ochi, Hideo; Igari, Akihide; Toyoda, Masaaki; Nakagawa, Zenbee**
Method of producing varistor.—73-11533
**Ochi, Yasuo** See Senda, Tetsuya
**Ochiai, Akira** See Goto, Hideaki
**Ochiai, Hidemitsu** See Fukuoka, Hirofumi
**Ochiai, Moyuru** See Ozao, Riko
**Ochiai, Naosuke**
Noble-metal-containing overglaze color composition for ceramics.—73-03427
**Ochiai, Shouichi; Doi, Yoshinaru; Kojima, Yo; Murakami, Takeshi; Somiya, Shigeyuki**
Mechanical properties and oxidation resistance of TiC-dispersed titanium aluminide produced by mechanical alloying process.—73-13866
**Ochiai, Takeshi**
Carbonation of autoclaved lightweight concretes [ALC's].—73-13686
**Ochoa, Ozden O.** See Aikens, Quinn
**Oda, Hatsujiro** See Mizoguchi, Kenji
**Oda, Kiichi** See Ohshima, Kazuyuki; Sano, Saburo
**Oda, Kiichi; Mizuta, Hiroyuki; Shibasaki, Yasuo; Ohshima, Kazuyuki**
Slip casting of silicon nitride and mechanical properties of sintered body: I, Preparation conditions of slurries of silicon nitride produced by direct nitridation and mechanical properties.—73-03017; 73-13273
**Oda, Kohei** See Yoshio, Tetsuo
**Oda, Kohei; Yoshio, Tetsuo**
Hydrothermal corrosion of hexagonal boron nitride.—73-09527; 73-17223; Oxidation kinetics of hexagonal boron nitride powder.—73-17231; Properties of $Y_2O_3$-$Al_2O_3$-$SiO_2$ glasses as a model system of grain-boundary phase of $Si_3N_4$ ceramics: II, Leaching characteristics.—73-00537
**Oda, Masaaki; Katsu, Isao; Tsuneizumi, Michitaka; Fuchita, Eiji; Kashu, Seiichiro; Hayashi, Chikara**
Ultrafine particle films [UFP] by gas deposition method.—73-06129
**Oda, N.** See Sasaki, T.
**Oda, O.** See Sawatari, H.
**Oda, S. J.**
Microwave applications to process nuclear and hazardous waste.—73-04893
**Oda, Shunri** See Sakai, Kenji
**Oda, Shunri; Zama, Hideaki; Fujii, K.; Sakai, Kenji; Chen, Y.-C.**
Self-limiting adsorption and in situ optical monitoring for atomic layer epitaxy of oxide superconductors.—73-04804
**Oda, Tetsuhiro; Fusegawa, Izumi; Yamagishi, Hirotoshi; Iwasaki, Atsushi; Maeda, Akiho; Takeyasu, Shinobu**
Method and apparatus for producing silicon single crystal.—73-02106
**Oda, Toshio** See Shimizu, Hideki
**Odabasoglu, M.** See Yilmaz, V. T.
**Odagaki, T.** See Kan'an, A. M.
**Odagawa, T.** See Yamamoto, Tsuyoshi
**Odagawa, Tetsufumi; Nakajima, Kaoru; Tanaka, Kazuhiro; Nobuhara, H.; Inoue, T.; Okazaki, N.**
High-speed operation on strained InGaAs/InGaAsP MQW laser under zero-bias condition.—73-14963
**Odani, Niro** See Yoshimura, Hironori
**Odawara, Osamu** See Okutani, Takeshi
**Odier, P.** See Soret, J. C.
**Odin, I. N.** See Plachkova, S. K.
**Odin, I. N.; Grin'ko, V. V.**
Tensimetric determination of the limits of the homogeneity region of the compound $Cd_4GeS_6$.—73-03207
**Odin, I. N.; Ivanov, V. A.**
$p_{total}$-$T$-$x$ phase diagram of the system Si-Te.—73-02370; Phase equilibria in the system Cd-Si-Se and the properties of the compound $Cd_4SiSe_6$.—73-02379
**Odintsova, E. A.**
Beryllium mineral paragenesis in the beryllia/water chemical potential diagram.—73-16037
**Odler, Ivan** See Chen, Y.; Osokin, A. P.; Zhang, H.
**Odler, Ivan; Koster, H.**
Structure of fully hydrated portland cement and tricalcium silicate pastes: III, Specific surface area and permeability.—73-00195
**Odoulov, S. G.** See Obukhovskii, V. V.; Van Olfen, U.
**Odriozola, J. A.** See Alvarez, Luis Javier
**Odulov, S. G.; Sturman, B. I.**
Parametric polarization of light in photorefractive $BaTiO_3$.—73-08943
**Oefinger, G.** See Bechinger, C.
**Oehlinger, G.** See Evers, J.
**Oehrlein, Gottlieb S.** See Vender, David
**Oel, Heribert J.** See Dannheim, Henning; Zhou, M.
**Offenberg, M.; Liehr, M.; Rubloff, G. W.**
Surface etching and roughening in integrated processing of thermal oxides.—73-01334
**Offermann, V.** See Dittmar, G.
**Offord, B. W.** See De la Houssaye, P. R.
**Ofitserova, N. V.** See Safaraliev, G. K.
**Ofner, H.; Zarwasch, R.; Rille, E.; Pulker, H. K.**
Reactive sputtering model applied to AlN.—73-02993
**Ogale, S. B.** See Ardakani, H. Kordi
**Ogale, S. B.; Bilurkar, P. G.; Mate, Nitant**
Deposition of copper oxide thin films on different substrates by pulsed excimer laser ablation.—73-12975
**Ogale, S. B.; Madhukar, A.; Joshi, S. Y.; Viswanathan, R.**
Surface reconstruction, steps, and ordering in semiconductor alloys grown from vapor phase.—73-07825
**Oganesyan, A. S.** See Petrosyan, A. M.
**Ogasawara, Haruhiko** See Seino, Yasuhiro
**Ogasawara, Masayuki** See Hikita, Tomoyuki
**Ogasawara, Toshio** See Akimune, Yoshio; Okada, Akira
**Ogasawara, Toshio; Akiba, Tohru; Otani, Keizo; Akimune, Yoshio; Shimizu, Koji**
Evaluation of stress intensity factor of silicon nitride with bridge indentation crack by caustic method.—73-01896; 73-12135
**Ogasawara, Toshio; Akimune, Yoshio; Akiba, Tohru**
Statistical analysis of lifetime predictions for ceramics exhibiting a transition in fatigue crack growth behavior.—73-06526
**Ogasawara, Toshio; Akimune, Yoshio; Yoneda, Koji**
Cyclic fatigue behavior of pressureless-sintered silicon nitride in rotating bending test.—73-06364
**Ogasawara, Toshio; Hirosaki, Naoto; Akimune, Yoshio**
Statistical analysis of the fatigue life distribution of monolithic silicon nitride.—73-06527
**Ogasawara, Toshio; Mabuchi, Yutaka; Hirosaki, Naoto**
Effect of humidity and cyclic loading condition on fatigue behavior of silicon nitride.—73-17288; 73-17289
**Ogasawara, Toshio; Yasuda, Eiichi**
Fatigue crack growth behavior of large crack in silicon nitride.—73-17319
**Ogasawara, Y.** See Kawai, T.
**Ogata, Haruhiko** See Sato, Hiromasa
**Ogata, Kiyoshi; Ando, Yasunori; Kamijo, Eiji**
Composite substrate and process for producing the same.—73-04194
**Ogata, Nobuo** See Ogihara, Takashi
**Ogawa, Hiroyuki** See Nakano, Kikuo
**Ogawa, Ichitaro**
Carbon-silicon carbide composite material and method for the preparation thereof.—73-15979; Preparation of carbon/ceramic composite materials by use of raw coke: VIII, Rod shape growth of ß-SiC and effects on fracture toughness in carbon-based ceramic composites.—73-16919
**Ogawa, Kenji** See Nagai, Masayuki; Yamashita, Kimihiro

**Ogawa, Kyouji** See Fukumi, Kohei
**Ogawa, Makoto** See Kuroda, Kazuyuki
**Ogawa, Masahide** See Nakazawa, Tadahisa
**Ogawa, Minoru; Takeda, Yasuo; Imanishi, Nobuyuki; Yamamoto, Osamu**
Preparation of (Ca, Sr)$CuO_2$ under various oxygen partial pressures and substitution of elements.—73-15592
**Ogawa, Mitsushige** See Isozaki, Kei
**Ogawa, N.** See Sato, H.
**Ogawa, Naoyuki** See Sakai, Takenobu
**Ogawa, Rikuo** See Egi, Toshio; Fukumoto, Yoshito
**Ogawa, Rikuro** See Masuda, Yoshio
**Ogawa, S.** See Yoshitake, Masaaki
**Ogawa, Soichi** See Kusaka, Tadaoki; Yotsuya, Tsutomu
**Ogawa, Takeshi** See Llorca, J.
**Ogawa, Takeshi; Hirose, Motohisa; Tokaji, Keiro**
Behavior and test method of subcritical crack growth at elevated temperatures in ceramics.—73-15779
**Ogawa, Takeshi; Llorca, J.**
Stable crack growth in polycrystalline magnesia under monotonic and cyclic loads.—73-09673
**Ogawa, Takeshi**
Tensile fatigue crack growth of polycrystalline magnesia.—73-06536
**Ogawa, Tetsuji** See Michishita, Kazuo
**Ogawa, Tetsuro** See Ichitsuka, Takeshi
**Ogawa, Tomeyoshi** See Cho, Seong-Jai
**Ogawa, Tomoshige** See Nagashima, Satoko
**Ogawa, Toru** See Harato, Takuo
**Ogawa, Toshiharu** See Nishiyama, Katsuhiro
**Ogawa, Y.** See Sasaki, T.
**Ogawa, Yoshihisa** See Matsuda, Motohide
**Ogihara, M.; Toda, F.; Makita, T.; Abe, Hitoshi**
Rubidium beam flux dependence of film properties of $Ba_{1-x}Rb_xBiO_3$ deposited by molecular beam epitaxy using distilled ozone.—73-13243
**Ogihara, Masahiro; Aihara, Katsuzo; Arai, Keiji; Satoh, Masaki**
Superconducting magnetic levitation apparatus.—73-12001
**Ogihara, Satoru** See Kodama, Hironori
**Ogihara, Takashi; Saito, Yoshihiko; Yanagawa, Teruaki; Ogata, Nobuo; Yoshida, Koukichi; Takashima, Masayuki**
Preparation of spherical $LiCoO_2$ powders by the ultrasonic spray decomposition and its application to cathode active material in lithium secondary battery.—73-16937; 73-16938
**Ogihara, Takashi; Yanagawa, Teruaki; Ogata, Nobuo; Yoshida, Koukichi**
Formation of monodispersed oxide particles by hydrolysis of metal alkoxide in octanol/acetonitrile solutions.—73-16791; 73-05815
**Ogino, Hiromi** See Asada, Eiji
**Ogino, Hiroyuki** See Kobayashi, Hidehiko; Mori, Toshiyuki
**Ogino, K.** See Nogi, K.
**Oginoh, Kiyoshi** See Aratani, Shinichi
**Ogita, Masami** See Isai, Masaaki
**Ogita, Norio** See Udagawa, Masayuki
**Ogita, Norio; Takanashi, Satohiko; Udagawa, Masayuki**
Infrared anomaly in $(La_{1-x}Sr_x)_2NiO_{4+\delta}$.—73-08110
**Ognev, A. N.; Kornetov, V. N.; Dmitriev, V. A.**
Crystal structure and morphology of epitaxial layers of germanium sillenite deposited by cathode reactive sputtering.—73-02181
**Ogo, Yoshiaki** See Nishikawa, Takashi
**Ogorodnik, Ya. V.** See Freik, D. M.
**Ogota, Seiya** See Kamei, Masayuki
**Ogryzlo, E. A.** See Athwal, I. S.
**Oguchi, T.; Sasaki, T.**
Fermi surface and transport properties of $YBa_2Cu_4O_8$.—73-11763
**Oguchi, Yukio** See Mori, Junichirou; Tsunetsugu, Kunio; Uzaki, Nobuyuki
**Oguma, Noriyasu; Sugita, Tadaaki; Nishi, Makoto**
Crack detection in ceramic bearings by acoustic emission [AE] signals.—73-09553
**Oguocha, I. N. A.; Yannacopoulos, S.**
Behavior of alumina particle-reinforced 2618 aluminum.—73-09545
**Ogura, Atsuko** See Suzuki, Akira
**Ogura, Atsushi** See Kieda, Nobuo; Sakurai, Osamu
**Ogura, Atsushi**
Method of manufacturing metal oxide ceramic composite powder.—73-05232
**Ogura, G.** See Ohta, Hiromichi
**Ogura, I.** See Okamura, Hideko
**Ogura, Iwao** See Nagashima, Seiichi
**Ogura, Kohji** See Banno, Hisao
**Ogura, S.** See Bindal, A.
**Ogura, Takashi** See Okuda, Hiroyuki
**Ogura, Takashi; Goto, Seishi**
Hydration of cement with heavy water.—73-09990
**Ogura, Tetsuyoshi** See Eda, Kazuo
**Ogura, Toru** See Matsubara, Ichiro
**Oguri, Hitoshi; Yamamura, Hiroshi; Orito, Toshihiro**
Growth of MgO-doped $LiNbO_3$ single crystal fibers by a novel drawing down method.—73-02848
**Oguri, Tatsuya** See Ryoke, Katsumi
**Oguz, S.** See Koestner, R.
**Oh, C.-H.** See Chung, I.-J.
**Oh, C.-H.; Chung, I.-J.; Kim, W.-Y.; Hwang, J.-R.; Lee, S.-K.; Kim, Y.-S.**
Effects of light and electrical stress on asymmetric a-Si TFT [thin-film transistor].—73-05550
**Oh, C.-S.; Choi, S.-C.; Lee, Eung-Sang**
Effect of the added seed on phase transformation and powder properties in the fabrication of $Al_2O_3$ powder by sol-gel process.—73-16746
**Oh, Chull-H.** See Trigg, Mark B.
**Oh, D.-K.** See Kim, Jeong-Soo
**Oh, Eu-Soon** See Sciacca, M. Dean
**Oh, H.-N.** See Baek, Kyung-Seon
**Oh, Jae-Eung** See Oh, Won-Ung
**Oh, Jae-Hee** See Choi, Kyung-Ku; Shin, Hyung-Sup
**Oh, Jong-Kee** See Kim, Sung-Gyu
**Oh, K.-D.** See Park, H.-C.
**Oh, K.-H.** See Gong, H.
**Oh, K.-H.; Le Gressus, C.; Gong, H.; Ong, C.-K.; Tan, B. T. G.; Ding, X.-Z.**
Dielectric polarization relaxation measurement in α-$SiO_2$ by means of a scanning electron microscope technique.—73-07298
**Oh, K.-H.; Ong, C.-K.; Tan, B. T. G.; Le Gressus, G.**
Monte Carlo model for trapped charge distribution in electron-irradiated α-quartz.—73-12836
**Oh, Ki-Dong** See Kim, B.-S.
**Oh, Ki-Young; Uchino, Kenji; Cross, L. Eric**
Optical study of domains in $Ba(Ti,Sn)O_3$ ceramics.—73-15273
**Oh, Kyung-Young** See Jung, Chang-Ju
**Oh, Kyung-Young; Jung, Chang-Ju**
Effect of MgO on microstructural evolution of alumina prepared from hydrosol-gel process of boehmite in plaster mold.—73-17124; Microstructure and phase transformation of α-alumina seeded boehmite gel.—73-13425
**Oh, Myung-Hwan** See Kim, Tae-Song
**Oh, S.-J.** See Kim, S.-J.
**Oh, Sang-Keun** See Tanaka, Kyoji
**Oh, Soo-G.; Han, Jeon-G.**
Effects of precoating and bias voltage on the adhesion of reactive arc evaporated TiN and ZrN coatings.—73-00224
**Oh, Sung-Rok** See Kim, Do-Hyung
**Oh, Tae-Sung** See Kim, In-Tae; Kim, Joon-Hong; Park, Jae-Gwan
**Oh, Tae-Sung; Lee, Chang-Bong; Lee, Byeong-Chan; Oh, Young-Jei; Kim, Yoon-Ho**
Dielectric properties and leakage current characteristics of $Ta_2O_5$ thin films prepared by sol-gel process.—73-02569
**Oh, U.-C.; Je, Jung-Ho**
Effects of strain energy on the preferred orientation of TiN thin films.—73-09109
**Oh, Won-Chun** See Choi, Sung-Jun
**Oh, Won-Ung; Oh, Jae-Eung; Ryoo, Seong-Ryong; Paek, Su-Hyun; Chung, Chun-Ki; Kang, Tae-Won**
Growth temperature and annealing effects on deep traps of $In_{0.52}Al_{0.48}As$ grown by molecular beam epitaxy.—73-11237
**Oh, Y.-J.; Kim, J.-G.; Joo, Gi-Tae**
Ferroelectric PLZT thin films prepared by sol-gel route.—73-11576
**Oh, Yong-Su; Hamagami, Junichi; Watanabe, Yuichi; Takata, Masasuke; Yanagida, Hiroaki**
Novel palladium thin-film hydrogen detector.—73-13877
**Oh, Yong-Su; Watanabe, Yuichi; Takata, Masasuke**
Preparation of vanadium oxide thin films by radio-frequency magnetron sputtering.—73-02976
**Oh, Yong-Su; Watanabe, Yuichi; Takata, Masasuke**
Preparation of vanadium oxide thin films by radio-frequency magnetron sputtering.—73-13211
**Oh, Young-Jei** See Oh, Tae-Sung
**Ohabu, Hajime** See Ikeda, Masaki
**Ohachi, T.** See Ito, Yoshiaki
**Ohama, Yoshihiko** See Afridi, Musarrat Ullah Khan
**Ohara, Akinori; Yamamoto, Shunji; Yamada, Tadatoshi**
Method for separating superconductor powder from nonsuperconductive powder.—73-04847
**Ohara, Shigeo** See Koyano, Mikio
**Ohara, Taigen; Nakabeppu, Tetsuya; Tanaka, Shinichi**
Mechanical properties of porous alumina ceramics.—73-17389
**Ohara, Tomoyuki; Sakuta, Ken; Kobayashi, Takeshi**
Initial growth of epitaxial (001)$SrTiO_3$ film deposited in situ on (001)YBaCuO/(100)MgO.—73-15519
**Ohara, Yoshinobu** See Shimono, Isao
**Ohara, Yoshinobu; Koumoto, Kunihito; Shimizu, Tadao; Yanagida, Hiroaki**
Hydrothermal synthesis of fibrous lead titanate powder.—73-16828
**Ohara, Yoshinobu; Koumoto, Kunihito; Yanagida, Hiroaki**
Effect of crystal-axis orientation on dielectric properties of ceramics prepared from fibrous barium titanate.—73-16457
**Ohara, Yoshinobu; Shiwa, Mitsuharu; Yanagida, Hiroaki; Kishi, Teruo**
Design for AE transducer by 1-3 piezoelectric composite.—73-15254
**Ohashi, Masao; Tadanobu, Kazuo; Yamanaka, Shoji; Hattori, Makoto**
Nitridation of calcium-stabilized zirconia.—73-08926; Preparation and properties of zirconium oxynitrides by the reaction of zirconia with layer-structured zirconium nitrochloride.—73-04451
**Ohashi, Masayoshi** See Nakamura, Kazuo
**Ohashi, Masayoshi; Hirao, Kiyoshi; Nagaoka, Takaaki**
Preparation of dense silicon oxynitride ceramics by HIPing.—73-13186
**Ohashi, Teruo** See Miwa, Kenji
**Ohashi, Toshio; Wakayama, Masaki**
Ceramic package for memory semiconductor.—73-04510
**Ohashi, Yasuo** See Kobayashi, Yuichi
**Ohata, Katsumi** See Hase, Takashi
**Ohata, Tomohisa** See Shiraishi, Eiichi
**Ohba, Yoko** See Ishida, Hideaki
**Ohbayashi, K.** See Udagawa, Masayuki
**Ohga, Yuichi** See Ishikawa, Shinji
**Ohga, Yuichi; Danzuka, Toshio; Kanamori, Hiroo; Yokota, Hiroshi**
Method for producing porous glass preform for optical fiber.—73-00660
**Ohga, Yuichi; Ishikawa, Shinji; Kanamori, Hiroo; Tsuchiya, Ichiro; Yokota, Hiroshi**
Method of producing glass preform in furnace for heating glass.—73-03953
**Ohga, Yuichi; Ishikawa, Shinji; Kanamori, Hiroo; Yoshimura, Ichiro; Yokota, Hiroshi**
Process of drawing optical fiber.—73-14557
**Ohgishi, Sakichi** See Ono, Hironobu; Yang, Jing
**Ohgushi, Tatsuo; Yokoyama, Hiroshi**
1-D rare gases in the pores of mordenite.—73-08931; 73-16237
**Ohhashi, Kentaro** See Tanaka, Hironao
**Ohhashi, N.** See Nozaki, Hiroshi
**Ohi, Akihiko** See Matsui, Toshiyuki
**Ohira, Hiroyuki** See Bradt, Richard C.; Yuzawa, Yukio
**Ohira, Kunio** See Imai, Osamu
**Ohira, Osamu** See Kobayashi, Yuichi
**Ohishi, Izumi** See Mori, Junichirou
**Ohishi, K.; Syono, Y.**
Dependence of lattice parameters and $T_c$ on the hole concentration determined by precise measurement of the oxygen content of $M_xLa_{2-x}CuO_{4-y}$ (M=Ba, Sr, Ca).—73-01517
**Ohishi, Masakazu** See Yoneta, Minoru
**Ohishi, T.; Katoh, Akira**
Photopatterning of tantalum oxide films by a sol-gel method using a KrF excimer laser.—73-09239
**Ohishi, T.; Maekawa, S.; Katoh, Akira**
Synthesis and properties of tantalum oxide films prepared by the sol-gel method using photoirradiation.—73-13299
**Ohishi, Yasutake; Kanamori, Terutoshi; Nishi, Toshihiro; Nishida, Yoshiki; Takahashi, Shiro**
Quantum efficiency at 1.3 μm of $Pr^{3+}$ in infrared glasses.—73-14265
**Ohji, Tatsuki** See Kanematsu, Wataru; Yamauchi, Yukihiko
**Ohji, Tatsuki; De Jonghe, Lutgard C.**
Presintering heat treatment, densification, and mechanical properties of silicon carbide.—73-13213
**Ohji, Tatsuki; Yamauchi, Yukihiko**
Diffusional crack growth and creep rupture of silicon carbide doped with alumina.—73-06373; Tensile creep and creep rupture behavior of monolithic and SiC-whisker-reinforced silicon nitride ceramics.—73-03362; Tensile creep and creep rupture behavior of monolithic and SiC whisker-reinforced silicon nitride ceramics—correction.—73-13600
**Ohji, Yuzuru** See Miki, Hiroshi; Shimizu, K.
**Ohkawa, K.** See Shiraishi, M.
**Ohki, A.; Ando, K.; Zembutsu, S.**
Exciton properties of $Zn_{1-x}Cd_xSe/ZnSe$ quantum well structures grown by metallorganic vapor phase epitaxy.—73-04340
**Ohki, Katsuyoshi** See Fujikawa, Takashi
**Ohki, Kimiko** See Ikoma, Shuji
**Ohki, Yoshimichi** See Fujinami, M.; Kitagawa, Manabu
**Ohkoda, Hitoshi** See Yokoe, Nobuo
**Ohkohchi, Masato; Ando, Yoshinori; Bandow, Shunji; Saito, Yahachi**
Formation of carbon nanotubes by evaporation of carbon rod containing scandium oxide.—73-17135
**Ohkubo, M.**
Monte Carlo calculation for nonequilibrium oxygen content of $YBa_2Cu_3O_x$.—73-01609
**Ohkubo, Michio; Namiki, Shu; Ijichi, Tetsuro; Iketani, A.; Kikuta, T.**
0.98-μm InGaAs-InGaAsP-InGaP GRIN-SCH SL-SQW lasers for coupling high optical power into single-mode fiber.—73-15233
**Ohkubo, S.** See Okuda, M.
**Ohkubo, S.; Okuda, M.**
Method for the determination of the thermal transport properties of submicron-thick dielectric films with the use of an analytical expression.—73-10972
**Ohkubo, T.** See Ohtake, Takeshi
**Ohkuma, Kenichi** See Kanazuka, Yasuo
**Ohlenforst, Hans** See Andersson, Kjell
**Ohlidal, Ivan** See Plsko, Alfonz
**Ohlidal, Ivan; Navratil, Karel; Libezny, Milan**
Optical studies of $SiO_2$, $TiO_2$, and $SiO_2$-$TiO_2$ coatings prepared by the sol-gel process.—73-03807
**Ohlinger, W. L.** See Hill, D. N.
**Ohlinger, W. L.; Hill, D. N.; Feeney, R. K.; Munne, V.**
Model for predicting the effects of device geometry on the capacitance of field emitter array cathodes.—73-12835
**Ohlmann, D.** See Pelant, I.
**Ohlsen, H.** See Hudner, J.
**Ohmatsu, Kazuya** See Yamauchi, Kazuhisa
**Ohmori, A.; Fukuoka, M.**
Characterization of plasma-sprayed silicide intermetallic compound coatings.—73-06747
**Ohmori, Hitoshi**
Efficient and precision grinding technique for ceramics with electrolytic in-process dressing (ELID).—73-04912; High-efficiency and high-precision grinding of ceramics—practice and application of ELID grinding technique.—73-05839
**Ohmura, Masanori** See Suzuki, Makoto
**Ohmura, Tomohiko** See Yoshimura, Kazuyoshi
**Ohnaka, Itsuo** See Kobayashi, Keizo
**Ohnishi, Hisao** See Sugiura, Nozomi
**Ohnishi, K.** See Aoyagi, Yoshinobu
**Ohnishi, Kazumasa; Kawarada, Masaru; Ishii, Takaaki; Tanabe, Y.; Yasuda, Eiichi**
Nanocomposite of PZT-PMN-$MnO_2$-NiO ceramics-alumina system.—73-02341
**Ohnishi, Kenji** See Bao, Qin-Li
**Ohnishi, N.** See Yamane, Hisanori
**Ohnishi, Osamu** See Uehara, Kaneo
**Ohnishi, Takaaki** See Nakamura, Masahiko
**Ohno, Akira** See Sakakibara, Hiroyuki
**Ohno, H.; Munekata, H.; Penney, T.; Vonmolnar, S.; Chang, L. L.**
Magnetotransport properties of *p*-type (In,Mn)As diluted magnetic III-V semiconductors.—73-08912
**Ohno, Hideo** See Murakami, Hirohiko
**Ohno, K.** See Muranoi, T.

**Ohno, Kelichiro** See Jackson, John E.
**Ohno, M.** See Kuwabara, K.
**Ohno, Makoto** See Oka, Akihiro
**Ohno, Michio** See Maeda, Masahito
**Ohno, Nobuhito; Lockwood, David J.; Deguchi, K.; Fulth, Armin; Warhanek, Hans**
Structural acentricity in $PbHPO_4$ near the ferroelectric transition investigated by Raman spectroscopy.—73-07920
**Ohno, Satoru** See Aoki, Aiko
**Ohno, Satoru**
Science and technology in composite materials—composite ultrafine particles.—73-13896
**Ohno, Shinji** See Kuromitsu, Yoshirou
**Ohno, Takahashi**
Energetics of As dimers on GaAs(001) As-rich surfaces.—73-14886
**Ohno, Takahisa**
Barrierless dimer breaking at semiconductor surfaces by chlorine atoms.—73-14782
**Ohno, Takashi** See Tsuda, Toshinobu
**Ohno, Toshiyuki** See Kanke, Yoko; Kasai, Masahiro
**Ohno, Toshiyuki; Kasai, Masahiro; Kanke, Yoko**
Cross-sectional observation of $YBa_2Cu_3O_y/La_{0.7}Ca_{0.3}MnO_3$/-$YBa_2Cu_3O_y$ trilayered films.—73-11715
**Ohno, Y.** See Maki, Iwao
**Ohoga, Y.** See Kyoto, Michihisa
**Ohomamyuda, Kohichi** See Watanabe, Koichi
**Ohsaki, Masashi** See Yoshida, Kozaburo
**Ohsato, Hitoshi; Okuda, Shoji; Mitsumatsu, Masato; Maki, Iwao**
Formation region of K-Al priderite ($K_xAl_yTi_{8-x}O_{16}$).—73-05405; 73-12587
**Ohsato, Hitoshi; Sugimura, Takashi**
Formation region of cryptomelane with different K ion occupancy and elutriation of K ion with water.—73-05404; 73-16157
**Ohsawa, Fumiyuki; Fujita, Hiromasa; Obitsu, Toshio; Ikeda, H.; Kawanishi, H.**
Determining lattice mismatch or the composition of a single ultrathin GaInAs layer grown on InP.—73-04282
**Ohsawa, Shigenari** See Matsuo, Yohtaro; Yasuda, Kouichi
**Ohsawa, Shigenari; Yasuda, Kouichi; Matsuo, Yohtaro; Kimura, Shiushichi**
Changes in fracture surface area and actual fracture energy of a carbon-fiber-reinforced silicon nitride composite during failure.—73-17243
**Ohshima, Hideaki** See Ishiwata, Shosuke
**Ohshima, Hideo** See Nishiyama, Akio
**Ohshima, Kazuyuki** See Oda, Kiichi; Sano, Saburo
**Ohshima, Kazuyuki; Oda, Kiichi; Sano, Saburo; Shibasaki, Yasuo**
Slip casting of silicon nitride and mechanical properties of sintered body: III, Preparation conditions of slurries of silicon nitride produced by imide decomposition.—73-06060; 73-17001
**Ohshima, Kazuyuki; Oda, Kiichi; Shibasaki, Yasuo**
Slip casting of silicon nitride and mechanical properties of sintered body: II, Vacuum-pressure-assisted slip casting of silicon nitride powder produced by direct nitridation.—73-03018; 73-13274
**Ohshima, Kenichi** See Kim, Hyun-Tak
**Ohshima, Kenji; Takahashi, Seiji; Kuwabara, Makoto**
Grain size dependence of high-temperature dielectric properties of (Pb, La)$TiO_3$ ceramics.—73-02612; 73-11581
**Ohshima, Masanari** See Suzuki, Suguru
**Ohshima, Mitsutoshi** See Shimizu-Iwayama, Tsutomu
**Ohshima, Nobuo** See Azuma, Yasuo
**Ohshima, Shigetoshi** See Sato, Rikiya
**Ohshio, Shigeo** See Kamata, Kiichiro
**Ohsumi, Kazumasa** See Kataoka, Masako
**Ohsumi, Kazuo** See Kita, Hideki
**Ohsumi, Rie** See Sakamoto, Masatomi
**Ohta, Fukuo; Saito, Tatsuhiko; Gorai, Toshiharu**
Estimation method by microwave for the deterioration depth of fire-damaged concrete.—73-09946; Microwave characteristics of fire-damaged high-strength concrete.—73-10052
**Ohta, Hiromichi; Tsukida, Tatuyuki; Tomota, Yo; Shibata, H.; Ogura, G.; Waseda, Y.**
Measurement of thermal diffusivity of Pyroceram 9606 by the laser flash method.—73-05065
**Ohta, Hitoshi; Yamauchi, Nobuyasu; Nanba, Takao; Motokawa, Mitsuhiro; Kawamata, Shuichi; Okuda, Kiichi**
EPR and AFMR of $Li_2CuO_2$ in submillimeter wave region.—73-02266
**Ohta, Hitoshi; Yoshida, Kazuhiro; Matsuya, Takashi**
EPR and AFMR of $Bi_2CuO_4$ in submillimeter wave region.—73-08864
**Ohta, Kouhei** See Watari, Takanori
**Ohta, Kouhei; Torikai, Toshio; Watari, Takanori**
Properties of porcelain bodies containing zirconia.—73-00923
**Ohta, M.; Sakaguchi, M.**
Effect of rare-earth ions on the phase transition of $Na_2SO_4$ crystals.—73-02245
**Ohta, Noriko** See Watari, Takanori
**Ohta, Shigetoshi** See Kumazawa, Takeshi
**Ohta, Tomohiro** See Kondoh, Eiichi; Nakano, Tadashi
**Ohta, Yukinori** See Yaba, Susumu
**Ohta, Yukinori; Koshibae, Wataru; Maekawa, Sadamichi**
Implications of the nuclear quadruple frequency in high-$T_c$ cuprates.—73-08100
**Ohta, Yukio** See Kanai, Kunio
**Ohtaka, Osamu** See Azuma, Masaki
**Ohtaka, Osamu; Yamanaka, Takamitsu; Kume, Shoichi**
Synthesis and X-ray structural analysis by the Rietveld method of orthorhombic hafnia.—73-02498
**Ohtake, Katsuya** See Yashima, Masatomo
**Ohtake, Takeshi; Uchida, Kunio; Ikazaki, Fumikazu; Kawamura, M.; Ohkubo, T.; Kamiya, K.**
Synthesis of mullite from fly ash and alumina powder mixture.—73-03049
**Ohtaki, Hitoshi** See Patnaik, S.
**Ohtaki, Shiro**
Process for fabricating a multilayer ceramic circuit board.—73-11043
**Ohtani, Hisashi; Miyanaga, Akiharu; Yamazaki, Shunpei**
Fabrication method of superconductive thin film transistor.—73-15676
**Ohtani, Hisashi**
Method for forming an oxide superconducting material.—73-15683
**Ohte, Akira** See Saito, Tadashi
**Ohtsu, Masayasu** See Nakagawa, Teruhisa; Uesugi, Shinpei
**Ohtsubo, Hideki** See Yamamura, Takemi
**Ohtsuka, Akihito** See Achikita, Masakazu
**Ohtsuka, Atsushi** See Sekiya, Takao
**Ohtsuka, Kenichi** See Kondoh, Eiichi
**Ohtsuka, Yasushi** See Muto, Norio
**Ohtsuki, C.** See Li, P.
**Ohtsuki, Chikara; Kokubo, Tadashi**
Effects of Al/P composition ratio on the crystallization of $MgO$-$CaO$-$Al_2O_3$-$SiO_2$-$P_2O_5$ bioglass-ceramic system—[comment].—73-14366
**Ohtuki, Motohiko** See Kamata, Kiichiro
**Ohtuki, Yuuzou** See Aoyama, Kazuteru
**Ohuchi, F. S.** See Yoo, H. M.
**Ohuchi, Hiromu; Nishida, Masamitsu**
Phase relation and electric properties of $Pb(Mg_{1/3}Ta_{2/3})O_3$-$PbTiO_3$-$PbZrO_3$ ceramics.—73-08947
**Ohuchi, Masahiko; Shiina, Yasushi; Miyakawa, Nobuaki; Shimada, Daisuke; Tsuda, Nobuo**
Anharmonic phonon structure in the tunneling conductance of Bi cuprates.—73-15385
**Ohuchi, Ryuichi** See Maruta, Toshihisa
**Ohura, K.** See Ebisawa, Y.
**Ohya, Haruhiko** See Hirata, Shigeru
**Ohya, Jun** See Tohmon, Genji
**Ohya, S.** See Mitsuhashi, Masahiko
**Ohya, Y.; Hoffmann, M. J.; Petzow, Gunter**
Mechanical properties of hot-pressed SiC-$TiB_2$/TiC composites synthesized in situ.—73-03334
**Ohyagi, Tomohito** See Tanabe, S.
**Ohyama, Takehiko** See Iwanaga, Hiroshi
**Ohyama, Tyuzi** See Kobori, Hiromi
**Ohyanagi, M.** See Miyamoto, Yoshinari
**Ohyanagi, M.; Koizumi, M.; Kanno, M.**
Characteristic TiC body fabricated by combustion synthesis using reactant compact with density of more than 80%.—73-05702
**Ohyanagi, M.; Koizumi, M.; Miyaji, Yoshiyuki; Izawa, Hajime; Inamaru, N.**
SiC coating on carbon block by the self-propagating high-temperature synthesis method.—73-09319
**Ohzeki, Shigaki** See Tanda, Satoshi
**Ohzuku, Tsutomo; Komori, Hideki; Nagayama, Masatoshi; Sawai, Keijiro; Hiral, T.**
Synthesis and characterization of $LiMeO_2$ (M=Ni, Ni/Co, and Co) for 4-V secondary nonaqueous lithium cells.—73-01030; 73-10993
**Oigawa, Haruhiro** See Sugahara, Hirohiko
**Oikawa, Hideo** See Machida, Katsuyuki
**Oikawa, M.** See Kishimoto, T.
**Oikawa, T.** See Mutoh, Yoshiharu
**Oikawa, Takahito; Ito, Hidetoshi; Fujiki, Yoichi**
Strength development and adiabatic temperature rise of concrete with crushed sand partly replaced by coal ash.—73-10165
**Oikawa, Tetsuo** See Suzuki, Hajime
**Oishi, Manabu; Matsuda, Yukihisa; Noguchi, Kenichi; Masaki, Takaki**
Correlations between strength and acoustic properties in yttria-stabilized zirconia polycrystals.—73-03250
**Oishi, Shuji; Mochizuki, Keisuke; Hirano, Shinichi**
Growth of emerald crystals by the flux evaporation method in $MoO_3$-$B_2O_3$ system.—73-16809
**Oitmaa, J.; Jie, Yang; Wille, L. T.**
Oxygen ordering in $YBa_2Cu_3O_{6+x}$: low-temperature expansions.—73-08158
**Ojima, Hidenori** See Aratani, Shinichi
**Ojo, Adeola F.; Dwyer, John; Dewing, John; O'Malley, P. J.; Nabhan, A.**
Synthesis and properties of SAPO-5 molecular sieves. Silicon incorporation into the framework.—73-12712
**Oka, Akihiro; Ohno, Makoto; Miyahara, Kaoru; Sasa, Tadashi**
Dispersion characteristics and slurry pressing behaviors of SiC whisker/SiC powder mixture in aqueous slurry.—73-16716
**Oka, Kunihiko** See Ha, Dong-Han
**Oka, M.** See Hayakawa, Motozo
**Oka, Matoo** See Yakushige, Noriyuki
**Oka, T.** See El-Ghazzawi, M. E.
**Oka, Yasuo** See Kobayashi, Yoshio; Yanata, Kohei
**Okabayashi, Shigeo** See Yoshida, Kozaburo
**Okabe, Hirotake** See Kuboyama, Keiichi
**Okabe, Nagatoshi** See Tanaka, Tsuneshichi
**Okabe, Yoichi** See Matsubara, Gensoh
**Okada, A.; Ishii, K.; Mito, K.; Sasaki, K.**
Second-order optical nonlinearity in corona-poled glass films.—73-07073
**Okada, Akihide** See Sekiba, Toru
**Okada, Akira** See Asano, Tetsuo; Iio, Satoshi
**Okada, Akira; Iio, Satoshi; Asano, Tetsuo; Kokaji, A.; Takahashi, H.; Yoshimura, Masahiro**
Corrosion behavior of silicon nitride ceramics in aqueous solutions: I, Effects of testing condition and various corrosive solutions.—73-03214
**Okada, Akira; Iio, Satoshi; Asano, Tetsuo; Yoshimura, Masahiro**
Corrosion behavior of silicon nitride ceramics in aqueous solutions: II, Weight loss and bending strength tested in boiling sulfuric acid.—73-03215; 73-13470
**Okada, Akira; Ogasawara, Toshio**
Fatigue crack propagation and failure prediction for toughened ceramics under cyclic loads.—73-06418
**Okada, Genji** See Kobayashi, Kenkichiro; Matsushima, Shigenori
**Okada, H.** See Perry, K. E.
**Okada, H.; Tamura, T.; Ramakrishnan, N.; Atleeri, S. N.; Epstein, J. S.**
Toughening of magnesia partially stabilized zirconia, due to dilatational transformation.—73-17449
**Okada, K.** See Beaurepaire, E.; Schneider, H.
**Okada, Kaoru; Kato, Hitoshi; Nakajima, Keihachiro**
Preparation of silicon carbide fiber from activated carbon fiber [ACF] and gaseous silicon monoxide.—73-13202
**Okada, Kazuki; Sakuma, Taketo**
Role of Zener's pinning effect on the grain growth in $Al_2O_3$-$ZrO_2$.—73-06279; 73-13242
**Okada, Keiichi** See Kawabata, Shoichi
**Okada, Kiyoshi** See Daimon, Masaki; Hayashi, Shigeo; Taruta, Seiichi
**Okada, Kiyoshi; Kuriki, A.; Hayashi, Shigeo; Yano, T.; Otsuka, Nozomu**
Mechanochemical effect for some $Al_2O_3$ powders by attrition milling.—73-09203
**Okada, Kiyoshi; Tanaka, A.; Hayashi, Shigeo; Otsuka, N.**
Preparation of $Al_2O_3$ powders from various aluminum salts by the spray pyrolysis method.—73-09253
**Okada, M.** See Gijs, M. A. M.; Noda, T.
**Okada, M.; Homma, M.; Iwashita, S.**
Grain-boundary-layered PTCR ceramics based on $PbTiO_3$-$TiO_2$.—73-11222
**Okada, Masaru** See Kashiba, Yoshihiro; Sakashita, Yukio
**Okada, Michiya; Nishiwaki, Ryou; Wadayama, Yoshihide; Matsumoto, Toshimi; Aihara, Katsuzo; Kamo, Tomoichi**
Oxide superconductor, superconducting wire and coil using the same, and method of production thereof.—73-15691
**Okada, Michiya; Tanaka, Kazuhide; Kamo, Tomoichi**
Weak-link characteristics and transport properties of Tl-1223 tape-shaped wire.—73-15666
**Okada, Mitsuyoshi; Ayano, Toshiki; Sakata, Kenji**
Creep and shrinkage of ultra-rapid-hardening cement concrete.—73-09873
**Okada, Nagaya** See Dong, Dun-Zhuo
**Okada, Shigeru** See Hamano, Kenya
**Okada, Shojiro** See Ishizaki, Kozo; Kondo, Yoshihito
**Okada, T.** See Funayama, Masahiro
**Okada, Takashi** See Mori, Yusuki
**Okada, Tatsuo** See Kumuduni, Wanniarachchi K. A.
**Okada, Toichi** See Owaki, Shigehiro
**Okada, Toshitake; Shimomura, Koji**
Measures to extend the campaign lives of blast furnaces at Kakogawa Works [Japan].—73-14602
**Okada, Y.** See Mabuchi, Mamoru; Tokura, Y.
**Okada, Yoshihiko; Fang, Yong-Hao; Ishida, Hideki; Nishido, Hirotsugu**
Dehydration processes of gyrolite.—73-16104
**Okada, Yoshihiko; Ishida, Hideki; Mitsuda, Takeshi**
$^{29}Si$ NMR spectroscopy of silicate anions in hydrothermally formed CSH.—73-05477; Thermal decomposition of tricalcium silicate hydrate.—73-16372
**Okada, Yoshihiko; Ishida, Hideki; Sasaki, Kaori; Young, J. Francis; Mitsuda, Takeshi**
Characterization of CSH from highly reactive ß-dicalcium silicate prepared from hillebrandite.—73-08567
**Okada, Yoshihiko; Sasaki, Kaori; Ishida, Hideki; Mitsuda, Takeshi**
$^{29}Si$ NMR study of the thermal decomposition of hydrothermally formed hillebrandite and xonotlite.—73-05478
**Okada, Yoshihiko; Sasaki, Kaori; Zhong, Bai-Qian; Ishida, Hideki; Mitsuda, Takeshi**
Formation processes of ß-$C_2S$ by the decomposition of hydrothermally prepared CSH with $Ca(OH)_2$.—73-08629
**Okafor, Fidelis O.**
Use of superplasticizers in palm kernel shell aggregate concrete.—73-00203
**Okafuji, Masaharu; Noguchi, Junichi; Otsuki, Tomizo**
Float-bath rollout control method and system.—73-14538
**Okajima, M.** See Itaya, Kazuhiko
**Okajima, Massaki** See Rennie, John
**Okajima, Y.** See Yamaya, K.
**Okamoto, A.** See Nair, K. M.; Yoshitake, Masaaki
**Okamoto, Hiromi** See Kawashima, Takeshi
**Okamoto, Hiroshi** See Terashima, Taichi
**Okamoto, K.** See Teraoka, Y.
**Okamoto, Kaori** See Ueno, Iwao
**Okamoto, Katsunori** See Imaeda, Minoru
**Okamoto, Keiichi; Sawada, Takayuki; Ujihara, Kikuo**
Transient response of a photorefractive grating produced in a $Bi_{12}SiO_{20}$ (BSO) crystal by a short light pulse.—73-05682
**Okamoto, Kuninori** See Nakagawa, Seiichi
**Okamoto, Masahide** See Kabasawa, U.; Kodama, Hironori
**Okamoto, Masahiro**
Machine tools and combined machining technology for functional ceramics.—73-04928
**Okamoto, S.** See Nakajima, Kensuke
**Okamoto, Tamotsu; Konagai, M.; Kojima, Nobuaki; Yamada, A.; Takahashi, K.; Nakamura, Yoshio**
Anomalous anisotropy in the absorption coefficient of vacancy-ordered $Ga_2Se_3$.—73-04241
**Okamoto, Tetsuya** See Sakata, Hironobu
**Okamoto, Yasuhiko** See Takahashi, Hisakazu
**Okamoto, Yasunori** See Hayashi, Kunio; Pezzotti, Giuseppe
**Okamura, Hideko; Simura, Tsutomu; Kuroda, Kazuo; Itoh, M.; Ogura, I.**
Measurement of photorefractive coupling constant of $BaTiO_3$ using the varying interaction length method.—73-05064
**Okamura, Hiromichi** See Yoshida, Masahiro
**Okamura, Hisanori** See Sato, Ichiya

**Okamura, Kiyohito** See Inagaki, Hideya; Ishikawa, Toshihiro; Kakimoto, Kenichi; Seguchi, Tadao; Shimoo, Toshio
**Okamura, Kiyohito; Ichikawa, Hiroshi; Takeda, Michio; Seguchi, Tadao; Kasai, Noboru; Nishii, Masanobu**
Super-heat-resistant silicon carbide fibers from polycarbosilane.—73-12528
**Okamura, Kouji; Arima, Tadao**
Process for fabricating an optical fiber preform.—73-10657
**Okamura, Osamu** See Kanamori, Yasuo; Murakami, Hirohiko
**Okamura, Soichiro** See Yoshimura, Kuniaki
**Okaniwa, Kiyoshi** See Yoshida, Noriyuki
**Okano, K.** See Tsutsumi, C.
**Okano, Kazuo; Fujinuma, Kenji; Maruoka, Kazutoshi**
Effect of aluminum doping on thermoelectric power of sintered SiC.—73-02576
**Okano, Kazuo**
Effect of dopant on electrical properties of sintered SiC.—73-02578
**Okano, Kazuyuki** See Saito, Shinji
**Okano, Kiyoshi** See Takahashi, Yutaka
**Okano, T.** See Sei, Tadanori
**Okashiro, Yasuharu** See Nakamura, Kazuo
**Okawa, Hajime** See Tsunooka, Tsutomu
**Okawa, Yoshihiro** See Ishida, Masanobu
**Okawara, Seiji** See Kishimoto, Hidehiro
**Okayama, Hideto** See Kondoh, Isao
**Okayasu, S.** See Kumakura, Hiroaki
**Okazaki, Atsushi** See Aomine, Nobutaka
**Okazaki, Hiroshi** See Takeuchi, Genki
**Okazaki, Hisaaki** See Shibata, Shuichi
**Okazaki, K.**
Synthesis of nanocrystalline intermetallic compounds by MA [mechanical alloying] and EDC [electro-discharge compaction].—73-06091
**Okazaki, Kiyoshi** See Sugihara, Sunao
**Okazaki, N.** See Odagawa, Tetsufumi
**Okazaki, Nobuo; Manabe, Katsuhide; Akasaki, Isamu; Amano, Hiroshi**
Gallium nitride group compound semiconductor laser diode.—73-01374
**Okazaki, Noriyasu** See Itoh, Hinenobu
**Okhrimenko, B.** See Bartnitskaya, N.
**Oki, N.** See Yoshizawa, M.
**Okinaka, Hideyuki** See Iga, Atsushi
**Okito, Kenichi** See Kinoshita, Kazuhisa
**Okonechnikov, A. P.; Mel'nik, N. N.**
Influence of annealing on the spectrum of deep centers in ZnSe.—73-01200
**Okoshi, Hitoshi** See Ookouchi, Takahiko
**Okoshi, Sadafumi** See Nishida, Toshihiko
**Oksoy, Dolun; Pye, L. D.; Bickford, Dennis F.; Ramsey, W. Gene**
Canonical correlation of waste glass compositions and durability, including pH.—73-08286
**Oktyabrsky, S. R.** See Bagaev, V. S.; Dovidenko, K.; Sidorov, M. V.
**Oku, Masato** See Hihara, Hiroshi
**Oku, T.** See Ishiyama, Shintarou; Yamane, Hisanori
**Oku, Takashi** See Iijima, Tomohiko
**Okubo, T.** See Kumar, Krishnankutty-Nair P.
**Okubo, T.; Watanabe, M.; Kusakabe, Katsuki; Morooka, Shigeharu**
Nanostructural control of sol-gel-derived porous alumina via modification of sol.—73-02898
**Okuda, Fumio** See Hamano, Kenya
**Okuda, Hiroshi** See Awaji, Hideo
**Okuda, Hiroshi; Imazu, Itsuro**
Silicon-carbide-reinforced composite material.—73-02139
**Okuda, Hiroyuki; Shimizu, Yoshiaki; Ino, Kazuo; Ishihara, Kousou; Ogura, Takashi**
Magnetic head with suppressed generation of pseudogap.—73-11676
**Okuda, K.**
Application of carbon fibers to construction materials in Japan—a review.—73-12411
**Okuda, Kiichi** See Ohta, Hitoshi
**Okuda, Koji** See Nishi, Tokumitsu
**Okuda, Koji; Takai, Hiroshi; Nishi, Tokumitsu; Yanagida, Hiroaki**
Heating mechanism in the electrical joining process of $Si_3N_4$ ceramics.—73-15964
**Okuda, M.** See Ohkubo, S.
**Okuda, M.; Ohkubo, S.**
Novel method for measuring the thermal conductivity of submicrometer thick dielectric films.—73-08427
**Okuda, Shigeru** See Yoshida, Noriyuki
**Okuda, Shoji** See Ohsato, Hitoshi
**Okugawa, D.** See Takahashi, Hideaki
**Okuhara, Toshio** See Inumaru, Kei
**Okuizumi, Masaru** See Yano, Mitsuaki
**Okulov, S. M.** See Ishchenko, S. S.
**Okumoto, K.** See Nishizawa, H.
**Okumura, Hisatake** See Nakamura, Toshio
**Okumura, Masatoshi** See Suganuma, Katsuaki
**Okumura, Takuji** See Kudaka, Katsuya
**Okumura, Tomohiro** See Aramaki, Keizo
**Okuno, Yasuo** See Kohzuki, Hidenori; Sano, Michihiro
**Okuno, Yasuo; Tamura, Hitoshi; Maruyama, Tsuyoshi**
Crystallographic evaluation of ZnSe crystals by X-ray diffraction.—73-05380
**Okuno, Yoshihiro** See Ikeda, Susumu
**Okura, A.** See Ahlborn, K.
**Okura, T.; Kanazawa, T.**
Coordination state of titanium atoms in titanate glasses.—73-06894
**Okushi, Hideyo** See Akita, Chiyoshi
**Okutani, Takeshi** See Suzuki, Masaaki
**Okutani, Takeshi; Nakata, Yoshinori; Hino, Masao**
Preparation of $SiCl_4$ from rice hull ashes: III, FTIR-PAS analysis of chlorination mechanism of rice hull ashes containing alkaline and alkaline-earth metal salts.—73-02969
**Okutani, Takeshi; Nakata, Yoshinori; Suzuki, Masaaki; Maniette, Yves; Goto, Nobuyoshi; Odawara, Osamu**
Synthesis of SiC fine particles by gas-phase reaction under short-time microgravity.—73-06096
**Okuwada, Kuni; Komatsu, Shuichi**
Preparation of $SrTiO_3$ films by the sol-gel method.—73-02971; Preparation of $SrTiO_3$ films by the sol-gel method.—73-13206
**Okuwaki, Akitsugu** See Sato, Tsugio
**Okuyama, Masahiko** See Fukui, Toshimi; Sakurai, Chihiro
**Okuyama, Masahiko; Fukui, Toshimi; Sakurai, Chihiro**
Phase transformation and mechanical properties of $B_2O_3$-doped cordierite derived from complex alkoxide.—73-09237
**Okuyama, Masanori** See Kanashima, Takeshi
**Okuyama, Masanori; Imai, Tadayuki; Hamakawa, Yushihiru**
Preparation of $PbTiO_3$ thin films by laser ablation.—73-11602
**Okuyama, Ryoichi; Nomura, Eiichi**
Fabrication of YSZ/NiO-YSZ two-layer ceramics for tubular SOFC by multilayer slurry casting process.—73-05807; 73-16778; Sintering behavior of YSZ/NiO-YSZ two-layer ceramics for tubular SOFC fabrication by multilayer slurry casting process.—73-16994
**Okuyama, Tetsuya** See Matsushima, Shigenori
**Ol'khovaya, L. A.; Karpenko, G. A.; Ikrami, D. D.; Fedorov, P. P.**
Ternary system $CaF_2$-$SrF_2$-$MnF_2$.—73-02517
**Ol'khovik, G. A.** See Naumov, I. I.
**Ol'khovik, I. V.; Politova, E. D.; Stefanovich, S. Yu.**
Dielectric properties and electrical conductivity in the system $BaPbO_3$-$PbTiO_3$.—73-12765
**Ol'shanetskii, E. B.** See Gusev, G. M.
**Ol'shevskii, V. G.** See Grebnik, V. G.
**Olagnon, Christian** See Saadaoui, M.
**Olagnon, Christian; Fantozzi, G.; Sudreau, F.; Peigne, P.**
Thermal shock and fatigue of mullite and alumina: refined analyses.—73-05663
**Olander, D.R.** See Moalem, M.
**Olczak, T.** See Deptula, A.
**Olds, Leonard E.; Kielmeyer, William H.**
Inorganic fiber composition.—73-15996
**Olego, D.** See Petruzzello, J.
**Oleinik, A. S.**
Optical parameters of the film-type reversible recording media Al-$VO_2$-AK-113F and Al-$VO_2$-$Al_2O_3$.—73-05603
**Oleinik, G. I.; Kushel, M. I.; Oleinik, M. I.**
Effect of firing regimes on the microstructure and the properties of zircon-containing ceramics.—73-02783
**Oleinik, G. S.** See Danilenko, N. V.
**Oleinik, G. S.**
Role of plastic deformation in the structure formation of ceramic materials.—73-03000
**Oleinik, M. I.** See Oleinik, G. I.
**Olek, Jan; Diamond, Sidney**
Alteration of polished sections of free-lime-containing cement clinker by short-term atmospheric exposure.—73-00022
**Olekseyuk, I. D.** See Kityk, A. V.
**Olenik, V. A.** See Grinchenko, A. Yu.
**Olesky, M.; Budnlok, A.; Matyja, P.**
Electrolytic composite layers based on nickel with nickel oxide addition.—73-10944
**Olevsky, E.; Kravchenko, I.**
Mathematical simulation of the thermoactivized densification of the nonhomogeneous glass powders on the base of the phenomenological model of sintering.—73-14422
**Oliew, G.** See Trettin, R.
**Oliferenko, G. L.; Evdokimova, T. V.; Azmetova, G. V.**
Chemical analysis of electroluminescent SrS:Ce films.—73-16051
**Olinger, John L.** See Schelhorn, Jean E.
**Olivares, J.; Cabrera, J. M.**
Modification of proton-exchanged $LiNbO_3$ layers for guiding modes with ordinary polarization.—73-15272
**Olivares, J.; Diaz-Garcia, M. A.; Cabrera, J. M.**
Direct measurement of ordinary refractive index of proton-exchanged $LiNbO_3$ waveguides.—73-01402
**Oliveira, N. F., Jr.** See Bindilatti, V.
**Oliver, Greg** See Franklin, Thomas C.
**Oliver, J. R.** See Neurgaonkar, R. R.
**Oliver, Jon** See Friel, John J.
**Oliver, Reed R.** See Hagle, Michael P.
**Oliver, W. C.** See Gorbatkin, S. M.
**Olivera-Pastor, P.** See Criado, C.; Ramos-Barrado, J. R.
**Olivier, J.; Bartenlian, B.; Bisaro, R.; Wyczisk, F.**
Sublattice orientation dilemma: a reflection high-energy electron diffraction and X-ray photoelectron diffraction study of GaAs growth on vicinal Si(001) surfaces.—73-07818
**Olivier-Fourcade, J.** See Akinocho, G.
**Ollivier, J. P.** See Locoge, P.
**Ollivier, J. P.; Massat, M.**
Permeability and microstructure of concrete: a review of modeling.—73-03515
**Olmez, H.** See Erdem, Emin; Yilmaz, V. T.
**Olofa, S. A.** See Tawfik, A.
**Olovsson, Ivar** See Ichikawa, Mizuhiko
**Olowolafe, J. O.; Mogab, C. J.; Gregory, R. B.**
Interdiffusion in Cu/reactive-ion-sputtered TiN, Cu/chemical-vapor-deposited TiN, Cu/TaN, and TaN/Cu/TaN thin-film structures: low-temperature diffusion analyses.—73-13356
**Olowplafe, J. O.; Lee, Charles; Kawasaki, Hisao; Geiatos, Carol; Blumenthal, Roc; Theodore, N. David**
Effect of TiN anneal ambient on the microstructure and electromigration performance of Al-based alloys.—73-03583
**Olry, P.** See Villeneuve, J. F.
**Olsen, G. H.** See Park, Chin-Ho
**Olsen, J. A.** See Hammons, B. E.
**Olson, C. G.** See Anderson, R. O.
**Olson, D. H.** See Meier, W. M.
**Olson, D. T.** See Krishnankutty, S.; Kuznia, J. N.; Van Hove, J. M.
**Olson, Darin S.; Kelly, Michael A.; Kapoor, Sanjiv; Hagstrom, S. B.**
Sequential deposition of diamond from sputtered carbon and atomic hydrogen.—73-13250
**Olson, G. L.** See Liu, B.
**Olson, J. M.** See Alonso, R. G.
**Olson, James R.; Stahlman, Mark D.**
High-strength ceramic fiber board.—73-05218
**Olson, Rudolf A.** See Christensen, Bruce J.
**Olsson, E.** See Thouless, Michael D.; Wang, S. Z.
**Olund, Patrik** See Thoors, Hakan
**Olzhausen, H. J.** See Bruckner, H. J.
**Olzi, Emilio**
Present and future applications of superconductivity.—73-08180
**Omaggio, J. P.** See Davis, John L.
**Omar, A. A.; Salman, S. M.; Saleh, H. I.**
Glass-ceramics from altered basalt-clay mixtures.—73-14396
**Omata, T.; Ueda, Kazushige; Ueda, N.; Katada, M.; Fujitsu, S.; Hashimoto, T.**
Preparation of oxygen excess $SrLaFeO_{4+\delta}$ and its electrical and magnetic properties.—73-11670
**Omatete, Ogbemi O.** See Nunn, Stephen D.; Tiegs, Terry N.; Zeltner, Walter A.
**Omellion, M.** See Kelley, R. J.
**Omi, S.** See Hiraga, H.
**Omori, Mamoru** See Nishiyama, Katsuhiro
**Omori, Naoya; Nomura, Toshio**
Diamond-coated hard material, throwaway insert, and a process for the production thereof.—73-15990
**Omori, Naoya; Yamagata, Kazuo; Nomura, Toshio; Tobioka, Masaaki**
Surface-coated hard material for cutting tools or wear-resistance tools.—73-03702
**Omotani, Chikara** See Hayashi, Takao
**Omote, Kazuhiko** See Ito, Yoshiaki
**Omura, H.** See Miyata, N.
**Onabe, K.** See Iijima, Y.
**Onae, Atsushi** See Kuze, Hiroaki
**Onda, Y.** See Hayakawa, Motozo
**Ondracek, Gerhard** See Boccaccini, Aldo R.
**Ondracek, Jan; Hajek, Bohumil**
Findings on blue-emitting luminophore based on (Ba, $Eu^{2+}$)Mg aluminate.—73-02275
**Ong, C.-K.** See Feng, Y.-P.; Gong, H.; Oh, K.-H.; Zhang, X.
**Ong, N. P.** See Brawner, D. A.; Harris, J. M.; Wu, Hui
**Ong, Shaode** See Diamond, Sidney
**Ong, Shaode; Diamond, Sidney**
Unexpected effects of alkali hydroxide added to cement mix water.—73-03550
**Ong, Tiong-P.** See Burger, Dale R.
**Onikata, Masanobu** See Kondo, Mitsuji
**Onillon, M.** See Santilli, C. V.
**Onink, M.** See Cordfunke, E. H. P.
**Onisawa, Kenichi; Abe, Yoshio; Nakayama, Takahiro; Fuyama, M.; Ono, Y. A.**
Dielectric breakdown properties of $Ta_2O_5$/$SiO_2$ stacked thin films prepared by rf sputtering.—73-10930
**Onishchukov, G.; Hodel, W.; Weber, H. P.; Mikhailov, V.; Minkov, B.**
Cw lasing characteristics of high-$Cr^{4+}$ concentration forsterite.—73-16436
**Onishi, Masashi** See Kogo, T.
**Onishi, Masashi; Chigusa, Yoshiki; Nakazato, Koji; Watanabe, Minoru; Miyajima, Yoshiaki; Sugawa, Tomoki**
Optical functioning glass and fiber amplifier.—73-03956
**Onishi, Masashi; Kohgo, Takashi; Chigusa, Yoshiki; Watanabe, Minoru**
Method of producing superconducting ceramic wire having protective metal coating thereon.—73-01724
**Onishi, Masashi; Nakazato, Koji; Kanamori, Hiroo; Watanabe, Minoru; Miyajima, Yoshiaki**
Optical functioning glass and apparatus using the same.—73-00752
**Onishi, Yasushi** See Saitoh, Itaru
**Onishi, Yasushi; Toyota, Sachio**
Grinding strain of PLZT ceramics.—73-16805
**Ono, Akira**
High-pressure synthesis of Mo-containing 1212 and 1222 compounds, (Cu, Mo)$Sr_2YCu_2O_z$ and (Cu, Mo)$Sr_2$(Y, Ce)$_2Cu_2O_z$.—73-11785
**Ono, Haruhiko** See Kimura, Shigeru
**Ono, Hirokazu** See Kondo, Nobuhiro
**Ono, Hironobu** See Yang, Jing
**Ono, Hironobu; Katoh, Satoshi; Ohgishi, Sakichi**
Effects of measurement condition on electric resistance in cement mortar specimens.—73-09937
**Ono, Hiroshi** See Mizuhara, Yukako
**Ono, Kenichi** See Natsuoka, Morita
**Ono, M.** See Kawamura, Kazuro
**Ono, Moriaki** See Shinbo, Yukio
**Ono, Naoki** See Kida, Michio
**Ono, S.** See Hirano, Shinichi; Yokoo, Kuniyoshi
**Ono, Shozo** See Kobayashi, Toyohiko
**Ono, Shuitiro** See Hayakawa, Hiroshi
**Ono, Takashi; Takenoshita, Takeshi; Uchimura, Hiroshi; Kaji, Masaki**
Fracture behavior of a silicon nitride ceramic under mixed-mode fracture condition.—73-17326; 73-06429
**Ono, Tetsuo; Hiraoka, Susumu; Suzuki, Keizo**
Oxidation of silicon with a hot oxygen beam.—73-05940
**Ono, Toru; Endo, Hidehiro; Fukuda, Kanao; Ueki, Masanori**
Composite materials for sliding members.—73-12455
**Ono, Toshihiko** See Inoue, Michiko

**Ono, Tsuyoshi** See Nishikawa, Takashi
**Ono, Y. A.** See Onisawa, Kenichi
**Ono, Y.** See Baba, Toshihide; Koike, Y.
**Ono, Yasushi; Sakamoto, Satoshi**
Powder mixture for monolithic refractories containing graphite and a method of making thereof.—73-00889
**Ono, Yoshio** See Masami, Numata
**Ono, Yukiyoshi** See Numoto, Hironao
**Ono, Yukiyoshi; Kimura, Kunio; Wakita, Hidenobu; Yamade, Yasue; Nishida, Hirofumi**
Catalytic body and process for producing the same.—73-12343
**Onoda, George Y., Jr.** See Wallenberger, Frederick T.
**Onoda, M.** See Mala, Takashi; Saeki, M.
**Onoda, Yoshihiro** See Tamamaki, Masahiro
**Onodera, A.**
Fabrication of ceramic composites by CVD/HP process.—73-16772
**Onodera, Akira** See Haga, Hisashi
**Onodera, Takaki; Kumakura, Masashi; Watanabe, Natsuya; Satoh, Ryoichi**
Consideration of bond between RCC [roller-compacted concrete] and cement-treated basecourse.—73-09865
**Onodera, Yoshio** See Torii, Kazuo
**Onodera, Yoshio; Iwasaki, Takashi; Hayashi, Hiromichi; Torii, Kazuo**
Development of a new composite material based on $\lambda$-$MnO_2$ and porous ceramics.—73-02770; 73-12980
**Onokhov, A. P.** See Burkat, T. M.
**Onorin, S. A.; Khodyashev, M. B.; Denisova, T. A.; Vol'khin, V. V.; Zakharov, N. D.**
Effects of synthesis conditions on structure and ion-exchange properties of hydrated titanium dioxide.—73-16755
**Onorin, S. A.; Vol'khin, V. V.; Khodyashev, M. B.; Zakharov, N. D.; Denisova, T. A.**
Physicochemical investigation of hydrated titanium dioxide and products of sorption of ions $As^V$ and $Na^+$ on it.—73-16273; Structure of X-ray-amorphous hydrated titanium dioxide.—73-16341
**Onoue, K.** See Shiomi, Haruhisa
**Onsgaard, J.; Bjorn, J. A.**
Growth and reactivity of $ZnO_x$ on Cu(111).—73-08633
**Onuma, Eiichi; Ito, Mitsuhiro**
Recent advance in cement grinding and milling technology.—73-04946
**Onuma, Tsutomu** See Sugahara, Yoshiyuki
**Onyshkevych, Lubomyr S.** See Cherukuri, Stayam C.
**Ooe, Masaharu; Ishiguro, Yoichi; Tanaka, Gotaro; Yoshizawa, Nobuyuki**
Production of a hermetically coated optical fiber.—73-00759
**Oohashi, Keiji**
Characteristics of carbon-coated optical fibers.—73-03823
**Ooi, Hiroshi** See Nishikawa, Takashi
**Ooi, K.** See Kanezaki, E.
**Ooi, Kenta** See Ookubu, Akira
**Ooi, Kenta**
Adsorbent with $Li^+$ ion-memory effect.—73-16404
**Ooike, Susumu** See Kitamura, Takao
**Ookouchi, Takahiko; Kagohara, Hiromi; Hama, Hiromu; Nakagawa, Mitsuo; Okoshi, Hitoshi; Nakayama, Yoshitaka**
Apparatus which comes in contact with molten metal and composite member and sliding structure for use in the same.—73-04027
**Ookubo, Akira** See Kanezaki, E.
**Ookubu, Akira; Ooi, Kenta; Hayashi, Hiromu**
Preparation and phosphate ion exchange properties of a hydrotalcite-like [HTAL] compound.—73-08710
**Oomen, Emmanuel W. J. L.; Van Dongen, Anne-Marie A.; Veenvliet, Hendrik**
Method of manufacturing a heavy metal fluoride glass composition.—73-03950
**Oomori, Yoshihiro** See Tanaka, Katsumi
**Oomori, Yoshiyuki** See Iijima, Tomohiko
**Oonaka, Y.** See Sasada, I.
**Oostra, D. J.** See La Via, F.
**Oosumi, K.** See Nukui, Akihiko
**Ootake, K.** See Majima, A.
**Ootsuki, Atsuyuki** See Nishikawa, Takashi
**Ootuka, Youiti** See Matsunaga, Noriaki
**Opalka, Susanne M.** See Parker, Anthony A.
**Opalko, J. F.** See Venigalla, S.
**Opeka, Mark M.**
Coating materials assessment for carbon-carbon space structures.—73-12419; Ptomic oxygen [AO] of TiC and $TiB_2$.—73-12441
**Opekunov, S. A.** See Meshcheryakov, Yu. G.
**Openov, L. A.** See Elesin, V. F.
**Opila, Elizabeth J.; Tuller, Harry L.**
Thermogravimetric analysis and defect models of the oxygen nonstoichiometry in $La_{2-x}Sr_xCuO_{4-y}$.—73-15656
**Opila, Elizabeth J.**
Oxidation kinetics of chemically vapor-deposited silicon carbide in wet oxygen.—73-06315
**Opila, R. L.** See Sher, A.
**Opitz, Joachim F. A.; Gontermann-Gehl, Ute**
Pore structure of thin ceramic tape.—73-05078
**Opoczky, Ludmilla**
Behavior of basalt fibers in high alumina cement matrix.—73-00028; Particle size distribution of jointly ground [portland cement] clinker and limestone.—73-10076
**Oppermann, B.**
European standards for building lime products.—73-09948
**Oprescu, Dan; Rees, Lovat V. C.; Shen, Dong-Min**
Diffusion of sorbates in zeolites by the frequency response method: particle shape and anisotropic effects.—73-09400
**Oquab, Djarollah** See Nowak, Jean-Francois
**Oralov, T. A.** See Fedorov, N. F.
**Orban, Jozsef; Terlaki, Jozsef**
Technology and application of BauMix cellular concrete.—73-00196
**Orban, Z.** See Belkind, A.
**Orbukh, V. I.** See Lebedeva, N. N.
**Ord, J. L.; De Smet, D. J.**
Anodic oxidation of tungsten in nonaqueous electrolyte: II. Electrochemical coloring and bleaching of the oxide film.—73-13466
**Ordan'yan, S. S.** See Samokhvalova, T. I.
**Ordan'yan, S. S.; Samokhvalova, T. I.; Zaitsev, G. P.**
Corundum ceramics with low sintering temperatures.—73-12960
**Ordejon, P.**
Interpretation of the X-ray emission spectra of a-$SiO_x$.—73-02306
**Orders, P. J.** See Hartley, R. H.
**Ordin, S. V.** See Zaitsev, V. K.
**Orekhova, N. V.** See Aguekian, V. F.; Belousov, M. V.
**Orel, B.; Svegl, F.; Bukovee, N.; Kosec, M.**
Structural and optical characterization of CuO particulate solid films and the corresponding gels and xerogels.—73-08746
**Orentlikchr, L. P.; Novikova, I. P.; Lifanov, I. I.**
Ways of estimating surface concrete hydrophobization.—73-00206
**Orentlikher, L. P.; Pervushin, G. N.**
Influence of composition and structure on crack resistance of keramzit concrete.—73-00113
**Orera, V. M.** See Merino, R. I.
**Orera, V. M.; Merino, R. I.; Cases, R.; Alcala, R.**
Luminescence of tetrahedrally coordinated $Co^{2+}$ in zirconia.—73-08659
**Orihara, K.**
Fabrication of organic-inorganic pseudo-superlattice and its electrical behavior.—73-16774
**Orio, L.** See Morterra, Claudio
**Orishchin, S. V.** See Babizhetskii, V. S.
**Orito, Toshihiro** See Oguri, Hitoshi
**Orkina, T. N.** See Aksenov, N. D.; Baidakov, L. A.
**Orkina, T. N.; Tukha, Kh.; Arif, Mokhammad; Baidakov, L. A.; Ananichev, V. A.**
Electrical conductivity of halogen telluride glasses.—73-14171
**Orlando, T. P.** See Luo, J.
**Orlik, D. R.** See Ivanovskaya, M. I.
**Orling, Timothy T.** See Messler, Robert W., Jr.
**Orloff, Giennis J.; Woollam, John A.; He, Ping; McGahan, W. A.; McNeil, J. R.; Jacobson, R. D.**
Ex situ variable angle spectroscopic ellipsometry studies of electron cyclotron resonance etching of $Hg_{1-x}Cd_xTe$.—73-14896
**Orlov, A. V.; Varlamov, A. G.; Shiryaev, A. A.; Grigor'ev, Yu. M.**
Thermodynamic analysis of the conditions of formation of the condensed phases of the system Cr-C-O-H by use of chrome carbonyl.—73-16375
**Orlov, N. Yu.** See Avrutin, E. A.
**Orlov, R. Yu.** See Vigasina, M. F.
**Orlov, S. N.; Polivanov, Yu. N.**
Raman scattering [RS] of light by surface polaritons [SP's] coherently excited on a rippled BeO crystal.—73-12667
**Orlova, O. D.** See Krot, V. V.
**Orlova, T. S.** See Egorov, V. M.; Smirnov, B. I.
**Orlova, T. S.; Peshchanskaya, N. N.; Markov, L. K.; Smirnov, B. I.; Shpeizman, V. V.; Engert, J.**
Effect of structure on the properties of the superconducting ceramic Y-Ba-Cu-O.—73-01532
**Orlova, T. S.; Smirnov, B. I.; Shpeizman, V. V.**
Effect of uniaxial compression on current-voltage characteristics of high-$T_c$ $YBa_2Cu_3O_{7-x}$ films.—73-15438
**Orlovskaya, N. A.** See Gogotsi, Yu. G.
**Orlyukas, A.** See Pechelyunaite, A.
**Oron, M.** See Eger, D.
**Orpen, A. G.** See Harrison, Carole C.
**Orr, B. G.** See Sudijono, J.
**Orr, K.-K.** See Cho, H.; Chung, D.-S.
**Orr, Keun-Ho** See Chung, Jae-Woo
**Orsal, B.; Peransin, J. M.; Signoret, P.; Daulasim, K.**
Low-frequency noise of a 980-nm InGaAs/GaAs strained quantum well [QW] laser.—73-07643; 73-15019
**Orsini, A.** See Di Pietro, E.
**Ortega, C.** See Cattan, E.
**Ortega, J.; Perez, R.; Flores, F.**
Schottky barrier formation between GaAs(110) and alkali metals.—73-01309
**Ortega, L.** See Bruyere, Jean-Claude
**Ortiz, A.** See Falcony, C.
**Ortiz, C.; Blatter, A.**
Laser irradiation of amorphous thin films.—73-13115
**Ortiz, C.; Vega, F.; Solis, J.**
Particulates in laser-deposited copper oxide films.—73-13159
**Ortiz-Longo, Carlos R.; White, Kenneth W.**
Elevated-temperature fracture characterization of advanced fibrous ceramic thermal insulators.—73-17305
**Orts, M. J.** See Barba, A.
**Orts, M. J.; Campos, B.; Pico, M.; Gozalbo, A.**
Methods of granulometric analysis: application in the granulometry control of raw materials.—73-08414
**Orudzhev, R. G.** See Krupnikov, E. S.
**Os'kina, T. E.; Tret'yakov, Yu. D.**
Features of synthesis of Bi(Pb)-Sr-Ca-Cu-O superconductors via precursors.—73-01550
**Os'minin, N. I.; Goncharova, L. A.; Paskonnov, I. V.; Tishchenko, I. M.**
Manufacture of heat-insulating material—gypsum-cork concrete.—73-13748
**Osad'ko, I. S.** See Zaitsev, N. N.
**Osada, T.; Miura, N.; Eaves, L.**
Magnetotunneling in the *n*-type GaAs/AlGaAs wide-well double barrier structure under transverse high magntic fields.—73-07658
**Osadchii, M. S.; Murakhtanov, V. V.; Fomin, E. S.**
Role of charge transfer in formation of X-ray and X-ray photoelectron spectra of Cu(II) compounds.—73-05474
**Osafune, Haruo; Minakuchi, Hiroyoshi**
Oxynitride glass fiber for composite products, and glass fiber-reinforced products.—73-03958
**Osaka, Akiyoshi** See Ding, Yong; Fu, Jie; Fu, Jin; Hayashi, Satoshi; Yoshimatsu, Hideyuki
**Osaka, Akiyoshi; Ikeda, K.; Miura, Yoshinari; Nanba, T.; Takada, Jun**
Preparation and magnetic properties of Ca-P-Si-FeO-O glass-ceramics.—73-15359
**Osaka, Akiyoshi; Qiu, Jian-Rong; Fujii, Tatsuo**
Raman spectra and constitution of binary tellurite glasses containing typical network-modifying cations.—73-14076
**Osaka, Fukunobu; Kato, Takashi**
Scanning tunneling microscopy of GaInAs/InP multiquantum well (110) surfaces observed under an ultrahigh vacuum.—73-11433
**Osaka, Shigemi; Hata, Kazuo; Takahashi, Tsukasa; Moto, Teruyuki**
Zirconia sol and method for production thereof.—73-02080; Zirconia sol, method for production thereof, porous ceramic-producing slurry, and porous ceramic product obtained by use thereof.—73-12408
**Osaka, Tetsuya; Fukuda, Toshihiro; Ouchi, Kiyoshi; Momma, T.**
Conduction mechanism in indium tin oxide/electroinactive polypyrrole/indium tin oxide sandwich structures.—73-10925
**Osaka, Tetsuya; Homma, T.**
Creation of high-functional magnetic thin films by electrochemical method.—73-15310
**Osaki, Kunihiro**
Rheology.—73-16977
**Osaki, Susumu; Huybrechts, Ben; Ishizaki, Kozo**
Grain growth during liquid-phase sintering of Sb-doped $BaTiO_3$.—73-09150; 73-17138
**Osaki, Yasuko** See Manabe, Tsuneo
**Osanaga, Tadahiro** See Kawamoto, Kohshi
**Osato, Kazuo** See Mukaida, Masakazu; Watanabe, Akio
**Osaulenko, O. P.** See Avrutskii, I. A.
**Osawa, Toshio** See Kundu, Debtosh
**Osbond, P. C.; Whatmore, R. W.**
High dielectric constant ceramics in the $PbSc_{0.5}Ta_{0.5}O_3$-$PbZrO_3$ and $PbSc_{0.5}Ta_{0.5}$-$PbTiO_3$ systems.—73-00975
**Osborn, R.** See Alekseev, P. A.; Guillaume, M.
**Osborne, D. G.**
Product specifications: their importance to the business.—73-07165
**Osborne, M. C.** See Braski, D. N.
**Osgood, R. M.** See Lu, Z.
**Oshawa, S.** See Kimura, S.
**Oshima, Kenji** See Nakano, Kikuo
**Oshima, Masaharu** See Klauser, Ruth; Sugahara, Hirohiko; Watanabe, Yoshio
**Oshima, Y.** See Nagai, H.
**Oshiyama, Atsushi** See Saito, Susumu
**Osiceanu, P.** See Gartner, M.
**Osiko, V. V.** See Gogotsi, G. A.
**Osinski, Julian S.** See Zou, Yao
**Osinski, Julian S.; Grodzinski, Piotr; Zou, Yao; Dapkus, P. D.**
Threshold current analysis of compressive strain (0–1.8%) in low-threshold, long-wavelength quantum well lasers.—73-15209
**Osinski, Marek** See Nakwaski, Wlodzimierz
**Osinskii, A. V.** See Gurevich, S. A
**Osinskii, V. I.** See Boiko, S. I.
**Osintsev, V. V.** See Zhukovets, V. F.
**Osip'yan, Yu. A.** See Afonikova, N. S.
**Osipov, A. F.** See Zav'yalova, A. A.
**Osipov, A. V.** See Kukushkin, S. A.; Ovid'ko, I. A.
**Osipov, A. V.**
Kinetic model of vapor-deposited thin-film condensation: nucleation stage.—73-05887
**Osipov, E. B.** See Averkiev, N. S.; Klimakova, N. N
**Osipov, K. A.** See Belousov, O. K.
**Osipov, V. V.; Kochev, I. V.; Vyodnov, E. B.; Samokhvalov, A. A.**
Microbridge spectrum of CuO.—73-16216
**Osipov, V. Yu.** See Boitsov, S. K.; Vul, A. Ya.
**Osipova, I. I.; Koval'chenko, A. M.; Sartinskaya, L. L.**
Optimization of the composition of nitridic ceramic tool material by tribotechnical tests.—73-02084
**Osipova, N. A.** See Klimakova, N. N
**Oskam, G.; Bart, L.; Vanmaekelbergh, D.; Kelly, J. J.**
Electrical and electrochemical properties of gold-plated InP.—73-07481
**Oskarsson, Rolf G.** See Weinl, Gerold
**Oskolok, K. V.** See Kopelev, N. S.
**Osman, Todd M.** See Hunt, Warren H., Jr.
**Osnika, T. E.** See Aminov, B. A.
**Osofsky, M. A.; Soulen, Robert J., Jr.; Wolf, S. A.; Broto, J. M.; Rakoto, H.; Ousset, J. C.**
Anomalous temperature dependence of $H_{c2}$ in Bi-Sr-Cu-O.—73-15391
**Osofsky, Michael S.** See Lechter, William L.
**Osokin, A. P.** See Kuznetsova, Tamara V.
**Osokin, A. P.; Krivoborodov, Yu. R.**
Sulfoferrite cements.—73-13784
**Osokin, A. P.; Odler, Ivan**
Properties of cement containing calcium ferrite sulfate.—73-10109
**Osorio, Roberto; Bernard, James E.; Froyen, Sverre; Zunger, Alex**
Thermodynamics of surface-induced ordering in the $Ga_{1-x}In_xP$ alloy.—73-08782
**Osotchan, T.** See Chin, V. W. L.
**Osquiguil, E.** See Gao, Z. X.
**Ossart, P.** See Debauche, C.

**Ossau, W.** See Yakovlev, D. R.

**Ossicini, S.; Arcangeli, C.; Bisi, O.**
Initial formation of the $CaF_2$ interface: a theoretical study.—73-02623

**Osslkovski, R.** See Segaud, J. P.; Shrai, H.

**Ossikovski, R.; Shirai, H.; Drevillon, B.**
In situ investigation by ir ellipsometry of the growth and interfaces of amorphous silicon and related materials.—73-13402

**Ostapchuk, P. N.**
Pore preference in elastically anisotropic cubic crystals.—73-17095

**Ostapenko, I. A.** See Slobodin, B. V.

**Ostapenko, S. S.** See Buyanova, I. A.

**Ostapov, S. E.** See Bodnaruk, O. A.

**Ostenson, Jerome E.** See Finnemore, Douglas K.

**Osterberg, Ulf** See Gallagher, Matt

**Ostermeyer, F.** See Tennant, D M.

**Osterstock, F.**
Contact damage submitted to thermal shock: a method to evaluate and simulate thermal shock resistance of brittle materials.—73-08829

**Ostertag, Claudia P.** See Xu, Hockin H. K.

**Ostling, M.** See Hudner, J.; Zhang, S.-L.

**Ostrik, P. N.** See Gasik, M. M.

**Ostrogina, O. M.** See Prokhorova, T. I.

**Ostroumov, A. G.** See Vodakov, Yu. A.

**Ostroushko, A. A.; Zhuravleva, L. I.; Portnova, S. M.**
Utilization of formates for superconductivity of HTS films.—73-01702

**Ostrovoi, D. Yu.** See Gogotsi, G. A.; Gogotsi, Yu. G.

**Ostrowski, Czeslaw; Czajewski, Henryk**
Physical properties of gypsum-cement plastic pastes and hardened mortars: II.—73-06695

**Ostrowsky, D.** See Saissy, A.; Tartarini, Giovanni

**Ostwald, J.** See Loo, C. E.

**Ota, Hiroyuki; Watanabe, Atsushi**
Semiconductor light-emitting element.—73-11546

**Ota, Nobuhiro** See Nagaishi, Tatsuoki

**Ota, Nobuhiro; Nagaishi, Tatsuoki; Fujimori, Naoji**
Laser ablation method for forming oxide superconducting thin films using a homogenized laser beam.—73-04840

**Ota, Rikuo** See Hara, Tatsuo; Kuribayashi, Hideyuki; Mishima, Naofumi; Nishikawa, Yoshinori

**Ota, Rikuo; Nakoshi, Yoshiyuki; Fukunaga, Jiro**
Thermal stability of gels and glass-forming regions in the $B_2O_3$-$Na_2O$-$Al_2O_3$ system.—73-12896

**Ota, Rikuo; Tsuchiya, Fumiaki; Kawamura, Kazuhisa**
High- and medium-range viscometers and their test with some alkali silicate glasses.—73-01902

**Ota, Rikuo; Wakasugi, Takashi; Fukunaga, Jiro**
Glass-forming ability and crystallization tendency evaluated by DTA method in the multicomponent system.—73-13999

**Ota, Toshitaka** See Katagiri, Naruhito; Takahashi, Minoru

**Ota, Toshitaka; Jin, P.; Yamai, Iwao**
Thermal expansion of $K_{1-x}Nb_xZr_{2-x}(PO_4)_3$.—73-08986

**Ota, Toshitaka; Yamai, Iwao; Zhang, Sheng**
Effect of alkali and alkaline-earth metal ions on the thermal expansion of nepheline.—73-05751; 73-16722

**Ota, Toshitaka; Yamai, Iwao; Zhang, Sheng**
High-thermal-expansion $NaAlSiO_4$ ceramics.—73-05578; 73-13089

**Otabe, Edmund Soji** See Matsushita, Teruo

**Otaki, Hisanori** See Anzai, Masahiro

**Otani, Keizo** See Ogasawara, Toshio

**Otani, S.** See Souda, R.

**Otani, Seigen** See Noshiro, Hideyuki

**Otani, Seigen**
MBE or MO-MBE process for forming Bi-Sr-Ca-Cu-O superconducting thin films.—73-11961

**Otani, Shigeki** See Hwang, Y.

**Otani, Shigeki; Tanaka, Takaho; Ishizawa, Yoshio**
Lanthanum boride type single crystal and method for growing the same.—73-02101

**Otani, Sugio** See Oya, Asao

**Otani, Tetsuya** See Deshimaru, Yuichi

**Otani, Yoshichika** See Taketomi, Susamu; Tenya, Kenichi

**Otazhonov, S. M.** See Vaitkus, Yu. Yu.

**Otdel'nov, V. V.; Drobot, N. F.; Babievskaya, I. Z.**
Effect of sodium chloride on chlorination of a mixture of bismuth(III) sulfide and iron(III) oxide.—73-12576

**Oteo, J. L.** See Rubio, F.

**Otero, A.** See Baro, M. D.

**Otero, E.** See Gonzalez, J. A.

**Otero-Diaz, C. L.** See Saez-Puche, R.

**Othmani, A.; Bovier, C.; Plenet, J. C.; Dumas, J.; Champagnon, B.; Mai, C.**
CdS semiconductor-doped silica xerogels.—73-11091

**Othonos, Andreas** See Mandelis, Andreas

**Otnes, K.** See Riste, T.

**Otoshi, Shoji** See Sasaki, Hirokazu; Sugiura, Nozomi

**Otroshchenko, L. P.; Aleksandrov, V. B.; Bendeliani, N. A.; Verin, I. A.; Sobolev, B. P.**
Atomic structure of nonstoichiometric $Pb_{0.3}La_{0.7}F_{2.7}$ crystal (fluoritelike phase at high pressure).—73-16035

**Otschik, P.** See Kretzschmar, C.

**Otsu, Masato; Funakubo, Hiroshi; Shinozaki, Kazuo; Henmi, Hiroshi; Mizutani, Nobuyasu**
Preparation of PZT film on (100)Pt/(100)MgO subtrate by CVD and its properties.—73-16930

**Otsuka, Akio; Sugawara, Hiroto; Yoo, Sung-Keun**
Cycle and crack length dependence of crack growth characteristics in silicon nitride.—73-09566

**Otsuka, Eizo** See Kobori, Hiromi

**Otsuka, Jun** See Itoh, Hideaki

**Otsuka, Jun; Iio, Satoshi; Tajima, Yo; Watanabe, Masakazu; Tanaka, Keisuke**
Strengthening mechanism in $Al_2O_3$/SiC particulate composites.—73-17435

**Otsuka, Jun; Iio, Satoshi; Tajima, Yo**
Aluminum-oxide-based sintered object and process for producing the same.—73-12339

**Otsuka, Kanji**
Glass powders for hermetic seal of semiconductor devices.—73-00493; Rheology of fine ceramics.—73-16976

**Otsuka, N.** See Chang, C. L.; Grillo, D. C.; Gunshor, R. L.; Melloch, M. R.; Okada, Kiyoshi; Yanka, R. W.

**Otsuka, Nozomu** See Hayashi, Shigeo; Kawai, Kazuyuki; Okada, Kiyoshi; Taruta, Seiichi; Yano, Toyohiko

**Otsuka, Ryohei** See Kosuge, Katsunori

**Otsuki, H.** See Kumazawa, H.

**Otsuki, N.; Nagataki, Shigeyoshi; Nakashita, K.**
Evaluation of $AgNO_3$ solution spray method for measurement of chloride penetration into hardened cementitious matrix materials.—73-01895

**Otsuki, Nobuaki** See Hashiuchi, Hiroshi; Kamada, Toshiro; Matsuura, Toshiyuki

**Otsuki, Tomizo** See Okafuji, Masaharu

**Ott, H. R.** See Brawner, D. A.; Schilling, A.

**Ott, H. R.**
Ten Years of Superconductivity: 1980-1990—73-17539

**Ott, J. A.** See Gennser, Ulf

**Ott, Kevin C.; Kodas, Toivo T.**
Aerosol chemical vapor deposition of metal oxide films.—73-12336

**Otten, J.; Ozols, A.; Reinfelde, M.; Biedowski, A.; Ringhofer, K. H.**
Threshold of self-enhancement in lithium niobate.—73-01439

**Ottermann, C.** See Wagner, W.

**Otto, Jugen** See Kersten, Ralf T.

**Ottolenghi, Michael** See Avnir, David

**Ottolini, Luisa; Bottazzi, Piero; Vannucci, Riccardo**
Quantification of lithium, beryllium, and boron in silicates by secondary ion mass spectrometry using conventional energy filtering.—73-08437

**Ottosson, M.** See Hudner, J.

**Ou-Yang, Bin** See Xu, Bing

**Ou-Yang, Xiao-Sheng; Wu, Fei-Qin; Le, Fu-Xin**
Fabrication of porcelain ware for microwave ovens.—73-10843

**Ouacha, A.; Willander, M.; Hammariund, B.; Logan, R. A.**
Effect of surface passivation with SiN on the electrical properties of InP/InGaAs heterojunction bipolar transistors.—73-11167

**Ouchi, Kiyoshi** See Osaka, Tetsuya

**Ouchi, Yukihiro** See Sugihara, Tadashi

**Oudar, J. L.** See Foing, J.-P.

**Oudard, M. Jean-Francois** See Harmand, Helene; Sauvinet, M. Vincent

**Ouellet, L.** See Gagnon, G.

**Ouellet, R.; Bui, R. T.; Provencher, R.; Bourgois, T.**
Modeling the stirring of Al-SiC composites.—73-06833

**Ouhammou, L.** See Suryanarayanan, R.

**Ourmazd, A.** See Bode, Michael H.; Rouviere, J.-L.

**Ousset, J. C.** See Osofsky, M. A.

**Outten, C. A.** See Barbour, J. C.

**Ouvrard, G.; Prouzet, E.; Brec, R.; Dexpert, H.**
EXAFS study of lithium-intercalated iron thiophosphate.—73-02273

**Ouwerkerk, Martin** See Beckers, Lucas J. A. M.

**Ouyang, Bo** See Jeong, Eun-Kee

**Ouyang, Cheng-Sheng** See Moukwa, M.; Shah, Surendra P.

**Ouyang, Cheng-Sheng; Shah, Surendra P.**
Toughening of high-strength cementitious matrix reinforced by discontinuous short fibers.—73-10182

**Ouyang, Jin-Lin** See Zhang, Guo-Wei

**Ovcharenko, N. V.** See Malashkevich, G. E.; Safonov, V. V.

**Ovcharenko, O. N.** See Makarov, V. I.

**Ovcharov, A. T.; Kozlenko, E. L.; Amosov, A. V.**
Photoinduced short-lived optical absorption in quartz glass.—73-00528; Photoinduced transient optical absorption in vitreous silica.—73-00529

**Ovchinnikov, Alexander** See Zhang, Gou-Dong

**Ovchinnikov, N. O.** See Nikitina, L. P.

**Ovchinnikov, S. G.** See Loseva, G. V.

**Ovchinnikov, S. G.**
Comparison of band structures of $La_2CuO_4$ and $Nd_2CuO_4$.—73-08578

**Ovchinnikova, E. I.; Litvinov, V. A.**
Effects of roller diameter and taper angle on glass cutting.—73-01778

**Ovchinnikova, L. A.** See Golikov, Yu. V.

**Ovchinnikova, O. G.** See Danchevskaya, M. N.

**Ovchinnikova, T. L.** See Moskvin, A. S.

**Ovenston, A.; Walls, J. R.**
Ac electrical parameters to monitor the sintering of a composite mixed conductor catalyst.—73-01880

**Overcamp, T. J.** See Bennert, D. M.

**Oversluizen, M.; Clark, S. M.; Greaves, G. N.**
Structurally characterizing a cordierite glass-ceramic by X-ray diffraction and X-ray absorption spectroscopy.—73-03764

**Ovezov, N. Sh.** See Durdyev, A. S.

**Ovid'ko, I. A.; Osipov, A. V.**
Disclination splitting and crystal-glass transformation under mechanical alloying.—73-14352

**Ovramenko, N. A.; Boiko, Yu. P.; Zakharchenko, O. F.**
Effect of $(HBO_2)_n$ intercalation on the surface acidity of kaolinite.—73-05543

**Ovseichuk, S. I.** See Mikhnov, S. A.

**Ovshinsky, S. R.** See Chao, Benjamin S.

**Ovsyannikov, V. P.** See Mazurenko, E. A.

**Owaki, Shigehiro; Okada, Toichi; Nakahara, Sumio; Sugihara, Kiyoshi**
Fractoemission from ceramics at cryogenic temperatures.—73-06426

**Owaki, Takeshi** See Taga, Yasunori

**Owen, A. E.** See Ramirez-Malo, J.

**Owen, D. M.; Chokshi, Atul H.**
Evaluation of the densification characteristics of nanocrystalline materials.—73-05795

**Owens, F. J.**
Magnetic field dependence of microwave absorption through *H-T* irreversibility line in $Bi_{2-x}Pb_xSr_2Ca_{n-1}Cu_nO_{4+2n}$.—73-02637

**Owers-Bradley, J. R.** See El-Abbar, A. A.

**Owliaei, J.; Sridhar, S.; Talvacchio, J.**
Field-dependent crossover in the vortex response at microwave frequencies in $YBa_2Cu_3O_{7-\delta}$ films.—73-08079

**Ownby, P. Darrell** See Hasselman, D. P. H.

**Owusu, Yaw A.; Gielisse, Peter J.**
Microwave application in precision investment casting operations.—73-05915

**Oxley, E. W.** See Benbow, John J.

**Oxnard, Robert T.**
Refractory recycling.—73-14618

**Oya, Asao; Saito, Tsutomu; Otani, Sugio**
Thermal degradation behavior of $WOP_2O_7$/phenanthroline complex.—73-16624

**Oya, Ginichiro** See Sugai, Tokuko

**Oyabu, Hajime** See Ikeda, Masaki

**Oyama, S. Ted** See Desikan, Anatha N.

**Oyama, T.** See Suzuki, K.

**Oyama, T.; Iimura, Y.; Takeuchi, K.**
Synthesis of $(Cr_{1-x}Ti_x)O_3$ solid solution by laser-ignited vapor-phase reaction.—73-06085

**Oyama, Yutaka** See Nishizawa, Junichi

**Oyamada, Akira** See Takeda, Naoya

**Oye, H. A.** See Grande, T.

**Oyetola, S.** See Akinocho, G.

**Oyobe, Akira; Nakamura, Kazunori; Kagi, Nobuyuki; Sasaki, Yasumasa**
Quartz glass doped with rare-earth element and production thereof.—73-03964

**Oyola, D.** See Prieto, P.

**Ozaki, Shinya** See Mosjouama, Latsijorp

**Ozaki, Yoshiharu** See Taketomi, Susamu

**Ozanyan, K. B.; Hunderi, O.**
Spectroscopic transmission ellipsometry studies of intersubband transitions in *n*-GaAs/$Al_{0.3}Ga_{0.7}As$ quantum wells.—73-15173

**Ozao, Riko; Ochiai, Moyuru**
Fractal reaction in solids—reaction functions reconsidered.—73-05818; Fractal reaction in solids—reaction functions reconsidered.—73-17080

**Ozasa, K.** See Simko, J. P.

**Ozawa, Eiichi** See Kojima, Toshinori

**Ozawa, Hirotomo** See Ihara, Hideo

**Ozawa, K.** See Nakatani, Isao

**Ozawa, Masakuni; Hasegawa, Hideo**
Internal friction of 9.4 mol% $Y_2O_3$-$ZrO_2$ cubic single crystal.—73-17365

**Ozawa, Masakuni; Hatanaka, Tatsuya; Hasegawa, Hideo**
Internal friction and anelastic relaxation of $ZrO_2$ polycrystals containing 2 mol% $Y_2O_3$, 8 mol% $Y_2O_3$, and 12 mol% $CeO_2$.—73-02304

**Ozawa, Tadao; Miyairi, Yukio**
Silicon-nitride-inserted piston.—73-05341

**Ozawa, Tatsuki** See Watanabe, Koichi

**Ozeki, Hidekichi; Aoki, Takafumi; Ariga, Kikuo**
Molten steel pouring nozzle.—73-00888

**Ozeki, Hirofumi** See Kato, Tokiomi

**Ozeki, S.** See Uekawa, N.

**Ozen, G.** See Wu, Xu

**Ozer, Nilgun**
Reproducibility of the coloration processes in $TiO_2$ films.—73-09304

**Ozguz, Volkan H.** See Esener, Sadik C.

**Ozhovan, M. I.; Batyukhnova, O. G.; Karlina, O. K.**
Microstructure of glass composite materials in immobilization of radioactive wastes.—73-01754; Microstructure of materials of glass composition for immobilization of radioactive wastes.—73-00516

**Ozhovan, M. I.; Kachalov, M. B.; Sobolev, I. A.**
Glass composite materials [GCM's]—a new form of the radioactive waste's immobilization.—73-15700

**Ozhovan, M. I.; Kachalov, M. B.**
Homogeneous fractals in supercritical glass.—73-03734

**Ozhovan, M. I.; Karlina, O. K.; Batyukhnova, O. G.**
Structure of glass composition materials for immobilizing radioactive waste.—73-04896

**Ozin, Geoffrey A.** See Bowes, Carol L.

**Ozkan, H.** See Albiss, B. A.; Hamdan, N. M.

**Ozkan, Umit S.** See Cai, Ye-Ping

**Ozkar, Saim** See Jelinek, Raz

**Ozkul, C.; Abdelghani-Idrissi, M. A.; Jamet, S.; Gravey, P.; Picoli, G.**
Mapping of dopant concentrations in photorefractive InP:Fe wafers.—73-07662

**Ozols, A.** See Otten, J.

**Ozturk, Mehmet C.** See Ren, Xiao-Wei; Xu, X.-L.

**Ozturk, Z. Z.; Altindal, A.; Yuzer, H.**
Interface properties of anodic sulfide and sulfide oxide films on *n*-InSb.—73-04371

**Ozvoldova, Miroslava** See Labas, Vladimir

**Pac, C.** See Shiragami, Tsutomu

**Pacaud, Bernard; Mercier, Marc**
5A zeolite/kaolinite adsorbent for gas purification.—73-12365

**Pach, Ladislav; Hrabe, Zdenek; Marcina, Ivan**
Drying of boehmite gel fibers.—73-03833

**Pacia, N.** See Pigeat, P.

**Pacobahyba, L. H.** See Engelsberg, M.

**Padam, G. K.; Gogia, Balvinder; Tripathi, R. B.; Sharma, M.; Das, B. K.**
Effect of thermal cycling on two-step enhanced superconducting transition in $Bi_{1.6}Pb_{0.4}Sr_2Ca_1Cu_2O_{8+x}$.—73-15436

**Padayatchy, Viveganda T.** See Drew, Michael G. B.

**Padberg, Hans-J.**
Structure and bonding of highly stressed vitrified bonded cutting tools.—73-13657

**Padel, A.** See Hennicke, Hans-Walter
**Padeletti, G.** See Ingo, G. M.
**Paderno, Y. B.** See Bat'ko, I.
**Padlewski, S.; Heine, V.; Price, G. D.**
Energetics of interaction between oxygen vacancies in sillimanite: a model for the mullite structure.—73-02263; Microscopic model for a very stable incommensurate modulated mineral: mullite.—73-08667
**Padmanaban, V. P. N.; Shahi, K.**
110-K $Bi_2Sr_2Ca_2Cu_3O_y$ superconductors by Pb and Sb doping.—73-04780
**Padmanathan, P.** See Ghosh, S. P.
**Padture, Nitin P.** See Guiberteau, Fernando
**Padture, Nitin P.; Lawn, Brian R.**
Toughness properties of a silicon carbide with an in-situ-induced heterogeneous grain structure.—73-17451
**Padture, Nitin P.**
In situ-toughened silicon carbide.—73-05858
**Padyukov, K. L.; Levashov, E. A.; Borovinskaya, I. P.**
Behavior of the synthetic diamond in the propagating wave of self-propagating high-temperature synthesis.—73-16659
**Paek, Su-Hyun** See Oh, Won-Ung
**Pafchek, Robert** See Elyamani, Abdessamad
**Paganelli, M.** See Barbieri, Luisa; Marazzi, Filippo
**Paganini, L.** See Valentini, R.
**Pagano, N. J.** See Kerans, Ronald J.; Kim, R. Y.
**Pagano, N. J.; Brown, H. W., III**
Full-cell cracking mode in unidirectional brittle matrix composites.—73-03304
**Page, C. H.** See Ahluwalia, S. C.; Khadilkar, S. A.
**Page, C. L.** See Goni, S.; Yu, S. W.
**Page, David** See Mackinnon, Ian D. R.
**Page, Richard** See Bose, Animesh
**Page, Trevor F.** See Hainsworth, S. V.; Twigg, Peter C.; Whitehead, Andrew J.
**Pagel, Charles** See Carpenter, Joseph A., Jr.
**Paget, D.** See Berkovits, V. L.
**Paget, K. M.** See Shields, P. J.
**Pagnod-Rossiaux, P.** See Vinchant, J.-F.
**Pagnoux, C.** See Guyomard, D.
**Pai, C. S.; Miner, J. F.; Foo, P. D.**
Electron cyclotron resonance microwave discharge for oxide deposition using tetramethylcyclotetrasiloxane.—73-02812
**Pai, Chul-Hoon** See Koumoto, Kunihito; Nakahara, Hirohiko; Seo, Won-Seon; Takeda, Shunji
**Pai, S. P.** See Pinto, R.
**Paik, Dong-Soo** See Kim, Joon-Han
**Pailler, R.** See Mocaer, D.; Pillot, J. P.; Villeneuve, J. F.
**Pailler, Rene** See Christin, Francois; Lespade, Pierre
**Paillet, P.** See Herve, D.
**Pain, G. N.**
Effects of mixed-valence mercury and indium on the electrical properties of $Hg_{1-x}Cd_xTe$.—73-07473
**Paine, David C.** See Shigesato, Yuzo
**Paishin, P. P.** See Isakov, S. L.
**Paisley, M. J.** See Huckabee, M. L.
**Paisley, M. J.; Bourget, L. P.; Davis, Robert F.**
Boron nitride thin films by microwave ECR plasma chemical vapor deposition.—73-12927
**Paisley, M. J.; Davis, Robert F.**
Photoassisted growth of gallium nitride by gas source molecular beam epitaxy.—73-05945; Photoinduced phase inhibition during growth of boron nitride thin films.—73-05946
**Paisley, M. J.; Horie, Y.; Davis, Robert F.; Dan, Koji; Tamura, Hideki; Sawaoka, Akira B.**
Novel phases in shock-compacted mixtures of diamond and boron nitride.—73-16234
**Pajares, Antonia** See Dransmann, Gerhard W.
**Pajares, Antonia; Guiberteau, Fernando; Westmacott, K. H.; Dominguez-Rodriguez, Arturo**
TEM characterization of indented polycrystalline Y-PSZ.—73-17209
**Paje, S. E.** See Llopis, J.
**Pajonk, G. M.** See Ponthieu, Eric
**Pak, J.-J.** See Santella, M. L.
**Pak, K.** See Kawai, T.; Lopez, M.
**Pak, V. N.** See Akhorukomeite, Zh.; Burkat, T. M.
**Pakade, S. V.** See Yawale, S. P.
**Pakhomov, A. L.** See Mezhogskikh, M. I.
**Pakhomov, E. P.** See Bakunov, O. V.
**Pakhomov, V. I.; Goryunov, A. V.; Gladkii, V. V.; Ivanova-Korfini, I. N.; Kallaev, S. N.**
Structure of low-temperature (170 K) phase and piezoelectric properties of cesium tetrachloromercurate.—73-16336
**Pakhomova, N. A.** See Slobodin, B. V.
**Pakulat, B.; Gerdes, E.**
Interpretation of electrical data of phase-separated glasses.—73-00506
**Pal'chun, T. A.** See Popov, V. A.
**Pal'tiel, L. R.** See Burkat, T. M.
**Pal, A. J.** See Joshi, S. V.; Wei, X.
**Pal, A. K.** See Gupta, P.
**Pal, D.** See Matacotta, F. C.; Mertelj, T.
**Pal, S.** See Joshi, S. V.
**Pal, U.; Samanta, D.; Ghorai, S.; Chaudhuri, A. K.**
Optical constants of vacuum-evaporated polycrystalline cadmium selenide thin films.—73-12847
**Pal-Val, L. N.; Pal-Val, P. P.; Natsik, V. D.; Dotsenko, V. I.**
Comparative study of the low-temperature acoustic properties of CuO and $YBa_2Cu_3O_x$ ceramics.—73-08005
**Pal-Val, L. N.; Pal-Val, P. P.; Natsik, V. D.**
Comparison of the acoustic properties of CuO and $YBa_2Cu_3O_x$ ceramics at 5–310 K.—73-08006
**Pal-Val, P. P.** See Pal-Val, L. N.
**Palacin, Maria Rosa; Bassas, Josep; Rodriguez-Carvajal, J.; Gomez-Romero, P.**
Syntheses of the perovskite $La_2CuTiO_6$ by the ceramic oxide precursors and sol-gel methods and study of the structure and Cu-Ti distribution by X-ray and neutron diffraction.—73-17017
**Palacio, C.** See Jimenez, C.; Sanchez, O.
**Palacios, J.** See Agudo, Antonio Lopez; Talero, R.
**Palatnik, L. S.** See Mamalui, A. A.
**Paleari, A.** See Azzoni, C. B.
**Paleichuk, V. S.** See Kuprienko, P. I.
**Palfrey, H. D.** See Archer, N. A.
**Paljevic, M.** See Matkovic, B.
**Palkar, V. R.; Rao, S. S.; Chattopadhyay, S.; Ayyub, P.; Multani, M. S.**
Nucleation of ultrafine particles during irreversible solid-solid phase transformation in oxides.—73-16235
**Palkin, A. M.** See Shegai, O. A.
**Palko, Joseph L.** See Choi, Sung-R.
**Palladino, M.; Pirini, F.; Beghi, M.**
Sol-gel formation of silica-zirconia glasses.—73-10602
**Palmer, A. W.** See Zhang, Zhi-Yi
**Palmer, G. B.; Baker, G.**
Load–cycling technique for *R*-curve behavior: application to a low-cement refractory.—73-10738
**Palmier, J. F.** See Etemandi, G.
**Palmisano, L.** See Bickley, R. I.
**Palmiter, T. V.** See Simpson, J. C.
**Palmour, Hayne, III** See Geho, Mikio; Huckabee, M. L.
**Palmour, John W.** See Glass, Robert C.
**Palmour, John W.**
Junction field effect transistor formed in silicon carbide.—73-04212
**Palmstrom, C. J.** See Allen, S. James; Duszak, R.
**Palomares, F. J.** See Jimenez, I.; Mendez, M. A.
**Palomares, F. J.; Alonso, M.; Soria, F.**
Formation of $SiO_2$/GaAs(100) interface by electron stimulated oxidation of ultrathin Si overlayers: subcutaneous oxidation processes.—73-07537
**Palomares, F. J.; Mendez, M. A.; Cuberes, M. T.; Soria, F.**
Initial stages of heterojunction formation: Si on GaAs(100).—73-01215
**Palombari, R.** See Casciola, M.; Skou, E.
**Palomo, A.** See Gimenez, S.
**Paloura, E. C.; Knop, A.; Dobler, U.; Holldack, K.; Logothetidis, S.**
Contribution of a nitrogen-related defect in the NEXAFS [near-EXAFS] spectra of thin $Si_3N_4$ films.—73-06145
**Paloura, E. C.; Knop, A.; Holldack, K.; Dobler, U.; Logothetidis, S.**
Identification of N dangling bonds in SiN films using X-ray absorption studies.—73-03095
**Palsule, C.; Gangopadhyay S.; Yi, S.; Shen, J. M.; Naseem, H. A.; Kizzar, S.**
Fast photoluminescence decay in a-$SiN_x$:H films.—73-05566
**Palumbo, G.** See El-Sherik, A. M.
**Palumbo, M.** See Marotta, A.
**Paluszkiewicz, C.** See Stoch, A.
**Palzer, Simone; Berger, Iris**
Deflocculation behavior of clay suspensions with a high nonclay content.—73-02763
**Pamler, W.** See Joswig, H.
**Pampuch, Roman** See Lis, Jerzy; Stobierski, Ludoslaw
**Pamulapati, J.** See Nichols, D.
**Pan, Fu-Min** See Chen, Yung-Fu; Chiao, Y.-S.
**Pan, Guang; Muto, Norio; Miyayama, Masaru; Yanagida, Hiroaki**
Microstructure effects on humidity-sensitive electrical resistivity of carbon fibers.—73-05597; Microstructure effects on humidity-sensitive electrical resistivity of carbon fibers.—73-16544
**Pan, Guo-Yao** See Mao, Ruo-Qing
**Pan, J.** See Cocks, A. C. F.; Ning, X.-G.
**Pan, J.; Cocks, A. C. F.**
Effect of grain size on the stress and velocity fields ahead of a crack in a material which deforms by Coble creep.—73-06382
**Pan, Jian-Mei; Madey, Theodore E.**
Ultrathin Fe films on $TiO_2$(110): growth and reactivity.—73-06870
**Pan, L. S.; Han, S.; Kania, D. R.; Zhao, S.; Gan, K. K.; Kagan, H.**
Particle- and photoinduced conductivity in type-IIa diamonds.—73-08944
**Pan, L. S.; Kania, D. R.; Pianetta, P.; Ager, Joel W., III; Landstrass, M. I.; Han, S.**
Temperature-dependent mobility in single-crystal and chemical-vapor-deposited diamond.—73-03115
**Pan, N.** See Hoke, W. E.
**Pan, N.; Carter, J.; Hein, S.; Howe, D.; Goldman, L.; Kupferberg, L.**
Atomic layer epitaxy [ALE] in InP using trimethylindium and tertiarybutylphosphine.—73-04244
**Pan, Qi** See Zhang, Xiao-Dong
**Pan, Sen-Yuan**
Removal of explosive crack of lime in coal gangue brick by dripping water.—73-10690
**Pan, V. M.** See Novitskaya, G. N.
**Pan, Wei** See Gong, Xin-Gao; Han, Ru-Shan
**Pan, Wu-Yi; Sun, Shan; Fuierer, Paul**
Effects of ferroelectric switching on the dielectric and ferroelectric properties in lead zirconate titanate ceramics and their modeling.—73-07882
**Pan, Wu-Yi; Yue, C. F.; Lin, K. W.; Sun, S.; Tuttle, B. A.**
Thermally activated rejuvenation of ferroelectric properties in electrically fatigued lead zirconate titanate ceramics.—73-07923
**Pan, Xiao-Ren** See Zhao, Da-Chun; Zhu, Yi-Hua
**Pan, Xing-Yan** See Xu, Qin-Lun
**Pan, Yi-Ming** See Schwab, Stuart T.
**Pan, Yi-Zhou**
Producing portland cement with tailings of molybdenum-iron ore.—73-10100
**Panaev, I. A.** See Studenikin, S. A.
**Panagopoulos, C.; Panogiotakis, A.**
Tensile behavior of phosphate-coated aluminum.—73-10283
**Panasyuk, G. P.** See Krot, V. V.
**Pancheha, P. A.** See Boiko, B. T.
**Panchenko, E. M.** See Kozakov, A. T.
**Panchenko, T. V.; Snezhnoi, G. V.**
Role of electron injection in formation electret state in $Bi_{12}SiO_{20}$ crystals.—73-16590
**Panda, J. D.** See Goswami, G.
**Pande, Krishna P.** See Hegazi, Gamal M.
**Pandelisev, K. A.** See Varhue, W. J.
**Pandey, Dhananjai** See Singh, A. P.; Tiwari, Vidya S.
**Pandey, G. K.; Massey, M.; Pandey, K. L.**
Anomalous paraelectric behavior of hydroxyl ion in a cesium bromide crystal.—73-08552
**Pandey, K. L.** See Pandey, G. K.
**Pandit, A. K.; Singh, R. S.; Ansari, T. H.; Singh, R. A.; Wanklyn, B. M.**
Electrical conduction in $TmVO_4$ single crystal.—73-04304
**Pandolfo, P.** See Sarott, F.-A.
**Pandya, P. B.** See Joshi, H. H.
**Panfilov, A. G.** See Starukhin, A. N.
**Panfilov, A. M.** See Kozhurkov, V. N.
**Panfilov, A. S.** See Xiang, Yu. N.
**Pang, Li-Ke**
Production of nonfired and nonsteam-cured brick with blast-furnace slags.—73-06701
**Pang, P.** See Gao, Q.-J.; Holstein, W. L.
**Pang, S. K.** See Chen, Z.
**Pang, S. W.** See Sung, K. T.; Thirstrup, C.
**Pang, S. W.; Ko, K. K.**
Comparison between etching in $Cl_2$ and $BCl_3$ for compound semiconductors using a multipolar electron cyclotron resonance source.—73-04272
**Pang, Wen-Qin** See Wang, Hai-Zeng; Yue, Yong
**Panic, Jasmina** See Ranogajec, Jonjaua
**Panichev, N. A.** See Ivanovskaya, I. S.
**Panini, Mauro**
Recycling wastewater.—73-15751
**Panitz, Janda K. G.; Dugger, M. T.; Peebles, D. E.; Tallant, D. R.; Hills, C. R.**
Electrophoretic deposition of pure $MoS_2$ dry film lubricant coatings.—73-09115
**Panjan, P.** See Hanzel, Darko; Navinsek, B.; Zalar, A.
**Panjan, P.; Navinsek, B.; Zabkar, A.; Marinkovic, V.; Mandrino, D.; Fiser, J.**
Structural analysis of Zr-N and Ti-N films prepared by reactive plasma beam deposition.—73-06285
**Pankajakshan, V. S.; Neelakandan, K.; Menon, C. S.**
Electrical conductivity of vacuum-deposited vanadium pentoxide thin films.—73-10943
**Pankova, N. A.** See Konovalova, L. D.
**Pankova, N. A.; Belyaeva, A. G.**
Use of waste products in glass melting.—73-00718
**Pankova, N. A.; Levitin, L. Ya.**
Nature of the distribution of remelted glass mass in a glass ribbon.—73-07155
**Pankova, N. A.; Menshov, V. N.**
Distribution of flatness deviations in float glass ribbon.—73-14353
**Pankova, N. A.; Polyakova, G. A.; Men'shov, V. N.**
Distribution of relief variations in glass strips produced on molten metal.—73-07120
**Pankova, N. A.; Terman, V. B.**
Distribution laws of inclusions across the thickness of plate glass.—73-07119
**Pankova, N. A.**
Rising currents in convection in a basin oven.—73-08485
**Pankove, Jacques I.; Feuerstein, Robert J.**
Electrically pumped rare-earth-doped semiconductor lasers.—73-04307
**Pankowska, H.** See Suryanarayanan, R.
**Pankrath, R.** See Buse, E.
**Pankratov, Oleg; Scheffler, Matthias**
Bound bipolaron at the surface: the negative *U* behavior of GaAs(110) with adsorbed alkali metals.—73-14787; Hubbard correlations and charge transfer at the GaAs(110) surface with alkali adsorbates.—73-14968
**Pankratova, O. Yu.; Undusk, E. P.; Vladimirova, V. A.**
Thermochemistry of the selenides of titanium of variable composition, $TiSe_{1.5-2}$.—73-02523
**Pankrats, A. I.** See Vasil'ev, V. N.
**Pannetier, J.** See Lacorre, P.
**Pannhorst, Wolfgang** See Bohmer, R.; Heinz, J.; Lu, Z.; Muller, R.; Rudolph, Thomas; Spallek, Michael; Szabo, I.; Winter, Wolfgang
**Pannikkat, A.** See Lappalainen, R.
**Panogiotakis, A.** See Panagopoulos, C.
**Panov, V. I.** See Antonenko, V. I.
**Panov, V. P.; Panova, G. D.**
Instability of the conductivity due to electric disturbance of the electron-molecular equilibrium in the surface layers of CdS films.—73-01216
**Panova, A. N.; Shpilinskaya, L. N.; Shakhova, K. V.; Kosinov, N. N.**
Thermostimulated luminescence of CsI:Na crystals with different contents of the activator in the region of destruction of $Na^0$ centers.—73-02715
**Panova, G. D.** See Panov, V. P.
**Panova, G. Kh.** See Khlopkin, M. N.
**Panova, G. Kh.; Shikov, A. A.; Savel'ev, B. I.; Zhernov, A. P.; Anshukova, N. V.; Golovashkin, I. A.**
Specific heat of copperless oxide $Ba_{0.6}K_{0.4}BiO_3$ superconductor.—73-15624
**Panova, T. I.; Glushkova, V. B.; Drozdova, I. A.; Roshchina, E. V.; Kazantseva, I. A.; Antroshchenko, E. S.**
Mechanisms of $YBa_2Cu_3O_{7-y}$ stability enhancement.—73-15553
**Pantano, Carlo G.** See Breval, Else; Dubray, J. J.; Qi, Gang; Verita, M.; Wang, Dong-Sheng S.

**Pantano, Carlo G.; Spear, Karl E.; Qi, Gang; Beall, Douglas M.**
Thermochemical modeling of interface reactions in glass matrix composites.—73-06980

**Panteleev, E. F.** See Samsonova, L. A.

**Panteleev, V. N.** See Ivanov, P. A.

**Pantelis, D.** See Marcellou, K.

**Panter, Herbert** See Schimmel, Gunther

**Pantone, Richard S.** See Madan, Sanjeev

**Panysheva, E. I.** See Ashtakhova, V. V.

**Panysheva, E. I.; Tunimanova, I. V.; Tsekhomskii, V. A.**
Effect of the composition of the matrix of multichrome glass on its properties.—73-00467; Kinetics of colloid formation of silver in multichromic glasses.—73-14415

**Panysheva, V. V.** See Kuchinsky, S. A.

**Paolini, A. E.** See Berra, M.

**Paoluzi, Antonio** See Turilli, Giuseppe

**Papadopoullos, A.** See Jean, A.

**Papadopoulos, Demetrious S.** See Gyekenyesi, John P.

**Papadopoulos, John K.**
Bellows' nozzles, tuyeres, and kiln firing supports.—73-09777

**Papaefthymiou, Georgia C.**
Nanophase molecular antiferromagnets.—73-04632

**Papageorge, Marc V.** See Carter, W. B.

**Papageorge, Marc V.; Pennisi, Robert W.; Davis, James L.**
Thermally conducting adhesive containing aluminum nitride.—73-12530

**Papaioannou, G. J.; Papastamatiou, M. J.; Ioannou-Sougleridis, B.**
Correlation between optical backgating and photogeneration mechanism in GaAs MESFET's.—73-11122

**Papanikolau, Emmanuel** See Van Hal, Henricus A. M.

**Papastamatiou, M. J.** See Papaioannou, G. J.

**Papavassiliou, C. M. A.** See Dresselhaus, P. D.

**Papazyan, K. Z.** See Abramyan, Yu. A.

**Papentsev, M. I.** See Brunkov, P. N.; Sobolev, M. M.

**Papirer, Eugene; Perrin, Jean-Marc; Siffert, Bernard; Philipponneau, G.; Lamerant, J. M.**
Influence of grinding on the surface properties of α-aluminas.—73-02868

**Papo, Adriano; Caufin, B.**
Hydration process of cement pastes studied by means of oscillatory rheological techniques.—73-00107

**Papp, J.** See Zsadon, B., Jr.

**Papp, John F.**
Chromite.—73-12264

**Pappas, David L.** See Cuomo, Jerome J.

**Pappin, A. J.** See Chryssikos, G. D.

**Papunashvili, N. A.** See Gaprindashvili, Kh. I.

**Paquet, Volker** See Kersten, Ralf T.

**Paquette, Edward L.** See Ahmad, Iftikhar

**Parada, C.** See Bueno, I.

**Parameswaran, V. R.** See Berriche, R.

**Paranchich, L. D.** See Prozorovskii, V. D.

**Paranchich, S. Yu.** See Prozorovskii, V. D.

**Paranthaman, M.; Foldeaki, Maria; Hermann, Allen M.**
Effect of site-selective substitution in bulk superconducting $Tl_2Ba_2CaCu_2O_8$ [Tl-2212].—73-11736

**Paranthaman, M.; Manthiram, A.; Goodenough, John B.**
Hole concentration and critical temperature in $Tl_{2-x}Ba_{2-x}CuO_{6+\delta}$.—73-11790

**Parashar, A. K.; Mathur, V. K.; Gopal, S.**
Quality improvement in clinker using mineralizers/activators.—73-10118

**Parashar, V. K.** See Raman, V.

**Pardavi-Horvath, M.; Takacs, Laszlo**
Magnetic properties of copper-magnetite nanocomposites prepared by ball milling.—73-04623

**Pardo, M.-P.; Gardette, M.-F.; Flahaut, J.**
$Cu_{0.5}RTe_2$ and $Cu_{0.5}RTe_{1.75}$ compounds (R=La or Nd).—73-02225

**Pareek, A.** See Luo, H.

**Parenchich, S. Y.** See Tsidil'kovskii, I. M.

**Parenchich, Y. S.** See Tsidil'kovskii, I. M.

**Parenskaya, E. S.** See Lashkarev, G. V.

**Parent, C.** See Boutinaud, P.

**Parent, Luc; Jain, Mukesh**
Process for producing small particles of aluminum nitride and particles so introduced.—73-02126

**Parent, Luc**
Process for producing silicon carbide platelets.—73-05329

**Parette, Georges** See Konstantinovic, Jovan

**Paretzkin, Boris** See Wong-Ng, Winnie

**Parfenov, V. Z.** See Minakova, A. A.

**Parfenova, L. I.** See Glinskii, G. F.

**Parham, Thomas G.** See Jansma, Jon B.

**Paria, M. K.** See Bhattacharjee, S.

**Parilak, L.** See Krylov, A. V.

**Parise, John B.; Corbin, David R.; Gier, Thurman E.; Harlow, R. L.; Abrams, L.; Vondreele, R. B.**
Flexibility of the RHO framework: a comparison of the Rb-exchanged zeolite and the novel composition $Rb_{24}Be_{24}As_{24}O_{96}{\cdot}3.2D_2O$.—73-05402

**Parjadis de Lariviere, G.; Frigerio, J. M.; Bridou, F.; Rivory, J.**
Modeling of ellipsometric data of inhomogeneous $TiO_2$ films.—73-10458

**Park, B. K.** See Buhay, H.

**Park, Byeong-Won** See Je, Hae-June

**Park, Byoung-Hark** See Han, Dong-Bin; Son, Gun-Suk

**Park, Byung-Ok** See Choi, Byung-Jin

**Park, C.** See Rees, William S., Jr.

**Park, C.-H.** See Chang, K.-J.

**Park, C.-O.** See Park, S.-W.

**Park, Chan-Gyung** See Kim, Kwang-Ho

**Park, Chang-Yub** See Kim, Joon-Han

**Park, Chin-Ho; Ban, Vladimir S.; Olsen, G. H.; Anderson, T. J.; Quinlan, Kenneth P.**
Process characterization and evaluation of hydride VPE-grown $Ga_xIn_{1-x}As$ using a Ga/In alloy source.—73-15117

**Park, Choon-Mahn** See Lee, Kyeong-Bock

**Park, Dong-Gon; Martin, M. Hogan E.; Ober, Christopher K.; Burlitch, James M.; Cavin, O. Burl; Porter, Wallace D.**
Crystallization of precursors to forsterite and chromium-doped forsterite.—73-05379

**Park, Dong-Soo** See Kim, Shin

**Park, Eugene S.** See Newkirk, Marc S.

**Park, Eugene S.; Poste, S. D.**
Method for producing ceramic composite foams.—73-12379

**Park, Eun-Sung; Lannutti, John J.; Cawley, James D.**
Etching investigation of $3iC_w/Al_2O_3$ and Incusil-ABA joints.—73-03586

**Park, Gang-Seok; Kang, Eun-Tae**
Ionic conductivity of $Li_2O$-$B_2O_3$-$P_2O_5$-based glasses.—73-10449

**Park, Gwang-Seo** See Lee, Kei-Jin

**Park, H.-C.** See Cha, K.-H.; Choi, S.-C.

**Park, H.-C.; Kim, K.; Kim, Y.-W.; Lee, Y.-B.; Oh, K.-D.; Riley, Frank L.**
Compaction and sintering behavior of zirconia powders: II, Sintering behavior.—73-12951

**Park, H.-K.** See Jeong, B.-S.

**Park, H.-L.** See Chung, I.-H.; Hwang, J.-S.; Jeong, B.-S.; Kim, T.-W.; Lee, J.-H.; Park, S.-H.

**Park, H.-Y.** See Lee, Yang-Lae

**Park, Han-Soo** See Park, Jeong-Hyun

**Park, Han-Soo; Kim, Kyung-Moon; Mun, Chong-Soo**
Preparation of CdS-doped $SiO_2$ glass coating films by the sol-gel method.—73-14475

**Park, Hee-Chan** See Son, Myung-Mo

**Park, Hee-Dong** See Kreidler, Eric R.

**Park, Hong-Chae** See Kim, B.-S.; Kim, Kyum

**Park, Hong-Chae; Riley, Frank L.**
Compaction and sintering behavior of zirconia powders: I, Compaction response.—73-02750

**Park, Hyo-Hoon** See Hong, Soon-Ku

**Park, Hyoung-Joon; Kim, Hyoun-Ee; Kim, Doh-Yeon**
Evaluation of whisker alignment in axisymmetric $SiC_w$-reinforced $Al_2O_3$ composite materials.—73-16766

**Park, Hyu-Bum** See Hong, Young-Sik

**Park, Hyun** See Kim, Hyun-Ha; Lee, Eung-Sang

**Park, J.-C.** See Yoo, K.-H.

**Park, J.-H.; Hahn, T.-S.; Choi, S.-S.**
Superconducting Bi(Pb)-Sr-Ca-Cu-O fibers drawn from melt-quenched glasses.—73-04811

**Park, J.-S.** See Chung, I.-J.

**Park, Jae-Gwan** See Kim, Joon-Hong

**Park, Jae-Gwan; Oh, Tae-Sung; Kim, Y.-H.**
Dielectric properties and microstructural behavior of B-site calcium-doped barium titanate ceramics.—73-02570

**Park, Jeong-Hyun** See Kim, Min-Soo

**Park, Jeong-Hyun; Kim, Hyun-Min; Lee, Hwa-Sun**
Microstructural control of LAS ceramics: II, Influence of $Li_2O$-$4B_2O_3$ frit addition on the microstructure and thermal expansion of ß-spodumene.—73-03163; Microstructural control of LAS ceramics: III, Influence of $Li_2O$-$4B_2O_3$ frit addition on the microstructure and thermal expansion of ß-spodumene made from kaolinite.—73-06248

**Park, Jeong-Hyun; Lee, Han-Joo; Moon, Sung-Whan**
Low-temperature degradation behavior for CaO-doped 2.5Y-TZP ceramics.—73-02323

**Park, Jeong-Hyun; Lee, Hyun-Kwuon; Chung, Kyung-Won**
Fabrication of low-shrinkage reaction-bonded alumina ceramics.—73-02826

**Park, Jeong-Hyun; Lee, Sang-Jin; Sung, Jae-Suk**
Sintering and mechanism of crystallization prevention of alumina-filled borosilicate glass.—73-13259

**Park, Jeong-Hyun; Lee, Sang-Jin**
Effect of oxygen partial pressure on tungsten–alumina bonding behavior.—73-03579

**Park, Jeong-Hyun; Moon, Sung-Whan; Park, Han-Soo**
Role of CaO in the sintering of 12Ce-TZP ceramics.—73-06024

**Park, Ji-Yun; Jung, Choong-Hwan; Kim, Young-Suk**
Effect of the addition of aluminum distearate [ADS] on manufacturing $UO_2$ nuclear fuel.—73-04890

**Park, Jin-Chae; Kim, Byong-Ho; Kim, Wang-Sup**
Effects of additives on electromagnetic properties in EMI noise filters for high-frequency region.—73-04606

**Park, Jin-Ho** See Kim, Eung-Ho

**Park, Jin-Seong; Chung, Dong-Jin; Lee, Woo-Sung; Lee, Ye-Seung; Moon, Hwan-Goo; Kim, Young-Nam**
Characteristics of gate electrode for $WSi_2$/CVD-Si/$SiO_2$.—73-07286

**Park, Jong-C.** See Hur, Nam-H.

**Park, Jong-Hyun** See Lee, Hee-Gyoun

**Park, Jong-Hyun; Kim, Hyoung-Wook; Song, Jin-Tae**
Microstructural properties of Pt-doped $YBa_2Cu_3O_{7-\delta}$ high-$T_c$ superconductor prepared by melting method.—73-15555

**Park, Jong-Wan; Han, S.-W.; Moon, H.-S.; Lee, J.-S.**
Effect of postannealing on electrical properties of $Ta_2O_5$ thin film deposited by PECVD using $TaCl_5$ and $N_2O$.—73-04080

**Park, K.-H.** See Batra, Shubneesh

**Park, Keun-Ha** See Eom, Tae-Hyoung

**Park, R. M.** See Deneuville, A.; Liu, H.; Rouleau, C. M.

**Park, S. M.; Hellstrom, E. E.**
Na to K vapor-phase exchange in polycrystalline ß´´-alumina.—73-03104

**Park, S. Y.** See Magruder, R. H., III

**Park, S.-B.; Lee, B. I.; Lim, Y. S.**
Engineering properties of carbon-fiber-reinforced cement composites.—73-00083

**Park, S.-H.; Kim, S.-I.; Kim, C.-H.; Jeong, B.-S.; Park, H.-L.**
$Eu^{2+}$ in $Y_2O_3$:$Eu^{3+}$ and $Y_2O_2S$:$Eu^{3+}$, $Tb^{3+}$.—73-08618

**Park, S.-J.** See Hwang, Y.; Jeong, Hong-Sik; Na, J.-G.

**Park, S.-W.; Baek, Y.-K.; Lee, J.-Y.; Park, C.-O.; Im, H.-B.**
Effects of annealing conditions on the properties of tantalum oxide films on silicon substrates.—73-16465

**Park, Sang-Whan** See Kim, Young-Wook

**Park, Sang-Yeup**
Microstructure and mechanical properties of platelet-reinforced mullite–zirconia composites.—73-13573

**Park, Seh-Jin; Lee, Joon-Hyung; Cho, Sang-Hee**
Effect of BN addition on the sintering and electrical properties of Y-doped $BaTiO_3$ ceramics.—73-12998

**Park, Sei-Min** See Kimura, Shiushichi

**Park, Seok-Kyun; Lim, Chang-Duk**
Flaw detection in concrete by the impact-resonance test.—73-09963

**Park, Seong-Khil** See Yoon, Kyung-Jin

**Park, Seung-Eek; Chung, Su-Jin; Kim, In-Tae; Hong, Kug-Sun**
Nonstoichiometry and the long-range cation ordering in crystals of $(Na_{1/2}Bi_{1/2})TiO_3$.—73-16232

**Park, Seung-M.** See Lee, Sun-S.

**Park, Soon-Ja** See Jin, Zhe-Gao; Kim, Byung-Kook; Kim, Myung-Chul; Lee, Jong-Heun; Song, Kug-Hyun

**Park, Soon-Tae; Chung, Su-Tae; Lee, Jong-Hyen**
Physical properties and output characteristics of piezoelectric transformer of Pb(Mg, Te, Mn, Nb)$O_3$-PZT ceramics with addition of $CeO_2$.—73-11597

**Park, Sun-Jin** See Han, Kyoung-Ran

**Park, Sung** See Lee, Hyung-Bock

**Park, Sung-Ho** See Hyung, Kyung-Woo

**Park, Sung-Y.**
High-dielectric ceramic composition.—73-04210

**Park, T.-H.; Yoo, Han-Il; Shim, J.-D.**
Thermoelectric property and *p-n* transition mechanism of hot-pressed $Bi_{4/3}Sb_{2/3}Te_2$.—73-11481

**Park, Tai-Su** See Kwon, Kee-Won

**Park, Won-Chul** See Lee, Eun-Bok

**Park, Y. C.; Jackson, W. B.; Smith, D. L.; Johnson, N. M.**
Deposited silicon nitride with low electron trapping rates.—73-07295

**Park, Y. H.; Holmes, John W.**
Finite element modeling of creep deformation in fiber-reinforced ceramic composites.—73-06421

**Park, Y.-H.** See Lee, Y.-S.

**Park, Y.-S.; Lee, Y.-S.; Yoon, K.-B.**
Novel method to generate ionic clusters within zeolites.—73-16884

**Park, Yong-K.** See Hur, Nam-H.

**Park, Yong-Wan; Hyun, Buh-Sung; Jeoung, Jun-Sang**
Glass-ceramics of the cordierite system—the effects of $TiO_2$ addition.—73-14397

**Park, Yong-Wan; Hyun, Buh-Sung; Kim, Chang-Yeoul**
Glass-ceramics containing fluorine.—73-10546

**Park, Yong-Wan; Hyun, Buh-Sung**
Effect of $SiO_2$ and $P_2O_5$ on the MgO-$Al_2O_3$-$SiO_2$ system glass-ceramics produced by sintering.—73-00616; Sintering of the cordierite glass-ceramics.—73-10599

**Park, Yong-Wan; Kim, Yong-Wook**
Transparent glass-ceramics on $Al_2O_3$-$SiO_2$ system.—73-03896

**Park, Yoon-Yul** See Ikeda, Yasuhisa

**Park, Young-Min; Choi, Gyeong-Man**
Electrical properties of Y-type hexagonal ferrite.—73-15320

**Parkachev, A. V.** See Boiko, G. G.

**Parkash, Om; Tewari, H. S.; Tare, V. B.; Kumar, D.**
Electrical conduction in calcium yttrium titanium cobalt oxide, $Ca_{1-x}Y_xTi_{1-x}Co_xO_3$ ($x \leq 0.15$).—73-02597

**Parker, Anthony A.; Stanzione, Todd T.; Armstrong, George H.; Phelps, Frankie E.; Opalka, Susanne M.**
Densified ceramic green sheet and stack having conductors therein.—73-04198

**Parker, D. W.**
Improving thermal efficiency with ceramic thermal barrier coatings [TBC's].—73-06804

**Parker, G. J.** See Flowers, Michael C.

**Parker, J. C.** See Foster, C. M.

**Parker, J. M.** See Hannon, A. C.; Searle, T. M.; Stanley, A. T.

**Parker, John L.; Rutland, Mark W.**
Time-dependent adhesion between glass surfaces in dilute surfactant solutions.—73-06982

**Parker, M. A.** See Hylton, T. L.

**Parker, M. J.; Janes, R.**
Synthesis of cuprate superconductors via a dual precipitation route.—73-08238

**Parker, Martin R.** See Harrell, J. W.

**Parker, S. C.** See Sayle, T. X. T.

**Parkhaev, B. V.** See Bendovskii, E. B.

**Parkin, I. P.; Hector, A.**
Convenient, rapid, low-energy route to crystalline TiN, VN, and $Ti_yV_yN$ ($x+y=1$).—73-16686

**Parking, J. Philip**
Quality control in mold manufacture.—73-15746

**Parkinson, Bruce A.** See Harmer, Mark A.

**Parkinson, J. B.** See Vydyanath, H. R.

**Parlebas, J. C.** See Beaurepaire, E.

**Parlier, M.** See Sudre, O.

**Parlog, C.** See Gartner, M.

**Parmaliana, A.** See Arena, F.

**Parmon, V. S.** See Avilov, A. S.

**Parolini, Tullio** See Formica, Riccardo

**Parras, M.** See Gonzalez-Calbet, J. M.

**Parravicini, G. B.** See Marabelli, F.

**Parrick, J.** See Yu, Ga-Er

**Parrot, L. J.**
Carbonation, moisture, and empty pores.—73-09838; Variations of water absorption rate and porosity with depths from an exposed concrete surface: effects of exposure conditions and cement type.—73-10190

**Parry, B. H.** See Mercurio, D.

**Parry, T. V.** See Blamey, J. M.

**Parshikova, G. N.** See Kononov, Yu. S.

**Parshin, N. D.**
Manipulator for applying powder enamels.—73-08349

**Parshin, P. P.; Zemlyanov, M. G.; Soldatov, P. I.**
Phonon spectrum of copper oxide.—73-05458

**Parshintsev, N. V.** See Bubelo, V. V.

**Parsonage, J. R.** See Bratton, Graham J.; Dunster, A. M.

**Parsons, R. R.** See Clarke, G. A.; Zindler, R. W.

**Partain, L. D.** See Schultz, J. C.

**Partch, Richard E.** See Groat, Eric A.
**Partch, Richard E.**
Cost-effective and environmentally sound chemical process for coating fine particulates.—73-16691
**Partenfelder, Uwe; Engel, Angela; Russel, Christian**
Pyrolytic route for the formation of hydroxyapatite/fluoroapatite solid solutions.—73-16967
**Parthasarathy, G.** See Prasad, M. V. N.
**Parthasarathy, Triplicane A.** See Crawley, J. D.; Kerans, Ronald J.
**Parthier, L.** See Schafer, P.
**Partin, D. E.; O'Keefe, M.**
Structures and crystal chemistry of magnesium chloride and cadmium chloride.—73-02469
**Partin, D. L.** See Heremans, J.
**Partl, M.** See Sayir, M. B.
**Partlow, W. D.** See Young, R. M.
**Partridge, G.** See Howard, P. J.; Hyde, A. R.; Vignesoult, S.
**Partridge, G.**
Glass-ceramic joining media.—73-02840
**Partyka, S.** See Groszek, A. J.; Narkiewicz-Michalek, J.
**Parvathy, N. N.** See Rao, A. Venkateswara
**Parvez, Aslam** See Meshcheryakova, I. V.
**Paschke, Hartmut; Ditz, Hermann**
Production of composite glass powder of any desired particle size from a particulate multicomponent mixture.—73-10660
**Pascova, R.** See Schmelzer, J.
**Pascova, R.; Penkov, I.; Gutzow, I.**
Nonsteady-state time lag in binodal phase separation and in crystallization of glass-forming melts.—73-14055
**Pascual, E.** See Canillas, A.; Segaud, J. P.
**Pascual, Luis** See Villegas, Maria Angeles
**Pascual, Luis; Jurado, J. R.; Duran, A.**
Electrical properties of nitrided phosphate glasses.—73-14176
**Pasechnik, F. I.** See Syrbu, N. N.
**Pasechnik, Yu. A.** See Mel'nichuk, A. V.
**Pashby, I. R.; Walbank, J.; Boud, F.**
Ceramic tool wear when machining austempered ductile iron.—73-06338
**Pashchenko, A. V.** See Levchenko, G. G.
**Pashchenko, V. A.** See Zvyagin, A. I.
**Pashchuk, E. G.** See Safaraliev, G. K.
**Pashchuk, I. P.** See Benderskaya, L. P.; Dovgii, Ya. O.
**Pashkevich, Yu. G.** See Blinkin, V. A.
**Pashkov, G. L.; Nikolaeva, R. B.; Saikova, S. V.**
Effects of sorption leaching conditions and sorbent type on ZnO and CuO dissolution.—73-16467
**Pashkova, O. A.** See Aleshina, L. A.
**Pashley, M. D.; Haberern, K. W.; Feenstra, R. M.**
Tunneling spectroscopy on compensating surface defects induced by Si doping of molecular beam epitaxially grown GaAs(001).—73-07845
**Pashley, Richard M.** See Atkins, David T.
**Pashmakov, B.; Claflin, B.; Fritzsche, H.**
Photoreduction and oxidation of amorphous indium oxide.—73-09536
**Pashuk, I. P.** See Antonyak, O. T.
**Pasimeni, L.; Leo, G.; Vasanelli, L.**
EPR study of $Mn^{2+}$ ions implanted in CdTe single crystals.—73-14892
**Pask, H. M.** See Lauder, R. D.
**Pask, Joseph** See Schneider, H.
**Pask, Joseph**
Fundamentals of bonding ceramic materials to metals.—73-13840
**Paskaleva, A.** See Dimitrov, D. B.
**Pasko, J. G.** See Arias, J. M.; Blazejewski, E. R.; Cheung, J. T.; Shin, S. H.
**Paskonnov, I. V.** See Os'minin, N. I.
**Paskov, P. P.**
Carrier-induced change in the refractive index of $InAs_{1-x}Sb_x$.—73-12748
**Paskova, T.; Yakimova, R.**
Effect of Sb doping on point defect ensemble in MOVPE GaAs.—73-14855
**Paskowitz, Michael J.** See Raman, Ramas V.
**Paslovsky, L.; Lowther, J. E.**
CNDO [complete neglect of differential overlap] parameterized cluster model calculations of transition metals in diamond.—73-06144
**Pasquali, M.** See Bojinov, M.; Wang, G.
**Pasquevich, Alberto F.** See Scian, Alberto N.
**Pasquier, Michel; Guyot, Daniel; Battigelli, Jean**
Process for controlling the temperature of a fiber centrifuger.—73-05005
**Pasquinelli, M.** See El Ghitani, H.
**Pasquino, Enrico** See Vallana, Franco
**Passacantando, M.** See Alfonsetti, R.
**Passamonti, M. R.; Polzonetti, G.; Furlani, C.; Geotti-Bianchini, F.; Hreglich, S.; Profilo, B.**
XPS, EPMA, and XRD analysis of hot-end-coated glass containers.—73-00430
**Passariello, Bruno**
Process for the deferrization of kaolin, quarztrose sand, paper filler, white pigment, pumice, and electronics materials.—73-05008
**Passerini, Stefano; De Angelis, Lucio**
Electrode of nickel oxide intercalated with lithium ions and electrochromic devices which incorporate such an electrode.—73-11016
**Passilly, B.** See Sudre, O.
**Passing, G.** See Riedel, R.
**Passing, G.; Schonfelder, H.; Riedel, R.; Brook, R. G.**
Monolithic crack-free Si-C-N ceramic bodies derived from polysilazane forms.—73-02897
**Pastel, P. W.** See Varhue, W. J.
**Pastel, P. W.; Varhue, W. J.**
Effect of radio frequency substrate biasing in the deposition of diamondlike carbon films in an electron cyclotron resonance discharge.—73-02794
**Pasto, Arvid E.; Avella, F.; Natansohn, S.; Rourke, W. J.**
Strength optimization through powder modification.—73-06069
**Pastor, Jose Ygnacio; Pianas, Jaime; Elices, Manuel**
Ambient and high-temperature stable fracture tests in ceramics: applications to yttria-partially-stabilized zirconia.—73-03235
**Pastor, K.** See Buckle, K. A.
**Pastor, Michael; Reifsnider, Kenneth L.; Stinchcomb, Wayne W.**
Modeling of strength in SiC/SiC composite systems.—73-17401
**Pastor, Ricardo C.** See Kirby, Kevin W.
**Pastore, H. O.** See Nakamura, O.
**Patarak, O.** See Makyta, M.
**Patarin, J.** See Des Courieres, Thierry; Llewellyn, P. L.; Merrouche, A.
**Patat, F.** See Feuillard, G.
**Patat, S.; Blunt, D. P.; Chippindale, A. M.; Dickens, P. G.**
Thermochemistry of LiCuO, $Li_2CuO_2$, and $LiCu_2O_2$.—73-05514
**Pate, M. A.** See Kanaah, A.; Thirstrup, Christen
**Patel, Anil** See Ainger, F.; Reaney, Ian M.
**Patel, M.** See Szepvolgyi, J.
**Patel, M.; Tirlocq, J.**
SEM studies on alumina fiber formation through plant fiber substrates.—73-13445
**Patel, N. B.** See Morosini, M. B. Z.
**Patel, P. P.** See Ajimine, Eric M.
**Patel, Parimal J.** See Messier, Donald R.
**Patel, R.** See Nelson, Arthur J.
**Patel, Vishnubhai V.** See Jaso, Mark A.
**Paterson, A. W.; Kozma, Laszlo**
South African ceramic developments.—73-05181
**Pathak, L. C.** See Rao, M. V.
**Pathak, R.** See Badakhshan, Ali
**Pathangey, B.** See Rees, William S., Jr.
**Patiagan, L.** See Fisher, B.
**Patibandla, N.; Hillig, William B.; Ramakrishnan, M. R.**
Reactive vapor infiltration of molybdenum disilicide: kinetics and composite processibility.—73-09297
**Patil, B. L.; Sawant, S. R.; Patil, S. A.; Patil, R. N.**
Bulk magnetic properties of tetravalent silicon substituted in copper ferrite.—73-07926
**Patil, H. D.; Upadhyay, R. V.; Shamkuwar, N. R.; Kulkarni, R. G.**
Magnetic ordering in disordered spinels $Zn_xMg_{1-x}FeCrO_4$.—73-07951
**Patil, Kashinath C.** See Chandran, R. Gopi; Dhas, N. Arul; Sekar, M. M. A.
**Patil, M. D.** See Addiego, William P.
**Patil, M. D.; Williams, Jimmie L.**
Mixed zeolites and method for producing [the] same.—73-02053
**Patil, R. N.** See Patil, B. L.
**Patil, S. A.** See Patil, B. L.
**Patissier, Bruno** See Lalauze, Rene
**Pattitsas, S. N.** See Pinnington, T.
**Patlagan, L.** See Contour, J. P.
**Patnaik, S.; Seshasayee, M.; Yamaguchi, Toshio; Nomura, Masaharu; Ohtaki, Hitoshi**
Structural study on AgI-$Ag_2O$-$CrO_3$ glass.—73-00412
**Patnaik, Sanjay** See Huh, Jeung-Soo
**Patra, A.; Ganguli, D.**
Optical properties of $Pr^{3+}$-doped silica gel and glass monoliths.—73-00524
**Patriarche, G.; Riviere, J. P.; Castaing, Jacques**
Misfit accommodation and dislocations in heteroepitaxial semiconductor layers: II–VI compounds on GaAs.—73-07674
**Patrick, Roger; Schoenborn, Philippe; Toda, H.; Bose, Frank**
Application of a high-density inductively coupled plasma reactor to polysilicon etching.—73-07381
**Patrick, W.** See Cramer, J. Kalpathy
**Patrin, G. S.; Volkov, N. V.; Petrakovskii, G. A.**
Polarization-dependent photomagnetic effect in α-$Fe_2O_3$:Eu, Ga crystals.—73-04635
**Patrin, J. C.; Li, Y. Z.; Chander, M.; Weaver, J. H.**
Bi thin-film growth structures prepared at 30 K on GaAs(110) and InP(110).—73-07390
**Patrina, I. B.** See Grunin, V. S.
**Patrini, M.** See Borghesi, A.
**Patsis, A. P.** See Chryssikos, G. D.; Duffy, J. A.; Huang, W. C.; Kamitsos, E. I.
**Pattemore, D.** See Raghavan, Narashima S.
**Patterson, George A.** See Chang, James S. C.
**Patterson, M. C.; Apte, P. S.; Kimber, R. M.**
High-performance ceramic tool-bit produced by microwave heating.—73-05841
**Pattnaik, Amitav** See Jessen, Todd L.
**Pattnaik, P. C.** See Tsuei, Chang-C.
**Patton, C. E.** See Chen, Ming; Truedson, John R.; Wiese, G.
**Patzelt, N.; Lohnherr, L.**
Opportunities for optimizing roller grinding mills.—73-12051
**Patzelt, N.**
Modern plant configurations for grinding granulated blast-furnace slag.—73-12047
**Patzias, Terry**
Importance of precision statements in developing performance standards for cement.—73-09997
**Paukov, I. V.** See Hadjiiskii, Yu. A.
**Pauksh, P. G.** See Kreitsberga, V. Z.
**Pauksh, P. G.**
Problems with enameling cast-iron articles.—73-06844
**Paul, A. E.** See Sargent, M., III
**Paul, A. V.** See Ivanov, Yu. F.
**Paul, A.** See Fluegel, B. D.
**Paul, Anand J.** See Khan, Parwaiz A. A.
**Paul, D. M.** See Mook, H. A.; Yethiraj, M.
**Paul, M.; Haberer, B.; Arnold, W.**
Materials characterization at high temperatures using laser ultrasound.—73-12160
**Paulamer, R. D. A.** See Kharat, D. K.
**Paulasto, M.; Kivilahti, J.**
Microstructural study of $Al_2O_3$/Ti joints brazed with different Ag-Cu filler metals.—73-03618
**Pauleau, Y.** See Gouy-Pailler, P.
**Paulik, Steven W.; Faber, K. T.; Fuller, Edwin R., Jr.**
Development of textured microstructures in ceramics with large thermal expansion anisotropy.—73-06207
**Paulose, K. V.; Jayaraj, M. K.; Koshy, J.; Damodaran, Alathoor D.**
Preparation and properties of $Ba_2YZrO_6$-$YBa_2Cu_3O_7$ composites.—73-15588
**Paulose, K. V.; Sebastian, M. T.; Nair, K. Ravondran; Koshy, J.; Damodaran, Alathoor D.**
Synthesis of $Ba_3YZrO_8$: a new phase in $YBa_2Cu_3O_7$-$ZrO_2$ system and its suitability as a substrate material for YBCO films.—73-09353
**Paulus, E. F.; Miehe, G.; Fuess, H.; Yehia, I.; Lochner, U.**
Crystal structure of $BaCuO_2$.—73-02190
**Pauly, A.** See Dogo, S.
**Pauthe, M.; Despetis, F.; Phalippou, J.**
Hydrophobic silica $CO_2$ aerogels.—73-00641
**Pautler, Dominic**
Continuous process inspection of refractory ceramics.—73-07201
**Pautov, L. A.** See Sokolova, E. V.
**Pavasaris, Ch. I.** See Balakauskas, S. I.
**Pavate, Vikram** See Nagarajan, R.
**Pavel, E.; Baluta, G.; Barb, D.; Lazar, D. P.; Morariu, M.; Popescu, M.**
Complex carbides in synthetic diamond crystals produced at ≈5.5 GPa.—73-08579
**Pavelescu, C.; McVittie, J. P.; Chang, C.; Saraswat, K. C.; Leong, J. Y.**
High-frequency *c-v* investigation of metal-oxide-semiconductor capacitors prepared by low-temperature subatmospheric pressure chemical vapor deposition of $SiO_2$ films on silicon substrates.—73-14958
**Pavelescu, C.**
Chemical foundations in understanding the step coverage problem in chemical vapor deposition using silane chemistry.—73-09039
**Pavesi, L.; Mariotto, G.; Carlin, J. F.; Rudra, A.; Houdre, R.**
Raman study of a single InP/InAs/InP strained quantum well.—73-04461
**Pavlenko, N. I.** See Shor, A. M.
**Pavlenko, V. B.** See Korzhik, M. V.
**Pavlenko, V. V.** See Yartys, V. A.
**Pavlidis, Dimitris** See Chau, Hin-Fai
**Pavlov, A. N.** See Kozakov, A. T.; Krylov, V. N.
**Pavlov, B. S.** See Adamyan, V. M.
**Pavlov, P. V.; Demidov, E. S.; Karzanov, V. V.**
Long-range effects in semiinsulating semiconductors GaAs and InP irradiated with argon ions.—73-04383
**Pavlov, V. Yu.** See Koroleva, L. I.
**Pavlovic, M.** See Desnica, U. V.
**Pavlovski, V. K.** See Golovin, A. I.
**Pavlovskii, A. I.** See Druzhinin, V. V.
**Pavlovskii, M.** See Kovtun, V. I.
**Pavlovskii, V. K.; Sobolev, Yu. S.**
Corrosion of refractory materials in molten lead silicate glasses.—73-07202; Effect of temperature on the corrosion of refractories in glass melts (review).—73-00806; 73-00807; Refractory-oxide corrosion resistance in molten high-lead silicate glasses.—73-00858; Temperature dependence of corrosion of refractories in barium borosilicate glass melts.—73-07225
**Pavlukhin, Yu. T.** See Bokhonov, B. B.
**Pavlushkina, T. K.; Bogomolova, L. D.; Krasil'nikova, N. A.**
Electronic state of transition metals in phosphosilicate glasses in relation to their structure and applications.—73-13976
**Pavlychev, A. A.** See Vinogradov, A. S.
**Pavlyuk, A. A.** See D'yakonov, V. P.
**Pavlyuk, V. V.; Bodak, O. I.; Dmytriv, G. S.**
Interaction of components in Li-Mg, Al-Si systems.—73-16178
**Pavone, P.** See Fritsch, J.
**Pavuna, Davor** See Dwir, Benjamin; Frangi, Francesca
**Pawar, Prakash K.; Traver, Frank J.; Miranda, Peter**
Abrasion-resistant coatings for glass articles.—73-00724
**Pawlaczyk, Czeslaw** See Reaney, Ian M.
**Pawlicki, E. J.; Saad, Elie E.**
Color matching in ceramic glaze systems.—73-08381
**Pawlik, D. A.** See Gonzalez-Hernandez, J.
**Pawlik, R.** See Singh, M.
**Pawlowski, C.; Aslam, M.; Rimai, Lajos**
Laser ablation deposition of $YBa_2Cu_3O_{7-\delta}$ thin films using a microwave plasma disk reactor oxygen source.—73-11814
**Paxman, M.** See Nelson, J.
**Paya, J.** See Peris Mora, E.
**Payen, E.** See Ponthieu, Eric
**Payli, Resat U.** See Ungan, Aydin
**Payne, D. A.** See Bhalla, Amar S.; Kalinichev, A. G.; Tani, Toshihiko; Viehland, Dwight; Xu, Z.
**Payne, David N.** See Wang, J.
**Payne, David N.**
Rare-earth-doped glass fiber lasers and amplifiers.—73-03810
**Payne, Michael C.** See Kruse, Carsten
**Payne, Stephen A.** See DeLoach, Laura D.; Thomas, Ian M.
**Payne, Stephen A.; Chase, L. L.; Smith, Larry K.; Kway, W. L.; Krupke, W. F.**
Ir cross-section measurements for crystals doped with $Er^{3+}$, $Tm^{3+}$, and $Ho^{3+}$.—73-08895
**Payzant, E. A.; King, H. W.; Das Gupta, S.; Jacobs, James K.**
Hot hardness of ceramic cutting tools using depth of penetration measurements.—73-08405

**Paz De Araujo, C. A.** See Mihara, Takashi; Scott, J. F.; Watanabe, Hitoshi
**Paz De Araujo, C. A.; Zuleeg, R.; Mihara, Takashi; Watanabe, Hitoshi; Carrico, A.; McMillan, L. D.**
Statistical theory of fatigue in ferroelectric devices.—73-11619
**Paz-Pujalt, Gustavo R.** See Braunstein, Gabriel; Hung, L. S.
**Paz-Pujalt, Gustavo R.; Nie, Wen-Jiang**
Metallorganic decomposition method for preparing a metal borate.—73-12376
**Pazpuyalt, G. R.** See Chen, Samuel
**Peacock, A.** See Foden, C. L.
**Peacock, R. N.**
Safety and health considerations related to vacuum gaging.—73-08439
**Peacor, S. D.** See Richardson, R. A.
**Peaker, A. R.** See Dobaczewski, L.
**Peaker, A. R.; Efeoglu, H.; Langer, J. M.; Wright, A. C.; Poole, I.; Singer, K. E.**
Erbium-doped gallium arsenide: a self-organizing low-dimensional system.—73-04328
**Pearah, P. J.** See Chen, A. C.
**Pearce, D. H.; Ponton, C. B.; Jickells, A. J.**
Optimization of an alumina slip for pressure filtration.—73-16888
**Pearsall, T. P.; Adams, Jeff C.; Kidder, J. N.; Williams, P. S.; Chambers, S. A; Lach, J.**
Bright visible photoluminescence in thin silicon films.—73-16416
**Pearson, A.** See Wang, J.
**Pearson, Dale S.** See Chang, Jeanne C.; Luther, Erik P.; Velamakanni, Bhaskar V.
**Pearson, G. P.; Bleay, S. M.; Cooke, R. G.**
Interfacial stress measurements on ceramic matrix composites.—73-17364
**Pearson, Gary W.** See Radzewicz, Czeslaw
**Pearson, Sarah D.** See Harjula, Risto
**Pearton, S. J.** See Abernathy, C. R.; Chakrabarti, U. K.; Hobson, W. S.; Katz, A.; Lothian, J. R.; Ren, F.
**Pearton, S. J.; Abernathy, C. R.; Ren, F.; Lothian, J. R.; Wisk, P. W.; Katz, A.**
Dry and wet etching characteristics of InN, AlN, and GaN deposited by electron cyclotron resonance metallorganic molecular beam epitaxy.—73-09074
**Pearton, S. J.; Ren, F.; Katz, A.; Chakrabarti, U. K.; Lane, E.; Hobson, W. S.**
Dry surface cleaning of plasma-etched high electron mobility transistors [HEMT's].—73-11148
**Pearton, S. J.; Ren, F.; Katz, A.; Lothian, J. R.; Fullowan, T. R.; Tseng, B.**
Dry-process, through-wafer via holes for GaAs power devices.—73-11149
**Pearton, S. J.; Ren, F.**
Plasma etching of ZnS, ZnSe, CdS, and CdTe in electron cyclotron resonance $CH_4/H_2/Ar$ and $H_2/Ar$ discharges.—73-11395
**Peascoe, R.; Clearfield, Abraham**
Hydrothermal synthesis of $Na_2(MoOPO_4)_2(HPO_4)\cdot 2H_2O$, a layered molybdenum(V) phosphate structure and its relationship to $2VOSO_4\cdot H_2SO_4$.—73-02287; Synthesis and structural characterization of $K(MoO_2)(PO_4)\cdot H_2O$, and its topotactic reaction to form $KMoO_2PO_4$.—73-02490
**Peatman, W.** See Gelmont, B. L.
**Peccoud, L.** See Sindzingre, T.
**Pechelyunaite, A.; Kezhenis, A.; Orlyukas, A.**
Peculiarities of the electrical properties of polycrystalline α-$PbSnF_4$ in frequency range $10^2$–$6\cdot10^{10}$ Hz.—73-02661
**Pechen, E. V.** See Vasil'ev, A. L.
**Pechen, E. V.; Schoenberger, R.; Brunner, B.; Ritzinger, S.; Renk, K. F.; Sidorov, M. V.**
Epitaxial growth of $YBa_2Cu_3O_{7-\delta}$ films on oxidized silicon with yttria- and zirconia-based buffer layers.—73-08063
**Pechenik, Alexander** See Chen, Wei; Gallas, Marcia R.
**Pechenik, Alexander; Piermarini, Gasper J.; Danforth, Stephen C.**
Low-temperature densification of silicon nitride nanoglasses.—73-16850
**Peck, Charles A.** See Doll, Gary L.
**Peck, W. F.** See Cava, R. J.; Takagi, H.
**Pecora, A.** See Scaglione, S.
**Pecquet, J.** See Seiple, J.
**Pecz, Bela** See Qiu, Hong
**Pedersen, G. N.** See Bienk, E.-J.
**Pederson, D. O.** See Chen, Z. Y.; Sheng, Zheng-Zhi
**Pederson, L. R.; McGrail, B. P.; McVay, G. L.; Petersen-Villalobos, D. A.; Settles, N. S.**
Kinetics of alkali-silicate and aluminosilicate glass reactions in alkali chloride solutions: influence of surface charge.—73-10387
**Pedrini, C.** See Boutinaud, P.; Grinberg, M.
**Pedyash, M. V.** See Leonyuk, L. I.
**Peebles, D. E.** See Panitz, Janda K. G.
**Peek, Joanne M.** See Roberts, Peter A.
**Peeters, Jozef; Li, Li**
Oxidation of silicon in plasma afterglows: new model of oxide growth including recombination of diffusing O atoms.—73-03227
**Pegg, Ian L.** See Bowan, B. W.; Zing, Shi-Ben
**Pegg, Ian L.**
Development of the Minimum Additive Waste Stabilization (MAWS) program for Fernald.—73-09712
**Pegouret, Jean** See Zagdoun, Georges
**Pehrsson, Pehr E.** See Marchywka, Mike
**Pei, S. S.** See D'Asaro, L. D.
**Pei, S.** See Lightfoot, P.
**Pei, S.; Jorgensen, J. D.; Hinks, D. G.; Zheng, Y.; Richards, D. R.; Dabrowski, B.**
Structure and chemistry of $Ba_{0.6}K_{0.4}BiO_y$ at high temperatures.—73-02458
**Pei, Zhi-Wu; Su, Qiang; Zhang, J.-Y.**
Luminescence of $Bi^{3+}$ and the energy transfer from $Bi^{3+}$ to $R^{3+}$ (R=Eu, Dy, Sm, Tb) in alkaline-earth borates.—73-05590
**Peichev, V. G.; Pliner, S. Yu.; Dabizha, A. A.**
Improving the crack resistance of zirconium dioxide.—73-03311
**Peidro, J. M.; Saez, M. P.**
CAD procedures for design.—73-00006
**Peigne, P.** See Olagnon, Christian
**Peikrishvili, M. D.** See Adamashvili, G. T.
**Peiro, F.; Cornet, A.; Herms, A.; Morante, J. R.; Georgakilas, A.; Halkias, G.**
Influence of the desorption and growth temperatures on the crystalline quality of molecular beam epitaxy InAlAs layers.—73-07603
**Peiro, J.** See Berthier, S.
**Peka, G. P.; Pulemetov, D. A.; Radzivilyuk, V. A.**
Selective photosensitivity formation in graded-gap injection photodiode prepared from electron irradiation compensated $Al_xGa_{1-x}As$.—73-01311
**Pekala, R. W.** See Mayer, S. T.
**Pekarik, J. J.** See Nguyen, Chanh
**Pekhen'ko, S. I.** See Ponomarenko, A. Ya.
**Pelant, I.; Ohlmann, D.; Cregut, O.; Aulombard, R. L.; Briot, O.; Honerlage, B.**
Stimulated emission from electron-hole plasmas in MOVPE-grown ZnSe epilayers.—73-07811; Optical nonlinearities of ZnCdTe at RT.—73-05602
**Pelikan, Peter** See Hulinova, Hana; Mazur, Milan; Vrbjarova, Eva
**Pelino, M.** See Romero, M.
**Pelizzetti, Ezio** See Zhao, Jin-Cai
**Pelka, David G.** See Savant, Gajendra D.
**Pellacani, Gian Carlo** See Andreola, Fernanda; Barbieri, Luisa; Corradi, Anna Bonamartini
**Pellacani, Gian Carlo**
Control of "black core."—73-15783
**Pelle, F.** See Wu, Xu
**Pelleg, J.** See Laor, A.
**Pellegrino, J. G.; Qadri, S. B.; Cotell, Catherine M.; Amirtharaj, P. M.; Nguyen, N. V.; Comas, J.**
Interface sharpness during the initial stages of growth of thin, short-period III-V superlattices.—73-04372
**Pellegrino, S.** See Borghesi, A.
**Pellerin, N.** See Gervais, Francois
**Pelletier, Sylvian; Fiset, M.; Angers, R.**
Use of ultrasonic wave velocities to characterize $SiC_w/Al_2O_3$ composites.—73-01937
**Pelli, S.** See Righini, Giancarlo C.
**Pellicone, Frank M.** See Kountz, Dennis J.
**Pellow, Scott W.** See Rue, Charles V.
**Pells, George Philip**
Radiation damage effects in alumina.—73-05624
**Pelovsky, Y.; Nishev, T.; Gruncharov, I.**
Mathematical description of hydrogen partial pressure effect on the kinetics of reduction of phosphogypsum to calcium sulfide.—73-10033
**Pelton, Arthur D.** See Larose, Sylvain
**Peltre, Marie Jeanne** See Derewinski, Miroslav
**Pelty, Larry P.** See Kumar, Anil
**Peltzer, E.** See Carter, J. B.
**Peluso, G.** See Andreone, A.
**Peiz, J. P.** See Seiple, J.
**Pelzer, David**
Ceramic tools stand up to composites.—73-05159
**Pen, Chang-Qi** See Xu, Xiao-Hong
**Pen, Jian-Ren**
Development of artistic colored glazes fired in oxidizing flame.—73-10815
**Pena, J. L.** See Castro-Rodriguez, R.; Sosa, Victor
**Pena, O.** See Laxmi Narsaiah, E.; Muralidhar, M.; Narsaiah, E. Laxmi
**Pena, P.** See Callahan, D. L.; Nieto, M. L.
**Penchev, V. Z.** See Tarasevich, Yu. I.
**Pendalwar, Shekar L.** See Tour, James M.
**Penev, Dragomir; Kawamura, Mitsunori**
Moisture diffusion in soil–cement mixtures and compacted lean concrete.—73-00145
**Peng, C. J.** See Hu, H.; Krupanidhi, S. B.
**Peng, Chien-H.** See Desu, Seshu B.
**Peng, Chien-H.; Desu, Seshu B.**
Metallorganic chemical vapor deposition of ferroelectric $Pb(Zr,Ti)O_3$ thin films.—73-11589; Modified envelope method for obtaining optical properties of weakly absorbing thin films and its application to thin films of $Pb(Zr,Ti)O_3$ solid solutions.—73-08421; Structure development study of $Pb(Zr,Ti)O_3$ thin films by an optical method.—73-11623
**Peng, Ding-Kun** See Xu, Qin-Lun
**Peng, Dong-Liang; Jiang, Sheng-Rui**
Optical properties of transparent and conductive $Cd_2SnO_4$ films.—73-08934
**Peng, Huo-Tian; Peng, Qiu-Yun; Long, Xiang-Yun**
Preparation of Tl-1223 superconductor and its silver-sheathed tape.—73-15599
**Peng, J. L.** See Chechersky, Vladimir; Skanthakumar, S.; Sumarlin, I. W.; Wu, Dong-Ho
**Peng, J.-G.** See Huang, T.-S.
**Peng, Jia-Hui** See Lin, Fang-Hui
**Peng, Min; Wu, Wen-Fang; Zhu, Hong-Yuan**
Development and application of semidry hot gunning mix for converter.—73-10715
**Peng, Qiang** See Li, Wen-Chao
**Peng, Qiu-Yun** See Peng, Huo-Tian
**Peng, Wen-Ji** See Qian, Shi-Xiong
**Peng, Xi-Ling; Chen, Xiao-Lin**
Postetching of diamond thin films in a hydrogen-oxygen atmosphere.—73-05952
**Peng, Zhi-Hui** See Lin, Fang-Hui
**Peni, F.; Crampon, J.; Duclos, R.**
Morphology and composition of the oxidized layer in $Si_3N_4$-based material.—73-09530
**Penkov, I.** See Pascova, R.
**Penner-Hahn, James E.** See Li, Ping
**Penney, T.** See Ohno, H.; Terry, I.
**Pennisi, Robert W.** See Papageorge, Marc V.
**Pensl, G.** See Gotz, W.; Suttrop, W.
**Pentlow, D. A.** See Chow, Julie L.
**Pentsov, A. V.** See Slobodchikov, S. V.
**Penza, Michele** See Valentini, Antonio
**Pepin, H.** See El Khakani, M. A.
**Pepper, M.** See Cobden, D. H.
**Pepper, S. V.** See Della Corte, Christopher; Miyoshi, Kazuhisa
**Peralta, Alonso** See Cuccio, John
**Perami, Rene** See Prince, William
**Peransin, J. M.** See Orsal, B.
**Perarnau, D.** See Cros, B.
**Perbellini, Claudio; Ascari, Guido**
Programming management control.—73-17500
**Perdriel, C.** See Zerbino, J. O.
**Perechinskii, S. I.** See Vysochanskii, Yu. M.
**Perechinskii, S. I.; Rizak, V. M.; Rizak, I. M.; Vysochanskii, Yu. M.; Motrya, S. F.; Filonenko, E. V.**
Anomalous birefringence hysteresis and thermooptical memory effect in incommensurate phase of ferroelectric-semiconductor $Sn_2P_2Se_6$.—73-14776
**Pereira, E.** See Mazzoni, A. D.; Scian, Alberto N.
**Pereira, J. C.** See Almeida, R. M.
**Perekalina, T. M.; Shapiro, A. Y.; Lipinskii, I. E.; Cherkezyan, S. A.**
Electrical and magnetic properties of sodium solid solutions in lanthanum manganites.—73-01458
**Perel, V. I.** See Mirlin, D. N.
**Peremarti, C.** See Mbow, B.
**Perepelitsa, N. I.** See Grigor'ev, O. N.
**Perepelitsyn, V. A.** See Khoroshavin, L. V.
**Perepelkin, A. D.** See Yafyasov, A. M.
**Perepletchikov, M. L.; Didenkulova, I. I.; Aleksandrov, Yu. A.**
Magnetic iron oxide powder production by ferrous pentacarbonyl liquid phase oxidation with ozone.—73-15335
**Perera, D. S.** See Low, I. M.
**Peressi, M.** See Biasiol, G.
**Pereverzeva, L. P.** See Poplavko, Yu. M.
**Pereverzeva, L. P.; Poplavko, Yu. M.; Sklyarenko, S. K.; Chepilko, A. G.; Zavorotnyi, V. F.**
Thermopiezoelectricity in noncentrosymmetric crystals.—73-15295
**Perez, F.** See Steren, L. B.
**Perez, Ignacio M.; Scott, William R.**
Method for forming Josephson break junctions.—73-15684
**Perez, J.** See Etienne, S.
**Perez, R.** See Ortega, J.
**Perez-Amor, M.** See Fernandez, D.
**Perez-Gonzalez, A.** See Alejo-Armenta, C. A.
**Perez-Murano, F.; Barniol, N.; Aymerich, Xavier**
Local modification of HF-treated silicon(100) surface and its characterization by scanning tunneling microscopy and spectroscopy.—73-11293
**Perez-Pariente, J.** See Camblor, M. A.; Franco, M. J.
**Perez-Rodriguez, Jose L.** See Sanchez-Soto, P. J.
**Perezramirez, J. G.** See Kahn-Harari, A.
**Perfecto, Eric; Prasad, Keshav; Wilkens, Peter; White, George; Tummala, Rao R.; Prasad, Chandrika**
Multilevel thin-film packaging technology at IBM.—73-04142
**Perga, V. M.** See Gololobov, Yu. P.
**Peric, A. D.** See Plecas, I. B.
**Peric, H. C.** See Jusserand, B.
**Perino, Joseph S.** See Wiesenfeld, Jay M.
**Peris Mora, E.; Paya, J.; Monzo, J.**
Influence of different sized fractions of a fly ash [FA] on workability of mortars.—73-06674
**Perissinotti, L.** See Castro, M. S.
**Perkins, F. Keith** See McGuire, G. E.
**Perkins, N. R.; Moore, John J.; Readey, D. W.**
Synergistic effects of coupled combustion synthesis and vapor phase transport in the synthesis of advanced materials.—73-06076
**Perl, Allen S.**
Zinc oxide.—73-12307
**Permbhusri, Kulapat** See Gupta, Tapan K.
**Permikina, N. M.** See Makhonina, S. N.
**Permogorov, S.; Stolz, H.; Vogelsang, H.; Weber, T.; Von der Osten, W.; Kuznetov, P.**
Resonant Brillouin scattering from polaritons in ZnSe/GaAs epitaxial layers.—73-15148
**Permyakova, T. V.; Zykova, T. A.**
Estimation of the contribution of various components of the ion-exchange interdiffusion coefficient.—73-00337
**Pernice, P.** See Aronne, A.; Cioffi, Raffaelle; Marotta, A.
**Pernice, P.; Aronne, A.; Marotta, A.**
Devitrification of $Li_2O\cdot5GeO_2$ glass.—73-00323
**Pernisz, Udo C.; Michael, Keith W.; Haluska, Loren A.**
Ceramic thin film memory device.—73-11007
**Pernot, F.; Etienne, P.**
Synthesis and properties of infrared transmitting oxide glasses.—73-14509
**Pernot, F.; Rogier, R.**
Mechanical properties of phosphate glass-ceramic–316L stainless steel composites.—73-13868
**Pernot, F.; Woignier, T.; Phalippou, J.**
Evolution of elastic and mechanical properties of silica aerogels during gel-glass transformation.—73-06411
**Perona, Joseph J.**
Model for Sr-Cs-Ca-Mg-Na ion-exchange equilibria on chabazite.—73-16217
**Perov, A. N.** See Biriukov, A. S.
**Perovic, D. D.** See Houghton, D. C.; Noel, J.-P.
**Perraton, D.** See Simard, M.-A.
**Perrem, R.** See Arshak, K.
**Perrier, C.** See Vincent, H.
**Perriere, J.** See Jimenez, C.; Montero, I.; Rano, L.

**Perrin, C.** See Narsaiah, E. Laxmi
**Perrin, Herve** See Castell, Ricardo
**Perrin, Jean-Marc** See Papirer, Eugene
**Perrone, A.** See Luby, S.
**Perry, Anthony J.; Valvoda, Vaclav; Rafaja, David**
X-ray residual stress measurement in TiN, ZrN, and HfN films using the Seemann-Bohlin method.—73-16649
**Perry, Charles H.** See Knickerbocker, John U.
**Perry, David M.** See Robinson, Glen M.
**Perry, K. E.; May, G. B.; Epstein, J. S.; Okada, H.; Atluri, S. N.**
Experimental *R*-curve behavior in partially stabilized zirconia using moire interferometry.—73-06412
**Perry, P. L.** See Jankowski, A. F.
**Perry, R.** See Hills, C. D.
**Perry, Scott S.; Ager, Joel W., III; Samorjai, Gabor A.; McClelland, Robert J.; Drory, Michael D.**
Interface characterization of chemically vapor deposited diamond on titanium and Ti-6Al-4V.—73-10240
**Perry, T. A.** See Meng, W. J.
**Persson, J.; Breder, Kristin; Rowcliffe, David J.**
Loading rate effects during indentation and impact on glass with small spheres.—73-14216
**Persson, J.; Kall, Per-Olov; Nygren, Mats**
Oxidation kinetics of $Si_2N_2O$ ceramics.—73-06316
**Pertsev, N. A.** See Nikolaev, V. I.
**Pertsev, N. A.; Arlt, G.**
Forced translational vibration of 90° domain walls and the dielectric dispersion in ferroelectric ceramics.—73-07891
**Peruchetti, J. C.** See Wetzel, P.
**Perumal, P.** See Varma, Hari Krishna
**Perumal, P.; Varma, Hari Krishna; Warrier, K. G. K.; Damodaran, Alathoor D.**
Tape-cast rare-earth-oxide-doped ZnO varistor.—73-01342
**Peruzzi, R.** See Alessandrini, G.
**Pervushin, G. N.** See Orentlikher, L. P.
**Pervyshina, G. G.** See Kirik, S. D.
**Pesarcik, S. F.** See Kesan, V. P.
**Peschanskii, A. V.** See Gnezdilov, V. P.; Kachur, I. S.
**Peschler, William J.** See Lasday, Stanley B.
**Pesek, A.** See Faschinger, W.; Hauzenberger, F.
**Peshchanskaya, N. N.** See Orlova, T. S.
**Peshev, P.** See Gyurov, G.
**Peshev, P.; Slavova, V.**
Preparation of yttria-stabilized zirconia thin films by a sol-gel procedure using alkoxide precursors.—73-02977
**Pesin, L. A.; Baitinger, E. M.; Kuznetsov, V. L.**
Structural model of glassy carbon based on Auger spectroscopic analyses.—73-16325
**Pesin, V. S.** See Starostin, Yu. V.
**Pesina, T. I.** See Baikova, L. G.
**Peskova, E. Yu.** See Gerasimova, L. V.
**Pessa, M.** See Zhang, Gou-Dong
**Pestrikova, M. V.** See Il'khamov, R. A.
**Petalas, J.** See Logothetidis, S.
**Petchenko, A. M.**
Interaction between dislocations and phonons in LiF crystals.—73-16177
**Peter, Agnes** See Foldvari, Istvan
**Peter, M.** See Hoffmann, L.
**Peterlik, H.; Kromp, K.**
Viscoelastic effects in testing of an $Al_2O_3$ ceramic containing a glassy phase.—73-09689
**Peterman, D. W.; Shields, P. J.; Wigen, P. E.**
Fingers of auto-oscillation in a circular YIG film with pinned surface spins.—73-04613
**Petermann, K.** See Koetke, J.
**Peters, And**
Determination of reduction components in glassmaking raw materials—report of the International Commission on Glass Technical Committee 2, "Chemical Durability and Analysis."—73-07117
**Peters, C. H.; Bernasek, S. L.; Venkatesan, T.; Pique, A.; Harshavardhan, K. S.; Wu, Y.**
Interactions of $YBa_2Cu_3O_{7-x}$ thin films with alkaline earth fluoride substrates.—73-08112
**Peters, Hans**
Amendment to the thermal insulation order.—73-06555
**Peters, Jeffery J.** See Morgart, James R.
**Peters, Michael G.; Cummings, Robert H.**
Methods for coating adherent diamond films on cemented tungsten carbide substrates.—73-02118
**Petersen, Gary A., Jr.; McNeil, J. R.**
Effects of oxygen partial pressure on lead content of PLZT thin films produced by excimer laser deposition.—73-11566
**Petersen, K. K.** See Willems, H. X.
**Petersen-Villalobos, D. A.** See Pederson, L. R.
**Peterson, Chad R.** See Sandlin, Michael S.
**Peterson, D. W.** See Napolitano, L. M., Jr.
**Peterson, Dean E.** See Hults, William L.
**Peterson, George T.; Liska, Timothy J.; McDevitt, John W.**
Machine for forming glass containers.—73-04980
**Peterson, J. M.** See Johnson, S. M.
**Peterson, J. R.** See Chen, G.
**Peterson, M. B.** See Ruff, A. W.
**Peterson, R. L.** See Zheng, L.
**Peterson, Richard W.** See Robinson, Glen M.
**Petersson, P. E.** See Ewertson, C.
**Peteves, Stathis D.** See Kodentsov, A. A.
**Peteves, Stathis D.; Suganuma, Katsuaki**
Solid-state bonding of $Si_3N_4$ ceramics with Fe-Cr alloy interlayers.—73-03642
**Peticolas, L. J.** See Ross, F. M.
**Petit, D.** See Smaihi, M.
**Petit, J. A.** See Denape, J.; Guilmard, Y.
**Petitcollin, Jean-Marc; Lesage, Jean-Luc; Borderiou, Arnaud**
Device for bending glass sheets using fluid barrier.—73-12075
**Petot, C.** See Monceau, D.
**Petot-Ervas, G.** See Monceau, D.
**Petrak, Daniel R.; Lee, Jae D.**
Silicon nitride/boron nitride composite with enhanced fracture toughness.—73-16017
**Petrakovskii, G. A.** See Furrer, A.; Patrin, G. S.; Vasil'ev, V. N.
**Petrakovskii, G. A.; Apiesnin, S. S.; Loseva, G. V.; Ryabinkina, L. I.; Yanushkevich, K. I.**
Magnetic properties and exchange interactions in disordered $Fe_xMn_{1-x}S$ system.—73-01469
**Petrakovskii, L. V.** See Roessli, B.
**Petranovic, N.** See Cvjeticanin, N.; Dimitrijevic, R.
**Petrashov, V. T.** See Shapoval, S. Y.
**Petrauskas, M.** See Weinert, R.
**Petravic, M.** See Prawer, Steven
**Petrenko, A. G.** See Zhmykhov, G. V.
**Petrenko, T. L.; Teslenko, V. V.; Mokhov, E. N.**
Electron-nuclear double resonance and electron structure of boron impurity centers in 6H-SiC.—73-04312
**Petretis, B.** See Amulevicius, A.
**Petric, Anthony** See Zou, Yun
**Petrini, G.** See Scarano, D.; Zecchina, A.
**Petroff, P. M.** See Bressler-Hill, V.; Chang, Ying-Lan; Hashemi, M. M.; Krishnamurthy, Mohan; Miller, M. S.; Tomiya, S.; Wang, X.-S.
**Petroff, T. E.; Hesp, S. A. M.; Sayer, M.**
Zirconia hydrogel casting of PZT ceramics.—73-13337
**Petropavlov, M. V.; Rybaltovskii, A. O.; Mikhalev, O. I.; Tsvigunov, A. N.**
EPR investigation of chromium ions in $Ca_3SiO_4$-$Cr_2O_3$ and $Ca_3Si_2O_7$-$Cr_2O_3$ solid solutions.—73-16139
**Petrosyan, A. M.; Chakatyan, K. O.; Oganesyan, A. S.; Sharkhatunyan, R. O.**
Effect of doping on energy of OH groups in lithium niobate single crystals.—73-02242
**Petrosyan, P. G.** See Vardanyan, G. A.
**Petrou, A.** See Jonker, B. T.
**Petrov, A. A.; Fromzel, V. A.**
Wavelength tuning near 1.54 μm in a phosphate erbium glass laser.—73-00581
**Petrov, A. I.** See Gorbylev, V. A.; Gorodnik, L. B.
**Petrov, D. M.** See Leonyuk, L. I.
**Petrov, E. A.** See Sakovich, G. V.
**Petrov, I. A.** See Ivanov-Omskii, V. I.
**Petrov, I.** See Hultman, L.; Mineeva, R. M.; Wahlstrom, U.
**Petrov, I.; Mojab, E.; Adibi, O. F.; Greene, J. E.; Hultman, L.; Sundgren, J. E.**
Interfacial reactions in epitaxial Al/$Ti_{1-x}Al_xN$ ($0 \le x \le 0.2$) model diffusion-barrier structures.—73-06165
**Petrov, Iwailo; Schulle, Wolfgang; Bartusch, R.**
Influence of basic raw materials on the behavior of isostatically pressed flatware during porcelain bisque firing.—73-00914
**Petrov, M. A.** See Dokuchaev, V. G.
**Petrov, M. P.** See Khromov, A. L.
**Petrov, S. A.; Grigor'eva, L. F.; Filatov, S. K.; Sazeev, I. Yu.; Kostyreva, T. G.**
Effect of the chemical composition of ramsdellite-like phases, crystallized in the $LiFeO_2$-$SnO_2$-$TiO_2$ system, on their structure, electrical properties, and phase transformation under heating.—73-16124
**Petrov, V. V.** See Borschensky, V. V.; Brinkevich, D. I.
**Petrov, V. V.; Kharchenko, T. D.; Yavid, V. Yu.**
Effect of rare-earth elements on the entropy of radiation defect ionization in *n*-type Ge.—73-04291
**Petrov, V.** See Seifert, F.
**Petrov, V.; Georgiev, D.; Herrmann, J.; Stamm, U.**
Theory of cw passive mode locking of solid-state lasers with addition of nonlinear index and group velocity dispersion.—73-05651
**Petrov, Yu. A.** See Chukalkin, Yu. G.
**Petrov, Yu. V.** See Ktitorov, S. A.
**Petrova, A. E.** See Ventsel, V. A.
**Petrova, L. I.** See Dolgushev, N. V.
**Petrova, L. V.** See Zaripov, N. G.
**Petrovic, John J.** See Ramamurty, U.; Reimanis, Ivar E.; Suematsu, H.
**Petrovic, M. S.** See Gilliland, G. D.
**Petrovska, B.** See Lezal, Dimitrij
**Petrovskaya, N. A.** See Kriklivyi, D. M.
**Petrovskii, G. T.** See Amosov, A. V.; Evstrop'ev, S. K.; Glebov, L. B.; Karapetyan, G.; Lunter, S. G.; Lyubalin, M. D.; Zhilin, A. A.
**Petrovskii, G. T.; Yashchishin, I. N.; Kozii, O. I.**
Modifying of metaphosphate glass surface with ammoniac gaseous medium.—73-14042
**Petru, Zdenek**
Mixed sintered glasses: I, Properties of the mixed sintered glasses based on ternary mixtures of powdered polydispersive glasses.—73-00517
**Petrukhin, A. G.** See Gorodnik, L. B.
**Petrukhnovskaya, N. B.; Popova, T. B.; Chernyaeva, N. B.**
Effect of fluorine doping on the electrical properties of $Bi_2Sr_2CaCu_2O_x$.—73-08031
**Petrullat, J.; Ray, S.; Schubert, V.**
Preparation and processing of metal-ceramic composite materials.—73-10264
**Petrusevskia, Vladimir; Trencevski, K.**
Description of molecular distortions: VI, Spectra-structure correlations in orthophosphate compounds.—73-10360
**Petrusha, I. A.** See Britun, V. F.; Kurdyumov, A. V.
**Petruzzello, J.** See Gaines, J. M.
**Petruzzello, J.; Gaines, J. M.; Van der Sluis, P.; Olego, D.; Marshall, T.; Ponzoni, C.**
Structural properties of nitrogen-doped ZnSe epitaxial layers grown by MBE.—73-04490
**Petryakov, V. A.** See Bakshi, I. S.
**Petrzhichek, V.** See Maksimov, B. A.
**Pettenkofer, C.** See Chasse, T.
**Petters, Cornelia; Schulle, Wolfgang**
Property improvement of silicate ceramics by coating the structural grain with a matrix paste in a fluidized bed granulator.—73-10756
**Pettersson, Karin** See Tritthart, Josef
**Pettersson, Karin**
Effects of silica fume on alkali-silica expansion in mortar specimens.—73-03460
**Petticrew, Richard W.** See Farzin-Nia, Farrokh
**Pettifer, K.** See Blackwell, B. Q.
**Pettit, Frederick S.**
High-performance/high-temperature materials in Japan.—73-17486
**Pettit, G. D.** See Chang, S.; Feenstra, R. M.; Raisanen, A.; Vaterlaus, A.; Vitomirov, I. M.
**Petty, John T.** See Vaughn, Wallace L.
**Petukhov, V. Yu.** See Ibragimova, M. I.
**Petzelt, J.** See Azough, F.; Ferreira, V. M.
**Petzold, A.** See Bahr, Hans-Achim
**Petzold, Matthias**
In situ radial crack initiation at hardness indentations in strengthened soda-lime-silica glass.—73-14205
**Petzow, Gunter** See Hettich, B.; Hoffmann, M. J.; Kramer, Martin; Magerl, Franz; Ohya, Y.; Rudolph, Thomas; Schneider, Gerold A.
**Peuckert, Doris** See Kriechbaum, Gangolf
**Peussa, Jouko** See Ghosh, Asish
**Pevtsov, A. B.** See Zherzdev, A. V.
**Peyghambarian, N.** See Fluegel, B. D.
**Peyrade, J. P.** See Goiran, M.; Voillot, F.
**Peyre, J.-L.** See Ripoche, G.; Vinchant, J.-F.
**Peyrot, Aurelie** See Backhaus-Ricoult, Monika
**Peytavin, S.** See Etienne, S.
**Pezzotti, Giuseppe** See Klemm, Hagen; Nishida, Toshihiko; Tanaka, Isao
**Pezzotti, Giuseppe; Aoyagi, Eiji; Suzuki, Toshiko; Sakai, Mototsugu**
Electron channeling pattern [ECP] of ceramic platelets.—73-17129
**Pezzotti, Giuseppe; Hiesgen, Renate; Nishida, Toshihiko**
Characterization by atomic force microscopy of nanometer-scale plastic damage in SiC single crystals after being sintered by hot isostatic pressing.—73-09547; Quantitative evaluation of microstructure in $Si_3N_4$/SiC platelet and particulate composites.—73-09504
**Pezzotti, Giuseppe; Noda, Kazuya; Okamoto, Yasunori; Nishida, Toshihiko**
Thermomechanically induced embrittlement in hot isostatically pressed $Si_3N_4$/SiC composites.—73-09686
**Pezzotti, Giuseppe; Sakai, Mototsugu**
Effect of a silicon carbide "nano-dispersion" on the mechanical properties of silicon nitride.—73-17279
**Pezzotti, Giuseppe; Tanaka, Isao; Nishida, Toshihiko**
Intrinsic fracture energy of polycrystalline silicon nitride.—73-06467
**Pezzotti, Giuseppe**
Actual contribution of crack deflection in toughening platelet-reinforced brittle-matrix composites.—73-06322; Effect of HIP sintering on the crystal structure and fracture behavior of α-SiC platelets embedded in $Si_3N_4$ matrix.—73-16728; 73-16729; Mechanical properties of HIPed $Si_3N_4$-based materials for high-temperature long-term applications.—73-09638; 73-17385
**Pfaff, Gerhard**
Sol-gel synthesis of barium titanate powders of various compositions.—73-13281; Sol-gel synthesis of strontium titanate powders of various compositions.—73-09337
**Pfaff, Peter**
Ceramics decoration and environmental protection.—73-00897; New possibilities for decorating glass, ceramics, and porcelain.—73-00917
**Pfammatter, C.** See Korner, N.
**Pfeffer, R. L.** See Flemish, J. R.; Lin, Chi-Hsien
**Pfeifer, Harry** See Beck, Kerstin; Karger, J.
**Pfeifer, Kent B.** See Butler, Michael A.
**Pfeifer, T.** See Dekorsy, T.
**Pfeiffer, H.** See Bailie, Xavier
**Pfeiffer, L. N.** See Ge, Wei-Kun; Goni, A.; Pinczuk, A.; Spector, M.; Vinattieri, A.; Zahler, M.
**Pfeiffer, T.; Baucke, F. G. K.; Roth, G.; Vitte, V.**
Importance of the oxygen fugacity for the reactivity of oxidic glass melts.—73-14407
**Pfeiffer, W.; Hollstein, T.**
Damage determination and strength prediction of machined ceramics by X-ray diffraction techniques.—73-06366
**Pfender, Emil** See Han, Q. Y.; Russ, S.; Tsai, Chung-Hsien
**Pfiester, James R.; Kenkare, Prashant**
Method of forming oxide isolation.—73-01058
**Pfitzenmaier, Robert W.**
Glass-ceramics and color methods.—73-03927
**Pfitzner, A.** See Lutz, H. D.
**Pfleiderer, Christoph; Leclerc, Norbert; Greulich, Karl-Otto**
Uv-induced 210-nm absorption band in fused silica with different thermal history and stoichiometry.—73-07098
**Pfleiderer, H. J.** See Baur, G.
**Pflugbeil, I.** See Bahr, Hans-Achim
**Pfromm, Peter H.** See Rezac, Mary E.
**Pfuhl, H.**
Development of the tableware and sanitary ware industry from 1950 to 1990.—73-10824
**Phalippou, J.** See Pauthe, M.; Pernot, F.; Woignier, T.
**Pham Van, Laurent** See Gautier, Martine
**Pham, Vuong T.** See Schwab, Stuart T.
**Phani Latha, V.** See Ramamurti, V.
**Phanjoubam, Sumitra** See Baijal, J. S.
**Pharaoh, M. W.; Daniel, A. M.; Lewis, M. H.**
Stability of interfaces in calcium aluminosilicate matrix/Nicalon SiC fiber composites.—73-09510
**Phelan, P. E.; Song, Y.; Kelkar, M.**
Film/substrate thermal boundary resistance for Er-Ba-Cu-O high-$T_c$ thin films.—73-11764
**Phelps, Frankie E.** See Parker, Anthony A.
**Phethean, Richard**
The Complete Potter: Throwing—73-09765

**Phifer, Carol C.**
Structure of barium zinc aluminate glasses.—73-00416
**Philip, Warren H.**
Silica precursors derived from TEOS.—73-08500
**Philipp, A.**
Nonlinear electrodynamics of $YBa_2Cu_3O_7$ thin films in the microwave region.—73-08148
**Philipp, Gerd** See Hofmann, Otto R.
**Philipp, Gerd**
3-D modeling of homogenization in glass melts.—73-00716
**Philipp, Warren H.** See DeGuire, Mark R.
**Philipp, Warren H.; Veltch, Lisa C.; Jaskowiak, Martha H.**
Guanidine-based vehicle/binders for use with oxides, metals, and ceramics.—73-04978
**Philippe, L.** See Lambin, P.
**Philipponneau, G.** See Papirer, Eugene
**Philippot, E.** See Polian, A.
**Philippou, T.** See Fikos, C.
**Philippou-Vallis, Nicolaos**
Situation of the brick and tile industry in Greece.—73-03406
**Philips, James R.** See Dullea, John F.
**Phillipps, M. B.** See Sammes, N. M.
**Phillips, A. J.** See Howard, S. J.
**Phillips, A. J.; Clegg, W. J.; Clyne, T. W.**
Correlation of interfacial and macroscopic toughness in SiC laminates.—73-03249; Fracture behavior of ceramic laminates in bending: I, Modeling of crack propagation.—73-06430; Fracture behavior of ceramic laminates in bending: II, Comparison of model predictions with experimental data.—73-06431
**Phillips, Brian J.; Thompson, John G.; Xiao, Yue-Hui; Kirkpatrick, R. James**
Constraints on the structure and dynamics of the ß-cristobalite polymorphs of $SiO_2$ and $AlPO_4$ from $^{31}P$, $^{27}Al$, and $^{29}Si$ NMR spectroscopy to 770 K.—73-16068
**Phillips, C. C.** See Vodop'yanov, K. L.
**Phillips, David H.; Lannutti, John J.**
X-ray computed tomography for the testing and evaluation of ceramic processes.—73-01939
**Phillips, David S.** See Hults, William L.
**Phillips, J. C.; Siegrist, T.**
Uses of crystallographic databases and bibliographies.—73-09755
**Phillips, J. C.**
Dopant microdomains and magnetic fluctuations in $La_{2-x}Sr_xCuO_4$.—73-01454; Micromorphological structure and superconductive properties of $YBa_2(Cu_{3-y}Zn_y)_3O_{6.9}$ alloys.—73-01603
**Phillips, Julia M.** See Kunchur, Milind N.
**Phillips, Matthew R.** See Moon, Anthony R.
**Phillips, Nicolas J.; Calzada, Maria L.; Milne, Steven J.**
Sol-gel-derived lead titanate films.—73-13282
**Phillips, R. C.** See Chen, C. H.
**Phillips, R. T.** See Gregory, A.; Lovering, D. J.; Sobiesierski, Z.
**Phillips, Richard J.** See Golden, Teresa D.; Raffaelle, R. P.
**Phillips, Wayne M.** See Jones, Jack A.
**Phong, L. Ngo; Shih, I.**
Photoresponse of granular (Pb)BiSrCaCuO films to millimeter-wavelength radiation.—73-11862
**Phule, Pradeep P.** See Russell, Richard A.
**Phuvoravan, S.; Nielsen, H.-J.; Fribo, H. J.**
Siam City Cement Co.'s fifth production unit with a clinker capacity of 10 000 Mt per day goes on stream.—73-13777
**Piancastelli, A.** See Ravaglioli, A.
**Piancastelli, M. N.** See Zanoni, R.
**Pianetta, P.** See Cao, R.; Herrera-Gomez, A.; Kim, Chang-Young; Pan, L. S.; Wu, J.; Yang, X.
**Piazza, T. W.** See Chen, Ling
**Picard, C.** See Yan, Yong
**Picard, C.; Gerdanian, P.**
Determination of the Neel temperature in $YBa_2Cu_3O_7$ by electrical conductivity measurements.—73-15416
**Picard, William C.**
Brown tetraxial.—73-07237; Designing with Speckle-Stains.—73-06614
**Piccaluga, G.** See Medda, M. P.
**Piccola, J. P., Jr.** See Jenkins, Michael G.
**Pichat, A.** See Rieu, J.
**Pichlmaier, S.** See Amler, H.
**Piciacchio, Alan; Lee, Sang-Ho; Messing, Gary L.**
Processing and microstructure development in alumina-silicon carbide intragranular particulate composites.—73-16949
**Pickering, C.** See Nayar, V.
**Pickering, C.; Carline, R. T.; Garawal, N. S.; Stehle, J. L.; Piel, J.-P.; Blunt, R.**
Nondestructive characterization of III-V alloy multilayer structures using spectroscopic ellipsometry.—73-15058
**Pickering, S.** See Djuricic, B.
**Pickert, Werner**
Boron-nitride-coated microcutting device.—73-10302
**Pickett, John B.** See Jantzen, Carol M.
**Pickett, Margaret A.** See Jantzen, Carol M.
**Pickles, C. A.** See Best, T. E.
**Pickles, C. A.; Cameron, J.; Simpson, C. J.**
Nitriding of silicon.—73-09224
**Pico, C.** See Ramos, E.
**Pico, M.** See Orts, M. J.
**Picoli, G.** See Ozkul, C.; Wolffer, N.
**Picone, K.** See Batra, Shubneesh
**Picozzi, P.** See Alfonsetti, R.
**Piddock, V.** See Taylor, R.
**Pidduck, A. J.** See Nayar, V.
**Pidzyrailo, N. S.** See Benderskaya, L. P.
**Pidzyrailo, S. N.** See Antonyak, O. T.
**Piehler, A.; Low, R.; Betz, J.; Schonberger, R.; Renk, K. F.**
Preparation of $TlBa_2Ca_2Cu_3O_{9\pm\delta}$ high-$T_c$ thin films by laser ablation in combination with thermal evaporation of thallium oxide.—73-11872
**Piekarczyk, Jan** See Lis, Jerzy
**Piel, J.-P.** See Pickering, C.; Zalczer, Gilbert
**Piel, J.-P.; Stehle, J. L.; Thomas, Olivier**
Fastest real-time spectroscopic ellipsometry [RTSE]: applications and limitations for in situ and quality control.—73-15798
**Piel, J.-P.**
Spectroscopic ellipsometry [SE] characterization of the index profile in inhomogeneous thin films.—73-12196
**Piel, K. T.** See Gudenau, Heinrich Wilhelm
**Pienkowski, M. C.; Jenkins, M. L.; Moseley, P. T.**
Microdomains in urania-yttria and urania-ceria.—73-01753
**Piepel, G. F.** See Hrma, Pavel
**Pieper, Helmut**
Furnace costs compared for nine different melters.—73-08472
**Pier, D.** See Ermer, J.
**Pier, Julie W.** See Matsumoto, Roger L. K.
**Piermarini, Gasper J.** See Chen, Wei; Gallas, Marcia R.; Pechenik, Alexander
**Pierre, A. C.** See Ma, Kun-Song
**Pierre, A. C.; Duboudin, F.; Tanguy, B.**
Sol-gel processing of $TeO_2$ powders.—73-13278
**Pierre, A. C.; Zou, J.; Barker, C.**
Structure reorganization in montmorillonite gels during drying.—73-13453
**Pierre, A. C.**
Texturing of platelike ceramics by colloidal processing.—73-13320
**Pierre, F.** See Ermolieff, E.; Sindzingre, T.
**Pierson, Hugh O.** See Kaplan, Richard B.
**Pierson, Hugh O.**
Handbook of Carbon, Graphite, Diamond, and Fullerenes: Properties, Processing, and Applications.—73-06603
**Pierson, Joseph E.** See Beall, George H.
**Pierson, R. L.** See Sullivan, G. J.
**Pierson, S. W.** See Liu, Jin-Xiang
**Pieterse, J. W. J.** See Kafka, James D.
**Pietzko, Guenter** See Gudenau, Heinrich Wilhelm
**Piffard, Y.** See Guyomard, D.
**Pigal'skii, K. S.** See Mamsurova, L. G.
**Pigeat, P.; Pacia, N.; Weber, B.**
Emissivity as a method of surfaces and thin-film analysis.—73-03142
**Pigeon, M.** See Carles-Gibergues, Andre
**Pigeon, Michel** See Bordeleau, Daniel; Pleau, Richard
**Pigeon, R. G.; Varma, A.**
Quantitative kinetic analysis of silicon nitridation.—73-09287
**Pignolet, A.** See Taguchi, I.
**Pigoretti, E.** See Ferrante, M.
**Pigram, A. J.; Hamyln, M. G.; Freer, R.; Bowden, A. L.**
Microwave sintering of Ni-Zn ferrites.—73-04627
**Pihlstrom, B. G.; Sheng, T. Y.; Thompson, L. R.; Collins, G. J.**
Low-pressure and low-temperature gallium arsenide homoepitaxy employing in situ generated arsine.—73-15021
**Pihlstrom, B. G.; Thompson, L. R.; Collins, G. J.**
In situ generated arsine radicals for gallium arsenide homoepitaxy.—73-04363
**Pijolat, Christophe** See Lalauze, Rene
**Pijolat, Michele** See Gruy, Frederic
**Pike, William T.** See Fathauer, Robert W.
**Pike, William T.; Fathauer, Robert W.; Anderson, M. S.**
Surface morphology of molecular beam epitaxially grown $Si_{1-x}Ge_x$ layers on (100) and (110)Si.—73-09514
**Pikhidchuk, V. P.** See Godzhieva, O. V.
**Pikhtin, A. N.** See Glinskii, G. F.
**Pikhtin, A. N.; Todorov, M. T.**
Photoreflection of GaAs.—73-11391
**Pikhtin, N.** See Saissy, A.
**Pikus, F. G.** See Estropov, V. V.
**Pilatov, A. G.** See Zherzdev, A. V.
**Pileckis, R.** See Amulevicius, A.
**Pilipchatin, L. D.; Kozdoba, V. I.; Lutsenko, A. S.**
Determination of phosphoric anhydride in the gaseous products of firing of phosphate-bonded fireclay shapes.—73-14582
**Pilipovich, I. V.** See Zaporozhchenko, R. G.
**Pilkington, R. D.** See El-Fallal, I.
**Pilkuhn, M. H.** See Kaden, C.
**Pillai, P. K. C.** See Pramila, C.
**Pillai, P. Krishna** See Varma, Hari Krishna
**Pillai, V.** See Hingorani, S.; Kumar, P.
**Pilleux, Mauricio E.; Fuenzalida, Victor M.**
Hydrothermal $BaTiO_3$ films on silicon: morphological and chemical characterization.—73-10958
**Pilleux, Mauricio E.; Grahmann, Carlos R.; Fuenzalida, Victor M.**
Hydrothermal strontium titanate films on titanium: an XPS and AES depth-profiling study.—73-10959
**Pillinger, C. T.; Russell, S. S.**
Intestellar SiC grains in meteorites.—73-13410
**Pillot, J. P.** See Mocaer, D.
**Pillot, J. P.; Richard, C.; Dunogues, J.; Birot, M.; Pailler, R.; Mocaer, D.**
New polycarbosilazane precursors of monofilamental ceramics Si-C-N and Si-C-N-O.—73-02902
**Pilon, L. P.** See Giguere, S.
**Pilon, L. P.; Leith, Y. P.**
New refractory practices in the anode casting department of Noranda Minerals' Horne Smelter, Rouyn-Noranda, Quebec[, Canada].—73-10747
**Pilosyan, S. Kh.** See Arutyunyan, S. R.
**Piltz, R. O.** See Crain, J.
**Pimentel, F.** See Zalar, A.
**Pinard, P.** See Jean-Jean, P.
**Pincemin, F.** See Barton, J. L.
**Pincenti, J. C.** See Lee, S. B.
**Pinckney, Linda R.** See Andrus, Ronald L.
**Pinczuk, A.** See Goni, A.; Merlin, R.
**Pinczuk, A.; Dennis, B. S.; Heiman, D.; Pfeiffer, L. N.; West, K. W.**
Inelastic light scattering in the regime of the fractional quantum Hall effect.—73-05581
**Pindera, Marek-Jerzy** See Eldridge, Jeffrey I.
**Pinero, M.; Atik, M.; Zarzycki, J.**
Cordierite–$ZrO_2$ and cordierite–$Al_2O_3$ composites obtained by sonocatalytic methods.—73-12958
**Pines, Alexander** See Jelinek, Raz
**Pines, David** See Sokol, Alexander
**Ping, Jian** See Ivey, Douglas C.
**Ping, Xie; Beaudoin, James J.; Brousseau, R.**
Effect of aggregate size on transition zone properties at the portland cement paste interface.—73-00070; Flat aggregate–portland cement paste interfaces: I, Electrical conductivity models.—73-00092; Flat aggregate–portland cement paste interfaces: II, Transition zone formation.—73-00093
**Pingitore, Nicholase E., Jr.; Fretzdorff, Susanne B.; Seitz, B. P.; Estrada, Leticia Y.; Borrego, P. M.; Crawford, G. M.**
Dissolution kinetics of $CaCO_3$ in common laboratory solvents.—73-12133
**Pinkse, P. W. H.; Maude, D. K.; Portal, J. C.; Difoitepoisson, M. A.; Brylinski, C.**
2-D hole gas in a GaInP/GaAs heterojunction.—73-15219
**Pinna, F.** See Zeng, Y. W.
**Pinna, G.** See Medda, M. P.
**Pinneo, John M.** See Herb, John A.
**Pinnington, T.; Patitsas, S. N.; Lavole, C.; Sanderson, A.; Tiedje, T.**
Cross-sectional imaging of doped layers in epitaxial gallium arsenide films by scanning tunneling microscopy.—73-11125
**Pinnow, Kenneth E.** See Stasko, William
**Pinot, M.** See Kiat, J. M.
**Pint, Harald** See Ullrich, Bruno
**Pintchovski, F.** See Kottke, M.
**Pinter, J.**
Physical properties of the glass used for comfort in buildings.—73-14251
**Pinto, R.; Goyal, Navdeep; Pai, S. P.**
Improved microwave performance of Ag-doped $Y_1Ba_2Cu_3O_{7-\delta}$ thin-film microstrip resonators.—73-01571
**Pinto, R.; Kumar, Ravi; Goyal, Navdeep; Apte, P. R.; Pai, S. P.; Malik, S. K.**
Nonlinear response of $YBa_2Cu_3O_{7-\delta}$ thin-film microstrip resonator at microwave frequency.—73-01615
**Pinto, R.; Poothra, J. I.; Purandare, S. C.; Pai, S. P.; Dsouza, C. P.; Kumar, D.**
Growth and microstructural study of radio frequency magnetron sputtered MgO films on silicon.—73-03150
**Pintschovious, L.** See Pyka, N.
**Piot, B.** See Plossu, C.
**Piotrowska, A.** See Lin, X. W.
**Piotrowska, A.; Kaminska, E.; Lin, X. W.; Liliental-Weber, Z.; Washburn, J.; Weber, E.**
Annealing behavior of Au(Te)/*n*-GaAs contacts.—73-11067
**Pipoly, Richard A.** See Byrne, Christine J.
**Pippel, Eckhard** See Woltersdoof, Jorg
**Pique, A.** See Peters, C. H.
**Piqueras, J.** See Cremades, A.; Dominguez-Adame, F.; Gomez, P.
**Piquet, Albert** See Delvar, Gerard; Iatrides, Jean-Yves
**Piramoon, M. R.** See Berry, Frank J.; Wang, J.
**Pirard, Jean-Paul** See Lecloux, Andre J.
**Pirard, Jean-Paul; Pirson, A.; Marchot, P.; Mohsine, Abdelkrim; Lecloux, Andre J.**
Synthesis of $SiO_2$-$TiO_2$ glasses by sol-gel process.—73-14511
**Pires, A. P. C.; Maia, Ana E. P.; Sampaio, A. J. C.; Freire, V. N.**
High-field transient of photoexcited GaAs electrons and holes with acoustic and TO-phonon momentum scattering.—73-07561
**Pirini, F.** See Palladino, M.
**Piriou, B.** See Ribeiro, S. J. L.; Zahra, A.-M.
**Pirlog, C.** See Zaharescu, Maria
**Piro, Giampietro** See Lockhart, Thomas P.
**Piroga, S. A.** See Kityk, A. V.
**Pirogov, A. N.** See Valiev, E. Z.
**Pirogov, F. V.** See Demishev, S. V.
**Pirogov, V. A.**
Fixing of concrete composition and its correction.—73-13726
**Pirogov, Yu. A.; Soloshenko, L. N.**
Development of a combined antioxidant for a periclase-graphite ramming body.—73-00799
**Pirogova, G. N.; Ryabov, A. I.; Kritskaya, V. E.**
Effect of temperature on the radiation-induced optical absorption of lithium lanthanum phosphate glass.—73-00465
**Pirouz, P.** See Holmes, D.; Morscher, Gregory N.
**Pirri, C.** See Kafader, U.; Wetzel, P.
**Pirson, A.** See Pirard, Jean-Paul
**Pirzada, S. A.** See Taylor, P. R.
**Pis'mennyi, V. A.** See Lyubalin, M. D.
**Pisarenko, V. F.** See Avanesov, A. G.
**Pisarev, R. V.** See Krichevtsov, B. B.
**Pisarevskii, Yu. V.** See Radaev, S. F.; Sil'vestrova, I. M.
**Pisarkiewicz, T.** See Bah, K.
**Pishch, I. V.; Zalevskaya, T. L.; Putilina, E. N.**
Synthesis of pigments according to the method of coprecipitation.—73-07275
**Pishch, I. V.**
Synthesis of clay-based pigments.—73-07274
**Pishchalko, V. D.; Tolstikhin, V. I.**
Phonon bottleneck effects in the course of carrier heating in semiconductor microstructures.—73-07711
**Pishchik, V. V.** See Blank, A. B.
**Pishko, V. V.** See Eremenko, V. V.
**Piskarskas, A.** See Danielius, R.; Dubietis, A.
**Piskunov, E. E.** See Sorokin, I. N.
**Pistilli, Michael F.; Willems, Terry**
Evaluation of cylinder size and capping method in compression strength testing of concrete.—73-09951
**Pistoia, G.** See Bojinov, M.; Li, L.; Wang, G.

**Pitak, N. V.** See Fedoruk, R. M.; Ustichenko, V. A.

**Pitak, N. V.; Fedoruk, R. M.; Khmelenko, T. P.**
SiAlON-containing material based on the Ovruch quartzite, aluminum powder, and coke.—73-12443; SiAlON-containing silicon carbide refractories.—73-10769

**Pitak, N. V.; Shapovalov, V. S.; Azarenkova, L. E.;**

**Privalova, N. G.**
Resistance of blast-furnace refractories to the action of aggressive reactants under conditions of oxidizing gaseous atmosphere.—73-14621

**Pitaval, M.** See Gendry, M.; Saoudre, R.

**Pitchumani, R.; Karbhari, V. M.**
Knowledge-based decision support systems for rapid and efficient production planning in CMC fabrication.—73-15733

**Pitkethly, M. J.; Doble, J. B.; Jacques, P.**
Interfacial shear strength evaluation of ceramic-coated carbon fibers.—73-13556

**Pitt, C. H.** See Chang, H.

**Pittal, S.** See Ianno, Natale J.; Johs, Blaine

**Pittal, S.; Snyder, Paul G.; Ianno, Natale J.**
Ellipsometry study of nonuniform lateral growth of ZnO thin films.—73-17132

**Pittson, R.** See Du, Y.-J.

**Pityulin, A. N.** See Zaripov, N. G.

**Pivac, B.** See Dubcek, P.

**Pivetti, Giuliano**
Extrusion through a great cross-section area.—73-03978

**Pivin, J. C.** See Montero, I.

**Pivin, J. C.**
Difficulties in estimating the rheological properties of diamondlike films by means of nanoindentation tests.—73-08395; Tribology of amorphous diamond films grown or modified by ion implantation.—73-03661

**Pivinskii, Y. Y.** See Kuznetsov, G. I.

**Pivinskii, Yu. E.; Litovskaya, T. I.; Samarina, O. N.**
Centrifugal casting of ceramics. Principal parameters and regularities of the process.—73-02735; Centrifugal casting of ceramics. Properties of the castings.—73-12015

**Pivinskii, Yu. E.**
Refractory concretes of a new generation: relationship between their composition, structure, and properties.—73-14614

**Pivovarov, M. M.** See Golubkov, V. V.

**Pivovarova, L. N.** See Korytkova, E. N.

**Pivovarova, V. I.** See Snegirev, A. I.

**Piwowarska, Z.** See Dziembaj, R.

**Pixley, Francis V.**
Drying experience: some thoughts on drying as we move into winter.—73-05110; Exhaust/preheat/hot zone air-flow considerations.—73-01949; Rhythm drying—what is it? How can it help you.—73-12240

**Pizarro, J. L.; Villeneuve, G.; Hagenmuller, P.; Asano, H.**
Synthesis, crystal structure, and magnetic properties of $CO_3(HPO_4)_2(OH)_2$ related to the mineral lazulite.—73-02503

**Plachkova, S. K.; Georgieva, O. Zh.; Odin, I. N.**
Synthesis, physicochemical investigation, and electrophysical properties of solid solutions based on GeTe in the cross section $(CeTe)_{1-x}$-$[(Ag_2Te)_{0.1667}(Bi_2Te_3)_{0.5333-x}]$.—73-16357

**Plachova, B.** See Koruderlieva, S.

**Plais, F.** See Agius, B.

**Plakhtii, V. P.** See Golosovskii, I. V.; Tutov, A. G.

**Plakhty, V.; Stratilatov, A.; Chernenkov, Yu.; Federov, V.;**

**Sinha, S. K.; Loong, C.-K.**
X-ray studies of the $YBa_2Cu_3O_{6+y}$ superstructures in the range of $0.4(3) \leq x \leq 0.73(3)$.—73-01704

**Planas, Jaime** See Pastor, Jose Ygnacio

**Planche, M. P.** See Coudert, J. F.

**Planche, M. P.; Betoule, O.; Coudert, J. F.; Grimaud, A.;**

**Vardelle, M.; Fauchais, P.**
Performance characteristics of a low-velocity plasma spray torch.—73-08356

**Planel, R.** See Baranov, P. G.; Maaref, M.; Mirlin, D. N.

**Planell, J. A.** See Bermudez, O.

**Planken, Paul C. M.; Nuss, Martin C.; Brener, Igal;**

**Goossen, K. W.; Luo, M. S. C.; Chuang, S. L.**
Terahertz emission in single quantum wells after coherent optical excitation of light hole and heavy hole excitons.—73-07832

**Plankina, S. M.** See Karpovich, I. A.

**Plannel, J. A.** See Driessens, F. C.

**Plante, Timothy D.** See Cogan, Stuart F.

**Plate, S. E.** See Bobrov, A. V.

**Platonov, V. V.** See Druzhinin, V. V.

**Platova, M. A.** See Kolomeitsev, V. V.

**Platts, Dennis R.**
Thermally durable antireflective glass.—73-03971

**Plavinskii, T. L.** See Gegeshidze, K. R.

**Plawsky, J. L.**
Physical properties of $Na_2O$-$SiO_2$ glasses: correlations derived using a network theory model developed for nonlinear hydrocarbon polymers.—73-06953

**Pleau, Richard; Pigeon, Michel**
Precision statement of ASTM C 457 practice for microscopic determination of air-void content and other parameters of the air-void system in hardened concrete.—73-06697

**Plecas, I. B.; Peric, A. D.; Drijaca, J. D.**
Mathematical modeling of physicochemical characteristics of concrete in immobilization of radioactive wastes.—73-00131

**Plecas, I. B.; Peric, A. D.; Drijaca, J. D.; Kostadinovic, A.**

**M.; Glodic, S. D.**
Immobilization of radioactive wastewater residues in a cement matrix.—73-09994

**Plecenik, A.; Grajcar, M.; Darula, M.**
Interaction of electrodes in $YBa_2Cu_3O_{7-\delta}$/metal tunnel junctions.—73-08111

**Plenet, J. C.** See Othmani, A.

**Plesh, G.**
Electron paramagnetic resonance studies on $YBa_{2-x}La_xCu_3O_n$ high-temperature superconductors.—73-08052

**Pleshko, V. I.** See Aliev, G. N.

**Plesingerova, Beatrice** See Rybarikova, Ludmila

**Pleskach, I. V.** See Tkachenko, V. D.

**Plester, Dave**
Data logging devices for the ceramic industry.—73-05105; Monitoring continuous heat-treatment processes.—73-10568

**Pletnev, P. M.** See Novikova, N. I.

**Pletnev, R.** See Klestchov, D.; Polyakov, E. V.

**Plieth, W.** See Arsov, L. D.

**Pliner, S. Yu.** See Peichev, V. G.

**Plodinec, M. J.** See Schumaker, R. F.

**Ploetz, Kristin L.** See Nunn, Stephen D.; Tiegs, Terry N.

**Ploog, K.** See Agullo-Rueda, F.; Brawner, D. A.; Garriga, M.; Gubarev, S. I.; Kukushkin, I. V.; Kwok, S. H.; Lukes, F.; Mirlin, D. N.; Sapega, V. F.; Scamarcio, G.; Spitzer, J.; Wang, H. S.

**Ploog, Klaus H.** See Ilg, Matthias; Notzel, Richard; Tournie, Eric

**Ploog, Klaus H.; Notzel, Richard; Ilg, Matthias**
Tunable generation of microscopic and mesoscopic step arrays on non-(100)-oriented GaAs: a new route to quantum wire structures by epitaxial growth.—73-11489

**Ploppa, M. G.** See Kalinushkin, V. P.

**Ploska, K.** See Reinhardt, F.

**Plossu, C.** See Autran, J. L.; Balland, B.

**Plossu, C.; Seigneur, Frederic; Balland, B.; Piot, B.;**

**Straboni, A.**
Charge-trapping properties of thin plasma-nitrided oxides induced by nitrogen and hydrogen incorporation.—73-05536

**Plotnichenko, V. G.** See Avrutskii, I. A.

**Plotnikov, A. E.** See Kachurin, G. A.; Bagaev, V. S.

**Plovnick, R. H.** See Mathis, M. D.

**Plsko, Alfonz** See Mrnikova, Miroslava

**Plsko, Alfonz; Hulinova, Hana; Ohlidal, Ivan**
Colored interference layers with high calorimetric purity prepared by sol-gel method.—73-03779

**Plsko, Alfonz**
Sol-gel method—application conditions and possibilities.—73-03888

**Plucknett, Kevin P.** See Bloyce, D. M.; Tuffe, S.

**Plucknett, Kevin P.; Caceres, Carlos H.; Hughes,**

**Christopher; Wilkinson, David S.**
Processing of tape-cast laminates prepared from fine alumina/zirconia powders.—73-16952

**Plucknett, Kevin P.; Caceres, Carlos H.; Wilkinson, David S.**
Tape casting of fine alumina/zirconia powders for composite fabrication.—73-17050

**Plucknett, Kevin P.; Wilkinson, David S.**
Microstructural characterization of microwave-sintered silicon nitride ceramics.—73-05913; Transient viscous phase reaction sintered (TVPRS) silicon oxynitride ceramics.—73-06126

**Plukhin, A. G.** See Lunter, S. G.

**Plumley, Peter W.** See Farrell, Charles W.

**Pluschke, Reinhard; Valtin, H. J.**
Clays of Saxony[, Germany].—73-12266

**Plutalov, N. Yu.; Urusovskaya, L. N.; Shchavelev, O. S.**
Thermal conductivity of aluminofluorophosphate glasses.—73-00555

**Pluth, Joseph J.** See Smith, Joseph V.

**Pluvinage, P.; Quenisset, J. M.**
Numerical simulation of the tensile behavior of 2D-SiC/SiC crossply laminates.—73-06496

**Plyasova, L. M.; Yurieva, T. M.; Ketchik, S. V.; Ziborov, A.**

**V.; Litvak, G. S.; Kryukova, G. N.**
Crystallochemical nature of copper-magnesium catalysts.—73-02224

**Plyasunov, A. V.; Plyasunova, N. V.**
Zinc oxide solubility in KOH aqueous solutions studied at 400–500°C and pressure of 0.5–2 kbar.—73-16650

**Plyasunova, N. V.** See Plyasunov, A. V.

**Plyatsko, S. V.** See Gromovoi, Yu. S.

**Plyatsko, S. V.; Gromovoi, Yu. S.; Kostyunin, G. E.**
ESR and electrophysical properties of single-crystal PbTe:Mn films grown by the method of laser epitaxy.—73-01159

**Plyatsko, S. V.; Gromovoj, Yu. S.; Sizov, F. F.**
Narrow gap IV-VI thin films produced by quasi-continuous-wave $CO_2$-laser-induced evaporation.—73-13147

**Plyute, Yu. V.** See Borisenko, N. V.

**Plyutto, V. P.; Loan, Do Tkhi; Bag, Fam-Kuang**
General algorithm for calculating batches in the ceramic industry.—73-08339; Planning the work of periodic ball mills in continuous ceramic production.—73-01810

**Poad, William J.; Dembicki, Michael T.; Wanson, Thomas**

**E.**
Apparatus for spraying glass containers.—73-12072

**Poate, J. M.** See Vredenberg, A. M.

**Pobedimskaya, E. A.** See Nadezhina, T. N.

**Pober, Richard; Abbott, Richard**
Arc plasma spraying as a manufacturing process for ceramic components.—73-08319

**Pochopien, Kevin P.** See Claar, Terry D.

**Pociask, M.** See Wal, A.

**Podchernyaeva, I. A.; Shapoval, T. A.; Tsyganenko, V. S.**
Formation and properties of laser coatings based on oxynitride ceramic.—73-13062

**Podchishchaeva, O. V.** See Galina, T. M.

**Podd'yakov, L. V.** See Andrienko, A. V.

**Poddar, A.** See Bandyopadhyay, S. K.

**Podenas, D.** See Danielius, R.

**Podesta, Wolfgang**
Opacified enamel for direct-on enameling on unpickled steel plate.—73-10334

**Podlesnik, D. V.** See Lu, Z.

**Podlesny, J.; Weinberg, Michael C.; Neilson, G. F.; Chen, A.**
Experimental determination of the binodal temperature in the lead borate system.—73-08623

**Podlesnyak, A.** See Guillaume, M.

**Podlesov, V. V.** See Shishkina, T. N.

**Podlesov, V. V.; Radugin, A. V.; Stolin, A. M.**
Technological fundamentals of SHS extrusion.—73-17051

**Podlesov, V. V.; Stolin, A. M.; Merzhanov, A. G.**
SHS extrusion of electrode materials and their application for spark alloying of steel surfaces.—73-13898

**Podlevskikh, N. A.** See Fisher, L. M.

**Podlivaev, A. I.** See Elesin, V. F.

**Podluzskii, E. Ya.** See Garnashevich, G. S.

**Podolnikov, A. G.; Chigvintsev, A. G.**
Effects from electrolyte concentration and temperature on the effective viscosity of a slip emulsion.—73-02801

**Podolnitsyn, S. N.** See Gal'tseva, E. V.

**Podrezov, Yu. N.** See Zadiraka, Yu. V.

**Podus, L. P.** See Kvyatkovskii, S. F.

**Poe, Brent T.** See Cote, Bertrand

**Poe, Brent T.; McMillan, Paul F.; Cote, Bertrand; Massiot,**

**D.; Coutures, Jean-Pierre**
$SiO_2$-$Al_2O_3$ liquids: in situ study by high-temperature $^{27}Al$ NMR spectroscopy and molecular dynamics simulation.—73-02433; Structure and dynamics in calcium aluminate liquids: high-temperature $^{27}Al$ NMR and Raman spectroscopy.—73-12702

**Poellmann, H.** See Kuzel, H.-J.

**Poellmann, H.; Auer, S.; Kuzel, H.-J.; Wenda, R.**
Solid solutions of ettringites: II, Incorporation of $B(OH)^{4-}$ and $CrO_4^{2-}$ in $3CaO{\cdot}Al_2O_3{\cdot}3CaSO_4{\cdot}32H_2O$.—73-10155

**Poellmann, H.; Fiermans, L.; Vennik, J.; Dalmai, G.**
$V_2O_5$ surface phonon spectrum.—73-08789

**Poels, J. P.; Hecq, A.**
Thin glass for LCD: review of the specifications.—73-14298

**Poels, J. P.**
Textured glass for various applications: a review.—73-14292

**Poeppel, R. B.** See Balachandran, Uthamalingam; Goretta, K. C.; Kirkpatrick, Kelly S.; Wagh, Arun S.; Wu, W.

**Poeppelmeier, K. R.** See Song, Y.-Q.

**Pogadaev, V. G.** See Zhuravlev, K. S.

**Pogarskii, M. A.** See Dmitriev, A. G.

**Pogemiller, J. E.** See Busta, H. H.

**Pogorelov, Yu. G.** See Ivanov, M. A.

**Pogosov, A. G.** See Budantsev, M. V.

**Pogosova, I. V.** See Gorbenko, O. Yu

**Pogoulskii, Y. V.** See Karpov, S. Yu.

**Pogozhev, V. A.** See Iorgov, Dimitr

**Pogrebitskii, K. Yu.** See Bert, N. A.

**Pohlen, M.** See Dittmar, G.

**Pohlenz, Eric L.** See McKimpson, Marvin G.

**Pohlmann, A.** See Hellmann, R.

**Poignant, H.** See Allain, J. Y.; Bulou, A.; Gomes, A. S. L.; Ibrahim, H.; Jacquier, B.; Lambard, J.

**Poignant, H.; Le Mellot, J.; Leve, A.; Le Cabec, P.; Riviere, D.**
Effect of some refractive index modifiers on both numerical aperture and mechanical strength of fluorozirconate fibers.—73-07017

**Poignet, J. C.** See Bouteillon, J.

**Poindexter, E. H.** See Gerardi, G. J.; Warren, W. L.

**Poirier, G. E.; Cavicchi, R. E.; Semancik, S.**
Ultrathin heteroepitaxial $SnO_2$ films for use in gas sensors.—73-07852

**Poirier, J.** See Themines, D.

**Poirier, J.; Rigaud, Michel**
Stability of metals, carbides, and oxides in carbon-magnesia refractories.—73-00868

**Poisson, Regis** See Dupin, Thierry

**Poitevin, J. M.** See Maheo, D.

**Pokazan'ev, V. G.** See Burmistrov, S. A.

**Pokrovskii, L.** See Ziling, C.

**Pol'skii, A. I.** See Andrianova, T. N.

**Poladov, P. M.** See Safarov, M. G.

**Polato, P.** See Daneo, Antonio

**Polborn, K.** See Evers, J.

**Polcik, M.** See Drahokoupil, J.

**Poler, J. C.; Irene, E. A.**
Pump-probe charge-integrating investigation of trap emission kinetics in ultrathin MOS capacitors.—73-04159

**Poletaev, N. K.** See Akimov, A. V.

**Poleti, D.** See Milosavljevic, Z.

**Poletimov, A. E.** See Korolev, N. E.

**Polgar, K.** See Zaldo, C.

**Polian, A.; Grimsditch, M.; Philippot, E.**
Memory effect in pressure-induced amorphous $AlPO_4$.—73-12628

**Polimbetova, G. S.** See Dorfman, Ya. A.; Kurakbaeva, R. Kh.

**Polini, Riccardo; Marcheselli, Gincarlo; Traversa, Enrico**
Nucleation and growth of diamond films on Ni-cemented tungsten carbide: effects of substrate pretreatments.—73-16885

**Politova, E. D.** See Ol'khovik, I. V.

**Polivanov, Yu. N.** See Orlov, S. N.

**Polizzi, S.** See Zeng, Y. W.

**Polizzotti, G.** See Minichelli, Dino

**Polizzotti, R. S.** See Hatch, S. R.

**Polla, D. L.** See Baude, P. F.

**Pollak, Fred H.** See Qiang, H.; Warren, A. C.

**Pollak, Fred H.**
Contactless electromodulation investigations of surface/interface electric fields in semiconductor microstructures.—73-11118

**Pollak, Maud** See Gautier, Martine

**Pollinger, John P.** See Chang, Jeanne C.

**Pollinger, John P.; Newson, D. D.; Nick, J. J.**
Implementation of acoustophoresis for the characterization of silicon-nitride-based aqueous suspensions.—73-08406

**Pollmann, H.** See Muhamad, M. N.

**Pollock, H. M.** See Burnham, N. A.

**Polman, A.** See Alves, E.; Custer, J. S.; Snoeks, E.

**Polo da Fonseca, C. N.** See Estrada, W.

**Polomska, M.** See Tikhomirova, N. A.

**Polonka, J.; Xu, Ming; Goldman, A. I.; Finnemore, Douglas K.**
Effects of oxygen on the melting and freezing of $Bi_2Sr_2Ca_1Cu_2O_{8+\delta}$.—73-11739
**Polovets, V. I.** See Prokopovich, I. E.
**Poltoratskii, E. A.** See Gergel, V. A.
**Poltoratskii, Y. B.** See Butorin, S. M.
**Poluektov, O. G.** See Gal'tseva, E. V.
**Polukhin, V. N.** See Livshits, V. Ya.
**Polvani, R. S.** See Ives, L. K.
**Polyakov, D. V.**
Monolithic silica glasses made from alcoholate gels.—73-07153
**Polyakov, E. V.; Pletnev, R.; Fotiev, A. A.**
Dependence of the temperature of transition in the superconducting state on the degree of metallicity of chemical bonds.—73-02230
**Polyakov, K. V.** See Gorokhovskii, A. V.
**Polyakov, K. V.; Gorokhovskii, A. V.; Kaplina, T. V.**
Modification of a plate glass surface under conditions of a molten tin bath.—73-07053
**Polyakov, M. E.** See Trusova, I. A.
**Polyakov, O. G.** See Mukhametshina, Z. B.
**Polyakov, S. M.; Gindin, E. I.; Laverko, E. M.; Shtel'makh, S. V.; Shustrov, B. A.**
Twin texture of tetragonal lead-metaniobate-based ferroelectric solid solutions.—73-15298
**Polyakov, S. N.** See Gorbenko, O. Yu
**Polyakov, V. E.** See Tarasevich, Yu. I.
**Polyakov, V. O.** See Tikhonov, V. B.
**Polyakova, E. V.** See Dolgushev, N. V.
**Polyakova, G. A.** See Pankova, N. A.
**Polyanetskaya, S. V.** See Novitskaya, G. N.
**Polyanskaya, T. A.** See Bystrov, S. D.
**Polyanskii, M. N.** See Grilikhes, S. F.
**Polyanskii, M. P.** See Kozakov, A. T.
**Polyba, A. N.** See Alybakova, A. A.
**Polyba, A. N.; Alybakova, A. A.; Gubanova, V. A.**
Luminescence of $Tl^+$ ions in an NaF:Tl crystal under pulsed excitation.—73-08907
**Polzonetti, G.** See Passamonti, M. R.
**Pomar, A.** See Cabeza, O.
**Pommier, C.; Chhor, K.; Bocquet, J. F.**
Elaboration of ceramic materials and supercritical fluids.—73-13040
**Pomonis, Philip J.** See Skaribas, Stellos P.
**Pompa, F.** See Porta, P.
**Pompe, W.; Gong, X.; Suo, Z.; Speck, J. S.**
Elastic energy release due to domain formation in the strained epitaxy of ferroelectric and ferroelastic films.—73-11567
**Pompe, Wolfgang E.**
Thermal shock behavior of ceramic materials—modeling and measurement.—73-05664
**Pomrenke, Gernot S.** See Colon, Jose E.; Elsaesser, David W.; Lozykowski, H. J.
**Ponader, Carl W.** See Dickinson, James E.
**Ponahlo, Johann** See Gutzov, Stoyan
**Ponce, F. A.** See Hetherington, C. J. D.
**Pond, Jeffrey M.** See Culbertson, James C.
**Pond, K.** See Bressler-Hill, V.
**Pond, K.; Ibbetson, J.; Maboudian, R.; Bressler-Hill, V.; Weinberg, W. H.; Mishra, W. K.**
Scanning tunneling microscopy study of [LT] low-temperature grown GaAs.—73-17195
**Pond, K.; Maboudian, R.; Bressler-Hill, V.; Leonard, D.; Wang, X. S.; Self, K.**
Scanning tunneling microscopy of flat and vicinal molecular beam epitaxy grown GaAs(001)-(2×4) surfaces: the effect of growth rate.—73-11432
**Ponec, V.** See Fu, W. T.
**Ponomarenko, A. Ya.; Pekhen'ko, S. I.**
Set of standardized units for mechanism control systems.—73-01929
**Ponomarenko, V. A.** See Golovko, E. I.
**Ponomarev, M. A.; Shteinberg, A. S.**
Periodical character of the density sample weight dependence at pressing thin layers of powders.—73-16897
**Ponomarev, V. B.**
Cupola furnace complex for mineral wool production.—73-01946
**Ponomarev, V. I.** See Bubnova, R. S.
**Ponraj, R.** See Annamalai, V. E.
**Ponraj, R.; Annamalai, V. E.; Iyer, S. Ramakrishna; Gokularathnam, C. V.; Krishnamurthy, R.**
Mechanical properties of low-temperature sintered ceria-stabilized tetragonal zirconia polycrustals: III, Thermal shock resistance.—73-13564
**Ponraj, R.; Annamalai, V. E.; Ramakrishna, S.**
Mechanical properties of low-tempeature-sintered Ce-TZP: I, Bending strength and Weibull modulus.—73-03335
**Ponraj, R.; Iyer, S. Ramakrishna**
Simple preparation method to determine fracture toughness using the single edge notched beam [SENB] technique for porcelain ceramics.—73-09669
**Ponthieu, Eric; Grimblot, Jean; Elaloui, Elimame; Pajonk, G. M.**
Synthesis and characterization of pure and yttrium-containing alumina aerogels.—73-06079
**Ponthieu, Eric; Payen, E.; Grimblot, Jean**
Ultrafine alumina powders via a sol-emulsion-gel method.—73-13329
**Ponton, C. B.** See Berry, Frank J.; Brownie, P. M.; Conder, R. J.; Illston, T. J.; Pearce, D. H.; Wang, J.
**Ponyatovskii, E. G.** See Bashkin, I. O.
**Ponzoni, C.** See Petruzzello, J.
**Pool, Christopher A.** See Arnold, Philip J., III
**Pool, F. S.** See Chen, J. S.
**Poole, I.** See Peaker, A. R.
**Poole, Richard R.** See America, William G.
**Poole, Toy S.** See Richter, Rudolf E.
**Poon, H.-C.** See Feng, Y.-P.
**Poon, Stephen S.** See Gelatos, Avgerinos V.
**Poorman, R. M.** See McKechnie, T. N.
**Poothra, J. I.** See Pinto, R.
**Pop, V.** See Burzo, E.
**Popa, J. M.** See Lauron-Pernot, H.
**Popa, Jean-Michel** See Faust, Anne C.
**Popa, S.** See Aldica, G.
**Pope, Christopher G.**
Adsorption of methanol and related molecules on zeolite HZSM-5 and silicalite.—73-12534
**Popenko, N. A.** See Vertii, A. A.
**Popescu, C.**
Specific features of copper and nickel oxides obtained under extreme conditions by $CO_2$ laser irradiation of inorganic salts.—73-13448
**Popescu, M.** See Dionne, S.; Mihailescu, I. N.; Pavel, E.
**Popescu, Veronica** See Sapturu, Nicolae
**Popik, Yu. V.; Zhikharev, V. N.; Seikovskii, I. D.**
Photopolarization effects in $Sn_2P_2Se_6$ single crystals.—73-16566
**Poplavko, Yu. M.** See Pereverzeva, L. P.
**Poplavko, Yu. M.; Pereverzeva, L. P.**
Artificial pyroelectricity in gallium arsenide.—73-04539
**Popolitov, V. I.; Telegenov, A. A.; Bondareva, O. S.**
Growth of tellurium oxychalcogenide single crystals.—73-16163
**Popolitov, V. I.**
Synthesis and physical properties of antimonides of $Me_3Sb_5O_{12}$ group (Me=In, Sc, La, Pr, Tb, Yb).—73-17022
**Popoola, Oludele O.** See Gulgun, Mehmet A.
**Popov, A. A.** See Bogoslovskaya, A. B.
**Popov, A. I.** See Goryunov, A. V.; Kopelev, N. S.
**Popov, A. N.** See Maksimov, B. A.
**Popov, A. V.** See Roginskaya, Yu. E.
**Popov, A.; Yakimova, R.**
Temperature formation of structural defects in the interface of GaAs Schottky barrier.—73-11478
**Popov, D. M.**
Change of mass and composition in transformation processes.—73-16047
**Popov, Dimitar** See Atanassov, George
**Popov, E. B.** See Gasik, M. M.
**Popov, O. A.** See Barbour, J. C.; Shapoval, S. Y.
**Popov, O. N.** See Kolomeitsev, V. V.
**Popov, O. N.; Frolova, V. P.; Kirilenko, V. I.**
Chrome-corundum refractory in the packing for a glass furnace regenerator.—73-00787
**Popov, O. N.; Kolomeytseva, E.**
New high-resistant fused cast refractories for glass-melting furnaces.—73-14606
**Popov, O. N.; Varshal, B. G.**
Corrosion of fusion-cast alumina refractories by silicate melts.—73-03996
**Popov, O. N.**
High-resistant fused cast refractories for glass-melting furnaces: development and optimal application.—73-00819
**Popov, P. A.** See Ivanov, S. N.; Sirota, N. N.
**Popov, P. A.; Sirota, N. N.; Zharikov, E. V.; Zagumennyi, A. I.; Luts, G. B.**
Thermal conductivity of gadolinium-scandium-aluminum garnets codoped by chromium.—73-16620
**Popov, S. M.** See Kulikova, O. V.
**Popov, S. N.** See Isakov, S. L.
**Popov, V. A.; Pal'chun, T. A.; Kurbatova, L. A.; Krukhmaleva, A. V.; Kuznetsova, N. M.; Churlyaeva, L. S.**
Controlling the composition of the heat-insulating mixtures used for teeming steels.—73-00792
**Popov, V. L.**
Efficient modifier for concretes.—73-03462
**Popov, V. P.** See Kachurin, G. A.; Talipov, N. Kh.; Tikhonov, V. B.
**Popov, V. P.**
Thermochemical evaluation of electron transport in metal oxides.—73-17103
**Popova, L. I.** See Atanassov, E. D.
**Popova, M. N.** See Hadjiiskii, Yu. A.
**Popova, N. A.** See Lukin, E. S.
**Popova, S. V.** See Brazhkin, V. V.
**Popova, T. B.** See Averkieva, G. K.; Petrukhnovskaya, N. B.
**Popovic, N.** See Gredic, T.
**Popovic, S.** See Moritz, H.; Music, S.
**Popovic, Z. V.** See Gajic, R.
**Popovkin, B. A.** See Shevelkov, A. V.
**Popp, Peter** See Stosser, R.; Unger, Brita
**Poppe, G. P. M.** See Wijers, C. M. J.
**Poppe, U.** See Copetti, C. A.; Prieto, P.
**Poppi, Mauro**
Inertizing—beyond double and single firing.—73-15731
**Por, P. T.** See Van der Zaag, P. J.
**Porai-Koshits, E. A.** See Golubkov, V. V.
**Porai-Koshits, E. A.**
Short- and medium-range order in the structure of glass.—73-14081; Structure of glass: problems and prospects.—73-14110
**Porcher, P.** See Baran, E. J.
**Poret, J. C.; Lindgren, E.; Rosen, M.; Suter, J. J.; Rifkind, J. M.**
Laser-generated ultrasonic characterization of irradiated glass optical fibers.—73-06934
**Porev, V. A.**
Method and instrument for remote temperature control.—73-08411
**Porkolab, G. A.; Wolf, E. D.**
Etch masks of semimetallic amorphous carbon thin films produced by electron-beam sublimation of graphitic carbon.—73-07510
**Porod, Wolfgang** See Harbury, Henry K.
**Poroikov, S. Yu.** See Levshin, N. L.
**Porotnikov, N. V.** See Godzhieva, O. V.; Murashov, V. V.
**Porshin, Yu. M.** See Privalikhin, G. K.
**Porta, P.; De Rossi, Sergio; Ferraris, Giovanni; Pompa, F.**
Characterization of copper-zinc mixed oxide system in relation to different precursor structures and morphology.—73-02160
**Porta, P.; Minelli, G.; Botto, I. L.; Baran, E. J.**
Structural, magnetic, and optical investigation of $Ni_6MnO_8$.—73-02691
**Portal, J. C.** See Pinkse, P. W. H.
**Porte, A.** See Soukiassian, P.
**Porte, B.** See Barriere, A. S.
**Portelles, J.; Gonzalez, I.; Kiriev, A.; Calderon, F.; Garcia, S.; Calzada, N.**
Influence of $La_2O_3$ additions on the dielectric properties of the ceramic $Sr_{0.3}Ba_{0.7}Nb_2O_6$.—73-16518
**Porter, C. D.** See Romero, D. B.
**Porter, James W.** See Riley, Thomas J.
**Porter, John R.** See Gu, Wei-Zhong
**Porter, John R.**
Reinforcements for ceramic matrix composites for elevated-temperature applications.—73-09662
**Porter, Lisa S.** See Glass, Robert C.
**Porter, Wallace D.** See Cozzi, A. D.; Lara-Curzio, Edgar; Park, Dong-Gon
**Portier, J.** See Campet, G.; Khatir, S.; Rossignol, S.
**Portier, R.** See Kahn-Harari, A.
**Portnova, A. I.; Bulakh, V. I.; Rud, R. F.**
Thermal shock resistance of silica brick for a coke oven by the panel method.—73-10773
**Portnova, S. M.** See Ostroushko, A. A.
**Portnyagin, A. S.** See Starodubtsev, V. A.
**Portnyagin, A. S.; Mil'man, I. I.; Kortov, V. S.**
Onsager effect in luminescence of $Al_2O_3$ crystals: II, Radiative annihilation of autolocalized excitons.—73-16551
**Porto Lopez, J. M.** See Galliano, Pablo G.; Scian, Alberto N.
**Porzhetskii, S. A.** See Grilikhes, S. F.
**Posadowski, W. M.**
Discharge density increase for high-rate magnetron sputtering.—73-05744
**Poshevneva, A. I.** See Goryushkin, V. F.
**Posney, Richard V.** See Claassen, George R.
**Pospisilova, M.** See Lezal, Dimitrij; Sedlar, Miroslav
**Pospisilova, M.; Vesely, Jaroslav; Sasek, L.**
Trichromatic coordinates determination of trace coloration in crystal glasses.—73-14302
**Posse, E. A.** See Gol'dberg, Yu. A.
**Possemiers, K.** See Gillis-D'Hamers, Iwan
**Post, E.; Winkler, S.**
Thermal analysis for characterization of ceramic materials.—73-12204
**Poste, S. D.** See Park, Eugene S.; Raghavan, Narashima S.
**Posternak, M.** See Resta, R.
**Posthill, J. B.** See Sharps, P. R.
**Posvyanskii, D. V.** See Ignat'ev, A. S.
**Potalitsyn, M. G.** See Livshits, V. Ya.
**Potapenko, A. N.** See Kazikaev, D. M.
**Potapov, A. I.** See Brudnyi, V. N.
**Potapova, Yu. B.** See Aleksandrov, V. V.
**Potekhina, L. V.** See Drozhzhina, T. V.
**Potel, M.** See Saint-Paul, M.
**Potemski, R.** See Kuech, T. F.
**Pothuis, Janneco H.** See Harjula, Risto
**Potseluiko, M. N.** See Zadiraka, Yu. V.
**Potter, Michael J.; Rogers, William R.**
Feldspar.—73-12271
**Potter, Michael J.**
Vermiculite.—73-12305
**Potter, Timothy J.** See Wu, Ching-Hsong
**Pottgen, Rainer** See Kaczorowski, Dariusz; Zeppenfeld, K.
**Pottgen, Rainer; Kaczorowski, Dariusz; Jeitschko, W.**
Crystal structure, magnetic susceptibility, and electrical conductivity of the uranium silicide carbides, $U_3Si_2C_2$ and $U_{20}Si_{16}C_3$.—73-05377
**Pou, J.** See Fernandez, D.; Gonzalez, P.
**Pouchard, M.** See Cocciantelli, J. M.
**Pouget, Francois**
Sprayed ceramic fiber substrates. Reinforcing and anchoring linings with refractive textiles.—73-00867
**Pougnet, A. M.** See Azoulay, R.
**Poulain, M.** See Bobe, J. M.; Deol, R. S.; Kahnt, H.; Lebullenger, R.; Messaddeq, Y.; Soufiane, A.
**Poulain, Marcel** See Poulain, Michel
**Poulain, Marcel; Poulain, Michel; Messaddeq, Y.; Soufiane, A.**
Fluoroindate glasses for active and passive fibers.—73-14382
**Poulain, Michel** See Poulain, Marcel
**Poulain, Michel; Poulain, Marcel**
Cadmium-containing fluoride glasses.—73-06886
**Poulsen, Ove** See Shi, Yuan
**Pourcin, J.** See Lalande, F.
**Pourroy, G.; Angelov, S.**
ESR study of CuO-doped cordierite.—73-05793
**Pouskouleli, G.** See Douglas, E.
**Pouskouleli, G.; Wheat, T. A.**
Advanced ceramics: international trends.—73-03377
**Povitkov, G. F.** See Solinov, V. F.
**Povitkov, G. P.** See Solinov, V. F.
**Powell, A. K.** See Fish, D. A.; Jeffrey, P. M.
**Powell, A. R.** See Grutzmacher, D. A.
**Powell, A. R.; Eberl, K.; LeGoues, B. A.; Ek, B. A.; Iyer, S. S.**
Stability of strained $Si_{1-y}C_y$ random alloy layers.—73-13449
**Powell, A. V.** See Chippindale, A. M.; Dickens, P. G.
**Powell, Anthony J.**
Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers.—73-02128
**Powell, K. L.; Yeomans, J. A.; Smith, P. A.**
Aspects of residual thermal stresses in continuous-fiber-reinforced ceramic matrix composites.—73-08810; Characterization of subsurface damage in ceramic matrix composites by confocal scanning laser microscopy.—73-03125; Indentation behavior of continuous fiber-reinforced ceramic matrix composites.—73-00502

**Powell, Quint** See Chandler, Clive D.
**Powell, R. C.** See Foldvari, Istvan
**Powell-Dogan, Cynthia A.; Heuer, Arthur H.; O'Bryan, Henry M.**
Devitrification of the grain boundary glassy phase in a high-alumina ceramic substrate.—73-17122
**Powers, Dale R.** See Bennett, Randy L.
**Powers, Lynn M.** See Nemeth, Noel N.
**Powley, Mark L.** See Aitken, Bruce G.
**Powroznik, Augustyn** See Chlopek, Jan
**Pozdeev, Y. L.** See Boiko, B. T.
**Pozigun, S. A.** See Gorbenko, O. Yu
**Pozina, G. R.** See Starukhin, A. N.
**Pozina, G. R.; Kavokin, A. V.; Kochereshko, V. P.; Uraltsev, I. N.; Yakovlev, D. R.; Landwehr, G.**
Oscillator strength study of the 2-D–3-D exciton transition in CdTe/(Cd,Mn)Te quantum wells and superlattices.—73-08942
**Pozzi, Paolo** See Andreola, Fernanda; Corradi, Anna Bonamartini
**Prabakar, S.; Rao, K. J.**
Local structures in $Na_xNb(PO_4)_3$ glass and crystal: $^{31}P$ MAS NMR studies.—73-03159
**Prabha, Singh S.** See Singh, N. B.
**Prabhakaran, D.** See Augustin, C. O.
**Prabhu, Ashok N.** See Cherukuri, Stayam C.
**Prabhu, Ashok N.**
Method of minimizing lateral shrinkage in a cofired, ceramic-on-metal circuit board.—73-11035
**Pradeep, B.** See John, K. Jacob
**Pradel, A.** See Granier, W.; Roblin-Semene, L.
**Pradhan, A. K.** See Kumar, Shailendra
**Pradhan, A. K.; Hazell, S. J.; Hodby, J. W.; Chen, C.; Chowdhury, A. J. S.; Wanklyn, B. M.**
Negative magnetoresistance in single-crystal $Y_{1-x}Pr_xBa_2Cu_3O_{7-y}$.—73-15563
**Pradhan, A. K.; Hazell, S. J.; Hodby, J. W.; Chen, C.; Hu, Y.; Wanklyn, B. M.**
Magnetoresistance and $H_{c2}$ in single-crystal $Y_{1-x}Pr_xBa_2Cu_3O_{7-y}$.—73-04766
**Pradhan, A. K.; Hazell, S. J.; Hodby, J. W.; Chen, C.; Wanklyn, B. M.**
Lorentz-force-independent dissipation and vortex glass phase in single-crystal $Bi_2Sr_2Ca_1Cu_2O_x$.—73-11816
**Pradip; Kulkarni, R. A.; Gundiah, S.; Moudgil, Brij M.**
Selective flocculation of kaolinite from mixtures with tribasic calcium phosphate [TCP] using hydrolyzed polyacrylamides.—73-01995
**Pradip; Moudgil, Brij M.**
Selective flocculation of tribasic calcium phosphate [TCP] from mixtures with quartz using polyacrylic acid [PAA] flocculant.—73-01996
**Prado, F.** See Caneiro, A.
**Pragasam, R.** See Raju, K. C. James
**Prakash, C.** See Baijal, J. S.
**Prakash, Om** See Bissinger, Melinda; Sarkar, Partho
**Prakash, Ram; Ahluwalia, S. C.; Katyal, N. K.**
Role of manganese on the kinetics of formation and hydration of $C_3S$ phase.—73-10142
**Prakash, S.** See Cha, Y. H. C.
**Pramanik, P.** See Saha, S. K.
**Pramila, C.; Goel, T. C.; Pillai, P. K. C.**
Piezoelectric, pyroelectric, and dielectric properties of La- and Sm-doped PZT ceramics.—73-15282
**Prandl, W.** See Schiebel, P.
**Pranevichius, P.** See Galdikas, A.
**Prasad, C. D.** See Singh, A. P.
**Prasad, C. S.** See Naseem, H. A.
**Prasad, Chandrika** See Perfecto, Eric
**Prasad, K.; Sati, R.; Choudhary, S. N.; Choudhary, R. N. P.; Yadav, K. L.**
$(Pb,Ca)[(Mn_{0.5}W_{0.5})\ Ti]O_3$ ceramics: X-ray and dielectric studies.—73-08946
**Prasad, Keshav** See Perfecto, Eric
**Prasad, M. V. N.; Asokan, S.; Parthasarathy, G.; Titus, S. S. K.; Gopal, E. S. R.**
Electrical resistivity studies of Ge-Se glasses at high pressures and low temperatures.—73-10437
**Prasad, Ram** See Kumar, Shailendra; Ramanathan, S.
**Prasad, Rarna N.** See He, Guang-S.
**Prasad, S. E.** See Ahmad, A.; Sherrit, Stewart; Varma, S.
**Prasad, S. V.; Mecklenburg, K. R.**
Friction behavior of ceramic fiber-reinforced aluminum metal-matrix composites against a 440C steel counterface.—73-03591
**Prasad, V.** See Fang, C. C.
**Prasolov, B. N.** See El'chaninova, S. D.
**Prassas, Michel** See Borrelli, Nicholas F.; Grateau, Luc; Leture, Phillipe J. A. M.
**Prater, C. B.** See Tan, I.-H.
**Prater, C. B.; Hansma, Paul K.; Tan, I.-H.; Lishan, D. G.; Hu, E. L.**
Detection of residual photoresist with the atomic force microscope.—73-08388
**Pratko, M. J.** See Chaney, J. H.
**Pratsinis, Sotiris E.** See Fotou, George P.
**Prave, G. G.** See Antonov, E. V.
**Pravina, H. A.** See Batalin, B. S.
**Pravina, N. A.** See Batalin, B. S.
**Prawer, Steven** See McCulloch, D.; Weiser, Paul S.
**Prawer, Steven; Hoffman, Alon; Petravic, M.**
Conductivity in insulators due to implantation of conducting species.—73-00942
**Predtechensky, M. R.**
Laser deposition of HTSC films: expansion of the laser plasma, deposition of particles, formation of the crystal structure, and superconducting properties of films.—73-04753
**Preis, M.** See Feldman, J.
**Preisler, Eberhard** See Bock, Joachim
**Preisler, Eberhard; Bock, Joachim; Holzem, Johannes; Horst, Werner**
Method for joining parts of ceramic high-temperature superconductor material.—73-01712
**Preisler, Eberhard; Bock, Joachim**
Process for producing molded bodies from precursors of high-temperature superconductors.—73-15693; Process for producing molded bodies from precursors of oxidic high-temperature superconductors.—73-04869
**Preisser, Friedrich**
Process for applying nitride layers to titanium.—73-10339
**Premachandran, R. S.** See Hackley, V. A.
**Premkumar, M. K.** See Koczak, Michael J.
**Prengel, H.-G.** See Knotek, Otto
**Prescher, Erwin** See Kampfer, Kersten
**Presniakov, I. A.** See Demazeau, Gerard
**Pressel, Klaus** See Dornen, Achim; Scholz, Ferdinand
**Prester, M.** See Kusevic, I.
**Preston, Barry W.; Kosin, John A.; Andrews, Claude R.**
Method for the manufacture of hydrotalcite.—73-05227
**Preston, J. S.** See Kakasaki, B. W.
**Preto, P.** See Soriano, L.
**Pretorius, R.; Marais, T. K.; Theron, C. C.**
Thin-film compound phase formation sequence: an effective heat of formation model.—73-16381
**Prew, R.**
Right display in the right place.—73-01829
**Prewo, Karl M.** See Tredway, William K.
**Pribat, D.** See Agius, B.
**Price, B. J.** See Brady, M. A.
**Price, G. D.** See Gillet, P.; Nada, R.; Padlewski, S.
**Price, Robert J.** See Bentson, Larry D.
**Price, Stephen** See Schoolar, Richard
**Prielipp, Helge** See Janssen, Rolf; Schon, Stefan
**Priester, C.** See Foulon, Y.
**Priestnall, M.** See Curtis, C. L.
**Prieto, C.; Zaldo, C.**
Determination of the lattice site of Fe in photorefractive $LiNbO_3$.—73-05381
**Prieto, P.; Chacon, M.; Gomez, M. E.; Moran, O.; Oyola, D.**
Superconducting properties of $HoBa_2Cu_3O_7/SrTiO_3/HoBa_2Cu_3O_7$ heterostructures.—73-01676
**Prieto, P.; Gomez, M. E.; Castro, L. F.; Soltner, H.; Poppe, U.; Sybertz, W.**
In situ growth of superconducting Bi-Sr-Ca-Cu-O thin films by a high-pressure sputtering process.—73-01573
**Prietsch, M.** See Bauer, A.; Ludeke, R.
**Prieur, C.**
Reduction of pollutant wastes in the environment of ceramic works.—73-13642
**Prikhod'ko, G. P.** See Voronin, B. M.
**Prikhod'ko, O. Yu.** See Sarsembinov, Sh. Sh.
**Primachenko, V. E.** See Kirilova, S. I.
**Primachenko, V. V.** See Ustichenko, V. A.
**Primdahl Iversen, Ivar; Henriksen, Hans J.**
Method of manufacturing a superconductive cable.—73-15687
**Prince, William; Perami, Rene; Grezes-Besset, Raoul**
Role of sodium hydroxide in the reaction between alkalis and aluminum-silicate-containing granulates.—73-02424
**Prince, William; Perami, Rene**
Determination of the essential role of $OH^-$ ions in alkali-silica reaction.—73-13703; Influence of lime on the reaction between alkalis and aluminosilicate aggregates.—73-00116
**Prints, V. Ya.** See Malt'sev, S. V.
**Prinzbach, Joseph M.** See Mroz, Thomas J.
**Priolo, F.** See Coffa, S.
**Prisenko, S. V.** See Gamants, E. M.
**Prishchepa, S. L.** See Lyn'kov, L. M.
**Prisyazhny, V. D.; Gufan, Yu. M.; Grankina, A. I.; Moshchenko, I. N.; Snezhkov, V. I.**
Crystallochemical analysis of superionic state in copper and silver halogenides.—73-16101
**Prisyazhnyuk, B. L.**
Reagent-less processing of stagnant water containing fluorine.—73-09742
**Pritchard, Timothy N.** See Jones, Stephen D.
**Prits, I. P.** See Vysochanskii, Yu. M.
**Privalikhin, G. K.; Porshin, Ya. M.**
Method of operative control by drying asbestos ore in shaft furnaces.—73-01798
**Privalova, N. G.** See Pitak, N. V.
**Priven, A. I.** See Startsev, Yu. K.
**Procaccini, Vincent N.** See Flaugher, Jeffrey R.
**Prochazka, I.** See Stankov, K. A.
**Prochukhan, V. D.** See Averkieva, G. K.; Magomedov, M. A.
**Proctor, M.** See Bi, J. Q.; Taguchi, I.
**Prodan, A. M.** See Borisovskii, K. E.
**Proetto, C. R.** See Reboredo, P. A.
**Profilo, B.** See Passamonti, M. R.
**Progler, C.** See Fuentes, Ricardo I.
**Prokhorov, A. M.** See Asatryan, G. R.; Bagratashvili, V. N.; Dianov, E. M.
**Prokhorov, A. S.** See Mukhin, A. A.
**Prokhorov, E. F.** See Gorev, N. B.
**Prokhorov, I. Yu.; Akimov, G. Ya.; Makievskii, A. V.**
Crack interaction with dislocation ensembles of various types.—73-17260
**Prokhorova, T. I.; Ostrogina, O. M.; Romanova, E. G.**
New material—quartz light-diffusing glass.—73-00671
**Prokhorovich, A. V.** See Glinchuk, K. D.; Gorodnichenko, O. K.; Vinnik, E. V.
**Prokof'ev, A. V.** See Dabizha, A. A.; Venger, E. F.
**Prokofeva, L. V.** See Alekseeva, G. T.
**Prokofiev, V. V.** See Kamshilin, Alexei A.
**Prokopenko, V. K.** See Troyanchuk, I. O.
**Prokopovich, I. E.; Kobrinets, V. M.; Polovets, V. I.**
Influence of regime of application of compressive load on long-term resistance of concrete.—73-00122
**Prokopovich, I. E.; Kobrinets, V. M.; Tvardovskii, I. A.**
Choice of coefficients of service conditions of heavy concrete $\gamma_{B2}$ considering all loadings.—73-00038
**Prokopski, G.**
Effect of coarse aggregate quantity on fracture toughness of concrete.—73-13706
**Prokudin, V. Yu.** See Frolova, L. S.
**Pronin, I. I.** See Gornoyunova, M. V.
**Pronkin, A. A.; Kogan, V. E.; Bakuradze, G. V.**
Electrical conductivity of glasses of the system $2PbO\text{-}SiO_2\text{-}Pb(Hal^-, Hal^-)_2$.—73-00473; 73-00474; Electrical conductivity of glasses of the systems $2PbO\text{-}SiO_2\text{-}PbHal_2$ (Hal=Cl, Br, I).—73-00475; 73-00476
**Pronkin, A. A.; Naraev, V. N.; Tsoi, Tong-Bin; Eliseev, S. Yu.**
Electrical conductivity of sodium borate glasses containing fluorine and chlorine.—73-14172
**Pronkin, A. A.; Shakhparonova, T. S.; Kogan, V. E.**
Evaluation of the coordination state of $Mn^{2+}$ ions in glasses of the system $(Na, K)_2O\text{-}MnO\text{-}SiO_2$ according to the absorption spectra in the region 2–5 micrometers.—73-00338; 73-00966
**Proscia, James W.** See Winter, Charles H.
**Proscia, James W.; Gordon, Roy G.**
Properties of fluorine-doped tin oxide films produced by atmospheric pressure chemical vapor deposition from tetramethyltin, bromotrifluoromethane, and oxygen.—73-16577
**Proshin, V. I.** See Mel'nik, R. B.; Nemov, S. A.
**Prosolovich, V. S.** See Borschensky, V. V.
**Prosser, A. G.** See Becker, P. C.
**Prosser, W. H.** See Bakuckas, J. G., Jr.
**Prosser, W. H.; Kriz, Ronald D.; Fitting, Dale W.**
Monitoring loads in fiber-reinforced composite materials.—73-12168
**Prouhet, Stephane** See Dugne, O.
**Prouhet, Stephane; Camus, Gerald; Labrugere, Christine; Guette, Alain; Martin, Eric**
Mechanical characterization of Si-C(O) fiber/SiC (CVI) matrix composites with a BN interphase.—73-06478
**Prouzet, E.** See Bestaoui, N.; Ouvrard, G.
**Provencher, R.** See Ouellet, R.
**Proverbio, Edoardo; Yasuoka, Masaki; Hirao, Kiyoshi; Kanzaki, Shuzo**
Microstructure development during sintering in polycrystalline $MgO\text{·}1.5Al_2O_3$ spinel.—73-06256; 73-17166
**Provot, X.; Burlet, H.; Vardavoulias, M.; Jeandin, M.; Richard, C.; Lu, J.**
Comparative studies of microstructures, residual stress distributions, and wear properties for HVOF [high-velocity oxy-fuel] and APS [air-plasma-sprayed] WC-Co coatings of Ti6Al4V.—73-06756
**Prozorovskii, V. D.; Reshidova, I. Yu.; Paranchich, S. Yu.; Paranchich, L. D.**
Band parameters of $Hg_{1-x-y}Cd_xMn_yTe$.—73-14781
**Pruett, Robert J.; Webb, Harold L.**
Sampling and analysis of KGa-1B well-crystallized kaolin source clay.—73-12678
**Pruna, Philip M.** See Brodeur, Russell P.
**Pruntsev, A. P.** See Dem'yanets, L. N.
**Prusov, V. A.** See Makerov, A. V.
**Pryadun, V. V.** See Aliev, F. G.
**Prybyla, S.** See Unal, Ozer
**Pryce, A. W.; Smith, P. A.**
Matrix cracking in unidirectional ceramic matrix composites under quasi-static and cyclic loading.—73-06473; Modeling the stress-strain behavior of unidirectional ceramic matrix composite laminates.—73-09653
**Pryor, C. E.** See Miller, M. S.
**Pryor, Roger W.**
Method for heteroepitaxial diamond film development.—73-02111
**Przhevuskii, A. K.** See Dymnikov, A. A.
**Przybilla, G.** See Hoffmann, H. J.
**Pshenitsyn, V. I.** See Alekseev, S. A.
**Pshonkin, N. G.**
Evaluation of the empirical dependence of electric resistance of concrete mixtures on temperature.—73-13721
**Pu, Gen-Shun**
Replacement of transmission mechanism of green brick cutter.—73-12187
**Pu, Ji-Xiong** See Zhang, Wen-Zhen
**Pu, Jing-Long**
Comprehensive utilization of fly ash.—73-08496
**Puc, Gabe** See Wu, Feng-Qing
**Puchkov, A. V.** See Maksimov, A. A.
**Puchkov, L. V.** See Grebenyuk, A. M.
**Pudonin, F. A.** See Alieva, E. V.
**Pueng, C.-Y.** See Lee, C.-H.
**Puente, G. Contreras** See Aydinli, A.
**Puertas, F.** See Gimenez, S.
**Puertas, F.; Blanco Varela, M. T.; Dominguez, R.**
Hydration of $4CaO\text{·}Al_2O_3\text{·}Mn_2O_3$ in the absence and the presence of gypsum—a comparative study with the hydration of $4CaO\text{·}Al_2O_3\text{·}Fe_2O_3$.—73-03478
**Puertas, F.; Blanco, M. T.; Martinez, S.**
$Ca_2AlMnO_5$: studies about its characterization and hydration.—73-13684
**Pugh, J. Richard; Mao, Du-Li; Zhang, Ji-Guang; Heben, Michael J.; Nelson, Arthur J.; Frank, Arthur J.**
Metal:*p*-*n*-CdTe Schottky barrier solar cell: photoelectrochemical generation of a shallow *p*-type region in *n*-CdTe.—73-07670
**Pugnet, M.** See Gouaichault-Brugel, N.
**Puh, N.-W.** See Chang, Chi-Ching
**Puigdollers, J.** See Bertomeu, J.
**Pujar, Vijay V.; Cawley, James D.**
Microstructural evolution in whisker-reinforced SiC-SiC composites.—73-09478
**Pujara, M.** See Klemer, David P.
**Pujari, V. K.** See Corbin, N. D.; Foley, Michael R.
**Pukh, V. P.** See Baikova, L. G.
**Pukh, V. P.**
Strength and fracture of glass.—73-14281

**Pukinskas, G.** See Babonas, G.-J.; Dagys, R.
**Pulcinelli, S. H.** See Brito, G. E.
**Pulemetov, D. A.** See Peka, G. P.
**Pulker, H. K.** See Ofner, H.; Rille, E.
**Pulling, D. B.** See Blackstead, H. A.
**Pullockaran, Jose D.** See Krumpelt, Michael
**Pulsford, N. J.** See Kukushkin, I. V.
**Pultz, G. N.** See Tobin, S. P.
**Pulyaeva, I. V.** See Blank, A. B.
**Pulyaevskii, D. V.** See Vaipolin, A. A.
**Pun, E. Y. B.; Loi, K.-K.; Mak, C.-F.; Chung, P.-S.**
High-index proton-exchanged $MgO:LiNbO_3$ optical waveguides using adipic acid.—73-01417
**Punagin, V. N.; Godovannikov, A. M.; Dzhurinskii, G. M.; Geiderikh, V. P.**
Improvement of the thermal-humid treatment of heavy concretes.—73-13735
**Purand, J.** See Morgeneier, K.-D.
**Purandare, S. C.** See Pinto, R.
**Purans, J.** See Balerna, A.; Kuzmin, A.
**Purdy, Mark J.** See Bentson, Larry D.
**Puri, A.** See Kan'an, A. M.; Teoreanu, Ion
**Puri, Micky** See Bonvalot, Marceline; Shrivastava, Keshav N.
**Puri, R. K.; Mishra, V. D.**
$^{151}Eu$ Mossbauer study and role of Eu ions in $Eu_xY_{1-x}Ba_2Cu_3O_{7-y}$ high-$T_c$ superconductors.—73-08064
**Purica, M.** See Rusu, E.
**Puro, A.** See Aben, H.
**Purtov, Yu. N.** See Krasnov, A. N.
**Puscasu, N.; Hagiopol, M.**
Ceramic products for hydrogen sintering kilns.—73-03993
**Pushcharovskii, D. Yu.** See Chiragov, M. I.; Kalacheva, L. V.; Mikheeva, M. G.; Rastsvetaeva, R. K.; Yamnova, N. A.
**Pustovit, A. V.** See Levin, E. M.
**Pustyfnik, O. D.** See Vertii, A. A.
**Putilina, E. N.** See Pishch, I. V.
**Putlyaev, I. E.; Kurbatova, I. I.; Zhelvakova, N. S.**
Optimization of properties of lightweight concrete by polymer admixtures containing amine.—73-00156
**Puttlitz, K.** See Acocella, J.
**Putyatin, A. A.; Nesterenko, S. N.**
Model of $Sm_{11}Fe_{12}C_{18}$ crystal structure.—73-16219
**Putzky, G.** See Herrmann, M.
**Puyane, Ramon** See Cowman, Stephen P.
**Py, M. A.** See Moreira, M. V. B.
**Pyatak, Yu. A.** See Vlokh, R. O.
**Pyatko, S. N.** See Anikin, M. M.
**Pyatrauskas, M.** See Iodkazis, S.
**Pye, D.**
Trends and developments in vacuum furnace technology.—73-12205
**Pye, G. B.; Beaudoin, James J.**
Energy approach to bond strength determinations in cement systems.—73-09945
**Pye, L. D.** See Eaton, W. C.; Korwin, D. M.; Oksoy, Dolun
**Pye, L. D.; La Course, W. C.**
Sub-$T_g$ phenomena—73-14114
**Pyka, N.; Reichardt, W.; Pintschovious, L.; Engel, G.; Rossatmignod, J.; Henry, J. Y.**
Superconductivity-induced phonon softening in $YBa_2Cu_3O_7$ observed by inelastic neutron scattering.—73-15638
**Pylkkanen, K. P. K.** See Nieminen, P. J.
**Pyriya, M. N.** See Kul'bachinskii, V. V.
**Pyrkov, V. N.** See Kozyrev, S. P.
**Pyrkov, Y. N.** See Avrutskii, I. A.
**Pyriya, M. N.** See Kul'bachinskii, V. A.
**Pyshkin, Sergei L.; Anedda, Alberto**
Preparation and properties of gallium phosphide doped by rare-earth elements.—73-04450
**Pyshnaya, N. B.; Radautsan, S. I.; Chumak, V. A.; Chaldyshev, V. V.; Shmartsev, Y. V.**
Isovalent Ga and As impurity doping of InP grown by LPE.—73-07625
**Pyzalski, M. M.** See Wojcik, M. A.
**Pyzik, Aleksander J.; Beaman, Donald R.**
Microstructure and properties of self-reinforced silicon nitride.—73-03342
**Pyzik, Aleksander J.; Carroll, Daniel P.; Hwang, C. James**
Effect of glass chemistry on the microstructure and properties of self-reinforced silicon nitride.—73-06209
**Pyzik, Aleksander J.**
Boron carbide-aluminum cermets having microstructures tailored by a post-densification heat treatment.—73-10301; Cermet or ceramic/glass composites including self-reinforced ß-silicon nitride, and method of making [the] same.—73-05293
**Qadri, S. B.** See Pellegrino, J. G.
**Qadri, S. B.; Kim, C.; Skelton, Earl F.; Hahn, T.; Butler, J. E.**
Thermal expansion of chemical vapor deposition grown diamond films.—73-16628
**Qadri, S. B.; Skelton, Earl F.; Harford, M. Z.; Jones, R.; Lubitz, P.**
e-beam deposition of $In_2O_3$-stabilized $ZrO_2$ films.—73-02777
**Qadri, S. B.**
X-ray characterization of (Zn, Cd)Te/CdTe strained layer superlattices.—73-01366
**Qi, Chang-Hong** See Chen, Shu-Chun
**Qi, Gang** See Pantano, Carlo G.
**Qi, Gang; Spear, Karl E.; Pantano, Carlo G.**
Carbon-layer formation at silicon carbide-glass interface.—73-16043
**Qi, Guo-Yong** See Liu, Shen-Sheng
**Qi, J.** See Yeganeh, M. S.
**Qi, J.; Yeganeh, M. S.; Koltover, I.; Yodh, A. G.; Theis, W. M.**
Depletion-electric-field-induced changes in second harmonic generation from GaAs.—73-14830
**Qi, Long-Hao** See Miao, He-Zhuo
**Qi, S.-K.** See Zhang, Guo-Wei
**Qi, Zhao-Hui; Chen, Yue-Nan**
Two-dimensional simulation of glass flow and heat transfer in a glass-melting furnace after air bubbling.—73-03898
**Qian, F.** See Ding, M.-Q.
**Qian, Guang-Ren** See Huang, Wen-Xi; Yang, Yu-Rong
**Qian, J.-J.** See Hsu, C.-C.
**Qian, L. Q.** See Wessels, B. W.
**Qian, Lie-Jia** See Magni, Vittorio
**Qian, M.; Anthony, B.; Hsu, T.; Irby, J.; Kinosky, D.; Banerjee, S.**
Structural analysis of $Ge_xSi_{1-x}$/Si layers by remote plasma-enhanced chemical vapor deposition on Si(100).—73-15181
**Qian, Sheng-Wei** See Lin, Chen-Fu
**Qian, Shi-Xiong; Li, Yu-Fen; Peng, Wen-Ji**
Band-filling effect in quantum well with excitation of 532-nm picosecond laser.—73-11083
**Qian, Y.-T.** See Li, Ru-Kang
**Qian, Y.-T.; Niu, C.-M.; Hannigan, C.; Yang, S.; Dwight, K.; Wold, A.**
Preparation and characterization of iron(III) oxide films by a novel spray pyrolysis method.—73-02932
**Qian, Y.; Chen, L.-H.; Wang, Qi-Ming**
Optical characteristics of GaAs/AlGaAs ridge quantum well wires grown by MBE on nonplanar substrates.—73-15071
**Qian, Yi-Tai** See Chen, Xian-Hui; Wang, Shi-Wei; Wu, Wen-Bin
**Qian, Zheng-Hong; Xiao, Ding-Quan; Zhu, Jian-Guo; Li, Zi-Sheng; Zuo, Chang-Ming**
X-ray photoelectron spectroscopy and Auger electron spectroscopy studies of ferroelectric $(Pb,La)TiO_3$ thin films prepared by a multi-ion-beam reactive cosputtering technique.—73-07925
**Qiang, H.; Pollak, Fred H.; Sacks, R. N.**
Piezospectroscopy of a $GaAs/Ga_{0.73}Al_{0.27}As$ single quantum well structure: piezoelectric effects.—73-04566
**Qiang, Liang-Shen** See Li, Ming-Hua
**Qiao, Bing-Shen**
Development of high-alumina brick with good thermal shock resistance.—73-10718
**Qiao, G.-W.** See Chuang, Y.-C.
**Qin, C. D.; Derby, Brian**
Diffusion bonding of a nickel (chromium) alloy to zirconia: mechanical properties and interface microstructures.—73-06770
**Qin, C. D.; James, N. A.; Derby, Brian**
Palladium-zirconia diffusion bonds: mechanical properties and interface reactions.—73-13878
**Qin, Hu-Cun; Fu, Gang**
Approach to the optimum structure of tunnel kiln roof.—73-10701
**Qin, J.-H.** See Ren, D.-M.
**Qin, Jia-Liang; Taggart, David G.**
Microstructure-property relations in discontinuous SiC aluminum composites.—73-03621
**Qin, L. C.; Hobbs, L. W.**
Energy-filtered electron diffraction [ED] from silica thin films.—73-06217
**Qin, Qiao-Nan** See Wu, Wen-Bin
**Qin, Xiao-Ying** See Wu, Xi-Jun
**Qin, Yu-Wen** See Zhao, Ming-Jun
**Qin, Zhi-Feng** See Chen, Chen-Jia
**Qin, Zhi-Gang** See Fu, Zi-Cheng
**Qin, Zhi-Gang**
Study and application on high-quality cement clinker calcining with low heat consumption in shaft kiln.—73-10169
**Qing, Xing-Lin** See Sun, Qing-Ping
**Qiou, Ping** See Zeng, Wen-Sheng
**Qiu, C.; Kruzelecky, R. V.; Thompson, D. A.; Comedi, D.; Balcaitis, G.; Robinson, B. J.**
Strain-induced compositional shift in the growth of $InAs_xP_{1-x}$ onto (100)InP by gas-source MBE.—73-07814
**Qiu, Hong; Safran, Gyorgy; Pecz, Bela; Barna, P. B.; Kosuge, A.; Nakai, H.**
Structural and electrical properties of Ni films grown on Si(100) and $SiO_2$ by dc bias sputtering.—73-08970
**Qiu, Jian-Rong** See Osaka, Akiyoshi
**Qiu, Jing-He** See Chen, Xi-Kum
**Qiu, Li-Ling**
Effect of aging on properties of brickmaking raw materials: I.—73-10676; Effect of aging on properties of brickmaking raw materials: II.—73-10677
**Qiu, Tai** See Xu, Jie
**Qiu, Wen-Fa** See Li, Zhen-Hua
**Qu, Bao-Dong** See Wang, Ke-Ming; Wang, Yu-Guo
**Qu, Hai-Ming; Sun, Cheng-Xu; Shao, Ming-Shi**
Applying energy-saving technique of water in oil for the glass tank furnace.—73-05101
**Qu, Xuan-Hui** See Han, Chuan-Xi
**Qu, Y.; Gessert, T. A.; Ramanathan, K.; Dhere, R. G.; Noufi, R.; Coults, T. J.**
Electrical and optical properties of ion-beam-sputtered ZnO:Al films as a function of film thickness.—73-08849
**Qu, You-Yuan** See Tao, Ying
**Quan, M.-X.** See Shen, T.-D.
**Quan, W.** See Li, Rong-Sheng
**Quantsch, Klaus**
Gas phase synthesis of silicon nitride.—73-13067
**Quaranta, A.** See Gonella, F.
**Quaranta, Fabio** See Valentini, Antonio
**Quaranta, Fabio; Valentini, Antonio; Rizzi, Federica R.; Casamassima, Giuseppe**
Dual-ion-beam sputter deposition of ZnO films.—73-08836
**Quarles, Gregory J.** See Seltzer, Michael D.
**Quartieri, Simona** See Vezzalini, Giovanna
**Quarton, M.** See Tillement, O.
**Quattroni, G.** See Cioffi, Raffaelle
**Quemerais, A.** See Gota, S.
**Quemere, Eric** See Garcin, Eric
**Quenisset, J. M.** See Pluvinage, P.
**Quick, G. W.** See Shayan, A.
**Quill, K.; Stevenson, J. P.**
Electron microprobe techniques for in situ glaze analysis.—73-15794
**Quillec, M.** See Blez, Monique
**Quillin, K. C.; Duerden, S. L.; Majumdar, Amal J.**
Formation of zeolites in OPC [ordinary portland cement]-PFA [pulverized fly ash] mixes.—73-06658
**Quilty, J.; Trodahl, H. J.; Edgar, A.**
Raman spectroscopy of $BaRuO_3$.—73-05468
**Quinlan, Kenneth P.** See Park, Chin-Ho
**Quinn, Candace J.** See Aitken, Bruce G.; Beall, George H.
**Quinn, Candace J.; Beall, George H.; Dickinson, James E.**
Alkali zinc pyrophosphate glasses for polymer blends.—73-14317
**Quinn, George D.** See Braue, W.; Gettings, R. J.; Jahanmir, Said; Swab, Jeffrey J.; Tracy, Carl A.; Wiederhorn, Sheldon M.
**Quinn, George D.; Gettings, Robert J.; Kubler, Jakob J.**
Fracture toughness by the surface crack in flexure (SCF) method: results of the VAMAS round robin.—73-17333
**Quinn, George D.; Salem, Jonathan A.; Bar-On, Isa; Cho, Kyu; Foley, Michael R.; Fang, Ho T.**
Fracture toughness of advanced ceramics at room temperature.—73-17334
**Quinn, W. E.** See Aspnes, D. E.
**Quintal, J. Mario** See Johnston, Lisa E.
**Quintard, P.** See Baraton, Marie-Isabelle; Merle, Therese
**Quintero, M.** See Guerrero, E.; Tinoco, T.
**Quinto, Dennis T.** See Jindal, Prem C.
**Quist, P.** See Dam, H.
**Quitmann, D.** See Malinovskii, V. K.; Sokolov, A. P.
**Quon, D. H. H.; Wang, S. S. B.; Wheat, T. A.**
Hydrothermal synthesis of lead titanate.—73-11584
**Qvardford, M.** See Rogelet, T.
**Raatz, F.** See Caullet, P.
**Rabbe, L. M.** See Rieu, J.
**Rabe, James A.** See Deleeuw, David C.; Freeman, Harvey A.; Xu, You-Ren
**Rabe, Karin M.**
Theory and practice in the prediction of new materials.—73-09750
**Rabezzana, F.** See Chiara, R.
**Rabier, J.** See Audurier, V.
**Rabier, J.; Tall, P. D.; Denanot, M. F.**
Dissociation of dislocations in $YBa_2Cu_3O_{7-\delta}$.—73-04695
**Rabil, S.** See Codazzi, V.
**Rabin, B. H.** See Drake, J. T.; Williamson, R. L.
**Rabin, B. H.; Moore, G. A.**
Joining of SiC using reaction-bonding methods.—73-05884; Reaction processing and properties of SiC-to-SiC joints.—73-02989
**Rabin, B. H.; Williamson, R. L.; Heaps, R. J.; Erickson, A. W.**
Ni-$Al_2O_3$ gradient materials by powder metallurgy.—73-03629
**Rabinal, M. K.; Sangunni, K. S.; Gopal, E. S. R.; Subramanyan, S. V.**
Heat capacity measurements on $Ge_{20}Se_{80-x}Bi_x$ glasses.—73-14200
**Rabinovich, A. S.** See Kazakov, S. V.
**Rabinovich, A. S.; Kazakov, S. V.; Vanicheva, L. L.**
Optimization of the composition and properties of plastic shapes for producing silicon carbide refractories.—73-14607
**Rabinovich, Eliezer M.** See Bruce, Allan J.
**Rabinovich, Eliezer M.; Bruce, Allan J.; Kopylov, N. A.; Trevor, P. L.**
Multicomponent glasses from particulate gels.—73-07154
**Rabinowicz, E.** See Forrest, David
**Rabinowitz, P.** See Hatch, S. R.
**Rabson, Thomas A.** See Rost, Timothy A.
**Rabukhin, A. I.; Belousova, G. V.**
Elastic constants of bismuth-containing gallate glasses.—73-07022; Optical constants of bismuth gallate glasses.—73-07058; Photoelastic constants of bismuth-containing gallate glasses.—73-07063; Refraction and molar volume of bismuth-containing gallate glasses.—73-07069
**Racah, D.** See Barkay, Z.
**Racanelli, Marco** See Greve, D. W.
**Rachkov, V. S.** See Dzerzhinskii, R. V.; Timokhova, M. I.
**Rada, Miroslav** See Mika, Martin
**Radaev, S. F.** See Maksimov, B. A.
**Radaev, S. F.; Genkina, E. A.; Lomonov, V. A.; Maksimov, B. A.; Pisarevskii, Yu. V.; Chelokov, M. N.**
Deformation electron density map in $LiB_3O_5$.—73-02228
**Radaev, S. F.; Krivandina, E. A.; Muradyan, L. A.**
Neutron diffraction study of nonstoichiometric phase $La_{0.85}Sr_{0.15}F_{2.85}$.—73-02346
**Radaev, S. F.; Simonov, V. I.**
Structure of sillenites and atomic mechanisms of ismorphous substitutions in them.—73-16338
**Radantsev, V. F.** See Zav'yalov, V. V.
**Radautsan, S. I.** See Pyshnaya, N. B.; Tezlevan, V. E.
**Radautsan, S. I.; Tiginyanu, I. M.; Ursaki, V. V.;**
**Korshunov, F. P.; Sobolev, N. A.; Kudryavtseva, E. A.**
Influence of isochronous annealing upon the near-band-edge photoluminescence spectra of the electron-irradiated *n*-InP.—73-07596
**Radchenko, M. V.** See Lashkarev, G. V.
**Radcliffe, Paul**
Fossil plant $SO_2$ control: FGD [flue gas desulfurization] materials guidelines and software.—73-09716
**Radeeva, E. N.** See Baikova, L. G.
**Radelaar, S.** See Jongste, J. F.
**Rademakers, Franciscus M. A.** See Rutjes, Peter C. S.
**Radhakrishna, S.** See Arof, Abdul Kariem; Sarma, R. V. G. K.
**Radhakrishnan, J.** See El-Sherif, M. A.
**Radhakrishnan, K.** See Chowdari, B. V. R.; Yoon, Soon-Fatt; Zhang, D.-H.
**Radhakrishnan, R.** See Bhaduri, S. B.
**Radhakrishnan, R.; Bhaduri, S. B.**
Characterization of dense combustion-synthesized $Ti_5Si_3$.—73-05367

**Radke, C. J.** See Ginter, D. M.
**Radlein, Edda** See Schmidt-Zum Berge, Anke
**Radmacher, Stephen** See Dasgupta, Sankar
**Radnaasedlin, Sanjaasuren**
Formation of low-temperature portland cement clinker by using nontraditional aluminosilicate rock and mineralizer.—73-09969
**Radnakrishnan, P.** See Rajasree, K.
**Radnoczi, G.** See Hultman, L.
**Radousky, H. B.** See Bennahmias, M.
**Radu, D.** See Balta, P.
**Radugin, A. V.** See Podlesov, V. V.
**Radzewicz, Czeslaw; Pearson, Gary W.; Krasinski, Jerzy S.**
Use of ZnS as an additional highly nonlinear intercavity self-focusing element in a Ti:sapphire self-mode-locked laser.—73-15223
**Radzhab, D.** See Aguekian, V. F.
**Radzieciak, Radeusz** See Bednarska, Lilia
**Radzivilyuk, V. A.** See Peka, G. P.
**Rae, A. D.** See Withers, R. L.
**Rae, Alan; Steiger, Russ**
Green [environmentally conscious] ceramics manufacturing.—73-17485
**Raedlein, E.; Frischat, G. H.; Speit, Burkhard**
Paramagnetic centers in glasses and glass-ceramics induced by simulated space irradiation.—73-06951
**Raether, F.** See Heinrich, T.; Sporn, D.
**Raether, F.; Freund, T.**
XPS measurements on glass surfaces.—73-00429
**Raevskaya, E. I.; Artamonova, G. I.; Varshal, B. G.**
Composition optimization for thermally polished sheet glass.—73-00601
**Rafailovich, M. H.** See Sunil, D.
**Rafaja, David** See Perry, Anthony J.
**Rafalko, P. W.** See Belkind, A.
**Rafaniello, William** See Katz, R. N.; Ness, Eric A.
**Raffaelle, R. P.** See Golden, Teresa D.
**Raffaelle, R. P.; Golden, Teresa D.; Phillips, Richard J.**
Determination of modulation wavelengths in nanoscale electrodeposited superlattices using the scanning tunneling microscope.—73-06206
**Raffy, H.** See Labdi, S.
**Rafiq, M.** See Larbot, A.
**Rafla-Yuan, H.; Cordaro, J. F.**
Effects of aluminum doping upon color formation in zinc oxide powders.—73-13026
**Rafoss, Eivind** See Saasen, Arild
**Rager, H.; Moller, P.; Nofz, M.; Stosser, R.**
Incorporation of $Gd^{3+}$, $Eu^{3+}$, and $Eu^{2+}$ ions in anorthite and related glasses.—73-14005
**Ragey, J. P.** See Shi, Yuan
**Raghavan, G. S. V.** See Kudra, T.
**Raghavan, Narashima S.** See Gesing, Adam J.
**Raghavan, Narashima S.; Poste, S. D.; Pattemore, D.**
Preparation and sintering of aluminum nitride suitable for electronic substrate purposes.—73-07352
**Raghavan, Narasimha S.** See Nadkarni, S. K.
**Raghaven, S. Lakshmi; Schlenker, C.; Rao, G. V. S.**
Normal state and superconducting properties of $Bi_2Sr_2Ca_{1-x}Ho_xCu_2O_y$ compounds.—73-11847
**Raghunathan, N.** See Davies, C. H. J.
**Raghunathan, V. S.** See Kuppusami, P.
**Raghuraman, R.** See Sahoo, P.
**Raghuraman, R.; Yu, Nu; Engelmann, Reinhard; Lee, H.; Shieh, C. L.**
Spectral dependence of differential gain, mode shift, and linewidth enhancement factor in an InGaAs-GaAs strained-layer single-quantum-well laser operated under high-injection conditions.—73-15168
**Raghuraman, S.; Stubbins, J. F.; Ferber, Mattison K.; Wereszczak, A. A.**
Crack growth behavior of $SiC_f$/SiC composite at room and high temperatures.—73-17258
**Ragimova, N. A.** See Abutalybov, G. I.; Dzhafarova, S. Z.
**Ragoizha, G. E.** See Borovskii, E. S.
**Rahaman, M. N.** See Dutton, R. E.; Hu, Ching-Li; Jeng, D.-Y.; Yang, X.
**Raharinaivo, R.** See Hachani, Leila
**Rahat, Ido** See Shappir, Joseph
**Rahman, M. H.** See Dwivedi, B. P.
**Rahman, M.** See Goh, T.-N.
**Rahmani, Moulay Driss; Masri, Pierre**
Electronic properties of strained heterostructures.—73-07498; 73-14883
**Rahmann, Steven E.** See Stanton, Edward L.
**Rahmat, Azmi** See Khangaonkar, P. R.
**Rai, G.** See Yao, Xian
**Rai, G.; Yao, Xian**
Synthesis of polycrystalline cubic boron nitride.—73-05346
**Rai, G.**
Metallurgy of cBN and its wear in high-speed machining of ferrous materials.—73-05268
**Rai, Jaya; Mehrotra, R. C.**
Methanolysis and hydrolysis of magnesium aluminum bimetallic alkoxides.—73-02893
**Raibagkar, R. L.** See Bichile, G. K.
**Raieh, A. O.** See Szirtes, L.
**Raikhel, A. M.** See Dubovik, V. N.; Gomon, V. M.; Samkova, L. G.
**Raikhel, A. M.; Nepomnyashchii, O. A.; Ivchenko, L. G.**
Method for determining the peak temperatures for crystallization center formation and crystal growth rates in glass crystallization.—73-15817; Method of inspecting the structural defectiveness of pyrocerams.—73-01913
**Raikhel, A. M.; Nepomnyashchii, O. A.; Shvedun, V. G.; Ivchenko, L. G.**
Method of determining Poisson's coefficient in glasses and devitrified glass.—73-01911
**Raikhel, A. M.; Nepomnyashchii, O. A.**
Sample preparation technique for electron microscopic determination of the structure of glass-ceramics (exchange of experience).—73-08440
**Raimers, J. N.** See Gaulin, B. D.
**Raimond, J. M.** See Collot, L.
**Raina, K.** See Ahluwalia, S. C.
**Raina, K.; Bhargava, R.**
Effect of thermal treatment on the reactivity of clinker minerals produced from vertical shaft kiln.—73-09923
**Raina, S. J.; Agarwal, S.; Ali, M. M.**
Barium aluminate cement—its synthesis and formation kinetics.—73-13681
**Raina, U.; Beigh, S.; Bhat, S.; Kotru, P. N.; Wanklyn, B. M.**
Vickers hardness anisotropy in $RFeO_3$ (R=Yb, Dy) single crystals.—73-07981
**Rainer, A. M.** See Fugol, I. Ya.
**Rainey, Clifford S.**
Resistor composition.—73-11049
**Rainford, B. D.** See Alekseev, P. A.
**Rainforth, Mark**
Advanced characterization techniques.—73-05017
**Rainforth, W. M.; Stevens, R.**
Transmission electron microscopy study of wear of magnesia partially stabilized zirconia.—73-06300
**Rairden, John R., III** See Rumaner, Lee E.
**Raisanen, A.** See Chang, S.; Vitomirov, I. M.
**Raisanen, A.; Vitomirov, I. M.; Brillson, L. J.; Kirchner, P. D.; Pettit, G. D.; Woodall, J. M.**
Control of As diffusion using ultrathin metal passivating layers at GaAs(100) surfaces.—73-07423
**Raistrick, Ian D.** See Brosha, Eric L.; Liaw, Bor Yann
**Raivich, R. M.** See Valishev, R. Sh.
**Raj, D.** See Sharma, Meenu
**Raj, P.** See Dharani, L. R.
**Raj, Rishi** See Kennefick, C. M.; Lappalainen, R.
**Raj, Rishi**
Design of the interface phase for obtaining thermal shock resistance in silicon nitride.—73-05263; Model for interface reaction control in superplastic deformation of nonstoichiometric ceramics.—73-09652
**Rajagopal, H.** See Bhargava, S. C.; Saini, N. L.
**Rajagopal, H.; Sequeira, A.; Vir Yakhmi, Jatinder; Sastry, Pamidi V. P. S. S.; Iyer, Ranga Mahadeva**
Neutron structural studies of superconducting $Bi_2Sr_2CuO_{\infty-6}$ and $Bi_{2-x}Pb_xSr_{1.8}\text{-}La_{0.2}CuO_{6+\delta}$ (x=0 and 0.2).—73-15565
**Rajala, Markku; Siikamaki, Raiji**
Simulation of glass colors on a computer screen.—73-08444
**Rajan, K.** See Steiner, Bruce
**Rajaram, G.** See Kannan, N.
**Rajasekar, P.; Chakraborty, P.; Ray, N.; Dey, S. D.; Bandyopadhyay, S. K.; Barat, P.**
Bonding and valence states in $YBa_2Cu_3O_{7-x}$ through secondary ion mass spectrometry.—73-01496
**Rajasekaran, T.** See Ganesan, V.
**Rajasree, K.; Vadyalal, V.; Radnakrishnan, P.; Nampoori, V. P. N.; Vallabhan, C. P. G.**
Measurement of laser ablation threshold on doped BiSrCaCuO high-temperature superconductors by the pulsed photothermal deflection technique.—73-08130
**Rajavel, D.** See Giles, N. C.
**Rajavel, D.; Wagner, B. K.; Benz, R. G.; Conte, A.; Maruyama, K.; Summers, C. J.**
Gas source iodine doping and characterization of molecular beam epitaxially grown CdTe.—73-07544
**Rajavel, D.; Zinck, J. J.**
Growth kinetics and properties of heteroepitaxial (Cd,Zn)Te films prepared by metallorganic molecular beam epitaxy [MOMBE].—73-11228
**Rajbenbach, H.** See Huignard, J.-P.
**Rajczyk, Krystyna; Lewandowski-Kanas, Anna; Slota, Ludolf**
Effect of gypsum addition on the properties of clinkers with high $Na_2O$ content.—73-09906
**Rajczyk, Krystyna; Noczun-Wczelik, W.**
Belite cement from barium-containing byproduct.—73-09830
**Rajh, Tijana; Saponjic, Zoran V.; Micic, Olga I.**
Reactions of hydrous titanium oxide colloids with strong oxidizing agents.—73-12673
**Rajic, Nevenka** See Batista, Jurka
**Rajic, Nevenka; Stojakovic, Djordje; Hocevar, Stanko; Kaucic, Venceslav**
Possibility of incorporating Mn(II) and Cr(III) in SAPO-34 in the presence of isopropylamine as template.—73-08706
**Rajkumar, K. C.** See Rich, D. H.
**Rajput, R.** See Jha, S. R.
**Raju, A. R.** See Laurent, C.; Uma, Seetharaman
**Raju, K. C. James; Sivasubramanian, V.; Pragasam, R.; Viswanathan, B.; Murthy, V. R. K.**
Contributions to the dielectric constant of the system $BaLn_2Ti_4O_{12}$ from packing fraction and nephelauxetic ratio.—73-07290
**Raju, P. K.** See Vaidya, Uday K.
**Raju, S. P.** See Ramulu, M.
**Rajurkar, K. P.** See Wang, S. Z.
**Rakhimov, H. T.** See Leonyuk, L. I.
**Rakhmanbekov, N.** See Magrupov, R. D.
**Rakhmanko, E. M.** See Borovskii, E. S.
**Rakhmanov, V. A.**
Change in pigment color in the system $CoO\text{-}Cr_2O_3\text{-}Al_2O_3$.—73-00899
**Rakocevic, Z. L.** See Nenadovic, T. M.
**Rakoto, H.** See Osofsky, M. A.
**Rakowska, A.** See Stoch, A.
**Rakshit, P. C.** See Chattopadhyay, D.
**Ralls, K. S.** See Eckstein, J. N.
**Ralph, B.** See Yu, Ga-Er
**Ralston, John D.; Weisser, Stefan; Esquivias, Ignacio; Larkins, E. C.; Rosenzweig, J.; Tasker, P. J.**
Control of differential gain, nonlinear gain, and damping factor of high-speed application of GaAs-based MQW lasers.—73-14817
**Ralston, John** See Newcombe, Gayle
**Ram-Mohan, L. R.** See Luo, H.
**Ramabadran, Uma B.; Jackson, Howard E.; Boyd, Joseph T.**
Raman investigation of the nonlinear optical phenomenon of polarization rotation in Ti:$LiNbO_3$ channel waveguides.—73-07916
**Ramachandran, A. R.** See Suzuki, Yoji
**Ramachandran, N.; Shetty, Dinesh K.**
Prediction of indentation-load dependence of fracture strengths from *R*-curves of toughened ceramics.—73-17413
**Ramachandran, V. S.** See Beaudoin, James J.
**Ramaker, David E.** See Sambe, Hideo
**Ramakrishna Reddy, K. T.** See Sravani, C.
**Ramakrishna, J.** See Meera, B. N.
**Ramakrishna, S.** See Maher, M. P.; Ponraj, R.
**Ramakrishnan, M. R.** See Patibandla, N.
**Ramakrishnan, N.** See Okada, H.
**Ramakrishnan, N.; Arunachalam, V. S.**
Effective elastic moduli of porous ceramic materials.—73-03273
**Ramakrishnan, N.**
Effective elastic moduli of porous ceramic materials—reply to comment.—73-17298
**Ramakrishnan, P.** See Balakrishna, P.
**Ramakrishnan, T. S.** See Goode, P. A.
**Ramakrishnan, V.; Goo, Edward; Roldan, J. M.**
Microstructure of mullite ceramics used for substrate and packaging applications.—73-03172
**Ramakrishnan, V.; Jayaraman, N.**
Fatigue behavior of borosilicate glass-ceramic matrix, Nicalon (silicon carbide) fiber composites.—73-13530; Mechanistically based fatigue-damage evolution model for brittle matrix fiber-reinforced composites.—73-13570
**Ramalingam, S.** See Zheng, L.
**Ramamurti, R.** See Maracas, G. N.
**Ramamurti, V.; Phani Latha, V.; Swarnamani, S.**
Instrumentation for the dynamic analysis of tube mills.—73-12038
**Ramamurty, U.; Hansson, T.; Suresh, S.**
High-temperature crack growth in monolithic and $SiC_w$-reinforced silicon nitride under static and cyclic loads.—73-17343
**Ramamurty, U.; Suresh, S.; Petrovic, John J.**
Effect of carbon addition on elevated-temperature crack growth resistance in (Mo,W)$Si_2$-$SiC_p$ composite.—73-17280
**Raman, N. S.; Viswanathan, B.; Varadarajan, T. K.**
Valency of copper in 123 oxides.—73-04825
**Raman, Narayanan K.** See Ryder, Daniel F., Jr.
**Raman, R.** See Ryan, Michael
**Raman, R.; Slike, W., III; German, Randall M.; Whitman, C. I.**
Experimental evaluation of the mixing process for the preparation of feedstock for powder injection molding.—73-09123
**Raman, Ramas V.** See Rele, Sundeep V.
**Raman, Ramas V.; Rele, Sundeep V.; Paskowitz, Michael J.**
In situ and rapid consolidation of fully dense $MoSi_2$.—73-09169
**Raman, Ramas V.; Rele, Sundeep V.**
Novel processing route for the fabrication of monolithic and composite silicon nitride.—73-05936
**Raman, V. K.** See Mahmood, F.
**Raman, V.; Bahl, O. P.; Jha, N. K.**
Synthesis of silicon oxycarbide through the sol-gel process.—73-09362
**Raman, V.; Parashar, V. K.; Bahl, O. P.**
Effect of additives on the thermal nitridation of sol-gel-derived silica gel.—73-07122
**Ramanath, S.** See Subramanian, K.
**Ramanathan, K.** See Qu, Y.
**Ramanathan, S.; Muraleedharan, R. V.; Ramprasad; Banerjee, S.**
Oxidation kinetics of silicon carbide powder.—73-13482; 73-13483
**Ramanathan, S.; Soni, N. C.; Prasad, Ram**
Crystallization behavior of zirconia 10 mol% yttria by hot-stage X-ray diffraction.—73-02223
**Ramanathan, Sriram** See Trubelja, Mladen E.
**Ramanujachary, K. V.** See Teweldemedhin, Z. S.
**Ramaswamy, Ramu V.** See Kim, Hyoun-Soo
**Ramberg, C. Eric** See Chou, Yeong-Shyung
**Ramberg, Jeffrey R.** See Kennedy, Christopher R.
**Rambousek, V.** See Lostak, P.
**Ramdani, J.** See He, Y.
**Ramdas, A. K.** See Sciacca, M. Dean
**Ramdou, M. T.** See Gadenne, M.
**Rameau, J. J.** See Bouteillon, J.
**Ramesh, K. P.** See Anavekar, R. V.
**Ramesh, Ramamoorthy** See Ghonge, Subodh G.; Inam, Arun
**Ramesh, Ramamoorthy; Inam, Arun; Chan, W. K.; Wilkens, B.; Tillerot, F.; Sands, T.**
Ferroelectric $PbZr_{0.2}Ti_{0.8}O_3$ thin films on epitaxial Y-Ba-Cu-O.—73-11575
**Ramesh, Ramamoorthy**
*c*-axis perovskite thin films grown on silicon dioxide.—73-01849; Cubic metal oxide thin film epitaxially grown on silicon.—73-04197; Transmission electron microscopy of oxide thin films.—73-06299
**Ramesham, Rajeshuni** See Swain, Greg M.
**Ramesham, Rajeshuni**
Selective growth and characterization of doped polycrystalline diamond thin films.—73-09313
**Ramirez, A. P.** See Mason, T. E.
**Ramirez, F. J.; Rincon, C.**
Polarized micro-Raman spectra in $CuGaSe_2$.—73-01286
**Ramirez, J.** See Caneiro, A.
**Ramirez-Bon, R.; Espinoza-Beltran, F. J.; Sanchez-Sinencio, F.; Zelaya, O.; De la Cruz, G. G.**
Transient photocurrents in CdTe and CdTe:O sputtered films.—73-15214

**Ramirez-Bon, R.; Sanchez-Sinencio, F.; De la Cruz, G. G.; Zelaya, D.**
Transient photoconductivity in CdTe films grown by the hot wall flash evaporation technique.—73-04501
**Ramirez-del-Solar, M.; Esquivias, L.; Craievich, A. F.**
Ultrastructural evolution during gelation of $TiO_2$-$SiO_2$ sols.—73-10413
**Ramirez-Malo, J.; Marquez, E.; Villares, P.; Jimenez-Garay, R.; Ewen, P. J. S.; Owen, A. E.**
Determining the refractive index and absorption coefficient of Ag-photodoped amorphous As-S films.—73-14153
**Ramis, G.** See Busca, Guido; Del Arco, Margarita
**Ramm, P.** See Amler, H.
**Rammohan, K.** See Rich, D. H.
**Ramos, A.** See Gandais, M.
**Ramos, E.; Veiga, M. L.; Fernandez, F.; Saez-Puche, R.; Pico, C.**
Synthesis, structural characterization, and two-dimensional antiferromagnetic ordering for the oxides $Ti_{3(1-x)}$
**Ramos, M. A.** See Gil, L.
**Ramos, Richard** See Skeels, Gary W.
**Ramos, S. M. M.** See Bauer, M.
**Ramos-Barrado, J. R.** See Criado, C.
**Ramos-Barrado, J. R.; Criado, C.; Jimenez-Lopez, A.; Olivera-Pastor, P.; Rodriguez-Castellon, E.**
Protonic conduction of vanadyl phosphate intercalation compounds.—73-01019
**Ramotar, R. I.** See Zhang, X. X.
**Ramprasad,** See Ramanathan, S.
**Ramsey, John** See Kopanski, Joseph J.
**Ramsey, P. M.; Whitehead, Andrew J.**
Nanohardness measurements of float glass surfaces.—73-14230
**Ramsey, W. Gene** See Jantzen, Carol M.; Oksoy, Dolun; Schumacher, R. F.
**Ramsey, W. Gene; Jantzen, Carol M.; Taylor, T. D.**
Relationship between borosilicate glass composition, structure, and durability test response.—73-06965
**Ramseyer, G.** See Davis, A.; Lee, Sun-Woo
**Ramulu, M.; Raju, S. P.; Inoue, H.; Zeng, J.**
Hydroabrasive erosion characteristics of 30 vol% $SiC_p$/6061-T6-Al composite at shallow impact angles.—73-06802
**Rancoule, Gilbert; DeBastiani, Duane L.**
Magnesia-carbon refractory compositions for slide gate plates and method of manufacture.—73-04033
**Rand, M.; Langford, J. I.; Abell, J. S.**
Domain size modeling in $YBa_2Cu_3O_{7-\delta}$ powders and powdered single crystals by means of X-ray diffraction.—73-08024
**Randall, C. A.; Matsko, M. G.; Cao, Wen-Wu; Bhalla, Amar S.**
Transmission electron microscopy investigation in the *R3m*→*R3c* phase transition in $Pb(Zr,Ti)O_3$ ceramics.—73-06298
**Randall, J. N.; Seabaugh, A. C.; Luscombe, James H.**
Fabrication of lateral resonant tunneling devices.—73-14909
**Randjelovic, I.** See Vilotijevic, M.
**Rando, N.** See Foden, C. L.
**Randoshkin, V. V.** See Airapetov, A. A.; Logunov, M. V.
**Randoshkin, V. V.; Chani, V. I.; Kozlov, V. I.**
High uniaxial magnetic anisotropy in epitaxial $(Dy,Bi)_3(Fe,Ga)_5O_{12}$ films.—73-01464
**Randyopadhyay, A. K.** See Sen, Nirupa
**Rangarajan, G.** See Kasiviswanathan, S.; Uma, Seetharaman
**Rangaswamy, M.** See Krauss, A. R.
**Rangavittal, N.** See Rurow, T. N. G.
**Rani, V. K. M.; Lakshmi, R. P. V.; Venugopal, R.; Reddy, D. R.; Reddy, B. K.**
Structural- and conductivity-type transitions in vapor-phase-grown $(ZnTe)_x(CdSe)_{1-x}$ single crystals.—73-04491
**Ranjbar, Khalil; Rao, B. T.; Mohan, T. R. Rama; Harendranath, Chilkunda S.**
Effect of chemically added zirconia and yttria on the mechanical properties of zirconia-dispersed alumina.—73-08510
**Ranjbar, Khalil; Rao, B. T.; Mohan, T. R. Rama**
Effect of zirconia allotropes on fracture toughness of α-alumina.—73-09584
**Rankin, Janet** See Lauten, Frederick S.
**Rankin, Janet; Boatner, Lynn A.**
Unstable neck formation during initial-stage sintering.—73-17067
**Rano, L.; Perriere, J.; Enard, J. P.; Kerherve, F.; Laurent, A.; Casero, R. P.**
RBS study of in situ grown BiSrCaCuO films.—73-08184
**Ranogajec, Jonjaua** See Djuric, Mirjana
**Ranogajec, Jonjaua; Panic, Jasmina; Marinkovic-Neducin, Radmila; Kasas, Karolj; Branislav, Zivanovic**
Compaction rate diagrams of a multicomponent atomized ceramic powder.—73-09044
**Ransom, Barbara; Helgeson, Harold C.**
Compositional end members and thermodynamic components of illite and dioctahedral aluminous smectite solid solutions.—73-12556
**Ransone, Philip O.; Spivack, Bruce D.**
Strength of thin 2-D carbon-carbon composite as a function of reinforcement fabric thickness and fiber type.—73-13595
**Ranta-Aho, Timo** See Kattelus, H.; Ylilammi, Markku
**Ranze, W.; Knecht, J.**
Drive systems for large twin roll presses.—73-12023
**Rao, A. Srinivasa; Rao, J. Lakshmana; Lakshman, S. V. J.**
Electron paramagnetic resonance and optical absorption spectra of $Cu^{2+}$ ions in alkali cadmium borosulfate glasses.—73-10369; EPR and optical absorption spectra of $Cr^{3+}$ ion-doped alkali zinc borosulfate glasses.—73-06911
**Rao, A. Venkateswara; Parvathy, N. N.**
Effect of gel parameters on monolithicity and density of silica aerogels.—73-09078
**Rao, B. T.** See Ranjbar, Khalil
**Rao, B. Uma Maheshwar** See Srinivasan, B.
**Rao, C. N. R.** See Ayyappan, S.; Bhat, V.; Laurent, C.; Nagarajan, R.; Rurow, T. N. G.; Vijayaraghavan, R.
**Rao, C. N. R.; Nagarajan, R.; Mahesh, R.; Kulkami, G. U.; Ayyappan, S.; Subbanna, G. N.**
Structure and properties of oxyanion derivatives of 123 cuprate superconductors: effect of substitution of carbonate and nitrate ions in the Cu(1) position of $YBaSrCu_3O_{7-\delta}$.—73-11907
**Rao, C. R. V.** See Uma, Seetharaman
**Rao, Dantam K.**
Superconducting coil bearings for rotor load.—73-04873
**Rao, E. V. K.** See Azoulay, R.
**Rao, G. Mohan** See Suhail, M. H.
**Rao, G. Srinivasa; Chand, Prem; Khan, D. C.**
Synthesis of single-phase $YBa_2Cu_4O_8$ superconductor at atmospheric pressure of oxygen.—73-08240
**Rao, G. V. S.** See Ganesan, V.; Kasiviswanathan, S.; Raghaven, S. Lakshmi
**Rao, J. Lakshmana** See Rao, A. Srinivasa
**Rao, K. J.** See Balasubramanian, Sathya; Nagarajan, V. S.; Prabakar, S.; Shastry, M. C. R.
**Rao, K. J.; Estournes, C.; Levasseur, A.; Shastry, M. C. R.; Menetrier, M.**
Activation barriers for dc conductivity in ionic glasses: classical calculations using the small-cluster approximation.—73-04055
**Rao, K. Narasimha** See Al-Robaee, Mansour S.; Krishna, M. Ghanashyam
**Rao, K. V.** See Koga, T.; Moon, B. M.
**Rao, M. S. R.** See Suryanarayanan, R.
**Rao, M. Subba** See Devi, P. Sujatha
**Rao, M. V.** See Martin, Jaime M.; Vellanki, Jayadev
**Rao, M. V.; Mishra, S. K.; Pathak, L. C.; Mathur, B. K.; Bhattacharya, D.; Chopra, K. L.**
Interlocked grain growth of YBCO film on magnesium oxide as observed by scanning tunneling microscopy.—73-01581
**Rao, Prabhakar P.** See Varma, Hari Krishna
**Rao, S. M.; Loo, B. H.; Wang, N. P.; Kelley, R. J.**
New technique for the growth of superconducting $YBa_2Cu_3O_{6+\delta}$ crystals completely separated from flux.—73-01614
**Rao, S. S.** See Palkar, V. R.
**Rao, S. V. M.** See Upadhyay, P. L.
**Rao, S. V. S.; Lal, K. B.; Amalraj, R. V.**
Epoxy-modified cements [EMC's] cured with catalytic curing agents for fixation of radioactive waste.—73-08297
**Rao, U. V. Subba** See Narsaiah, E. Laxmi
**Rao, V. J.** See Devi, G. Sarala; Manorama, S.
**Rao, X.-L.** See Wang, Kai-Ying
**Raoux, S.** See Barriere, A. S.
**Rapakoulias, D.** See Mataras, D.
**Rapp, O.** See Andersson, Magnus
**Rapp, Robert A.** See Claar, Terry D.
**Rappen, A.**
Conveying desulfogypsum with hose belt conveyors and shuttle-floor trough conveyors.—73-01770
**Rappensberger, M.** See Szabo, I.
**Raptis, Y. S.** See Calamiotou, M.
**Rarenko, A. I.** See Gritsyuk, B. N.
**Rarenko, I. M.** See Bodnaruk, O. A.; Garyagdyev, G.; Gasan-Zade, S. G.; Vertii, A. A.
**Rasch, Helmut**
Boron and its "hazy behavior."—73-00306; Temporary melt phases—importance for applications of cordierite-mullite kiln furniture.—73-04022
**Rasheeduzzafar,** See Al-Amoudi, Omar S. B.; Ali, Mohammad Golam; Hussain, S. E.
**Rasheeduzzafar; Hussain, S. E.; Al-Gahtani, A. S.**
Pore solution composition and reinforcement corrosion characteristics of microsilica-blended cement concrete.—73-00165
**Rasheeduzzafar; Hussain, S. E.; Al-Saadoun, S. S.**
Effect of cement composition on chloride binding and corrosion of reinforcing steel in concrete.—73-00073
**Rasheeduzzafar**
Influence of cement composition on concrte durability.—73-00112
**Rashid, S.** See Muhamad, M. N.
**Rashid, S.; Barnes, Paul; Turrillas, Xavier**
Rapid conversion of calcium aluminate cement hydates, as revealed by synchrotron energy-dispersive diffraction.—73-10126
**Rashkovetskii, L. V.** See Babentsov, V. N.
**Rasines, I.** See Campa, J. A.
**Rasky, Daniel J.** See Bull, Jeffrey D.
**Rass, I.** See Lugscheider, E.
**Rassem, R.; Zanni-Thevenau, H.; Heidemann, D.; Grimmer, A. R.**
Proton high-resolution solid-state NMR study of $C_3S$ [tricalcium silicate] hydration.—73-03522
**Rassokhin, S. N.** See Asadov, S. K.
**Rastegaev, V. P.** See Anikin, M. M.
**Rastegaeva, G. G.; Khan, B. Kh.**
Producing cast stone sheets to close size tolerances.—73-01820
**Rastegaeva, M. G.** See Anikin, M. M.
**Rastogi, A. C.** See Dhara, Sandip; Sharma, R. N.
**Rastorguev, Yu. I.** See Atkarskaya, A. B.
**Rastsvetaeva, R. K.** See Bolotina, N. B.; Mikheeva, M. G.; Nadezhina, T. N.; Yamnova, N. A.
**Rastsvetaeva, R. K.; Andrianov, V. I.; Genkina, E. A.; Sokolova, T. N.; Kashaev, A. A.**
Crystal structure of volkovskite, $KCa_4B_{22}O_{32}(OH)_{10}Cl{\cdot}4H_2O$, from Nepsky deposit in Eastern Siberia.—73-16097
**Rastsvetaeva, R. K.; Borutskii, B. E.; Shlyukova, Z. V.**
Crystal structure of rinkite from Khibiny mountains.—73-02210
**Rastsvetaeva, R. K.; Khomyakov, A. P.**
Crystal structure of rare-earth analog of ilerite.—73-16092
**Rastsvetaeva, R. K.; Mikheeva, M. G.; Yamnova, N. A.; Pushcharovskii, D. Yu.; Khomyakov, A. P.**
Crystal structure of revdite, $Na_{16}[Si_4O_6(OH)_3]_2{\cdot}[Si_6O_{15}(OH)_6](OH)_{10}{\cdot}28H_2O$.—73-16094
**Rastsvetaeva, R. K.; Tamazyan, R. A.; Sokolova, E. V.**
Crystal structure of two modifications of natural Ba, Mn titanium silicate.—73-02217
**Rasulov, R. Ya.; Sidikova, Kh.; Ganiev, U.**
Theory of photovoltaic effects in *n*-type GaP.—73-15204
**Ratcheva, T.; Stambolova, I.; Konstantinov, K.**
Copper-doped $SnO_2$ thin films for $PH_3$ detection.—73-16688
**Rathore, Hazara S.** See Nguyen, Du B.
**Ratkje, Signe Kjelstrup; Tomii, Yoichi**
Transported entropy in zirconia with 3–12 mol% yttria.—73-06181
**Ratnikov, V. I.** See Borovinskaya, I. P.
**Ratseyev, S. A.** See Tezlevan, V. E.
**Ratto, Joseph J.** See Marshall, David B.
**Ratz, R.** See Schroeder, N.
**Ratz, S.; Schroeder, N.; Bottner, R.; Dietz, E.; Gerhardt, U.; Wolf, T.**
Electroconducting gap and the sharp 1-eV structure in angle-resolved photoelectron spectra in $YBa_2Cu_3O_{7-\delta}$ crystals.—73-08051
**Rauber, G.**
Use of personal computers to control ceramic processes.—73-12068
**Rauch, F.** See Helmich, Michael; Wagner, W.
**Rauch, Torsten; Denz, Cornelia; Tschudi, Theo**
Analysis of irregular fluctuations in a self-pumped $BaTiO_3$ phase-conjugate mirror.—73-01073
**Rauer, H.** See Jung, W.
**Rauh, M.; Wissmann, P.; Wolfel, M.**
Ellipsometric studies on the oxidation of thin copper films.—73-16491
**Rauh, M.; Wissmann, P.**
Oxidation kinetics of thin copper films studied by ellipsometry.—73-03631
**Rauh, R. David** See Cogan, Stuart F.
**Rauh, R. David; Cogan, Stuart F.**
Design model for electrochromic windows and applications to the $WO_3$/$IrO_2$ system.—73-07296
**Raukhman, A. M.** See Sanygin, V. P.
**Rauluszkiewicz, J.** See Nowak, J.
**Raupp, Gregory B.** See Zirkle, Thomas E.
**Raupp, Gregory B.; Levedakis, Dimitris A.; Cale, Timothy S.**
Predicting intrawafer film thickness uniformity in an ultralow pressure chemical vapor deposition reactor.—73-16903
**Raupp, Gregory B.; Shemansky, Frank A.; Cale, Timothy S.**
Kinetics and mechanism of silicon dioxide deposition through thermal pyrolysis of tetraethoxysilane.—73-09188
**Rausch, N.; Burte, E. P.**
Thin $TiO_2$ films prepared by low-pressure chemical vapor deposition.—73-04180
**Rauschenbach, F.; Henning, Otto**
Polysaccharide-based additives in plaster binders.—73-10084
**Rauscher, H.-U.** See Spauszus, S.
**Rautioaho, R.** See Zhang, Hong-Xue
**Ravaglioli, A.** See Azzoni, C. B.
**Ravaglioli, A.; Krajewski, A.; Piancastelli, A.; Berger, G.; Adam, K.; Gildenhaar, R.**
Influence of alumina porosity in glass-ceramic adhesion.—73-12327
**Ravattinen, Risto** See Kamshilin, Alexei A.
**Ravdel, B. A.** See Toroshchina, E. I.
**Raveau, B.** See Benabbas, A.; Benhamada, L.; Caignaert, V.; Costentin, G.; Domenges, B.; Huve, M.; Labbe, P.; Michel, C.
**Raveile-Chapuis, R.** See Bernstein, E.
**Ravelosona, D.** See Contour, J. P.
**Ravex, A.** See Lasjaunias, J. C.
**Ravez, J.** See Elissalde, C.; Kazaoui, S.; Lu, Zhi-Gao
**Ravi, K. V.**
Low-pressure diamond synthesis for electronic applications.—73-07335
**Ravi, S.; Bai, V. Seshu**
Excess conductivity studies in pure and Ag-doped 85-K phase in Bi-Sr-Ca-Cu-O system.—73-04719
**Ravi, V.** See Kutty, T. R. N.
**Ravi, V.; Kutty, T. R. N.**
Field-dependent changeover from current-to-voltage-limiting characteristics by nonlinear *n*-type $BaTiO_3$ ceramics.—73-14926
**Ravich, Yu. I.** See Nemov, S. A.
**Ravich, Yu. I.; Chernik, I. A.; Berezin, A. V.**
Tunnel state parameters in lead chalcogenides.—73-16386
**Ravichandran, Guruswami; Subhash, G.**
Critical appraisal of limiting strain rates for compression testing of ceramics in split Hopkinson pressure bar [SHPB].—73-06361
**Ravichandran, K. S.**
Elastic properties of two-phase composites.—73-08845; Mechanics of toughness development in ductile phase-reinforced brittle matrix composites.—73-17394
**Ravikiran, A.; Bai, B. N. P.**
High-speed sliding of $Al_2O_3$ pins against an En-24 steel disk.—73-06449
**Ravikumar V.,** See Dravid, Vinayak P.
**Ravinder, D.**
Dielectric behavior of mixed lithium-zinc ferrites.—73-02567
**Ravindrachary, V.; Sreeramalu, V.; Sreepad, H. R.; Chandrashekara, A.; Gopal, S.**
Doppler broadened and ionic conductivity studies on Nasicon analog.—73-00950

**Ravindran, P. V.** See Ananthapadmanabhan, P. V.
**Ravindranathan, P.** See Roy, Rustum
**Ravindranathan, P.; Komarneni, S.; Roy, Rustum**
Synthesis of lithium aluminate, mullite, and colored zirconia by a combustion process.—73-09360
**Ravn, Jesper N.**
Laser-induced grating in ZnO.—73-01228
**Ravot, D.; Mauger, A.; Gorochov, O.**
Metal-insulator transition in a disordered antiferromagnet $Yb_{1-x}Gd_xTe$.—73-16540
**Ravy, S.** See Berret, J.-F.
**Raw, P.** See Bottger, D.
**Rawers, J. C.** See Maupin, H. E.
**Rawlence, David J.; Karim, Khalid; Dwyer, John**
Gallium zeolites.—73-02039
**Rawlings, R. D.** See Carter, S.
**Rawn, Claudia J.; Roth, Robert S.; Burton, Benjamin P.; Hill, Michael D.**
Phase equilibria and crystal chemistry in portions of the system SrO-CaO-1/2$Bi_2O_3$-CuO: V. The system SrO-CaO-1/2$Bi_2O_3$.—73-16248
**Rawson, Harold**
Radiative heat transfer in glass manufacture—one- and two-dimensional problems.—73-07167
**Ray, Chandra S.** See Huang, Wen-Hai
**Ray, J.** See Chatterjee, M.
**Ray, J.; Chatterjee, M.; Ganguli, D.**
Sol-gel-derived alumina microspheres.—73-17006
**Ray, M. A.** See Kepten, A.; McGuire, G. E.
**Ray, N.** See Rajasekar, P.
**Ray, S. K.** See Mishra, S. K.
**Ray, S. K.; Maiti, C. K.; Lahiri, S. K.; Chakrabarti, N. B.**
Properties of silicon dioxide films deposited at low temperatures by microwave plasma-enhanced decomposition of tetraethylorthosilicate.—73-08960
**Ray, S.** See Petrullat, J.
**Ray-Chaudhuri, A. K.; Ng, W.; Liang, S.; Singh, S.; Welnak, J. T.; Wallace, J. P.**
First results of microspectroscopy from a scanning photoemission microscope with a submicron probe size.—73-07530
**Raychaudhuri, Satyabrata** See Kirkbir, Fikret; Wang, Shi-Ho
**Rayevsky, I. P.** See Bokov, A. A.
**Rayne, Roy J.** See Bender, Barry A.
**Rayner, David M.** See Bourne, Orson L.
**Raynes, Alan S.** See White, Grady S.
**Razavi, F. S.** See Misra, S. K.
**Razbirin, B. S.** See Starukhin, A. N.
**Razhenov, Yu. M.; Alimov, L. A.; Voronin, V. V.**
Principles of the determination of concrete composition based on binders with low water consumption.—73-13766
**Razip, Mohamad** See Muranoi, T.
**Razorenov, S. V.; Kanel, G. I.; Fortov, V. E.**
Failure of glass during intensive pulsed action.—73-00479
**Razumeenko, M. V.** See Grunin, V. S.
**Razumov, S. V.** See Bogomolov, V. N.
**Razzell, A. G.; Lewis, M. H.**
Silicon carbide/SRBSN composites.—73-03194
**Re, Marilena** See Di Giulio, Massimo
**Read, D.** See Atkins, M.
**Read, Julie**
Ceramics—their use as microoelectronic packaging materials.—73-04062
**Reader, A. H.** See La Via, F.
**Readey, D. W.** See Chen, Ning-Wei; Mhaisalkar, S. G.; Perkins, N. R.
**Readey, D. W.**
Vapor phase reactions in the synthesis of ceramics.—73-06131
**Readey, M. J.** See Kovar, Desiderio
**Readey, M. J.; McCallen, C. L.; McNamara, P. D.; Lawn, Brian R.**
Correlations between flaw tolerance and reliability in zirconia.—73-17257
**Readey, M. J.**
Microstructure, *R*-curve behavior, and reliability of structural ceramics.—73-09651; Process-tolerant manufacturing: an optimization strategy for processing advanced ceramics.—73-09276
**Reali, G. C.** See Agnesi, A.; Kubecek, V.
**Reaney, Ian M.** See Colla, E. L.
**Reaney, Ian M.; Brooks, Keith; Klissurska, Radosveta; Pawlaczyk, Czeslaw; Setter, Nava**
Use of transmission electron microscopy for the characterization of rapid thermally annealed, solution-gel, lead zirconate titanate films.—73-09520
**Reaney, Ian M.; Patel, Anil; Barber, David J.**
TEM studies of oxide thin films in transverse section intended for device applications.—73-03206
**Reardon, Brian J.** See Freeman, S. A.
**Reardon, Brian J.; Kieffer, John; Booske, John H.; Cooper, Reid F.**
Analysis of the microwave sintering effect in NaCl using molecular dynamics simulations.—73-05691
**Reardon, E. J.** See Dewaele, P. J.
**Reau, J. M.** See Bobe, J. M.; El Omari, M.; Kahnt, H.; Kyung-Soo, S.
**Reau, J. M.** See Rossignol, S.
**Reau, J. M.; Kahnt, H.; Rocherulle, J.; Verdier, P.; Laurent, Y.**
Influence of nitrogen on the mobility of lithium in oxynitride glasses of the Li-Si-Al-O-N system.—73-00503
**Reau, M.** See Barriere, A. S.
**Rebane, Yan A.** See Strelkov, Alexander V.
**Rebane, Yu. T.** See Lelikov, Yu. S.
**Reber, A.** See Duvierre, Gerard
**Rebordinos Cubero, J.**
Rapid method for boron determination in glass by means of inductively coupled plasma emission spectrometry (ICP-AES).—73-15836
**Reboredo, P. A.; Proetto, C. R.**
Noncompensated GaAs sawtooth doping superlattices: a self-consistent band structure.—73-01258
**Rechenberg, W.** See Kuhlmann, K.
**Reck, Gene P.** See Fried, Daniel
**Red'ko, S. V.** See Klokova, N. E.
**Redala, S. E.** See Kreitsberga, V. Z.
**Reddy, B. K.** See Lakshmi, R. P. V.; Rani, V. K. M.
**Reddy, B. Mahipal; Manohar, B.; Reddy, E. Padmanafha**
Oxygen chemisorption on titania–zirconia mixed oxide supported vanadium oxide catalysts.—73-08688
**Reddy, C. S.** See Viswanathan, K.
**Reddy, D. R.** See Lakshmi, R. P. V.; Rani, V. K. M.
**Reddy, E. Padmanafha** See Reddy, B. Mahipal
**Reddy, P. J.** See Aparma, Y.
**Reddy, P. S.** See Aparma, Y.
**Reddy, Padala Krishna** See Gadepally, Kamesh
**Reddy, S. K.** See Devrajan, J.
**Reddy, S. K.; Singh, R. N.**
Characterization of interfacial properties in SiC-zircon composites.—73-09548
**Reddy, Srinivasa S. N.** See Casey, Jon A.
**Reddy, Y. S.** See Jha, S. R.; Sarkar, B.
**Redfern, Simon A. T.** See Schofield, Paul F.
**Redgate, P. E.** See Hrma, Pavel
**Redin, G.** See Faigon, A.
**Redinger, J.**
Unoccupied Shockley surface state on a carbon-deficient TiC(110) surface.—73-16389
**Redington, M.** See O'Reilly, K. P. J.
**Redington, M.; Hampshire, S.**
Multication α-SiAlON's.—73-02338
**Redington, P. D.** See Subramanian, K.
**Redkorechev, V. I.** See Ametov, S. A.
**Redler, Laszlo**
Quantitative X-ray diffraction analysis of high-alumina cements.—73-00178
**Redmond, Pat** See Slemmons, Whit
**Redner, Alex S.**
Comparison of stress measurement techniques.—73-15781; Precision measurements of stress-birefringence in glass.—73-14255
**Reed, Alan R.**
Designing hoppers and silos for reliable flow.—73-15712
**Reed, C. T.; Haun, M. J.; Brog, T. K.; McNerney, K. R.; Sibold, J. D.; Wirth, D. G.**
Effects of zirconia additions on the crystallization behavior of MgO-$Al_2O_3$-$SiO_2$ glass-ceramics.—73-08608
**Reed, J. S.** See Walker, W. J., Jr.
**Reeder, M.** See Huffman, Maria
**Reehuis, M.** See Zeppenfeld, K.
**Rees, D.** See Folkard, M. A.; Hartley, R. H.
**Rees, Lovat V. C.** See Oprescu, Dan
**Rees, P.; Hamilton, R. A. H.; Blood, P.; Burke, S. V.**
Carrier-carrier scattering effects in InGaAs-GaAs strained layer lasers.—73-14792
**Rees, William S., Jr.** See Greenwald, Anton C.
**Rees, William S., Jr.; Green, D. M.; Anderson, T. J.; Bretschneider, E.; Pathangey, B.; Park, C.**
Evaluation of $Zn[N[Si(CH_3)_3]_2]_2$ as a *p*-type dopant in OMVPE growth of ZnSe.—73-14894
**Reetz, Teja; Haase, Ingrid**
Oxides as sintering aids in aluminum nitride ceramics.—73-02916
**Reetz, Teja; Monch, B.; Saupe, M.**
Aluminum nitride hydrolysis.—73-12913
**Reeve, S. W.; Weimer, W. A.; Cerio, F. M.**
Gas-phase chemistry in a direct current plasma jet diamond reactor.—73-13069
**Reeve, S. W.; Weimer, W. A.**
Plasma diagnostics of a dc arcjet chemical vapor deposition diamond reactor.—73-12860
**Reeves, Roger J.** See Foldyari, Istvan
**Regan, S. E.** See Lowe, A. J.
**Regnault, L. P.** See Darriet, J.
**Regnier, S.; Renou, A.; Gillet, M.**
Growth mechanism of gold films on alumina.—73-00236
**Reguera-Ruiz, E.** See De las Pozas-Del Rio, C.
**Reh, H.**
Changes in roofing tile technology.—73-00767; Germany's ceramic industry after unification.—73-03393; Origins and development of the ceramic industry in the "Kannenbackerland" [Germany].—73-00012; What does the future material for tableware look like.—73-10908
**Rehak, B.** See Hubacek, M.
**Rehfeld, Gerhard** See Fliedner, Christine
**Rehspringer, J. L.** See Tighezza, A.
**Reich, A.** See Grebner, M. D.
**Reich, S.** See Veretnik, D.
**Reich, S.; Veretnik, D.; Felner, I.**
Magnetic suspension, critical current, and morphology in $YBa_2Cu_3O_{7-x}$-silver composites.—73-11823
**Reich, T.** See Schneider, D.
**Reichardt, W.** See Pyka, N.
**Reichel, U.** See Daum, W.
**Reichert, H.** See Llewellyn, P. L.
**Reichert, Jutta** See Klug, Thomas
**Reichert, Karlheinz; Kroger, Harald**
Process for the production of lead metal niobates.—73-12399
**Reid, B.** See Tronc, P.
**Reid, W. B.; West, Anthony R.**
Surface roughness effects at lithium silicate glass/blocking metal interfaces.—73-01338
**Reidmeyer, Mary R.** See Stevenson, Jeffry W.
**Reif, R.** See Ye, Z.-Z.
**Reiff, W. M.** See Kim, J. S.
**Reifsnider, Kenneth L.** See Elahi, Mehran; George, Eric R.; Liao, Kin; Pastor, Michael; Xu, Yong-Li
**Reihlen, E. H.** See Sadwick, L. P.
**Reiman, S. I.** See Vardapetyan, R. P.
**Reimanis, Ivar E.** See Rogers, Kirk A.
**Reimanis, Ivar E.; Dalgleish, Brian J.; Trumble, K. P.**
Fracture at Cu/sapphire interfaces.—73-03590
**Reimanis, Ivar E.; Petrovic, John J.; Suematsu, H.; Mitchell, Terence E.; Leung, O. S.**
Mechanical properties of a novel $Si_3N_4$–amorphous $Si_3N_4$ composite.—73-06479
**Reimanis, Ivar E.; Tullock, D. L.; Graham, A. L.**
Crack deflection at bimaterial interfaces.—73-06345
**Reimer, Robert F.; Braithwaite David**
Alignment apparatus for a gob delivery system.—73-04954
**Reimers, J. N.** See Nakua, A.
**Reimers, J. N.; Dahn, J. R.**
Electrochemical and in situ X-ray diffraction studies of lithium intercalation in $Li_xCoO_2$.—73-02251
**Reine, M. B.** See Tennant, William E.
**Reinecke, T. L.** See Knipp, P. A.
**Reiners, Georg** See Beck, Uwe
**Reinertson, R. C.** See Smith, C. W.
**Reinfelde, M.** See Otten, J.
**Reinhardt, F.** See Muller, A. B.
**Reinhardt, F.; Richter, W.; Muller, A. B.; Gutsche, D.; Kurpas, P.; Ploska, K.**
GaAs surface control during metallorganic vapor phase epitaxy by reflectance anisotropy spectroscopy [RAS].—73-11217
**Reinhart, F. K.** See Berz, Martin W.
**Reinhart, F. K.** See Krieger, M.
**Reinhold, C.** See Himmel, B.
**Reinhold, J. H.** See Wang, C. A.
**Reining, L.** See Bechstedt, F.
**Reinke, J.; Greulich-Weber, S.; Spaeth, J. M.**
Optically detected EPR of a V impurity in 6H-SiC.—73-09498
**Reisch, Renate** See Voigt, Ingolf
**Reiser, Werner**
Round up of recent European lime and dry mortar projects.—73-03533
**Reisfeld, R.** See Gorodetskaya, O.
**Reisinger, A. R.** See Harris, K. A.; Yanka, R. W.
**Reisman, A.** See Kepten, A.
**Reiss, H.** See Stachel, D.
**Reitz, T. C.** See King, Wayne E.
**Reizen, Kouji** See Iwanaga, Hiroshi
**Rekenova, Maria** See Eliasova, Maria
**Rekhson, S. M.** See Sakoske, G. E.
**Rekhviashvili, D. N.** See Borisov, V. I.
**Rekow, E. D.; Zhang, G. M.; Thompson, V. P.**
Machining ceramic materials for dental restorations.—73-05903
**Rekveldt, M. T.** See Van der Zaag, P. J.
**Rele, Sundeep V.** See Raman, Ramas V.
**Rele, Sundeep V.; Raman, Ramas V.**
High-$T_c$ ceramic superconductors: overcoming a materials processing challenge.—73-11783
**Reller, A.** See Williams, T.
**Rellick, G. S.** See Zaldivar, R. J.
**Rellick, G. S.; Cull, A. D.**
Effects of heat treatment on mechanical and thermal properties of CVD-densified Novoltex carbon/carbon composites.—73-12428
**Rembetski, J. F.** See Gu, Tieer
**Rembetski, J. R.** See Awadelkarim, O. O.
**Remesnik, V. G.** See Dvurechenskii, A. V.; Talipov, N. Kh.
**Remillieux, A.** See Jacquier, B.
**Remizov, M. V.** See Bagdasarov, Kh. S.
**Remmert, J.**
Dispatch logistics of products using packaging and palletizing installations.—73-12022
**Remmey, G. Bickley, Jr.**
Jet firing with pulse/proportional control (AM/FM).—73-08476; Jet firing with pulse/proportional control.—73-08477
**Rempel, A. A.** See Gusev, A. N.
**Rempel, A. A.; Foster, M.; Shefer, G.-E.**
Lifetime of positrons in carbides with *B*1 structure.—73-05429
**Ren, Cong-Xin** See Li, Yi-Jie
**Ren, Cong-Xin; Chen, Guo-Liang; Li, Yi-Jie**
Epitaxial growth of YBCO superconducting thin films by dc magnetron sputtering using a partially melted sintered target.—73-11748
**Ren, D.-M.; Liu, W.; Hu, B.-Y.; Zhou, G.-E.; Qin, J.-H.**
FIM [field ion microscopy] investigation of high-temperature superconducting $Bi_2(Sr, Ca)_3Cu_2O_y$.—73-01552
**Ren, De-He; Zhang, Yong-Bing; Cheng, Zhao-Kan**
Application of basic refractories for regenerators.—73-03991
**Ren, F. Y. G.; Michel, J.; Sun-Paduano, Q.; Zheng, B.; Kitagawa, H.; Jacobson, D. C.**
Ic compatible processing of Si:Er for optoelectronics.—73-04359
**Ren, F.** See Abernathy, C. R.; Lothian, J. R.; Pearton, S. J.
**Ren, F.; Fullowan, T. R.; Pearton, S. J.; Lothian, J. R.; Esagui, R.; Abernathy, C. R.**
Damage introduction in GaAs/AlGaAs and InGaAs/InP heterojunction bipolar transistor structures during electron cyclotron resonance plasma processing.—73-07432
**Ren, F.; Pearton, S. J.; Lothian, J. R.; Abernathy, C. R.; Hobson, W. S.**
Reduction of sidewall roughness during dry etching of $SiO_2$.—73-09300
**Ren, F.; Pearton, S. J.; Tennant, D. M.; Resnick, D. J.; Abernathy, C. R.; Kopf, R. F.**
Dry etching bilayer and trilevel resist systems for submicron gate length GaAs-based high-electron-mobility transistors for power and digital applications.—73-14844
**Ren, Feng; Ishida, Shinyo; Mineta, Shinya**
Effect of manganese addition on phase stability of hexagonal $BaTiO_3$.—73-16117
**Ren, Hong-Tao** See Shao, Bei-Ling

**Ren, Hong-Tao; Xiao, Ling; He, Qing**
Magnetization and microstructure of melt-textured growth (MTG) $YBa_2Cu_3O_{7-\delta}$ irradiated by fast neutrons.—73-11825
**Ren, J.; Eason, D. B.; Lansari, Y.; Yu, Z.; Bowers, K. A.; Boney, C.**
Blue/green light-emitting diodes and laser diodes [LD's] based on II-VI heterostructures grown on predeposited GaAs buffer layers.—73-11085
**Ren, J.; Lansari, Y.; Yu, Z.; Cook, J. W., Jr.; Schetzina, J. F.**
Integrated heterostructure devices based on II-VI compound semiconductors.—73-11277
**Ren, Jian** See Cagliostro, D.
**Ren, Jin-Sheng** See Zhang, Si-Yuan
**Ren, Quan; Zhang, Ming-Dong; Ding, Lan-Ying**
Accurate analysis of noncollinear acoustooptic interaction in $TeO_2$ crystal.—73-08800
**Ren, S. R.** See Briscoe, B. J.
**Ren, Shang-Yuan; Dow, John D.**
Electronic structure of Si doped by rare-earth $Yb^{3+}$.—73-04314
**Ren, X.** See Wang, J.
**Ren, Xiao-Wei; Ozturk, Mehmet C.; Wortman, J. J.; Zhang, Bo-Jun; Maher, D. M.; Batchelor, D.**
Deposition and characterization of polysilicon films deposited by rapid thermal processing.—73-09062
**Ren, Yu-Fang** See Meng, Jian; Zeng, Zuo-Tao
**Ren, Z.-M.** See Zhu, Yi-Hua
**Ren, Zhi-Feng** See Wan, Xian-Qin
**Renardus, Max L. P.; Kandelaars, Theodorus P. P.; Carleton, Samuel A.; Jacobs, Cornelis A. J.**
High-pressure discharge lamp with ceramic vessel.—73-05217
**Renaud, Gilles** See Gautier, Martine
**Renaud, M.** See Vinchant, J.-F.
**Renaud, Philippe** See Alvarado, Santos F.
**Renberg, Lars** See Joshi, Ashok V.
**Renk, K. F.** See Pechen, E. V.; Piehler, A.
**Renkey, Albert L.** See Michael, David J.
**Rennie, John; Okajima, Massaki; Watanabe, Minoru; Hatakoshi, G.**
High-temperature (74°C) cw operation of 634-nm InGaAlP laser diodes utilizing a multiple quantum barrier.—73-11248
**Renou, A.** See Regnier, S.
**Renoult, Oliver; Boilot, Jean-Pierre; Boncoeur, Marcel**
Alkoxide–hydroxide route for the preparation of $\gamma$-$LiAlO_2$-based ceramics.—73-05688
**Rensch, David B.** See Josefowicz, Jack Y.
**Rensinghoff, W.** See Bloech, H.
**Rentschler, J. A.** See Rouviere, J.-L.
**Renucci, J. B.** See Landa, G.
**Renucci, M. A.** See Martinez, S.
**Resce, J. L.** See Bennert, D. M.
**Resch, M.** See Lunkenheimer, P.
**Resch, U.** See Muller, A. B.
**Resch, U.; Esser, N.; Richter, W.**
Growth mode of Bi and Sb layers on GaAs(110) and InP(110).—73-01179
**Resetic, A.; Metikos-Hukovic, M.**
Ac impedance investigation of $Ta_2O_5$ film for use as a storage capacitor dielectric.—73-10916
**Reshchikov, M. A.** See Averkiev, N. S.; Gutkin, A. A.
**Reshetnikov, O. G.** See Andrianova, T. N.
**Reshidova, I. Yu.** See Prozorovskii, V. D.
**Reshina, I. I.** See Mirlin, D. N.
**Resnick, D. J.** See Ren, F.
**Ressler, K. G.** See Sonnenberg, N.
**Resta, R.** See McKinley, J. T.
**Resta, R.; Posternak, M.; Baldereschi, A.**
Toward a quantum theory of polarization in ferroelectrics: the case of $KNbO_3$.—73-15296
**Restivo, J.** See Bindal, A.
**Retoux, R.** See Caignaert, V.
**Retta, Negussie**
Extract from endod (Phytolacea dodecandra), a soap berry plant, in the making of concrete.—73-00089
**Rettel, A.; Seydel, R.; Gessner, W.; Bayoux, J. P.; Capmas, A.**
Influence of alumina on the hydration of monocalcium aluminate at different temperatures.—73-13737
**Rettori, C.** See Gennaro, A. M.
**Reucroft, P. J.** See Kim, J. S.
**Reul-Heeren, W.** See Lauwers, E.
**Reuther, A.** See Heinz, P.
**Revcolevschi, Alexandre** See Dravid, Vinayak P.
**Revel, Jean-Paul** See Hoh, Jan H.
**Revertegat, E.** See Gegout, P.
**Revesz, A. G.; Brown, G. A.; Hughes, H. L.**
Properties of buried $SiO_2$ films in SIMOX structures.—73-04151
**Revzina, L. A.** See Vorontsov, B. S.
**Rey, Fernando; Fornes, Vicente; Rojo, Jose M.**
Thermal decomposition of hydrotalcites. An ir and NMR spectroscopy study.—73-08775
**Rey, P.** See Labeau, M.
**Reyes, A. P.** See Hammel, P. C.
**Reyes, A. P.; Ahrens, E. T.; Hammel, P. C.; Thompson, J. D.; Canfield, P. C.; Fisk, Z.**
NQR study of local structure and cooling-rate-dependent superconductivity in $La_2CuO_{4+\delta}$.—73-04779
**Reynes, B.** See Bruyere, Jean-Claude; Jousse, Didier
**Reynolds, A.**
Are glassmakers consistent or just insistent.—73-10497; Impact of recycled glass on the usage of primary raw materials.—73-01982
**Reynolds, D. C.; Evans, K. R.; Jogai, B.; Stutz, C. E.; Yu, P. W.**
Photoluminescence study of symmetric, coupled, double $In_xGa_{1-x}As$-GaAs quantum well structures.—73-04442
**Reynolds, D. C.**
Step-by-step approach to batch house automation.—73-01831
**Reynolds, M. C.**
Electric melting of glass.—73-01947; Future of the glass industry—electric melting.—73-14389
**Rezac, Mary E.; Pfromm, Peter H.; Costello, Lora M.; Koros, W. Y.**
Aging of thin polyimide-ceramic and polycarbonate-ceramic composite membranes.—73-16406
**Rezlescu, E.** See Rezlescu, N.
**Rezlescu, N.; Rezlescu, E.**
Influence of Fe substitution by R ions in an Ni-Zn ferrite.—73-15329
**Reznik, D.** See Cooper, S. L.; Maksimov, A. A.
**Reznikov, A. G.** See Gutman, V. I.
**Reznikov, Leon** See Mayer, Christopher R.
**Rezzoug, N.** See Mbow, B.; Mezerreg, A.
**Rhee, Jhun; Choi, Sang-Wook; Han, Ki-Sung**
Preparation and sintering of zirconia-toughened alumina powder.—73-05964
**Rhee, Jhun; Choi, Sang-Wook; Jo, Dong-Soo; Lee, Jong-Gil; Kim, Seung-Tae**
Preparation of alumina powder from aluminum salts by precipitation method.—73-16914
**Rhee, Jhun; Jo, Dong-Soo**
Continuous processing of monodispersed zirconia powders.—73-12954
**Rhee, Kang-In** See Lee, Jae-Chun
**Rhee, Shi-Woo** See Choi, Yoon
**Rhiger, David R.** See Johnson, S. M.
**Rhiger, David R.**
Use of ellipsometry to characterize the surface of HgCdTe.—73-11496
**Rhine, Wendell E.** See Higgins, Richard J.; Jiang, Zhi-Ping; Lewis, Jennifer A.; Sakai, Hiroshi
**Rhodes, Christopher N.; Brown, David R.**
Structural characterization and optimization of acid-treated montmorillonite and high-porosity silica supports for $ZnCl_2$ alkylation catalysts.—73-08748
**Rhoton, F. E.; Grissinger, E. H.; Bigham, J. M.**
Improved suction apparatus for plating clay specimens onto ceramic tiles.—73-12036
**Rhyne, J. J.** See Malik, S. K.
**Riabkina-Fishman, M.; Zahavi, J.**
Effect of processing conditions on superconductive properties of laser-deposited YBCO thin films.—73-08036
**Riaz, Umar**
Low-temperature atmospheric pressure chemical vapor deposition of tungsten oxide thin films.—73-13119
**Ribar, Jacob W.** See Dubovoy, Val S.
**Ribeiro, S. J. L.; Dexpert-Ghys, J.; Piriou, B.; Mastelaro, V. R.**
Structural studies in lead germanate glasses: EXAFS and vibrational spectroscopy.—73-06973
**Ribeiro, S. J. L.; Hiratsuka, Renato Satoshi; Massabni, A. M. G.**
$SnO_2$ gels [studied] by $Eu^{3+}$ fluorescence spectroscopy.—73-10400
**Ribes, M.** See Etienne, S.; Kennedy, John H.; Roblin-Semene, L.
**Riccardi, R.** See Berbenni, V.; Marini, A.
**Riccitiello, Salvatore R.** See Cagliostro, D.; Schlautmann, James J.
**Rice, D. E.** See Tranquada, J. M.
**Rice, J. P.** See Safar, H.
**Rice, P.** See Ma, H.
**Rice, Prudence M.; Van Beck, Sara L.**
Spanish colonial kiln tradition of Moquequa, Peru.—73-13672
**Rice, Roy W.; Wu, Carl Cm.; Borchelt, Fred**
Hardness–grain-size relation in ceramics.—73-16502
**Rice, Roy W.**
Crack-shape–wake-area effects on ceramic fracture toughness and strength.—73-17262; Effect of hot extrusion, other constituents, and temperature on the strength and fracture of polycrystalline MgO.—73-03266; Effects of ceramic microstructural character on machining direction–strength anisotropy.—73-05777; Porosity effects on machining direction—strength anisotropy and failure mechanisms.—73-17409
**Rice, T. M.** See Bonesteel, N. E.; Fehrenbacher, R.
**Rice, T. M.; Gopalan, S.; Sigrist, M.**
Superconductivity, spin gaps, and Luttinger liquids in a class of cuprates.—73-08232
**Rich, Christopher C.** See Savant, Gajendra D.
**Rich, D. H.; Rajkumar, K. C.; Chen, L.; Madhukar, A.; George, T.; Maserjian, J.**
Defects in strained $In_{0.2}Ga_{0.8}As$/GaAs multiple quantum wells on patterned and unpatterned substrates: a near-infrared cathodoluminescence study.—73-07438
**Rich, D. H.; Rammohan, K.; Tang, Y.; Lin, H. T.; Maserjian, J.; Grunthaner, F. J.**
Absorption modulation induced by electron beam excitation of strained $In_{0.2}Ga_{0.8}As$/GaAs multiple quantum wells.—73-11060
**Richard, C.** See Gonnard, P.; Mocaer, D.; Pillot, J. P.; Provot, X.
**Richard, J.; Chen, J.; Artemenko, S. N.**
Narrow-band "noise" in $NbSe_3$ as a function of magnetic field and temperature: a reassessment.—73-04415
**Richard, J.; Chen, J.**
Damping of CDW's in $NbSe_3$.—73-07433
**Richards, D. R.** See Lightfoot, P.; Pei, S.
**Richards, D.** See Jusserand, B.
**Richards, David** See Harrell, J. W.
**Richards, J.** See Jenkins, L. C.
**Richards, L. E.; Hoff, H. A.; Aggarwal, P. K.**
Grain growth of high-$T_c$ $YBa_2Cu_3O_{7-x}$.—73-11773
**Richards, P. L.** See Verghese, S.
**Richards, R. S.; Jain, Vijay**
Rapid stirred melting of simulated West Valley high-level waste.—73-08483
**Richards, R.** See Low, I. M.
**Richardson, B.** See Carter, J. B.
**Richardson, I. G.** See Brough, Adrian R.
**Richardson, I. G.; Groves, G. W.; Brough, Adrian R.**
Carbonation of OPC [ordinary portland cement] and OPC/silica fume hardened cement pastes in air under conditions of fixed humidity.—73-06633
**Richardson, I. G.; Groves, G. W.**
Incorporation of minor and trace elements into calcium silicate hydrate (CSH) gel in hardened cement paste.—73-03482; Microstructure and microanalysis of hardened cement pastes involving ground granulated blast-furnace slag.—73-00143; Models for the composition and structure of calcium silicate hydrate (CSH) gel in hardened tricalcium silicate pastes.—73-10056
**Richardson, I. G.; Hall, C.; Groves, G. W.**
TEM study of the composition of the interstitial phase in an oil well cement clinker.—73-06725
**Richardson, J. T.; Dumin, D. J.; Lo, G. Q.; Kwong, D. L.; Gross, B. J.; Sodini, C. G.**
Comparison of the density and distribution of traps generated by high-voltage stress in silicon oxide and silicon oxynitrides.—73-04066
**Richardson, J. T.; Luss, Dan; Morgan, D.; Maric, M.**
Process for making high-temperature superconducting powders.—73-11988
**Richardson, R. A.; Peacor, S. D.; Uher, C.**
$YBa_2Cu_3O_{7-\delta}$ films: calculation of the thermal conductivity and phonon mean-free path.—73-11945
**Richeson, D. S.** See Neumayer, Deborah A.; Schulz, D. L.; Wessels, B. W.
**Richet, C.** See Locoge, P.
**Richet, P.** See Guillemet, C.; Guyot, F.
**Richmond, G. L.** See Arekat, S.
**Richter, A.** See Kozlowski, F.
**Richter, Hilmar** See Bonnet, Dieter
**Richter, Manfred** See Kosslick, Hendrik
**Richter, Rudolf E.; Poole, Toy S.**
Development of a new method for the determination of iron content of hydraulic cementitious materials and pozzolans.—73-06645
**Richter, Sabine** See Spindler, Jurgen
**Richter, Scott W.**
Microsheet glass in solar concentrators.—73-06829
**Richter, W.** See Esser, N.; Kobayashi, H.; Muller, A. B.; Nowak, C.; Reinhardt, F.; Resch, U.; Rossow, U.; Scholz, S. M.; Zahn, D. R. T.; Zettler, J.-T.
**Richter, W.; Esser, N.; Kelnberger, A.; Kopp, M.**
Electronic surface state resonant Raman scattering from vibrational modes of adsorbed monolayers: Sb on III-V semiconductors.—73-04315
**Riciputi, Lee R.; Christie, W. H.; Cole, David R.; Rosseel, T. M.**
Analysis of rare-earth elements in silicates by ion microprobe using doubly charged ions.—73-05355
**Rick, K.** See Lohner, A.
**Rickards, J.** See Falcony, C.
**Rickerby, David S.** See Knights, Clive F.
**Ricoult, Daniel L. G.** See Boury, Gerard R. M.
**Rideout, W. C.** See Zou, Yao
**Ridgway, M. C.** See Ellingboe, S.
**Rieck, C. T.; Little, W. A.; Ruvalds, J.; Virosztek, A.**
Energy gap, susceptibility, and damping in superconducting cuprates.—73-15457
**Riede, V.** See Syrbu, N. N.
**Riedel, H.; Svoboda, J.**
Theoretical study of grain growth in porous solids during sintering.—73-06114
**Riedel, R.** See Passing, G.
**Riedel, R.; Kienzle, A.; Szabo, V.; Mayer, J.**
Hydroboration of polymethylvinyl silane—a novel route to silicon boron carbide ceramics.—73-09166
**Riedel, R.; Passing, G.; Brook, Richard J.; Colombier, Christian; Gonon, Maurice; Fantozzi, G.**
Production of nonoxide monolithic ceramic shaped articles.—73-12512
**Riedle, E.** See Ashworth, S.
**Rieger, J. H.** See Sinharoy, S.
**Rieger, Konrad C.**
Pyrophyllite.—73-12293; Wollastonite.—73-12306
**Riehle, Daniel R.** See Carius, Alan C.
**Riello, P.** See Righini, Giancarlo C.; Zeng, Y. W.
**Ries, G.** See Busch, R.; Gerhauser, W.
**Ries, H. B.**
Body preparation for dry-press forming of production tile.—73-12014; Mixing in the ceramic industry—an introduction into theory+practice.—73-12046; Preparation of ceramic bodies with special consideration given to the available grinding systems and processes.—73-08357
**Riess, I.**
Potential measurements using mixed ionic electronic conductors as probes.—73-01011
**Riess, J.** See Jin, Y.
**Riester, L.** See Tortorelli, P. F.
**Rietschel, H.** See Lang, M.
**Rietveld, G.; Chen, N. Y.; Van der Marel, D.**
Anomalous temperature dependence of the work function in $YBa_2Cu_3O_{7-\delta}$.—73-07986
**Rieu, J.; Pichat, A.; Rabbe, L. M.**
Ion implantation for biomaterials.—73-10244
**Riffe, D. M.** See Rowe, J. E.
**Rifkind, J. M.** See Poret, J. C.
**Rigamonti, A.** See Borsa, F.
**Rigato, V.** See Della Mea, Gianantonio; Terranova, M. L.
**Rigaud, D.** See Rolland, M.
**Rigaud, Michel** See Li, Xiang-Min; Poirier, J.
**Rigaux, C.** See Jouanne, M.

**Rigby, A. J.; Forest, R. E.**
Magnesia chrome refractories—quality and performance.—73-10740
**Rigby, G. A.** See Xu, Y. P.
**Rigdon, Michael A.** See Hong, William S.
**Riggs, W. L., II** See Lynn, M.; Steeper, T. J.
**Righetti, Renzo**
Method for cooling ceramics, especially ceramic tiles produced in roller kilns, and the relative plant.—73-12083
**Righini, Giancarlo C.** See Shen, Rong-Gui
**Righini, Giancarlo C.; Fagherazzi, G.; Pelli, S.; Riello, P.; Verciani, A.**
Cd(S, Se, Te)-doped glasses: structure and optical properties.—73-14794
**Righini, Giancarlo C.**
New glasses for optical applications.—73-09733
**Rigney, Joseph D.; Castro, R. G.; Lewandowski, John J.**
In situ fracture monitoring of plasma-sprayed $MoSi_2$-Ta composites.—73-06806
**Rigney, Joseph D.; Lewandowski, John J.**
Chemical stability of titanium diboride reinforcement in nickel aluminide matrices.—73-06749; Effects of reinforcement size and distribution on fracture toughness of composite nickel aluminide intermetallics.—73-00225
**Rigotty, J. M.** See Terry, I.
**Rigout, N.** See Adam, J. L.
**Rigout, N.; Adam, J. L.; Lucas, Jacques**
BIG fluoride glass optical fibers with improved NA.—73-06998
**Rijkeboer, Albert**
Bauxite processing.—73-12309
**Rikken, A. H. M.** See Morelissen, H. W.
**Riley, Clyde** See Taylor, Timothy E.
**Riley, David R.; Jurbergs, David; Zhou, Ji-Ping; Zhao, J. N.; McDevitt, John T.**
Environmental reactivity characteristics of $K_3C_{60}$ and $YBa_2Cu_3O_{7-x}$ high-temperature superconductor thin film.—73-15461
**Riley, David R.; McDevitt, John T.**
Electrochemical response of $YBa_2Cu_3O_{7-x}$ as a function of oxygen content.—73-01539
**Riley, F. L.** See Szepvolgyi, J.
**Riley, Frank L.** See Egerton, Terence A.; Park, H.-C.
**Riley, J. D.** See Zhang, X. D.
**Riley, Thomas J.; Hopke, Philip; Martin, Rodger; Porter, James W.**
Diffusion of technological knowledge: a case study in North American ceramic analysis.—73-09779
**Riley,, Frank L.** See Park, Hong-Chae
**Rille, E.** See Ofner, H.
**Rille, E.; Zarwasch, R.; Pulker, H. K.**
Properties of reactively dc magnetron-sputtered AlN thin films.—73-05622
**Rimai, L.; Ager, R.; Hangas, J.; Logothetis, E. M.; Abu-Agel, Nayef; Aslam, M.**
Pulsed laser deposition of SiC films on fused silica and sapphire substrates.—73-07749
**Rimai, Lajos** See Pawlowski, C.
**Riman, Richard E.** See Dejneka, Matthew; Eamsiri, J.; Nicolaescu, Ion V.; Yu, S. H.
**Rimbourg, L.** See Segaud, J. P.
**Rimpel, Eckhard**
Effect of the Heat Utilization Order on production processes in the brick and tile industry.—73-05111
**Rimshans, Ya. S.** See Abashkina, S. A.
**Rinaldi, R.** See Cingolani, R.
**Rinaldi, Stefano** See Vallana, Franco
**Rincon, C.** See Ramirez, F. J.; Tinoco, T.
**Rincon, J. M.** See Caceres, J.; Carda, J.; Cordoncillo, E.; De Vicente, I.; Diaz, C.; Lerma, J. R.; Romero, M.; Zayas, M. E.
**Rincon, J. M.; Rivera, E.**
Structure of CdO-$SiO_2$ low-silica-content inverted glasses.—73-14108
**Rincon, J. M.; Torres, L.; Diaz, C.; Gutierres, I.**
Glass produced from silica from a geothermic plant.—73-14395
**Rincon, J. M.**
Archaeometric investigation of ancient glasses from the Balearic Islands.—73-13662
**Rinderer, Leo** See Suzuki, Morio
**Ring, Terry A.** See Ampuero, Silva; Chen, Zhien-Chi
**Ringeissen, J.** See Beaurepaire, E.
**Ringhofer, K. H.** See Otten, J.
**Ringlien, James A.**
Inspection of transparent containers with opposing reflection means.—73-01858; Inspection of transparent containers.—73-01859
**Ringnalda, J.** See Breslin, Michael C.
**Ringot, E.** See Barrioulet, M.; Saada, R.
**Ringwood, Alfred E.**
Abrasive compact of cubic boron nitride and method of making [the] same.—73-09768
**Rino, J. P.** See Jin, Wei
**Rioux, D. F.** See Chang, S.; Vitomirov, I. M.
**Rioux, Dennis** See Niles, David W.
**Rioux, Dennis; Niles, David W.; Hochst, Hartmut**
ZnTe: a potential interlayer to form low-resistance back contacts in CdS/CdTe solar cells.—73-07868
**Ripa, Donald P.** See Claar, Terry D.
**Ripoche, G.; Peyre, J.-L.; Lambert, M.; Mottet, S.**
High-speed (≥6 GHz) InGaAs/InP avalanche photodiodes grown by gas source molecular beam epitaxy [GSMBE] with a thin quaternary grading layer for high bit rate (≥5 Gbit/s) systems.—73-07566; 73-14961
**Risbud, S. H.** See Fletcher, Joseph P.; Shackelford, James F.
**Riscan, Jasenka; Kosec, M.**
Electrokinetic characteristics of $Pb(Ti,Zr)O_3$ and its oxide constituents.—73-09112
**Riskiev, T. T.; Salikhov, T. P.; Minadzhiev, D. Ya.**
Thermodynamic study of high-temperature superconductors $YBa_2Cu_3O_x$ and $Bi_2Sr_2CaCu_2O_y$.—73-01691
**Risse, M.** See Vouillemet, M.
**Risse, P.** See Albenque, M.
**Riste, T.; Samuelsen, K.; Otnes, K.; Feder, J.**
Critical behavior of $SrTiO_3$ near the 105-K phase transition.—73-16072
**Ristic, L.; Kniffin, M. L.; Gutteridge, R.; Hughes, H. G.**
Properties of polysilicon films annealed by a rapid thermal annealing process.—73-12871
**Ristow, M. L.** See Schultz, J. C.
**Ritala, Mikko; Leskela, Markku; Johansson, Leena-Sisko; Niinisto, L.**
Atomic force microscopy study of titanium dioxide thin films grown by atomic layer epitaxy [ALE].—73-06188
**Ritala, Mikko; Leskela, Markku; Nykanen, Erja; Soininen, P.; Niinisto, L.**
Growth of titanium dioxide thin films by atomic layer epitaxy.—73-05836
**Ritchie, D. A.** See Linfield, E. H.
**Ritchie, R. O.** See Card, J. C.; Dauskardt, R. H.
**Ritchie, R. O.; Cannon, Rowland M., Jr.; Dalgleish, Brian J.; Dauskardt, R. H.; McNaney, J. M.**
Mechanics and mechanisms of crack growth at or near ceramic-metal interfaces: interface engineering strategies for promoting toughness.—73-09644
**Ritchie, R. O.; Dauskardt, R. H.**
Cyclic fatigue of ceramics: a fracture mechanics approach to subcritical crack growth and life prediction.—73-03256
**Ritter, J. J.** See McMichael, R. D.; Shull, R. D.
**Ritter, John E.**
Particle impact damage of engineering ceramics.—73-06498
**Ritter, T.** See Lemos, V.
**Rittler, Hermann L.**
Nanocrystalline materials.—73-12389
**Ritzinger, S.** See Pechen, E. V.
**Rivas, Patricia C.** See Scian, Alberto N.
**Rivera, E.** See Rincon, J. M.; Zayas, M. E.
**Rivera, P.** See Dannheim, Henning
**Rivereau, A.** See Masse, S.
**Rives, Vicente** See Del Arco, Margarita
**Riviere, D.** See Poignant, H.
**Riviere, J. P.** See Lagerlof, K. Peter D.; Patriarche, G.
**Riviere, J. P.; Delafond, J.**
Structure and mechanical properties of coatings produced by dynamic ion mixing.—73-17437; Surface modification of materials produced by dynamic ion mixing.—73-10281
**Rivoallan, L.** See Ibrahim, H.
**Rivory, J.** See Parjadis de Lariviere, G.; Vuye, G.
**Rivory, J.; Fisson, S.; Van, V. N.; Vuye, G.; Wang, Y.; Abeles, F.**
$CaF_2$ growth on Si, a-$SiO_2$ [studied] by in situ spectroscopic ellipsometry.—73-17111
**Rizak, I. M.** See Perechinskii, S. I.; Vysochanskii, Yu. M.
**Rizak, V. M.** See Perechinskii, S. I.; Vysochanskii, Yu. M.
**Rizakhanov, M. A.; Khamidov, M. M.**
Photoelectrically active and inactive slow electron trapping centers in ZnSe crystals.—73-11376
**Rizkalla, Maher E.; Kara, Miklos T.**
Computer simulation for the design of high-performance, high-$T_c$ superconducting thin-film switches.—73-15404
**Rizzi, A.** See Moritz, H.
**Rizzi, A.; Moritz, Heiko; Luth, H.**
Electronic and vibrational properties of semiconducting crystalline $FeSi_2$ layers grown on Si(111).—73-01156
**Rizzi, Federica R.** See Quaranta, Fabio; Valentini, Antonio
**Rizzo, Graziella** See Guadagnino, Emanuel
**Roach, R. P.** See Weimer, Alan W.
**Roas, Bernhard**
Method for the production of a structured composite with high-temperature superconductor material.—73-11969
**Robbevalloire, F.** See Liu, G. H.
**Robbins, D. J.** See Nayar, V.
**Robels, U.; Arlt, G.**
Domain wall clamping in ferroelectrics by orientation of defects.—73-01404
**Roberge, R.** See Mager, P.
**Robert, J. L.** See Jean-Jean, P.
**Robert, M. H.; Carvalho, B. R.**
Microstructural modifications in Al-5.7 wt% Cu-30 vol% $Al_2O_3$ fibers during isothermal heat treatment.—73-06830
**Roberts, Barry C.**
Sorbent-bed crop-drying system.—73-12330
**Roberts, D. M.** See Agrawal, Anoop
**Roberts, Gordon J.** See Muralidhar, S. K.; Ruderer, Clifford G.; Stadnicar, Edward, Jr.
**Roberts, Gordon J.**
Bismuth-containing lead-free glass enamels and glazes of low silica content.—73-03672; 73-14675
**Roberts, J. S.** See Kanaah, A.; Nelson, J.; Thirstrup, Christen
**Roberts, L.; Hughes, G.; Fennema, B.; Carbery, M.**
Vacuum ultraviolet photoelectron spectroscopy study of the interaction of molecular sulfur with the GaAs(100) surface.—73-07856
**Roberts, Patrick**
Reduced individual section (IS) machine wear through air pressure control.—73-12060
**Roberts, Peter A.** See Hayes, Kevin G.
**Roberts, Peter A.; Hayes, Kevin G.; Peek, Joanne M.**
Ceramic building block.—73-15935
**Roberts, Steven G.** See Booth, Andrew S.; Marrow, James
**Roberts, T. A.; Grace, J. M.; McDonald, D. B.; Gray, K. E.; Chang, R. P. H.**
In situ compositional analysis of multielement thin films.—73-05055
**Robertson, A., Jr.; Levkoff, J.; Leiberich, A.; Anyanwu, V.; Moore, J.; Lord, H. A.**
Process control system for improved run-to-run control of molecular beam epitaxial growth of $GaAs/Al_xGa_{1-x}As$ heterostructures.—73-11404
**Robertson, J. D.** See Dudney, N. J.; Kim, J. S.; Wu, Si-Jia; Warren, W. L.
**Robertson, John; Juma, Kassim**
Ceramic composition.—73-02028
**Robertson, John**
Electronic structure of defects in amorphous silicon nitride.—73-06158
**Robertson, M. D.; Corbett, J. M.; Webb, J. B.; Rousina, R.**
TEM characterization of $In_{1-x}Ga_xSb$ on (001)GaAs heteroepitaxial system.—73-07828
**Robertson, Michael J.** See Burton, Julie D.
**Robertson, Richard E.** See Tao, Wess H.
**Robertus, Robert** See Hrma, Pavel
**Robey, Steven W.** See Smilgys, Russell V.
**Robins, P. J.; Austin, S. A.; Issaad, A.**
Suitability of GGBFS [ground granulated blast-furnace slag] as a cement replacement for concrete in hot arid climates.—73-03542
**Robinson, B. J.** See Comedi, D.; Hofstra, P. G.; Kovacic, S. J.; Qiu, C.
**Robinson, David** See Solmon, Helene
**Robinson, G. D.** See Look, D. C.
**Robinson, Gerald D.** See DeNatale, Jeffrey D.
**Robinson, Gilbert C.** See Li, Ching-Hsien
**Robinson, Glen M.; Perry, David M.; Peterson, Richard W.**
Optical interferometry of surfaces.—73-01923
**Robinson, Quentin K.** See Johnson, D. Lynn
**Robinson, W. R. A. M.; Mol, J. C.**
Support effects in methanol synthesis over copper-containing catalysts.—73-02698
**Roblin-Semene, L.; Pradel, A.; Ribes, M.**
Structural and electrical properties of glassy analogs to bismuth-cuprate-based superconductors.—73-01321
**Robson, Peter N.** See Thirstrup, Christen
**Robyn, Pierre; Zivkovic, Alexandre; Mottet, Leon-Philippe**
Ceramic welding process.—73-04965
**Robyns, G.** See Somogyi, A.
**Roca i Cabarrocas, P.** See Yakovlev, V.
**Rocazella, Michael A.** See Aghajanian, Michael K.
**Roch, C.** See Bruyere, Jean-Claude
**Rocheleau, Richard E.; Zhang, Zhe**
Densification of plasma-deposited silicon nitride films by hydrogen dilution.—73-12971
**Rocher, A.** See Voillot, F.
**Rocherulle, J.** See Reau, J. M.
**Rochester, Colin H.** See Millar, Graeme J.
**Rochet, F.** See Debauche, C.
**Rockett, P. I.** See Kanaah, A.
**Rod, B. J.** See Brody, P. S.
**Roddewig, D. L.**
Operating experience with the calcination of natural gypsum and desulfogypsum in a grinding and calcining plant.—73-00153
**Roddy, Mike** See Skandan, Ganesh
**Rodel, Jurgen** See Scholz, H.; Schon, Stefan
**Rodel, Jurgen; Glaeser, Andreas M.**
Microdesigned interfaces: new opportunities for materials science.—73-02895
**Rodewald, Katia** See Schneider, H.
**Rodgers, John R.; Villars, Pierre**
Trends in advanced materials data: regularities and predictions.—73-09753
**Rodic, D.** See Guillot, M.
**Rodier, N.** See Masquelier, C.
**Rodin, V. V.** See Gorima, J.; Vasil'ev, A. L.
**Rodionova, M. K.** See Mansfeld, G. D.
**Rodney, P. J.** See Tousley, B. C.
**Rodnyanskii, A. E.** See Gomoyunova, M. V.
**Rodnyi, P. A.** See Antonyak, O. T.
**Rodnyi, P. A.; Voloshinovskii, A. S.**
Effect of phase transition on intrinsic luminescence parameters of $RbCaF_3$.—73-16122
**Rodrigo, M. T.** See Anderson, James A.
**Rodriguez Cuartas, R.**
Theoretical calculation of the hydrolytic surface resistance of glass containers.—73-14293
**Rodriguez, E.; Goffman, M. F.; Arribere, A.; De La Cruz, F.-Y.; Schneemeyer, L. F.-S.**
Critical state of the weakly coupled 2-D superconductor $Bi_2Sr_2CaCu_2O_8$.—73-11714
**Rodriguez, J. E.** See Marino, A.
**Rodriguez, L.** See De Lucas, Antonio
**Rodriguez, Mark A.** See Chen, Bin-Jiang
**Rodriguez, Rogelio; Arroyo, Ruben; Salinas, Pastora**
Dynamic light scattering studies of the stability and growth of silica particles.—73-09075
**Rodriguez, S.** See Cordoncillo, E.; Sciacca, M. Dean
**Rodriguez, Sergio** See Kartheuser, E.
**Rodriguez, V. D.** See Martin, I. R.
**Rodriguez-Carjaval, J.** See Garcia-Matres, E.; Garcia-Munoz, J. L.; Navarro, J. M.; Palacin, Maria Rosa; Criado, C.; Ramos-Barrado, J. R.
**Rodriguez-Clemente, R.** See Aspar, B.; Burappa, K.; Martinez, Benjamin.; Sandiumenge, F.
**Roed, Gjerloff; Linnet, Niels D.**
Glass electrode.—73-14750
**Roedel, R. J.** See Wong, J.
**Roeder, A.** See Oberste-Padtberg, R.
**Roeder, Erwin** See Langhans, Klaus
**Roelofs, M. G.; Ferretti, A.; Bierlein, J. D.**
Proton- and ammonium-exchanged optical waveguides in $KTiOPO_4$.—73-02677
**Roenkov, A. D.** See Verenchikova, R. G.; Vodakov, Yu. A.
**Roentgen, P.** See Unger, Peter
**Roerig, C. S.**
Simple base inspection.—73-14490
**Roessli, B.** See Furrer, A.; Guillaume, M.
**Roessli, B.; Fischer, P.; Furrer, A.; Petrakovskii, L. V.; Sablina, K.; Valkov, V.**
Magnetic neutron scattering in single-crystal $Bi_2CuO_4$.—73-05432
**Roessli, B.; Fischer, P.; Staub, U.; Zolliker, M.; Furrer, A.**
Combined electronic-nuclear magnetic ordering of the $Ho^{3+}$ ions and magnetic stacking faults in the high-$T_c$ superconductor $HoBa_2Cu_3O_7$.—73-08002

**Rog, G.; Bogusz, W.**
Application of glass-ceramic Nasicon-based composite electrolytes in galvanic cells for detection of sulfur oxides in gases.—73-14680
**Rogachev, A. S.** See Levashov, E. A.; Mukas'yan, A. S.; Shugaev, V. A.
**Rogachev, D. L.** See Kuznetsov, V. Ya.
**Rogacki, K.; Lalho, R.; Heikkila, L.; Sadowski, W.**
Evidence for layered structure of $YBa_2Cu_3O_{7-x}$ single crystals.—73-01547
**Rogalla, H.** See De Nivelle, M. J. M. E.
**Rogashkov, A. S.** See Borisov, V. I.
**Rogelet, T.** See Yu, Z.-M.
**Rogelet, T.; Soderholm, S.; Qvardford, M.; Saini, N. L.; Karlsson, U. O.; Lindau, I.**
Electronic structure in NiO(100) with adsorbed Na.—73-05391
**Roger, Francoise** See Carre, Alain
**Roger, J. P.** See Jin, G.
**Roger, M.** See Holz, Dietmar
**Roger, Ulrich** See Wischnat, Volker
**Rogers, B. R.** See Kottke, M.
**Rogers, C. T.** See Chan, Siu-Wai; Inam, Arun
**Rogers, C. T.; Myers, K. E.; Eckstein, J. N.; Bozovic, I.**
Brownian motion of vortex-antivortex excitations in very thin films of $Bi_2Sr_2CaCu_2O_8$.—73-07994
**Rogers, D.; Tiedje, T.**
Scanning tunneling microscopy study of carbon and hydrogen reactions with Si(111) in ultrahigh vacuum.—73-17196
**Rogers, Jim L.; Varhue, W. J.; Adams, Edward**
Growth of Er-doped Si films by electron cyclotron resonance [ECR] plasma-enhanced chemical vapor deposition.—73-04351
**Rogers, K. D.** See Lane, D. W.
**Rogers, Kirk A.; Trumble, Kevin P.; Dalgleish, Brian J.; Reimanis, Ivar E.**
Role of oxygen in microstructure development at solid-state diffusion-bonded Cu/α-$Al_2O_3$ interfaces.—73-13895
**Rogers, M.** See Saasen, Arild
**Rogers, P. S.** See Carter, S.
**Rogers, T. J.; Lei, C.; Streetman, B. G.; Deppe, D. G.**
Low-growth-temperature AlGaAs current blocking layers for use in surface normal optoelectronic devices.—73-11295
**Rogers, William R.** See Potter, Michael J.
**Roggendorf, H.** See Sebastian, K.
**Rogier, R.** See Pernot, F.
**Roginskaya, Yu. E.** See Morozova, O. V.
**Roginskaya, Yu. E.; Morozova, O. V.; Loubnin, E. N.; Popov, A. V.; Ulitina, Y. I.; Zhurov, V. V.**
XRD, TEM, and XPS characterization of $IrO_2$+$Ta_2O_5$ films.—73-12739
**Rogl, P.; Fischer, P.**
Powder neutron diffraction of α-$UB_2$ (α-$UB_2C$-type).—73-01756
**Rogmann, N.**
Emergence and duties of the International Lime Association (ILA) and the European Lime Association (EuLA).—73-09944
**Rogulis, U. T.** See Britsis, D. I.
**Rogunov, V. A.** See Lapidus, M. A.
**Rohanova, Dana; Hlavac, Jan**
Chemical interaction of bioactive glass-ceramics with a simulated body fluid.—73-03713
**Rohatgi, A.** See Chen, Z.
**Rohde, J. R.** See Rohde, S. L.
**Rohde, S. L.; Kim, Y. K.; De Angelis, R. J.**
Processing-texture relationships in dual-unbalanced magnetron deposition of TiN films.—73-16955
**Rohde, S. L.; Sproul, W. D.; Rohde, J. R.**
Correlations of plasma properties and magnetic field characteristics to TiN film properties formed using a dual unbalanced magnetron system.—73-02755
**Rohling, William W.** See Hatfield, William T.
**Rohonczy, Janos** See Boksay, Zoltan
**Rohrbach, Ronald P.; Schollmeyer, Julie R.; Fanelli, Anthony J.**
Modified agar and process for preparing modified agar for use [in] ceramic composition to add green strength and/or improve other properties of a preform.—73-12087
**Rohrer, Gregory S.; Bonnell, Dawn A.**
Geometric and electronic structure of the ZnO(000$\bar{1}$) surface.—73-03146
**Roitman, Peter** See Mayo, Santos
**Roitsin, A. B.** See Gokhman, V. L.; Ishchenko, S. S.
**Roizin, Y. O.** See Vovk, O. V.
**Roizin, Ya.; Rysiakiewicz-Pasek, E.; Sviridov, V.; Marczuk, K.**
Recording media on the basis of porous glasses.—73-14266
**Rojas, R. M.; Garcia-Chain, P.; Herrero, P.**
Electron microscopy study of the fluorite↔rhombohedral ($R_{III}$) transformation in the U-La-O system.—73-01746
**Rojas, S.** See Borghesi, A.
**Rojek, A.; Cendlewska, B.**
Effect of Sb additions on the formation of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O superconducting thick films.—73-08038
**Rojo, Jose M.** See Rey, Fernando
**Rokhlin, R.** See Mhaisalkar, S. G.
**Rokhlin, S. I.; Chu, Y. C.; Lavrentyev, A. I.; Baaklini, G. Y.; Bhatt, Ramakrishna T.**
Ultrasonic assessment of oxidation damage in SiC/RBSN composites.—73-17235
**Rokhvarger, Anatoly**
Choice of statistical control cards and testing method sets for total quality management [TQM] of traditional ceramics.—73-08326
**Rokkaku, T.** See Sueda, M.
**Roldan, J. M.** See Ramakrishnan, V.
**Rolfe, S.** See Roth, A. P.
**Rolland, M.; Gaillard, S.; Villemain, E.; Rigaud, D.; Valenza, M.**
Low noise ohmic contacts on *n*- and *p*-type GaSb.—73-07642
**Rolland, M.; Gaillard, S.; Villemain, E.; Rigaud, D.; Valenza, M.**
Low-noise ohmic contacts on *n*- and *p*-type GaSb.—73-15020
**Romagnan, J. P.** See Eggenkamp, M. E. W.
**Romain, F.** See Khatir, S.
**Romano, Valerio** See Konz, Flurin
**Romanoff, Eugene G.**
Fragmentary approach in searching for new compounds.—73-08630
**Romanov, E. G.** See Zvyagin, B. B.
**Romanov, N. G.** See Baranov, P. G.
**Romanov, S. G.** See Bogomolov, V. N.; Kumzerov, Yu. A.
**Romanov, V. A.** See Buyanov, A. V.; Gasan-Zade, S. G.
**Romanov, Yu. A.** See Aleshkin, V. Ya.
**Romanova, E. G.** See Prokhorova, T. I.
**Romanovskaya, L. V.** See Kashkina, T. V.
**Romanovskii, L. B.; Terekhin, V. A.; Chuklai, A. M.; Bibaev, V. M.; Koptelov, V. N.**
Refractories based on sintered and fused periclase chromite.—73-00852
**Romanovskii, L. B.; Terekhin, V. A.; Sadovnik, Yu. V.**
Testing of magnesia-spinellide refractories for gas-oxygen refining of corrosion-resistant steels.—73-00876
**Romashin, A. G.** See Ivanova, L. P.
**Romashova, E. I.** See Eron'yan, M. A.
**Romer, D.** See Bauer, J. C.
**Romero, D. B.; Porter, C. D.; Tanner, D. B.; Forro, L.; Mandrus, D.; Mihaly, L.**
Phenomenology of the ir properties of the CuO superconductors.—73-08163; Quasi-particle damping in $Bi_2Sr_2CaCu_2O_8$ and $Bi_2Sr_2CuO_6$.—73-08183
**Romero, M.; Callejas, P.; Rincon, J. M.; Garcia Hernandez, J.; Pelino, M.; Boattini, P.**
Obtention and microstructure of glasses obtained from goethite industrial wastes.—73-14059
**Romich, H.; Fuchs, D. R.**
New comprehensive concept for the conservation of stained glass windows.—73-13671
**Romig, A. D., Jr.** See Morral, J. E.
**Ronarch, D.** See Ibrahim, H.
**Roncari, E.** See Galassi, C.
**Roncato, Giordano; Fedorowsky, Robert; Boissonnat, Philippe; Loubinoux, Dominique**
Apparatus for manufacturing a glass and organic composite strand, including a blowing device.—73-15762
**Roncevic, S.** See Cizmek, Ankica
**Ronchetti, Renzo**
Fast firing technology in the brick and tile industry—economic considerations.—73-05116
**Rondinella, Vincenzo V.; Matthewson, M. John; Kurkjian, Charles R.**
Coating additives for improved mechanical reliability of optical fiber.—73-03778
**Rong, F. C.** See Gerardi, G. J.
**Rong, Huang**
Diffusion bonding behavior of austenitic stainless steel containing titanium and alumina.—73-03575
**Ronkainen, H.; Ehrnsten, U.; Zilliacus, R.; Saarilahti, J.; Mahiout, A.; Hannula, S. P.**
Microstructural features related to corrosion initiation in titanium-aluminum nitride coated steel.—73-10254
**Rooke, Ann**
Carbide tips for bandsawing.—73-15960
**Rooney, Gerry**
Ultimate firing machine for sanitary ware.—73-05134
**Roos, Arne** See Andersson, K. E.
**Roos, Arne; Chinyama, Godfrey; Hedenqvist, Per**
Thermal stability of pyrolytic tin oxide films on aluminum.—73-10287
**Roos, J. R.** See Blanpain, B.; Celis, J. P.; De Bruyn, K.; Vancoille, E.
**Roos, J.** See Wang, G.
**Roosen, G.** See Delaye, Philippe; Disdier, Laurent; Jarasiunas, Kestutis; Sugg, B.
**Roosten, A.** See Groen, W. A.
**Rosa, J.; Krejci, A.**
Optimized control system for rotary cement kilns based on a linguistic model.—73-01963
**Rosa, L. Guerra** See Martins, C. Saraiva
**Rosbeck, Joseph P.** See Johnson, S. M.; Schoolar, Richard
**Rosch, William R.; Fripp, Archibald L., Jr.; Debnam, William J., Jr.; Woodell, Glenn A.**
Measuring furnace/sample heat transfer coefficients.—73-15814
**Rosda, I. I.; Shpak, I. I.**
Thermooptic properties of glasses of the system Ge-As-S.—73-00566
**Rose, D.; Kupper, D.**
Adsorptive and catalytic flue gas purification of exhaust gases from cement plants: laboratory and small-scale experiments.—73-00017; Ecological and economical aspects of cement production when using waste-derived fuels.—73-00068
**Rose, E.** See Lang, W.
**Rose, K. C.** See Muller, A. B.
**Rose, Malcolm F., Jr.; Tyree, Charles B., Jr.; Dodson, James D.; Bennett, Terry L.**
Method and apparatus for handling glass sheets.—73-01862
**Rose, Millard F.** See Tatarchuk, Bruce J.
**Rose, Peter E.**
Mold for casting components.—73-01871
**Roseler, A.** See Humlicek, J.; Weidner, M.
**Roseler, A.**
Ir spectroscopy ellipsometry: instrumentation and results.—73-12152
**Roseman, R. D.** See Buchanan, R. C.
**Rosen, A.** See Altshulin, S.
**Rosen, B.** See Moritz, H.
**Rosen, M.** See Poret, J. C.
**Rosenbaum, T. F.** See Bao, Wei; Seidler, G. T.
**Rosenberg, Richard** See Nelson, Arthur J.
**Rosenfeld, D.** See Sanjines, R.
**Rosengren, A.** See Spindt, C. A.; Tornau, E. A.
**Rosenthal, Dan G.; Larsen, Donald E., Jr.**
Infiltrated fiber-reinforced metallic and intermetallic alloy matrix composites.—73-03685
**Rosenthal, Jens**
Complete [glass] batch house concept.—73-00600
**Rosenthal, M. S.** See Draper, E. A.
**Rosenzweig, J.** See Ralston, John D.
**Roshavelov, T. T.** See Ivanov, Ya. P.
**Roshchina, E. V.** See Panova, T. I.
**Roskova, G. P.; Morozova, E. V.; Bakhanov, V. A.**
Light transmission of porous plates obtained from two-phase sodium borosilicate glasses of various structures.—73-00509
**Rosner, S. J.** See Mars, D. E.
**Rosolen, Graham; Wong, Terence K. S.; Willard, Mark E.**
Reactive ion etched nanometer size trenches [studied] using a combined scanning electron microscope and scanning tunneling microscope.—73-17190
**Ross, C. Philip**
California's environmental challenges to glassmakers.—73-10502; Changing colors in container furnaces.—73-10505; RECLAIM [Regional Clean Air Incentives Market]—California's guarantee for cleaner air.—73-17501; Refractory concerns within the glass container industry.—73-07220
**Ross, F. M.; Hull, R.; Bahnck, D.; Bean, J. C.; Peticolas, L. J.; Hamm, R. A.**
In situ transmission electron microscopy measurements of the electrical and structural properties of strained layer GeSi/Si *p-n* junctions.—73-07586
**Ross, Graeme W.; Hribek, Petr; Eason, R. W.; Garrett, M. H.; Rytz, D.**
Impurity-enhanced self-pumped phase conjugation in the near ir in "blue" $BaTiO_3$.—73-16513
**Ross, J. R. H.** See Mercera, P. D. L.
**Ross, Joseph H., Jr.** See Shi, Jian-Hui
**Ross, N. L.; Angel, R. J.**
Crystal structure of high-pressure $SrB_2O_4$(IV).—73-02195
**Ross, P.; Boulay, C.; Van Mier, J. G.**
Dynamic behavior of concrete: influence of free water.—73-00066
**Rossatmignod, J.** See Marin, C.; Pyka, N.
**Rosseel, T. M.** See Riciputi, Lee R.
**Rossell, H. J.** See McCarthy, L. D.
**Rossi, G. A.** See Corbin, N. D.
**Rossi, Raffaele** See Di Chirico, Giuseppe
**Rossignol, S.; Reau, J. M.; Tanguy, B.; Videau, J. J.; Portier, J.; Dexpert-Ghys, J.**
Ionic conductivity and structure of thallium tellurite glasses containing AgI.—73-07043
**Rossignol, S.; Reau, J. M.; Tanguy, B.; Videau, J. J.; Portier, J.**
Glass formation and conductivity of the AgI-$AgO_{0.5}$-$TeO_2$ system.—73-00491
**Rossignol, V.** See Bensaoula, A. H.; Freundlich, A.
**Rossin, V. V.; Christianen, P. C. M.; Travnikov, V. V.**
Effect of hot electrons on the magnetic field enhancement of exciton luminescence in GaAs.—73-14849
**Rossington, David R.**
Ph.D. in glass science—a new graduate degree program at Alfred University.—73-17498
**Rossler, E.** See Sokolov, A. P.
**Rossler, U.** See Mayer, H.
**Rossman, George R.** See Baker, Shenda M.
**Rossnagel, S. M.**
Plasma sputter deposition systems: plasma generation, basic physics, and characterization.—73-04940
**Rossner, Wolfgang** See Leppert, Juergen
**Rossovskii, V. N.** See Bocharov, N. A.
**Rossow, U.** See Muller, A. B.; Nowak, C.
**Rossow, U.; Krost, A.; Werninghaus, T.; Schatke, K.; Richter, W.; Hase, A.**
Ellipsometric characterization of InP-based quantum well structures.—73-14885
**Rossow, U.; Werninghaus, T.; Zahn, D. R. T.; Richter, W.; Horn, K.**
Thin epitaxial films of wide gap II-VI compounds studied by spectroscopic ellipsometry.—73-15206
**Rost, Timothy A.; Lin, He; Rabson, Thomas A.**
Deposition and analysis of lithium niobate and other lithium niobium oxides by rf magnetron sputtering.—73-11559
**Rostasy, Ferdinand S.** See Schmidt, Frank
**Rostoker, David**
Polishing material.—73-09772
**Rostoker, William; Bonini, Julius J.; Klimczak, Gary W.**
Method for forming carbide coating on various metals and their alloys.—73-00286
**Rotger, A.; Beille, J.; Laurant, J. M.; Schlenker, C.**
Pressure dependence of the Peierls transition in the quasi-2-D purple bronze $KMO_6O_{17}$.—73-16278
**Roth, A. P.** See Maigne, P.; Sudersena Rao, T.
**Roth, A. P.; Sudersena Rao, T.; Benzaquen, R.; Lacelle, C.; Rolfe, S.**
Nature and origin of residual impurities in high-purity GaAs and InP grown by chemical beam epitaxy.—73-11344
**Roth, A.; Lugagne-Delpon, Emanuel; Voisin, P.**
Electric and magnetic field induced dimensionality reduction in InGaAs-GaAs superlattices.—73-07479
**Roth, G.** See Brugger, T.; Pfeiffer, T.
**Roth, P.; Tonshoff, H. K.**
Influence of microstructure on grindability of alumina ceramics.—73-06232
**Roth, P.; Wobker, H.-G.**
Finishing technology for ceramic materials.—73-02830

**Roth, Reinhold C.**
Gas-distributing and infrared-radiating block assembly.—73-04031
**Roth, Robert S.** See Rawn, Claudia J.
**Roth, S.** See Stiegler, J.
**Rothe, Erhard W.** See Fried, Daniel
**Rothgeb, Timothy** See Sawyer, James W.
**Rothschild, W.** See Dugger, M. T.
**Rotolico, A. J.** See Steeper, T. J.
**Rottger, B.** See Hanbucken, M.
**Rotunno, T.** See Torsi, Luisa
**Roubin, Marc** See Descemond, M.; Tosan, Jean-Luc
**Roucau, C.** See Alimoussa, A.
**Rouco, A.** See Steren, L. B.
**Rouco, A.; Obradors, X.; Tovar, M.; Bordet, P.; Chateigner, D.; Chenavas, J.**
Magnetic-field-induced weak ferromagnetic order in $Y_2CuO_4$.—73-07959
**Rouge, Carl J.** See Miller, Robert A.
**Rouhani, M. Djafari; Gue, A. M.; Sahlaoui, M.; Esteve, D.**
Atomic-scale simulation of interface defect formation in the initial stages of thin-film growth.—73-06139
**Rouillon, Marie-Helene** See Gomina, Moussa
**Rouleau, C. M.; Park, R. M.**
In situ, real-time diffuse optical reflectivity measurements during GaAs cleaning and subsequent ZnSe/GaAs heteroepitaxy.—73-07587
**Roulet, H.** See Senemaud, C.
**Round, R.** See Kathrina, T.
**Rouquerol, J.** See Llewellyn, P. L.
**Rourke, W. J.** See Pasto, Arvid E.
**Rousina, R.** See Akano, U. G.; Robertson, M. D.
**Rousseau, Gerard**
Composite material with carbon-reinforced fibers and its production.—73-12454
**Rousseau, J.** See Jandl, S.
**Rousseau, M.** See Bulou, A.
**Roussel, J. C.** See Masse, S.
**Rousselot, C.; Tachez, M.; Malugani, J. P.; Mercier, R.; Chieux, P.**
Characterization of intermediate-range order in superionic $AgPO_3$-AgX (X=I, Br, Cl) glasses by neutron diffraction.—73-00938
**Rousset, A.** See Devaux, X.; Gillot, B.; Laurent, C.; Sarda, C.
**Routbort, J. L.** See Marrero, Madelyn; Miller, D. J.; Morrison, C. T.
**Routschka, G.**
Refractories history—1950 to 1990.—73-10761
**Rouviere, J.-L.; Kim, Y.; Cunningham, J.; Rentschler, J. A.; Bourret, A.; Ourmazd, A.**
Measuring properties of point defects by electron microscopy: the Ga vacancy in GaAs.—73-07664
**Rouxel, J.** See Jobic, S.
**Rouxel, Tanguy** See Wakai, Fumihiro
**Rouxel, Tanguy; Besson, Jean-Louis; Goursat, Paul**
Improvement of creep resistance of sintered silicon nitride by hot isostatic exudation of intergranular glass.—73-02858
**Rovedo, N.** See Bindal, A.
**Rovenskii, A. I.** See Makarenko, E. S.
**Rover, V.** See Wolffer, N.
**Row, T. N. G.** See Senbhagaraman, S.
**Rowcliff, David J.; Medelius, Hannes; Li, Yue-Zhu**
Microstructural development in 1-2-3 tapes produced from spray-dried powder.—73-01606
**Rowcliffe, David J.** See Persson, J.; Zeng, Kai-Yang
**Rowe, J. E.; Wertheim, G. K.; Riffe, D. M.**
Silicon (2p) surface core-level line shape of Si(111)-B.—73-02431
**Rowell, N. L.** See Houghton, D. C.; Noel, J.-P.
**Rowland, L. B.** See Sumakeris, J.
**Rowlands, W. N.** See O'Brien, R. W.
**Rowlinson, John S.** See Maddox, Michael W.
**Roy, Amitava** See Akhter, H.; Schilling, Paul J.
**Roy, Amitava; Eaton, Harvill C.**
Solidification/stabilization of a synthetic electroplating waste in lime–fly ash binder.—73-10156
**Roy, B.; Chakravorty, D.**
Ultrafine copper particles grown in a glass-ceramic.—73-07186
**Roy, Della M.** See Fang, Yi; Krupanidhi, S. B.; Majling, Jan; Steinke, Richard A.
**Roy, Della M.; Jiang, W.**
Microcharacteristics and properties of hardened alkali-activated cementitious [AAC] materials.—73-10045
**Roy, Della M.; Scheetz, Barry E.; Silsbee, Michael R.**
Processing of optimized cements and concretes via particle packing.—73-06700
**Roy, Donald W.; Hastert, James L.; Coubrough, Lawrence E.; Green, Kenneth E.; Trujillo, Aurelio**
Method for producing transparent polycrystalline body with high-ultraviolet transmittance.—73-02048
**Roy, P. K.; Kook, T.; Kizilyalli, I. C.; Nanda, A. K.**
Compound sidewall spacer technology for submicron MOSFET.—73-04067
**Roy, Rustum** See DebRoy, Tarasankar; Fang, Yi; Hu, Jia-Shan; Mathis, M. D.; Ravindranathan, P.; Steinke, Richard A.
**Roy, Rustum; Dewan, H. S.; Ravindranathan, P.**
Diamond synthesis via a low-pressure solid-state source process.—73-09069
**Roy, Rustum**
Nanocomposites: retrospect and prospect.—73-06582
**Roy, S. B.** See Kumar, Shailendra
**Roy, S. K.** See Kundu, D.; Mondal, J. K.
**Roy, S.; Das, D.; Chakravorty, D.; Agrawal, Dinesh C.**
Magnetic properties of glass-metal nanocomposites prepared by the sol-gel route and hot-pressing.—73-11662
**Roy, Subhransu** See Bang, Se-Yoon
**Roy, Subhransu; Modest, Michael F.**
Cw laser machining of hard ceramics: I, Effects of three-dimensional conduction, variable properties, and various laser parameters.—73-09054
**Roy, Sujit** See Devi, G. Sarala
**Roy, Sutapa; Ganguli, D.**
Optical properties of $Ni^{2+}$-doped silica and silicate gel monoliths.—73-10467
**Royle, M.; Sharma, M.; Feller, S.; MacKenzie, J.; Nijhawan, S.**
Densities and structural models resulting from extremely modified cesium and rubidium borate glasses.—73-10430
**Roys, W. B.** See Kirk, A.
**Royston, James** See Flom, Yury
**Rozanov, K. V.** See Zadiraka, Yu. V.
**Rozati, S. M.; Mirzapour, S.; Takwale, M. G.; Marathe, B. R.; Bhide, V. G.**
Effect of postdeposition heat treatment on physical properties of tin oxide thin films prepared by an electron-beam evaporation technique.—73-09085
**Rozenberg, A. S.; Sinenko, Yu. A.; Chukanov, N. V.**
Ir spectroscopy characterization of various types of structural irregularities in pyrolytic boron nitride.—73-12616; Regularities of pyrolytic boron nitride coating formation on a graphite matrix.—73-13442
**Rozenfel'd, Yu. B.** See Vasil'ev, A. V.
**Rozenkov, S. B.** See Bolotov, A. M.
**Rozental, O. M.** See Gorbatov, I. N.
**Rozhko, I. A.** See Boiko, S. I.
**Rozhkov, A. V.** See Avrutin, E. A.
**Rozhkova, I. B.** See Spiridonova, E. V.
**Rozhnov, G. V.** See Gerchikov, L. G.
**Rozhnova, T. A.** See Zhur'yari, E. L.
**Roziere, J.** See Ding, Y.
**Rozsa, K.** See Stutzin, G. C.
**Roztocka, D.** See Havlica, J.
**Rozwadowski, M.; Wloch, J.; Erdmann, K.; Komatowski, J.**
Energy distribution function associated with Dubinin's description of water adsorption on zeolite Y.—73-16493
**Ruan, Jual** See Bhushan, Bharat
**Ruan, Mei-Ling** See Su, Jing
**Ruan, Y.-Z.** See Zhang, Dao-Yuan
**Ruan, Yao-Zhong** See Tian, Ming-Liang
**Ruan, Yu-Zhong; Zhuo, Ke-Xiang**
Oxidizing kinetics of SiC kiln furniture at different temperatures.—73-10751; Resistance of thermal shock of SiC kiln furniture.—73-10767
**Ruani, G.** See Wei, X.
**Rubaylo, A. I.** See Shor, A. M.
**Rubel, H.** See Folsch, J.
**Rubel, H.; Folsch, J.; Schade, H.**
Hydrogen bonding configurations in amorphous silicon carbon alloys and their impact on the silicon carbon stretching vibrations.—73-05415
**Rubel, M.** See Kodintsev, I. M.
**Rubets, V. P.** See Belyaev, A. P.
**Rubin, Louis**
Advanced carbon-carbon for space radiators.—73-12409
**Rubin, P.; Kristoffel, N.**
Calculation of $F^+$ centers in the $CuO_2$ plane of HTSC.—73-15395
**Rubini, A.**
Oxygen supplying.—73-05127
**Rubinina, N. M.** See Volk, T. R.
**Rubinstein, I.** See Golan, Y.
**Rubio, F.; Rubio, J.; Oteo, J. L.**
Surface characterization of an $SiO_2$-$ZrO_2$ glass by gas-solid adsorption.—73-14115
**Rubio, J.** See Rubio, F.
**Rubloff, G. W.** See Offenberg, M.
**Rubner, Klaus**
Valve disks of silicon-infiltrated silicon carbide.—73-12532
**Rubtsov, A. A.** See Kabychenkov, A. F.
**Rubtsov, E. R.** See Kuznetsov, V. V.
**Rubtsov, N. M.** See Zakhar'in, V. I.
**Rubtsov, V. I.** See Zakhar'in, V. I.
**Ruckman, M. W.** See Yang, X.-Q.
**Rud, R. F.** See Bulakh, V. L.; Portnova, A. I.
**Rud, V. Yu.** See Konstantinova, N. N.; Magomedov, M. A.
**Rud, V. Yu.; Rud, Yu. V.; Serginov, M.**
Enhancement of photoleochroism in *n-p*-$CdSiAs_{2-\alpha}$-$In_2O_3$ structures.—73-04320
**Rud, Yu. V.** See Averkieva, G. K.; Gremenok, V. F.; Kindyak, V. V.; Konnikov, S. G.; Konstantinova, N. N.; Magomedov, M. A.; Rud, V. Yu.
**Ruda, H. E.** See Jedral, L.
**Rudajevova, A.**
Thermal diffusivity of plasma-sprayed coatings of $ZrO_2$ with 8 wt% $Y_2O_3$ and $ZrO_2$ with 25 wt% $CeO_2$.—73-02707
**Rudakov, B. P.** See Kolomeitsev, V. V.
**Rudder, R. A.** See Hattangady, S. V.
**Rudder, R. A.; Hendry, R. C.; Hudson, G. C.; Markunas, R. J.; Johnson, A. C.; Thigpen, L. T.**
Diamond chemical vapor deposition (CVD) via microwave-excited plasma from water-ethanol solutions.—73-05741
**Ruderer, Clifford G.; Roberts, Gordon J.; Emlemdi, Hasan B.**
Lead-free glass coatings.—73-10914
**Ruderer, Clifford G.; Stroup, Robert C.; Korn, George C.**
Method of forming glass having a $Zn_2SiO_4$ enamel layer thereon.—73-10642
**Rudesill, John A.** See Laine, Norman R.
**Rudham, Robert** See Green, Kevin J.
**Rudnev, I. A.** See Menushenko, A. P.
**Rudnitskaya, V. P.** See Medvedovskii, E. Ya.
**Rudnykh, T. G.; Kirillov, L. P.; Chistyakov, Yu. N.**
Introducing separate beneficiation technology for magnesites at the Magnezit Combine.—73-01794
**Rudolf, P. R.** See Moyer, John R.
**Rudolf, P.** See Chen, C. T.
**Rudolf, Petra** See Kuiper, Pieter
**Rudolph, Bernd** See Burckhardt, Wolfgang
**Rudolph, Stephan**
Boron nitride.—73-12261
**Rudolph, T.** See Gehman, B. L.
**Rudolph, Thomas; Pannhorst, Wolfgang; Petzow, Gunter**
Determination of activation energies for the crystallization of a cordierite-type glass.—73-03783
**Rudolph, W.** See Schulle, Wolfgang
**Rudowicz, C.** See Yeom, T.-H.
**Rudowicz, C.; Du Mao-Lu; Yeung, Yau-Yuen**
Crystal field levels and fine structure of the ground orbital state for high spin $Fe^{2+}$ and $Fe^{4+}$ ions in $YBa_2(Cu_{1-x}Fe_x)_3O_{7-\delta}$.—73-04690
**Rudra, A.** See Pavesi, L.
**Rudzinski, Lech; Golaski, Leszek; Turiej, Bohuslaw**
Synthetic fiber-reinforced cement composites—optimization of the composition and structural and mechanical properties.—73-10177
**Rudzinski, W.** See Narkiewicz-Michalek, J.
**Rue, Charles V.; Van de Merwe, Ronald H.; Bauer, Ralph; Pellow, Scott W.; Cottringer, Thomas E.; Klok, Richard J.**
Sintered sol-gel alumina abrasive filaments.—73-00005
**Rueter, Richard E.; Frank, Robert G.; Fecik, Michael T.**
Method and apparatus for bending glass sheets.—73-12082
**Ruf, B.** See Viscaino, S.
**Ruf, R. R.** See Gambino, R. J.
**Ruf, T.** See Gubarev, S. I.; Jandl, S.; Sapega, V. F.; Spitzer, J.
**Ruf, T.; Wegerer, R.; Heyen, E. T.; Cardona, M.; Furrer, A.**
Crystal-field phonon interaction and in-plane charge transfer in $NdBa_2Cu_3O_{7-\delta}$.—73-04691
**Ruff, A. W.** See Gettings, R. J.
**Ruff, A. W.; Peterson, M. B.**
Wear of reflected materials and composites sliding against $MoS_2$ films.—73-09695
**Ruffaldi, Aldo**
Erosion-resistant stopper rod.—73-04030
**Ruffer, Nils** See Majewski, Peter
**Rugg, Kevin L.** See Giannuzzi, Lucille A.
**Ruh, Edwin** See Sainz de Baranda, Pedro
**Ruhle, Manfred** See Bruley, John; Cinibulk, Michael K.; Hoche, Thomas; Schafer, G. W.; Tanaka, Isao; Vetrano, J. S.
**Ruhle, W. W.** See Snoke, D. W.
**Ruigrok, J. J. M.** See Van der Zaag, P. J.
**Ruisi, V. F.** See Lo Casto, S.
**Ruiz Navarro, Antonio M.; Martin-Sanchez, Juan M.; Corzo Carreno, Carlos**
Minimizing energy consumption in kilns by the SCAP system.—73-05122
**Ruiz, H.** See Lira, Joaquin
**Ruiz, Roberto** See Drogue, Sophie
**Ruka, Roswell J.; Kuo, Lewis J. H.**
Electrode and method of interconnection sintering on an electrode of an electrochemical cell.—73-11015
**Rul, Yu. V.** See Magomedov, M. A.
**Rulenko, M. P.** See Dashevskii, Z. M.
**Ruller, Jacqueline A.** See Jewell, John M.
**Rulment, A.** See Winand, J.-M.
**Rumaner, Lee E.; Gray, Dennis M.; Mehan, Richard L.; Rairden, John R., III**
Thermally protective composite ceramic-metal coatings for high-temperature use.—73-10354
**Rummens, Kees P. J.** See Wijnen, Peter W. J. G.
**Rumpeltin, Charles R.; Dody, Julie A.**
Sprayable refractory composition.—73-10788
**Rumyantsev, B. M.; Saduakasov, M. S.; Baibolov, S. M.; Kolesnikova, I. V.**
Efficient modified gypsum binder for manufacture of gypsum-concrete panels.—73-13715
**Rumyantsev, P. F.; Erofeeva, N. T.**
Acceleration of the clinker formation process.—73-09801
**Rumyantsev, S. L.** See D'yakonova, N. V.; Gusinskii, G. M.
**Rumyantsev, S. L.**
Dynamics of switching in Si and GaAs *p-i-n* diodes.—73-07458
**Rumyantsev, V. D.** See Andreev, V. M.; Kazantsev, A. B.; Semikin, E. I.
**Rumyantsev, V. N.**
Features of hydrothermal crystallization of quartz under heterogeneous solvent conditions.—73-16781
**Rundgren, K.** See Falk, L. K. L.
**Runova, R. F.** See Zadiraka, Yu. V.
**Ruoff, Arthur L.** See Xia, Qing
**Ruoff, Rodney** See Eidolloth, Walter
**Rup, R.** See Basantakumar, Sharma H.
**Rupp, R. A.** See Sugg, B.
**Rurow, T. N. G.; Ganguli, A. K.; Rangavittal, N.; Seshadri, R.; Rao, C. N. R.**
Stabilized tetragonal phase of $La_2O_3$ in the La-Pd-O system.—73-02443
**Rusan, V. V.** See Kabanov, V. O.
**Rusanov, Yu. V.** See Shershnev, A. A.
**Ruscher, Claus H.; Gotte, Matthias**
Optical absorption of the high-$T_c$ superconductors $Y_1Ba_2Cu_3O_{7-\delta}$, $LaCuO_{4+\delta}$, and $Bi_2Sr_2Ca_{1-x}Y_xCu_2O_{8+\delta}$.—73-04781
**Rushton, J. C.** See Worden, R. H.
**Rusiecki, S.** See Domenges, B.
**Rusina, M. V.** See Kashkarov, P. K.
**Russ, S.; Pfender, Emil; Heberlein, J.**
Anode arc attachment control using boundary layer bleed holes.—73-08317
**Russel, Christian** See Geyer, V.; Partenfelder, Uwe; Wagener, Ulrike; Zink, Marianne
**Russel, Christian; Hofmann, T.; Limmer, G.**
Thermal conductivity of aluminum nitride ceramics.—73-02706
**Russel, Christian**
Iron-oxide-doped alkali-lime-silica glasses: I, EPR investigations.—73-06931; Iron-oxide-doped alkali-lime-silica glasses: II, Voltammetric studies.—73-06932; Pyrolytic route to fluoride glasses: I, Preparation and thermal decomposition of metal trifluoroacetates.—73-00693
**Russell, Edward S.** See Nimmer, Ronald R.
**Russell, G. J.** See Hartmann, A.
**Russell, Michael W.** See Vassiliou, John K.
**Russell, R. L.** See Huckabee, M. L.

**Russell, Richard A.; Phule, Pradeep P.**
Chemical synthesis of tantalum zirconate from alkoxide precursors.—73-12943
**Russell, S. S.** See Pillinger, C. T.
**Russell, Stephen D.**
Conformal method of fabricating an optical waveguide on a semiconductor substrate.—73-01441
**Russell-Floyd, R. S.; Harris, B.; Jones, R. W.; Cooke, R. G.; Wang, T. H.; Laurie, J.**
Sol-gel processing of fiber-reinforced ceramic shapes.—73-03021
**Russev, S.; Valcheva, E.; Germanova, K.**
System InSb-$SiO_2$ [investigated] by spectroscopic multiangle ellipsometry.—73-17208
**Russo, Dave A.** See Gitlitz, Mel H.
**Russo, Richard E.** See Faulques, Eric
**Russo, T. J.** See Singh, K. N.
**Russo, U.** See Narducci, D.
**Russu, E. V.** See Kovalevskaya, G. G.; Meredov, M. M.
**Russu, R.** See Stoica, A. D.
**Rustamov, A. G.** See Niftiev, N. N.
**Rustamov, G. P.; Gamidov, R. S.; Il'yasov, T. M.**
Projection of the liquidus surface of the ternary system Nd-As-Se.—73-12662
**Rustamov, P. G.** See Akhmedova, D. A.
**Rustamov, P. G.; Gamidov, R. S.; Il'yasov, T. M.**
Ternary system Tm-As-Se.—73-12717
**Rusu, E.; Nan, S.; Purica, M.; Budianu, E.; Cobzarenco, V.**
$In_{0.53}Ga_{0.47}As$ *p-i-n* photodiode for detection in the 1.3 to 1.6 μm spectral range.—73-15510; 73-11800
**Rut, O. E.** See Germanenko, A. V.
**Ruth, Alan J.** See Nutter, William A.
**Ruth, R. P.** See Tennant, William E.; Waterman, James R.
**Ruther, R.; Livingstone, J.**
Role of substrate temperature and in-chamber annealing in H–Si bonding configurations in sputtered a-Si:H.—73-06027
**Ruthven, Douglas** See Do, Duong D.
**Rutjes, Peter C. S.; De Jongh, Petrus F.; Van der Huist, Victor A.; Rademakers, Franciscus M. A.**
Method of molding [glass] products with heating a parison with microwaves.—73-15771
**Rutland, Mark W.** See Parker, John L.
**Rutt, Truman**
Method of making varistor or capacitor.—73-01379
**Ruvalds, J.** See Rieck, C. T.
**Ruvimov, S. S.** See Andreev, A. M.; Lelikov, Yu. S.
**Ruvinskii, M. A.** See Freik, D. M.
**Ruwet, M.** See Clarebout, G.
**Ruys, Andrew J.**
Feasibility study of silicon doping of hydroxyapatite.—73-16780
**Ruzek, Jozef** See Videnska, Magdalena
**Ruzin, A.** See Nemirovsky, Y.
**Ruzin, A.; Nemirovsky, Y.**
Photon-assisted growth of HgTe by metallorganic chemical vapor deposition.—73-07731
**Ruzyllo, J.** See Beck, R. B.
**Ryabinkina, L. I.** See Petrakovskii, G. A.
**Ryabov, A. I.** See Pirogova, G. N.
**Ryabov, P. M.** See Malov, V. V.
**Ryabov, V. A.** See Samokhvalova, T. I.
**Ryabova, L. I.** See Akimov, B. A.; Belokon, S. A.
**Ryabova, L. I.; Tamm, Marina E.**
Tm doping of lead telluride.—73-04499
**Ryabtseva, N. V.** See Shchegrov, L. N.
**Ryabtseva, V. D.** See Gaprindashvili, Kh. I.
**Ryadnov, S. N.; Bologova, A. V.; Arzumanyan, G. A.**
Tb distribution in YAG:Tb crystals.—73-02514
**Ryan, Michael; Raman, R.**
Minimization of binder content for production of injection-molded aluminum nitride parts.—73-09211
**Ryapolov, V. D.** See Kolomatskii, A. S.
**Ryason, P. R.** See Yamaguchi, E. S.
**Ryazantsev, I. A.** See Dvurechenskii, A. V.
**Ryazin, V. P.** See Albats, B. S.
**Ryba-Romanowski, W.; Gołob, S.; Dominiak-Dzik, G.**
Influence of temperature on infrared-to-visible conversion in tellurite glass doped with erbium and ytterbium.—73-03793
**Rybalchenko, L. F.** See Yanson, I. K.
**Rybalchenko, L. F.; Hohn, N.; Muller, R.**
Temperature-dependent point-contact characteristics of $YBa_2Cu_3O_x$-Ag.—73-08250
**Rybalko, Yu. I.** See Fugol, I. Ya.
**Rybaltovskii, A. O.** See Amosov, A. V.; Bagratashvili, V. N.; Petropavlov, M. V.
**Rybarikova, Ludmila** See Mohanova, Pavla
**Rybarikova, Ludmila; Lejbl, Ladislav; Hradecka, Helena**
Leaching of lead from lead crystal.—73-03740
**Rybarikova, Ludmila; Mohanova, Pavla**
Bioactive glasses.—73-03709
**Rybarikova, Ludmila; Plesingerova, Beatrice; Sovarova, Lenka**
Dealkalization of container glass surface.—73-00317
**Rybarikova, Ludmila**
Suppression of lead leaching in lead crystal products by surface dealkalization.—73-03767
**Rybicki, E. F.** See Han, W.
**Rychkova, L. V.** See Vanchikova, E. V.
**Rydanov, A. Yu.** See Veis, A. N.
**Ryder, Daniel F., Jr.; Raman, Narayanan K.**
Sol-gel processing of Nb-doped Pb(Zr, Ti)$O_3$ thin films for ferroelectric memory applications.—73-11615
**Rye, Robert R.**
Hot filament activated chemical vapor deposition of boron nitride.—73-02851
**Rykov, V. V.; Kharionovskii, A. V.; Vyvenko, O. F.**
Negative photoacoustic effect in glassy arsenic selenide.—73-01257
**Rykova, T. S.** See Gutenev, M. S.
**Rymon-Lipinski, Tadeusz; Wolf, Peter**
Reaction processes in the interior of an MgO-carbon brick with boron carbide additive.—73-13891
**Ryoji, M.** See Aoyagi, Yoshinobu
**Ryoke, Katsumi; Hayata, Youichi; Yazawa, Junji; Miura, Toshihiko; Suzuki, Masaki; Oguri, Tatsuya**
Magnetic recording medium rubbed with a super hard alloy blade containing tungsten carbide powder and cobalt.—73-01489
**Ryoo, Seong-Ryong** See Oh, Won-Ung
**Ryoson, H.** See Komai, K.
**Ryou, D.-W.** See Song, J.-T.
**Ryou, Mitsuo** See Kurihara, Kenro
**Rys, A.** See Singh, N.
**Rysava, N.** See Baro, M. D.
**Ryschenkow, G.** See Creuzet, F.
**Rysiakiewicz-Pasek, E.** See Roizin, Ya.
**Rysiakiewicz-Pasek, E.**
Electrical measurements of the porous glasses after impregnation with different ions.—73-14174
**Ryskin, A. I.** See Vasil'ev, A. V.
**Ryskin, A. I.; Langer, Jerzy M.**
Relaxation of the lattice due to photoionization of different deep impurities.—73-11418
**Ryssel, H.** See Bauer, A. J.
**Rytz, D.** See Fontana, M. D.; Ross, Graeme W.
**Ryu, Beyong-Hwan; Takahashi, Minoru; Suzuki, Suguru**
Effect of added organics on mechanical properties of alumina green sheets prepared by doctor blade method.—73-05750; 73-12995; Effect of added organics on the fluidity of alumina slurry for doctor blade method.—73-12996; Rheological characteristics of aqueous alumina slurry for tape casting.—73-16974
**Ryu, Bong-Gi; Sakamura, Hiroyasu; Yasui, Itaru**
Thermal and dielectric properties of silica/glass composites with the controlled amount of tridymite.—73-05652; 73-14294
**Ryu, Bong-Gi; Yasui, Itaru**
Properties of sodium borosilicate glasses/$Al_2O_3$-sintered composites containing fluorides.—73-16579
**Ryu, H.-J.** See Sugiyama, K.
**Ryu, J. H.** See Lim, S.
**Ryu, Jae-Sang; Watanabe, Yuichi; Takata, Masasuke**
Correlation between gas sensing properties and preferential orientations of sputtered tin oxide films.—73-12760; Correlation between gas-sensing properties and preferential orientations of sputtered tin oxide films.—73-01111; Crystal structure and gas sensing property of tin oxide films sputtered in $N_2/O_2$ atmosphere.—73-11129
**Ryutin, S. B.** See Skokov, V. N.
**Ryvkin, B. S.** See Butusov, D. M.
**Ryzhik, A. B.; Ioganson, A. K.; Fraiman, Lev S.; Alexandrov, Andrei V.**
Safe burning of cement raw mixes.—73-03534
**Ryzhik, A. B.; Ioganson, A. K.; Fraiman, Lev S.**
Safety and ecological problems in burning energy-saving raw materials.—73-10145
**Ryzhik, A. B.; Kougiya, M. V.; Alexandrov, Andrei V.**
Thermal treatment of cement raw materials through intensive heat exchange.—73-10180
**Ryzhikov, V. D.** See Embergenov, B.
**Ryzhkov, S. E.** See Bunkin, A. Yu.
**Ryzhov, V. A.** See Bershtein, V. A.; Egorov, V. M.
**Ryzhov, V. A.; Bershtein, V. A.; Melekh, B. T.; Filin, Y. N.**
Long-wavelength infrared spectra of $Bi_2Sr_2Ca_{0.6}Ba_{0.4}Cu_{1.9}O_x$ in the glassy and crystalline (superconducting) states.—73-01588
**Rzhanov, Yu. A.** See Kotel'nikov, I. N.
**Saad, Abdul Mohammed** See Waqif, Mohamed
**Saad, Elie E.** See Barkatt, Aaron; Grebe, Vernon J.; Pawlicki, E. J.
**Saad, Elie E.**
EVOP [evolutionary operation process] design for process optimization.—73-13834
**Saada, R.** See Barrioulet, M.
**Saada, R.; Ringot, E.; Barrioulet, M.**
Quantitative structural study of fresh cement paste by image analysis: II, Measurements and their application.—73-00177
**Saadaldin, Hussamaldin S.** See Ahmad, Iftikhar
**Saadaldin, Hussamaldin S.; Black, W. Murray; Tian, Yong-Lai; Ahmad, Iftikhar; Silberglitt, Richard**
Microwave heating of ceramics in a single-mode mitered bend cavity.—73-05917
**Saadaoui, M.; Olagnon, Christian; Fantozzi, G.**
*R*-curve behavior of alumina and PSZ at ambient and high temperatures.—73-06506
**Saadi, L.; Jabry, E.; Moussa, R.; Gomina, Mousse**
Physicochemical and mechanical properties of ceramic materials made from a Moroccan clay: I, Preparation, structural properties, and mechanical behavior.—73-10686
**Saakyan, E. R.**
Heat-insulating properties of enclosing structures based on foam glass granulate.—73-00098; Multifunctional foam glasses from volcanic glassy rocks.—73-00670
**Saakyan, S. R.** See Arutyunyan, S. R.
**Saarilahti, J.** See Kattelus, Hanno; Ronkainen, H.
**Saarinen, K.** See Makinen, J.
**Saarinen, K.; Kuisma, S.; Hautojarvi, P.; Corbel, C.; Leberre, C.**
Native vacancies in semiinsulating GaAs observed by positron lifetime spectroscopy under photoexcitation.—73-15053
**Saasen, Arild; Marken, Craig; Dawson, Jeff; Rogers, M.**
Oscillating rheometer measurements on oilfield cement slurries.—73-00157
**Saasen, Arild; Rafoss, Eivind; Behzadi, Amrollah**
Experimental investigation of rheology and thickening time of Class G oil well cement slurries containing glycerin.—73-00087
**Sabatini, R. L.** See Wang, Y.-L.; Zhu, Yi-Mei
**Sabiryanov, R. F.** See Ivanovsky, A. L.
**Sabirzyanova, L. D.** See Tsidil'kovskii, I. M.
**Sablina, K.** See Furrer, A.; Roessli, B.; Vasil'ev, V. N.; Vorotinov, A. M.
**Sabouni, A. R.** See Alshamsi, A. M.
**Sacchetti, M.** See Di Pietro, E.
**Sacco, A.** See Morris, M.
**Sacedon, J. L.** See De Castro, A. J.; Jimenez, I.
**Sachdev, Subir** See Chubukov, Andrey V.
**Sachtjen, S. A.** See Verghese, S.
**Saciloti, M. A.** See Andrade, Leandro H. F.
**Sacks, M. D.** See Al-Assafi, S.
**Sacks, R. N.** See Dresselhaus, P. D.; Qiang, H.
**Sacks, R. N.; Ade, R. W.; Bossi, D. E.; Basilica, R. P.; Eichler, D. W.**
High-speed λ=1.3 μm metal-semiconductor-metal [MSM] photodetectors on GaAs.—73-11247
**Sacuto, A.; Balkanski, M.; Gorochov, O.**
CuO chain contribution to the electronic Raman scattering of a $YBa_2Cu_3O_7$ single crystal.—73-04693
**Sada, E.** See Kumazawa, H.
**Sadahirok, Yoshikazu; Honda, Hirotaka; Koishi, Masumi**
Effect of treating time by high-speed impact method on the calcination of oxide superconductor $YBa_2Cu_3O_{7-x}$.—73-15437
**Sadakata, Nobuyuki** See Iijima, Y.; Kohno, Osamu
**Sadamura, H.; Yamashita, K.; Nagai, N.**
Crystallographic study of cobalt treatment on γ-$Fe_2O_3$.—73-04600
**Sadaoka, Yoshihiko** See Aono, Hiromichi; Nakayama, Susumu; Sakamoto, Masatomi
**Sadd, Andrea L.** See Aitken, Bruce G.
**Sader, E.** See Edelman, F.
**Sadibasic, A.** See Milinkovic, S.
**Sadik, S.** See Leclercq, J. L.
**Sadikov, I. P.** See Alekseev, P. A.
**Sadoc, A.** See Santa-Cruz, P.
**Sadofev, Y. G.** See Semenova, G. N.
**Sadotomo, Akiko** See Kojima, Yoshiyuki
**Sadovnik, Yu. V.** See Romanovskii, L. B.
**Sadovskaya, L. Ya.** See Dubinskaya, O. F.
**Sadovskaya, N. V.** See Tomashpol'skii, Yu. Ya.
**Sadoway, Donald R.** See Kim, Kwang-Bum
**Sadowski, M. L.** See Lusakowski, J.
**Sadowski, W.** See D'Anna, G.; Rogacki, K.
**Sadra, K.** See Gwo, S.; Srinivasan, A.
**Saduakasov, M. S.** See Rumyantsev, B. M.
**Sadwick, L. P.; Reihlen, E. H.; Jaw, D. H.; Hwu, R. J.; Streit, D. C.**
1-eV 1.2-defect photoluminescence [PL] peak in heavily planar-doped *n*-type GaAs grown by molecular beam epitaxy.—73-11356
**Sadykova, Sh. Z.** See Koroleva, L. I.
**Sadyrov, F. M.** See Aliev, O. M.
**Saeki, Goji; Watanabe, Akira**
Component region for the synthesis of rod-shaped ß-$LiAlO_2$ crystals.—73-02168; Heating conditions to synthesize rod-shaped ß-$LiAlO_2$ crystals.—73-05838; 73-16812
**Saeki, M.; Yajima, Y.; Onoda, M.**
Preparation and crystal structures of new barium zirconium sulfides, $Ba_3ZrS_4$ and $Ba_3Zr_2S_7$.—73-02400
**Saeki, Tatsuhiko** See Tanzil, Gunawan
**Saeki, Tatsuhiko; Yoneyama, Kouichi; Nagataki, Shigeyoshi**
Corrosion of reinforcement in jet cement mortar due to carbonation.—73-09871
**Saeki, Yuzo** See Sasamoto, Tadashi
**Saemannischenko, G.** See Busch, R.
**Saeta, Peter N.; Greene, Benjamin I.**
Primary relaxation processes at the band edge of $SiO_2$.—73-16280
**Saetta, Anna V.; Schrefler, Bernhard A.; Vitaliani, Renato V.**
Carbonation of concrete and the mechanism of moisture, heat, and carbon dioxide flow through porous materials.—73-06632
**Saez, M. P.** See Peidro, J. M.
**Saez-Puche, R.** See De Andres, A.; Garcia-Matres, E.; Ramos, E.
**Saez-Puche, R.; Coronado, J. M.; Otero-Diaz, C. L.; Llorente, J. M. M.**
Structural change and magnetic properties of $Y_2BaNi_{1-x}Zn_xO_5$ oxides.—73-03197
**Safai, S.** See Chen, Z. J.
**Safar, H.; Gammel, P. L.; Bishop, David J.; Mitzi, D. B.; Kapitulnik, A.**
SQUID picovoltametry of single-crystal $Bi_2Sr_2CaCu_2O_{8+\delta}$: an observation of the crossover from high-temperature Arrhenius to low-temperature vortex glass behavior.—73-08203
**Safar, H.; Gammel, P. L.; Huse, David A.; Bishop, David J.; Lee, W. C.; Giapintzakis, J.**
Experimental evidence for a multicritical point in the magnetic phase diagram for the mixed state of clean, untwinned $YBa_2Cu_3O_7$.—73-15324
**Safar, H.; Gammel, P. L.; Huse, David A.; Bishop, David J.; Rice, J. P.; Ginsberg, D. M.**
Experimental evidence for a first-order vortex-lattice-melting transition in untwinned single-crystal $YBa_2Cu_3O_7$.—73-08069
**Safaraliev, G. K.; Tairov, Yu. M.; Tsvetkov, V. F.; Shabanov, S. S.; Pashchuk, E. G.; Ofitserova, N. V.**
Preparation and properties of polycrystalline SiC-AlN solid solutions.—73-15111
**Safari, Ahmad** See Suwannasiri, Thitima
**Safarov, M. G.; Gamidov, R. S.; Poladov, P. M.; Bagirova, E. M.**
Ternary system $InS-As_2S_3-As_2Te_3$.—73-16364
**Safarov, M. G.; Gamidov, R. S.; Poladov, P. M.**
System $Bi_2Se_3$-InSe.—73-12714
**Safarov, M. G.**
Projections of the liquidus surface in the ternary reciprocal system $InSe-Sb_2Se_3-Sb_2Te_3$.—73-12663
**Safarov, V. I.** See Berkovits, V. L.; Gamants, E. M.
**Safonov, V. L.** See Andrienko, A. V.

**Safonov, V. V.; Ovcharenko, N. V.; Bayandin, D. V.; Krylov, I. A.**
Interactions and properties of glasses of the system PbO-$TeO_2$-$WO_3$.—73-16180
**Safonov, Yu. S.** See Bublik, V. T.
**Safonova, A. A.** See Ushakova, T. G
**Safonova, L.** See Brazis, R.
**Safran, Gyorgy** See Qiu, Hong
**Safronenko, M. G.; Bogatov, Yu. E.; Molodkin, A. K.**
Interaction of niobium(IV) oxide with the rare-earth oxides.—73-12606
**Safronov, L. N.** See Gerasimenko, N. N.
**Safronova, L. V.** See Dolgopolov, V. M.
**Sagala, Djunaidi A.** See Koyasu, Shigeji
**Sagawa, Hideo** See Nakajima, Akira
**Sagawa, Masaaki** See Yoshida, Hideto
**Sagawa, Masato; Nagata, Hiroshi; Shirai, Hiroo**
Method for producing permanent magnet and sintered compact and production apparatus for making green compacts.—73-04666
**Sagoe-Crentsil, K. K.** See Yilmaz, V. T.
**Sagoe-Crentsil, K. K.; Glasser, Fredrick P.**
"Green Rust" [GR], iron solubility, and the role of chloride in the corrosion of steel at high pH.—73-06663
**Sagoe-Crentsil, K. K.; Yilmaz, V. T.; Glasser, Fredrick P.**
Properties of inorganic corrosion inhibition admixtures in steel-containing OPC mortars: I, Chemical properties.—73-10112
**Sagredo, V.** See Leccabue, F.
**Saha, Atanu; Agrawal, Dinesh C.; Sharma, Ashutosh**
Microstructure and mechanical properties of hybrid sol-gel-processed $Al_2O_3$-$ZrO_2$ composites.—73-09482
**Saha, Bijay S.; Mutz, Alec N.**
Magnetic carrier particles.—73-04664
**Saha, Bijay S.; Yetter, Wilson**
Magnetic properties and domain structure of strontium ferrite particles.—73-04620
**Saha, Bijay S.**
Method of preparing electrographic magnetic carrier particles.—73-11677
**Saha, Chandan K.** See Atwell, William H.
**Saha, Naresh C.; Tompkins, Harland G.**
Titanium nitride oxidation chemistry: an X-ray photoelectron spectroscopy study.—73-13490
**Saha, S. K.** See Brow, R. K.; Schroeder, John
**Saha, S. K.; Pramanik, P.**
Aqueous sol-gel synthesis of powders in the $ZrO_2$-$SiO_2$ system using zirconium formate and tetraethoxysilane.—73-09020
**Sahahian, S. R.** See Harutunian, S. R.
**Sahara, Kyozo** See Uchiyama, Yasuo
**Sahara, Tetsuya** See Takeuchi, Tatsuro
**Sahira, Kensho** See Kida, Michio
**Sahlaoui, M.** See Rouhani, M. Djafari
**Sahli, S.; Segui, Y.; Hadj Moussa, S.; Djouadi, M. A.**
Growth, composition, and structure of plasma-deposited siloxane and silazane.—73-16811
**Sahm, P. R.** See Herrmann, C.
**Sahoo, P.; Raghuraman, R.**
Chromium-carbide-reinforced composite coatings for high-temperature hard-coat applications.—73-06750
**Sahu, S. C.; Sahu, S. N.**
Preparation of CdS semiconductor thin films by a solution growth technique.—73-11401
**Sahu, S. N.** See Sahu, S. C.
**Sahu, S.** See Gabrisove, A.; Havlica, J.
**Sahu, S.; Tomkova, V.; Majling, Jan; Havlica, J.**
Influence of particle sizes of individual minerals on the hydration processes in the system $C_2S$-$C_4A_3\bar{S}$-$C\bar{S}$ [dicalcium silicate-tetracalcium trialuminate sulfate-anhydrite].—73-03486
**Said, A. A.** See El-Bayoumi, O. H.
**Saidov, Ch. S.** See Masterov, D. F.; Seregin, N. P.
**Saidov, S. M.** See Vdovin, V. I.
**Saikawa, Taiichirou** See Kaga, Hiroyuki
**Saiki, Atsushi** See Kanda, Hajime; Wakiya, Naoki
**Saiki, Atsushi; Mizutani, Nobuyasu**
*c-t*-axis orientation on ground surface of tetragonal zirconia polycrystals.—73-02153; 73-12542
**Saiki, J.; Hirota, Ken; Yamaguchi, Osamu; Inamura, Suguru; Miyamoto, Hiroki; Shiokawa, N.**
Formaton, transformation, and sintering of $ZrO_2$-MgO compositions prepared from alkoxides.—73-16797
**Saikko, V.**
Wear and friction properties of prosthetic joint materials evaluated on a reciprocating pin-on-flat apparatus.—73-09692
**Saikova, S. V.** See Pashkov, G. L.
**Saikumar, V.** See Kouvatsos, Dimitrios N.
**Sainctavit, P.** See Schille, J. P.
**Saini, N. L.** See Garg, K. B.; Nerrien, N.; Rogelet, T.; Srivastava, P.
**Saini, N. L.; Garg, K. B.; Rajagopal, H.; Sequeira, A.**
Neutron diffraction and Hall effect measurements in Y-Ba-Cu(Mn)-O system.—73-11844
**Saini, N. L.; Sekhar, B. R.; Srivastava, P.**
Normal state behavior and microstructure in $YBa_2Cu_{3-x}Co_xO_y$ system.—73-01618
**Sainov, N. A.** See Ibragimova, M. I.
**Sainov, S.** See Sainov, V.
**Sainov, V.** See Gospodinov, M.; Marinova, V.
**Sainov, V.; Gospodinov, M.; Sainov, S.; Marinova, V.**
Holographic characteristics of doped BTO crystals.—73-16508
**Saint-Aman, E.** See Danes, F.
**Saint-Paul, M.; Britel, R.; Noel, H.; Levet, J. C.; Potel, M.; Gougeon, P.**
Magnetic field dependences of ultrasound velocity in $YBa_2Cu_3O_7$ and $Bi_2Sr_2CaCu_2O_8$.—73-04759
**Sainte-Catherine, C.** See Bucher, C.
**Sainte-Fot, Daniel** See Blandin, Yannick
**Sainz de Baranda, Pedro; Knudsen, Arne K.; Ruh, Edwin**
Effect of yttria on the thermal conductivity of aluminum nitride.—73-12777
**Sainz, Carmen** See Castell, Ricardo
**Saipullaeva, L. A.** See Aliev, Sh. M.
**Saissy, A.; Dussardier, B.; Maurice, E.; Monnom, G.; Ostrowsky, D.; Pikhtin, N.**
Amplified spontaneous emission in $Ho^{3+}$-doped ZBLA fibers.—73-06995
**Saito, D.** See Kawai, T.
**Saito, F.** See Shinohara, A. H.
**Saito, Fumihiko; Kimura, Yuji; Yoshida, Norifumi**
Rare-earth oxide powder.—73-12401
**Saito, H.** See Yoneta, Minoru
**Saito, Hajime** See Furukawa, Katsuki; Hayashi, Hiroaki; Hayashi, Shinsuke; Kotaka, Hiroaki; Suwa, Yoshiko; Suzuki, Hisao
**Saito, Hiroshi** See Ishikawa, Tatsuo
**Saito, Hiroshi**
Glass blocks.—73-03846
**Saito, Kajin** See Nagasaki, Shunsuke
**Saito, Makoto**
Application of electroless plating on ceramics.—73-13799
**Saito, Masao; Kanno, Akira; Hayashi, Akira**
Application of a computer system for the repair pattern in torpedo cars.—73-14569
**Saito, Minoru** See Terada, Osamu
**Saito, Naruki; Ishizaki, Chanel; Ishizaki, Kozo**
Temperature-programmed desorption (TPD) evaluation of aluminum nitride powder surfaces produced by different manufacturing processes.—73-17054
**Saito, Osamu**
Micro-glass-balloon "CEL-STAR."—73-00515
**Saito, R.** See Kimura, T.
**Saito, S.** See Itaya, Kazuhiko
**Saito, Shinichi** See Mitomo, Mamoru; Nishida, Toshihiko
**Saito, Shinji** See Hayashi, Shinsuke
**Saito, Shinji; Okano, Kazuyuki; Hayashi, Chiharu; Kuramasu, K.; Takahashi, Y.**
Formation of $RuO_2$-$TiO_2$ thin films by thermal decomposition technique.—73-00972; 73-13066
**Saito, Susumu; Oshiyama, Atsushi; Miyamoto, Yoshiyuki**
Electronic structure of fullerenes and fullerides: artificial atoms and their solids.—73-16134
**Saito, T.** See Murakami, S.; Niwa, T.; Wakamatsu, Yoshio
**Saito, Tadashi** See Kanazuka, Yasuo
**Saito, Tadashi; Ebato, Koichi; Kanazuka, Yasuo; Ohte, Akira; Horikawa, Kenichi**
Improvement on repair technique of tap hole sleeve for BOF [basic oxygen steelmaking furnace].—73-00824
**Saito, Tasuku** See Kojima, Shoichi
**Saito, Tatsuhiko** See Danzuka, Toshio; Ohta, Fukuo
**Saito, Tomoki** See Atsumi, Kiminori
**Saito, Tsutomu** See Oya, Asao
**Saito, Y.** See Imamura, Seichiro
**Saito, Yahachi** See Bandow, Shunji; Ohkohchi, Masato
**Saito, Yoshihiko** See Ogihara, Takashi
**Saito, Yukio** See Nabatame, Toshihide
**Saito, Yuria** See Takeuchi, Tomonari
**Saito, Yuria; Ado, Kazuaki; Asai, Takashi; Kageyama, H.; Nakamura, O.**
Conductivity enhancement mechanism of interstitial-type $Li^+$ conductor, $Li_{4+x}B_xSi_{1-x}O_4$ ($0 \le x \le 0.7$).—73-04068
**Saitoh, Hidetoshi; Mima, Hiroyuki; Ishiguro, Takashi; Ichinose, Yukio**
Monte Carlo simulation for dissociation of hydrogen during electron-assisted chemical vapor deposition of diamond.—73-13142
**Saitoh, Hiroyuki** See Tsuchiya, Yoshimi
**Saitoh, Itaru; Kitano, Hirohisa; Toyota, Sachio; Onishi, Yasushi**
Application of PLZT for photoprinter.—73-07869
**Saitoh, K.** See Miyagawa, S.; Shimizu-Iwayama, Tsutomu
**Saitoh, Kazuo** See Ikeyama, Masami; Nakamura, Mamoru
**Saitoh, Mitsuchika; Iiyama, Michitomo**
Process for depositing a different thin film on an oxide superconductor.—73-01729
**Saitoh, Shinichiroh; Tarutani, Yoshinobu; Fukazawa, Tokuumi; Hiratani, Masahiko; Nishino, Toshikazu; Hasegawa, Haruhiro**
Superconductive switching element with semiconductor channel.—73-04884
**Saitoh, T.** See El-Ghazzawi, M. E.; Watanabe, Y.
**Saitoh, Tatsuhiko; Danzuka, Toshio**
Method for producing glass soot deposit.—73-03944
**Saitoh, Tatuo** See Suzuki, Kazuo
**Saitou, Katsuyoshi** See Kankawa, Yoshimitsu
**Saitou, Takashi** See Hashiuchi, Hiroshi
**Saitou, Yoshiaki; Date, Shigeyuki; Nonaka, Shinpei; Shinbo, Takashi; Nakamura, Hiroshi**
Method for preparing molded articles of high-purity alumina fibers.—73-15948
**Saiylov, N. S.** See Durdyev, A. S.
**Sajgalik, P.; Galusek, D.**
α/ß phase transformation of silicon nitride: homogeneous and heterogeneous nucleation.—73-16029
**Saka, Tsutomu** See Sato, Katsuaki
**Sakabe, Yukio** See Abe, Yoshio; Nishiyama, Toshiki; Sano, Harunobu; Ueno, Yasushi
**Sakachi, Y.** See Murakami, S.
**Sakagami, Seigou** See Kawai, Chihiro
**Sakagami, Seigou; Takemura, Yoshuke; Wakamasu, Satoshi; Takemoto, Takatoshi**
Method of manufacturing composite material of carbon fibers in a carbon matrix.—73-02115
**Sakaguchi, I.** See Gomyo, K.
**Sakaguchi, Isao; Yurimoto, Hisayoshi; Sueno, Sigeho**
Self-diffusion along dislocations in single-crystal MgO.—73-09420
**Sakaguchi, Kouichi** See Nagashima, Yukihito
**Sakaguchi, M.** See Ohta, M.
**Sakaguchi, Masayuki; Aratani, Kohryu; Kawakami, Tatsuo**
SiAlON-bonded silicon carbide refractories for blast furnace.—73-00863
**Sakaguchi, Shuji** See Murayama, Norimitsu; Wakai, Fumihiro
**Sakaguchi, Shuji; Murayama, Norimitsu; Kodama, Yasuharu; Wakai, Fumihiro**
Fracture toughness measurement by indentation fracture method at elevated temperature [≤1200°C].—73-06439
**Sakaguchi, Tori** See Kineri, Tohru
**Sakaguchi, Toru** See Akai, Tomoko; Kadono, Kohei
**Sakaguti, T.** See Wakabayashi, Hajimu
**Sakai, A.** See El-Ghazzawi, M. E.; Itoh, K.
**Sakai, Akira; Tatsumi, Toru; Ishida, Koichi**
Growth kinetics of Si hemispherical grains on clean amorphous Si surfaces.—73-14947
**Sakai, Etsuo; Kosuge, Keiichi; Mashimo, Masaaki; Sugita, Jun**
Composite systems and microstructure of polymer-modified cement.—73-09863
**Sakai, Fumiko** See Takei, Humihiko
**Sakai, H.** See Yamasaki, Seiji
**Sakai, Hideki; Tuchiya, Toshio**
Preparation of PZT thin films by sol-gel process and properties.—73-01428
**Sakai, Hiroaki; Isomura, Manabu**
Silicon nitride bodies and a process for producing the same.—73-02137
**Sakai, Hiroaki; Yano, Shinsuke; Soma, Takao; Isomura, Manabu**
Ceramic packages and ceramic wiring board.—73-11005
**Sakai, Hirohiko**
Technical advances in plate and sheet glasses.—73-03894
**Sakai, Hiroshi; Cima, Michael J.; Rhine, Wendell E.**
Adsorption of sulfonic acid doped poly(vinyl chloride) on barium ferrite particles.—73-01448
**Sakai, Hitoshi** See Matsuhiro, Keiji
**Sakai, Hitoshi; Yoshida, Hitoshi; Baba, Hideyuki; Yoshida, Manabu**
Oxide superconducting material and process for producing the same.—73-11984
**Sakai, J. W.** See Henini, M.
**Sakai, Junji** See Sobue, Masahisa
**Sakai, Junji; Sobue, Masahisa; Yasutomi, Yoshiyuki**
Slip casting method.—73-05014
**Sakai, Kenji; Zama, Hideaki; Oda, Shunri**
In situ optical monitoring of two-dimensional crystal growth in layer-by-layer chemical vapor deposition of $YBa_2Cu_3O_x$.—73-15508
**Sakai, Masahiro** See Kohiki, Shigemi
**Sakai, Mototsugu** See Lutz, Ekkehard H.; Miyajima, Tatsuya; Pezzotti, Giuseppe
**Sakai, Mototsugu; Miyajima, Tatsuya**
Matrix cracking and fiber bridging of carbon-fiber-reinforced carbon matrix composites.—73-06472
**Sakai, Mototsugu**
Deformation and damage of ceramics by a sharp indenter.—73-06368; Fracture mechanics and mechanisms of fiber-reinforced brittle matrix composites.—73-03297
**Sakai, Natsuko** See Kawada, Tatsuya; Yokokawa, Harumi
**Sakai, Natsuko; Kawada, Tatsuya; Yokokawa, Harumi; Dokiya, Harumi**
Effect of preparation method on chemical stability of sinterable calcium-doped lanthanum chromites.—73-16736
**Sakai, Norio** See Kawabata, Shoichi
**Sakai, Norio; Itou, Masahiro; Iwasa, Masanobu**
Device for and method of detecting positioning marks for cutting ceramic laminated body.—73-01851
**Sakai, Shiro** See Ueta, Yoshihiro
**Sakai, Syuji** See Iwasaki, Hiroyuki
**Sakai, Takenobu; Hirabayashi, Izumi; Tanaka, Shoji**
Fabrication and properties of superconducting wire formed by extruding method.—73-04722; 73-11756
**Sakai, Takenobu; Nishio, Kozi; Ogawa, Naoyuki; Hirabayashi, Izumi; Tanaka, Shoji**
Oxide superconductor and process for producing the same.—73-11985
**Sakai, Tatsuo; Ghosh, Asish; Bradt, Richard C.**
Fracture toughness evaluation of mullite ($3Al_2O_3$-$2SiO_2$) having three different microstructures.—73-13538; Indentation fracture resistance of self-reinforced mullites.—73-06457
**Sakai, Toshihiko** See Takizawa, Kazutaka
**Sakai, Yasuto** See Goda, Takuji
**Sakai, Yasuto; Goda, Takuji; Hishinuma, Akihiro; Takemura, Kazuo; Kawahara, Hideo**
Fabrication of silica glass in aqueous solution.—73-14378
**Sakai, Yoshiro** See Nakayama, Susumu
**Sakaida, Yoshihisa** See Awaji, Hideo
**Sakaida, Yoshihisa; Awaji, Hideo; Tamiya, Hiromichi; Nakao, Hiroshi**
Evaluation of fracture toughness by chevron V-notch method.—73-13525
**Sakaki, Hiroyuki** See Nishi, Kenichi; Noge, Hiroshi
**Sakaki, Sumio** See Kurata, K.
**Sakakibara, A.** See Lim, W.-Y.
**Sakakibara, Hiroto** See Konishi, Masahiro
**Sakakibara, Hiroyuki; Ohno, Akira; Futagawa, Tosiaki**
Degradation mechanism of hardened cement by oil.—73-09881
**Sakakibara, Masato** See Kamiya, Hidehiro
**Sakamaki, Shozo** See Miyazaki, Yuji
**Sakamoto, Akira** See Tanaka, Hiroshi
**Sakamoto, Akira**
Status of R&D project on high-performance materials for severe environments.—73-05276
**Sakamoto, I.; Maruno, Shigeo; Jin, P.**
Preparation and microstructure of reactively sputtered $Ti_{1-x}Zr_xN$ [x=0.3–0.8] films.—73-06269
**Sakamoto, J.** See Takeda, Michio
**Sakamoto, Masatomi** See Nakayama, Susumu

**Sakamoto, Masatomi; Matsuki, Kimihiro; Ohsumi, Rie; Nakayama, Yusuke; Sadaoka, Yoshihiko; Nakayama, Susumu**
Preparation and properties of perovskite-type oxides from three-dimensional heterometal assemblies, $\{Ln[Cr(ox)_3]\cdot 10H_2O\}_n$ (Ln=La, Pr, or Nd).—73-02402; 73-11668
**Sakamoto, Naoya** See Fukada, Takeshi
**Sakamoto, Nobuyoshi**
Characteristics of fresh superplasticized concrete for vibrating compaction.—73-09846
**Sakamoto, Noriaki** See Enoki, Toshiaki
**Sakamoto, Ryoichi** See Matsumura, Tatsuo
**Sakamoto, Satoshi** See Ono, Yasushi
**Sakamoto, T.** See Kanezaki, E.
**Sakamura, Hiroyasu** See Ryu, Bong-Gi
**Sakamura, Hiroyasu; Yasui, Itaru**
Internal friction of mixed-alkali aluminogermanate glasses—complexity of mixed-alkali peak.—73-00358; 73-10386
**Sakane, K.** See Wada, Hideo
**Sakane, Takashi** See Shibuya, Takehiro
**Sakanoue, Akira**
Method of forming fluoride glass fiber preform.—73-03946
**Sakanoue, Hitoyuki** See Yamakawa, Akira
**Sakaris, P.** See Xia, X.
**Sakarya, N.** See Kapur, S.
**Sakashita, Keiichi; Yamada, Keiji; Shiratani, Kazuhiko; Yaegashi, Takehisa**
High-temperature gasket.—73-02044
**Sakashita, Yukio; Segawa, Hideo; Tominaga, Kouji; Okada, Masaru**
Dependence of electrical properties on film thickness in $Pb(Zr_xTi_{1-x})O_3$ thin films produced by metallorganic chemical vapor deposition.—73-08832
**Sakata, Hironobu** See Amano, Masatake; Mori, Hidetsugu; Natsume, Y.; Noguchi, Satosi
**Sakata, Hironobu; Amano, Masatake; Ishiguro, Takayuki; Hirayama, Toru**
Electrical properties of $Sb_2O_3$-SrO-$V_2O_5$ glasses and crystallized ones.—73-00477; 73-10436
**Sakata, Hironobu; Amano, Masatake; Kawashima, Yasuyuki; Okamoto, Tetsuya**
Effects of gas atmospheres on resistivity of $V_2O_5$-SrO-$Sb_2O_3$ glasses at high temperature.—73-14861; Oxygen gas-sensing properties of semiconductive $V_2O_5$-SrO-$Sb_2O_3$ glass at high temperature.—73-15082
**Sakata, Kenji** See Okada, Mitsuyoshi
**Sakatsume, Shinichi** See Takeda, Naoya
**Sakaue, H.; Nakasako, T.; Nakaune, K.; Kusuki, T.; Miki, A.; Horiikie, Y.**
Digital chemical vapor deposition of silicon oxide/nitride and its surface reaction study.—73-03832
**Sakharov, V. V.** See Chuprakov, V. F.
**Sakisaka, Y.** See Masuda, S.
**Sakka, Sumio** See Dimitrov, Vesselin V.; Fujihara, S.; Hashimoto, Tadanori; Hu, Li-Li; Jin, Ji-Sun; Masuda, Yoshio; Miyaji, Fumiaki; Zhao, Xiu-Jian
**Sakka, Sumio; Aoki, K.; Kozuka, Hiromitsu; Yamaguchi, J.**
Sol-gel synthesis of silica gel disk as applied to supports of organic molecules with optical functions.—73-07174
**Sakka, Sumio; Miyaji, Fumiaki; Fujimine, S.; Yoko, Toshinobu**
Crystallization of Bi-Ba-Cu-O nonconventional glasses.—73-13952
**Sakka, Sumio; Yoko, Toshinobu; Kozuka, Hiromitsu; Miyaji, Fumiaki**
Preparation of porous bodies and functional materials by the sol-gel method.—73-14477
**Sakka, Sumio; Yoko, Toshinobu**
Fibers from gels.—73-13059
**Sakoske, G. E.; Rekhson, S. M.; Cooper, Alfred R.**
Flow and fracture of glass cylinders pressed between parallel plates.—73-14188
**Sakov, D. M.** See Lipson, A. G.
**Sakovich, G. V.; Petrov, E. A.; Komarov, V. F.; Kozyrev, N. V.**
New type of artificial diamonds and the physical-chemical fundamentals of their creation.—73-12437
**Sakthivel, P.** See Mukherjee, P.
**Sakulina, E. P.** See Shutov, A. I.
**Sakuma, E.** See Hara, Shiro
**Sakuma, Shuji; Atsumi, Kiminori; Fujita, Keijiro**
Antimicrobial hydroxyapatite powders containing hinokitiol, protamine, or sorbic acid.—73-05190
**Sakuma, Taketo** See Harada, Hideyuki; Miyazawa, K.; Okada, Kazuki; Yamamoto, Takahisa
**Sakura, Makoto** See Inoue, Norio
**Sakuraba, Hiroshi** See Nishizawa, Junichi
**Sakuraba, Junji** See Watanabe, Kazuo
**Sakurada, O.** See Hashiba, M.
**Sakurai, C.** See Sato, Y.
**Sakurai, Chihiro** See Fukui, Toshimi; Okuyama, Masahiko
**Sakurai, Chihiro; Okuyama, Masahiko**
Process for preparing zirconia sols and/or zirconia forms.—73-02061
**Sakurai, Kiyoko** See Matsuno, Takashi
**Sakurai, Makoto** See Watanabe, Makoto
**Sakurai, Osamu** See Kim, Bok-Hee; Nishiyama, Shin; Sumino, Hiroyasu
**Sakurai, Osamu; Katsumoto, Masumi; Shinozaki, Kazuo; Mizutani, Nobuyasu**
Preparation and dielectric properties of $BaTiO_3$-$Pb(Mg_{1/3}Nb_{2/3})O_3$.—73-05616; 73-16573
**Sakurai, Osamu; Kimagai, Kazumasa; Kieda, Nobuo; Ogura, Atsushi; Shinozaki, Kazuo; Mizutani, Nobuyasu**
Preparation of Ni-Zn ferrite thin films by ICP flash evaporation method.—73-15360
**Sakurai, T.** See Bai, Chun-Li
**Sakurai, Tadashi** See Nishino, Tadashi; Sugihara, Tadashi
**Sakurai, Takeshi; Yamashita, Toru; Yamauchi, Hisao; Tanaka, Shoji**
*n*-type oxide superconductor represented by the formula $Nd_4(Ce_yL_{1-y})_2CuO_{4-\delta}$ (L=La, Mg, or a mixture of alkaline earth elements).—73-01725; Oxide superconductor and manufacturing method thereof via HIP and controlling the oxygen partial pressure.—73-15689
**Sakurai, Takeshi; Yamashita, Toru; Yamauchi, Hisao**
Stability of superconducting $La_{1.8}Sr_{0.2}CaCu_2O_6$ with respect to oxygen partial pressure.—73-08205
**Sakurai, Yoshihito; Yoshida, Tetsuro**
Synthesis of $K_2Ti_4O_9$ by the hydrolysis of KOH-Ti(iso-$C_3H_7O)_4$ ethanol solution.—73-03048
**Sakurai, Yukio** See Kamiya, Hidehiro
**Sakuta, H.** See Tateno, M.
**Sakuta, Ken** See Ohara, Tomoyuki
**Sakuyama, Kazuhiro** See Maeda, Toshihiko
**Sal'kov, E. A.** See Babentsov, V. N.
**Saladini, M.** See Bruckner, Sergio
**Salaev, F. M.** See Allakhverdiev, K. R.; Esengaliev, A. B.; Suleimanov, R. A.
**Salaev, F. M.; Kamzina, L. S.; Krainik, N. N.**
Improper ferroelectric phase transition in cadmium pyroniobate.—73-15268
**Salama, Kamel; Selvamanickam, Venkatakrishnan**
Oriented grained Y-Ba-Cu-O superconductors having high critical currents and method for producing [the] same.—73-11983
**Salamanca-Riba, L.** See Ballal, A. K.; Hua, Susan Z.; Yamamoto, Tatsuya
**Salamo, G. J.** See Tang, Y. Q.
**Salamo, G.** See Kukhtarev, N.
**Salamon, A. W.** See Feder, M. S.
**Salata, T. P.** See Irisova, K. N.
**Salazar, Kenneth V.** See Hults, William L.
**Salchert, F.**
Particulate collection for thermal spray processes.—73-08355
**Saldin, D. K.** See Harp, G. R.; Tonner, B. P.
**Saldugei, M. M.** See Girshtel, G. B.
**Saleh, Bahaa E. A.** See Hayat, Majeed M.
**Saleh, H. I.** See Omar, A. A.
**Saleh, Ramzi Y.; Soled, Stuart L.; Dispenziere, Nicholas C.**
Catalyst comprising amorphous NiO on silica/alumina support and process for butene dimerization.—73-05193
**Salem, Jean; Bommier, Christophe**
Process for manufacturing porous tubes of high permeability made from carbon-carbon composite material, and their application.—73-05327
**Salem, Jonathan A.** See Choi, Sung-R.; Ghosh, Asish; Quinn, George D.; Singh, M.
**Salem, Jonathan A.; Choi, Sung-R.**
Creep behavior of silicon nitride determined from curvature and neutral axis shift measurements in flexure tests.—73-17265
**Salemink, H. W. M.; Albrektsen, O.**
Atomic scale survey of III-V epitaxial interfaces.—73-07388
**Sales, Brian C.** See Boatner, Lynn A.; Foley, Michael R.
**Sales, M.; Monros, G.; Tena, M. A.; Carda, J.; Escribano, P.; Alarcon, J.**
Preparation of glasses and glass-ceramics via nonconventional methods.—73-14476
**Salge, Henning; Schlegel, Christian**
Ceramic composition for the production of the top layer of two-layered stoneware tiles.—73-10911
**Salii, Ya. P.** See Freik, D. M.
**Salikhov, K. M.** See Kovalevskaya, G. G.; Slobodchikov, S. V.
**Salikhov, T. P.** See Riskiev, T. T.
**Salikhov, T. P.; Kan, V. V.**
Subsecond measurements of optical properties in the spectral range 0.4–1.1 μm near high-temperature phase transitions in refractory oxides.—73-16604
**Salim, M. A.** See Khawaja, E. E.
**Salimian, S.** See Felch, S. B.
**Salimov, Sh. K.** See Evstrop'ev, S. K.
**Salin, J. F.** See Lucchese, P.
**Salinas, Pastora** See Rodriguez, Rogelio
**Salinas-Sanchez, A.** See De Andres, A.; Garcia-Matres, E.
**Salivonov, I. N.** See Gololobov, Yu. P.
**Salk, S. H. S.** See Han, K.-H.
**Salkov, E. A.** See Bakshi, I. S.; Eissa, N. A.
**Salman, E. G.** See Voronkov, V. P.
**Salman, S. M.** See Omar, A. A.
**Salmeen, Irving T.** See Narula, Chaitanya K.
**Salmi, Jorma** See Kattelus, H.
**Salomon, D.** See Liu, Ran
**Salomon, M. B.** See Yu, R. C.
**Salova, T. P.** See Epel'baum, M. B.
**Saltanov, A. V.** See Mikhnov, S. A.
**Salvado, I. M. Miranda; Margaca, F. M. A.; Teixeira, J.**
SANS study of $xTiO_2$-$SiO_2$ gels with low titania content.—73-16299
**Salvador, Paul A.** See Shen, Li
**Salvi, M.** See Favennec, P. N.; Kechouane, M.
**Salzman, J.** See Zahler, M.
**Samanta, D.** See Pal, U.
**Samanta, S. B.** See Dutta, P. K.
**Samara, D.** See Fowler, B.
**Samarasekera, I. V.** See Davies, C. H. J.
**Samarina, O. N.** See Pivinskii, Yu. E.
**Samarth, N.** See Hu, B.; Luo, H.; Smyth, J. A.
**Sambasivan, S.** See Brown, Peter W.
**Sambe, Hideo; Ramaker, David E.**
X-ray photoelectron spectroscopy study on the electrical double layer at an $Al_2O_3$-Al interface.—73-06881
**Sambueva, S. R.** See Kodess, B. N.
**Samchenko, N. P.; Alcheev, I. S.; Zdornaya, Z. M.**
Effect of conditions of zeolite Ni/H-DC preparation on catalytic properties in the reaction of $CO_2$ hydration.—73-16456
**Samchenko, S. V.** See Krivoborodov, Yu. R.; Kuznetsova, Tamara V.
**Samdani, Gulam** See Moore, Stephen
**Samdani, S. G.** See Muqtader, S. A.
**Samdi, A.** See Descemond, M.
**Samedov, E. S.** See Kyazym-Zade, A. G.
**Sameshima, Katsumi**
Method of manufacturing device having ferroelectric film.—73-04585
**Samim, Hamid; Vortisch, Walter**
Clay-mineralogical investigation of tertiary natural sands from Grefrath and Suchteln [Germany] for use as molding sands.—73-01980
**Samitier, J.** See Scheid, E.
**Samkova, L. G.; Dubovik, V. N.; Raikhel, A. M.**
Effect of edge defects on strength of plate glass subject to lateral bending.—73-00454; Effects of edge effects on sheet glass bending strength.—73-00470
**Samkova, L. G.; Moskalenko, A. M.; Soboleva, K. L.**
Service reliability of high voltage glass suspension insulators.—73-01024
**Samlenski, R.; Flemig, G.; Brenn, R.; Wild, C.; Muller-Sebert, W.; Koidl, P.**
Ion channeling in textured polycrystalline diamond films.—73-09472
**Sammells, Anthony F.** See Cook, Ronald L.
**Sammes, N. M.; Phillipps, M. B.**
Synthesis of $La_{1-x}Sr_xMnO_3$ at different sintering temperatures.—73-09358
**Sammes, N. M.**
Fracture toughness of doped bismuth oxide electrolytes.—73-09602
**Samoggia, G.** See Camagni, P.
**Samoilov, A. V.**
Universal behavior of the Hall resistivity of single-crystalline $Bi_2Sr_2CaCu_2O_x$ in a thermally activated flux flow regime.—73-15661
**Samoilov, P. P.** See Naumov, N. G.
**Samoilov, V. M.** See Kotosonov, A. S.
**Samoilyuk, T. T.** See Bumai, Yu. A.
**Samokhvalov, A. A.** See Kostylev, V. A.; Loshkareva, N. N.; Osipov, V. V.
**Samokhvalov, V. S.; Torlopov, A. A.; Zub, M. P.**
Operating a steam superheater on a glass-melting furnace.—73-01961
**Samokhvalova, T. I.** See Ordan'yan, S. S.
**Samokhvalova, T. I.; Zaitsev, G. P.; Ryabov, V. A.; Fedorenkov, A. L.; Ordan'yan, S. S.**
Corundum ceramics with improved mechanical strength.—73-16690
**Samori, Lorenzo** See Tavolazzi, Valentino
**Samorjai, Gabor A.** See Perry, Scott S.
**Samovarov, V. N.** See Fugol, I. Ya.
**Sampaio, A. J. C.** See Pires, A. P. C.
**Sampath Kumar, T. S.** See Natarajan, S.
**Sampath, S.** See Tiwari, R.
**Sampath, S.; Wayne, S. F.**
Plasma-sprayed Mo-$Mo_2C$ composites: microstructure and properties.—73-06840
**Sampathkumaran, P.** See Krishnamoorthy, P. R.
**Sampere, S. M.** See Chan, Siu-Wai; Ma, Q. Y.
**Sampson, E. R.; Nieder, L. B.**
Progress report—Hobart/Tafa's Model 9000 arc spray system.—73-08359
**Sampson, E. R.**
Economics of arc vs plasma spray for aircraft components.—73-08332
**Samsonov, A. L.; Bessonova, T. S.**
Vacancy topography in corundum, grown in sets with graphite thermal units by horizontal directed crystallization technique, and control over vacancy structure of crystals.—73-03071
**Samsonova, L. A.** See Sankov, V. E.
**Samsonova, L. A.; Shulov, S. Ya.; Panteleev, E. F.**
Preparation of electrochemically treated glass for metallization.—73-00683
**Samsonova, T. P.** See Ivanov, P. A.
**Samuel, A. M.** See Liu, H.
**Samuel, C. C.** See Sundaram, V. S.
**Samuel, F. H.** See Liu, H.
**Samuel, George** See Handoo, S. K.
**Samuelsen, K.** See Riste, T.
**Samuelson, L.** See Maximov, I.
**Samuely, P.; Vedeneev, S. I.; Jansen, A. G. M.**
Tunneling into BiSrCuO superconductor up to the critical magnetic field.—73-08265
**Samuely, P.; Venedeev, S. I.; Meshkov, S. V.**
Electron-phonon coupling mechanism in $Bi_2Sr_2CaCu_2O_x$ by tunneling.—73-08053
**Samuneva, B.** See Kozhukharov, V.
**Samuneva, B.; Kozhukharov, V.; Trapalis, C.; Kranold, R.**
Sol-gel processing of titanium-containing thin coatings: I, Preparation and structure.—73-03022
**Samuneva, B.; Kozhukharov, V.; Trapalis, C.**
Structure and properties correlation dependence of titanium and silicon coatings obtained by sol-gel processing.—73-14103
**Samwer, K.** See Von Helmolt, T.
**Sanada, Kazuo**
Glass production by gas-phase reaction.—73-10543
**Sanada, Y.** See Ehara, T.
**Sanagi, M.** See Choi, Y.-K.
**Sanchez de Rojas, M. I.** See Frias, M.
**Sanchez de Rojas, M. I.; Luxan, M. P.; Frias, M.; Garcia, M.**
Influence of different addition on portland cement hydration heat.—73-03485
**Sanchez, A.** See Wall, K. F.
**Sanchez, E.** See Escardino, A.
**Sanchez, Jean-Pierre** See Demazeau, Gerard
**Sanchez, L.** See Hernan, L.
**Sanchez, M. Morales** See Sarrion, M. L. Martinez

**Sanchez, O.** See Gonzalvez, J. M.; Montero, I.

**Sanchez, O.; Gomez-Aleixandre, C.; Palacio, C.**
Role of fluorine atoms in the oxidation-hydrolysis process of plasma-assisted chemical vapor deposition fluorinated silicon nitride film.—73-13239

**Sanchez-Escribano, V.** See Del Arco, Margarita

**Sanchez-Galvez, V.** See Cortes, R.

**Sanchez-Quesada, F.** See Hernandez-Rojas, J. L.

**Sanchez-R., J. C.** See Galindo, H.

**Sanchez-Sinencio, F.** See Espinoza-Beltran, F. J.; Ramirez-Bon, R.

**Sanchez-Soto, P. J.** See Macias, M.; Navio, J. A.

**Sanchez-Soto, P. J.; Sobrados, Isabel; Sanz, Jesus; Perez-Rodriguez, Jose L.**
$^{29}Si$ and $^{27}Al$ magic angle spinning nuclear magnetic resonance study of the thermal transformations of pyrophyllite.—73-02429

**Sanders, D. M.** See Falabella, S.

**Sanders, J. E.** See Friedman, Gerald M.

**Sanders, Steven C.** See Finnemore, Douglas K.

**Sanders, William A.** See Bansal, Narottam P.

**Sanderson, A.** See Pinnington, T.

**Sandhage, Kenneth H.** See Schmutzler, Hans J.

**Sandhage, Kenneth H.**
Electroceramics and process for making the same.—73-14748; Process for making ceramic/metal and ceramic/ceramic laminates by oxidation of a metal precursor.—73-05006

**Sandhu, Gurtej S.; Buley, Todd W.**
Low-pressure chemical vapor deposition process for depositing high-density, highly conformal titanium nitride films of low bulk resistivity.—73-02103

**Sandhu, Gurtej S.; Doan, Trung T.; Meikle, Scott G.**
Method of depositing high-density titanium nitride films on semiconductor wafers.—73-05315

**Sandifer, Jerry B.** See Ye, Pei

**Sandifer, Jerry B.; Edwards, Michael J.; Brown, Thomas S., III; Duffy, Stephen F.**
High-temperature life prediction of monolithic silicon carbide heat exchanger tubes.—73-17347

**Sanditov, D. S.**
Anharmonism of the vibrations of the quasi-lattice and a model of fluctuation holes in glassy solids and melts.—73-00305

**Sandiumenge, F.** See Martinez, Benjamin.

**Sandiumenge, F.; Gali, S.; Rodriguez-Clemente, R.; Batlle, Xavier; Obradors, X.**
$Ba_3Fe_{10}Sn_2CoO_{22}$: growth, crystal structure (120 K), and magnetic properties.—73-02146

**Sandiumenge, F.; Martinez, Benjamin; Batlle, Xavier**
Cation distribution and magnetization of $BaFe_{12-2x}Co_xSn_xO_{19}$ (x=0.9, 1.28) single crystals.—73-11646

**Sandler, N. P.** See Kwon, Kee-Won; Treichel, H.

**Sandlin, Michael S.; Peterson, Chad R.; Bowman, Keith J.**
Texture measurement on materials containing platelets using stereology.—73-17211

**Sandmaier, H.** See Kozlowski, F.

**Sands, R.** See Wang, S-W.

**Sands, T.** See Ghonge, Subodh G.; Ramesh, Ramamoorthy

**Sands, T.**
Nanoscale engineering of metal/semiconductor interfaces.—73-07686

**Sandstrom, P. W.; Sridharan, K.; Conrad, J. R.**
Machine for fretting wear testing of plasma-surface-modified materials.—73-08409

**Sandul, G. V.** See Yaremov, P. S.

**Sandulenko, V. A.** See Demchuk, M. I.

**Sanfacon, M. M.** See Vernon, S. M.

**Sang, Jing-C.** See Barkatt, Aaron

**Sangunni, K. S.** See Rabinal, M. K.

**Saniger, Jose M.; Hu, H.; Castano, Victor M.; Garcia-Alejandre, Juventino**
Characterization of the metal oxide–polyacrylic acid [PAA] compounds by Fourier transform infrared spectroscopy.—73-08572

**Sanina, V. A.** See Babinskii, A. V.; Golovenchits, E. I.

**Sanjines, R.; Coluzza, C.; Rosenfeld, D.**
Photoemission spectromicroscopy: a new insight in the chemistry of $SnO_x$ films for gas sensors.—73-01274

**Sankar, Jagannathan** See Neogi, Jayant; Vaidyanathan, K. Ranji

**Sankar, Jagannathan; Krishnaraj, S.; Vaidyanathan, K. Ranji; Kelkar, Ajit D.**
Elevated temperature behavior of sintered silicon nitride under pure tension, creep, and fatigue—73-17303

**Sankey, O. F.** See Ma, H.

**Sankin, V. I.** See Verenchikova, R. G.

**Sankov, V. E.; Samsonova, L. A.; Bragin, V. B.**
Determination of lead and copper content in surface layers of electrochemically colored glass.—73-00319

**Sankov, V. E.; Samsonova, L. A.; Bragin, V. B.**
Determining pigments in glass by XFA.—73-00321

**Sankur, H. O.** See Bajaj, J.

**Sankur, H.**
Deposition of optical coatings by laser-assisted evaporation and by photoassisted chemical vapor deposition.—73-12977

**Sanna, U.** See Atzeni, C.

**Sano, Akinobu** See Matsushita, Takeshi

**Sano, Akinobu**
Floating magnetic head slider [with ceramic film].—73-15379

**Sano, Akira** See Matsushita, Junichi

**Sano, Harunobu** See Kanba, Seiji

**Sano, Harunobu; Hamaji, Yukio; Sakabe, Yukio**
Nonreducible dielectric ceramic composition.—73-01062

**Sano, Harunobu; Hamaji, Yukio; Tomono, Kunisaburo**
Nonreducible dielectric ceramic composition.—73-04226; 73-14757

**Sano, Hideaki** See Kobayashi, Kazuo

**Sano, Hirohisa** See Aoki, Masahiro

**Sano, Hiroyuki** See Kakizaki, Koichi

**Sano, Isao** See Miura, Takashi

**Sano, K.** See Itatani, Kiyoshi

**Sano, Michihiro; Yamashita, Yoji; Okuno, Yasuo**
Growth and characterization of ZnSe epitaxial layers grown by the solution growth method.—73-11226

**Sano, Mikihiro** See Takizawa, Kazutaka

**Sano, Saburo** See Ohshima, Kazuyuki

**Sano, Saburo; Mizuta, Hiroyuki; Maeda, Masaki; Teranishi, Hisahiro; Oda, Kiichi; Shibasaki, Yasuo**
Slip casting of low-soda alumina: I, Preparation conditions of slurry.—73-09333; Slip casting of low-soda alumina: II, Vacuum-pressure-assisted slip casting and mechanical properties of sintered body.—73-09334

**Sano, Saburo; Ohshima, Kazuyuki; Oda, Kiichi; Shibasaki, Yasuo**
Slip casting of silicon nitride and mechanical properties of sintered body: IV, Compositions of sintering additives and sintering conditions.—73-09335; 73-17002

**Sano, T.; Mizukami, Fujio; Kawamura, M.; Takaya, H.; Mouri, T.; Inaoka, W.**
Crystallization of ZSM-5 zeolite under microgravity.—73-12568

**Sano, Toshio; Kaneko, Yasunari**
Preparation of titanium oxide fibers by use of sodium alginate.—73-02973; 73-13208

**Sant, C.** See Contour, J. P.

**Santa-Cruz, P.; Auzel, F.; Sadoc, A.; Dexpert-Ghys, J.; Henoc, P.; Morin, D.**
Synthesis and microstructural studies of $Er^{3+}$-doped fluorozirconate devitrified glasses.—73-06976

**Santamaria, J.** See Hernandez-Rojas, J. L.

**Santella, M. L.; Pak, J.-J.**
Brazing titanium vapor-coated zirconia.—73-10199

**Santha, I. S.** See Neurgaonkar, R. R.

**Santhanakrishnan, G.; Krishnamurthy, R.; Malhotra, S. K.**
Mechanics of tool wear during machining of advanced fibrous composites.—73-06487

**Santic, B.** See Desnica, U. V.

**Santilli, C. V.** See Brito, G. E.; Hiratsuka, Renato Satoshi

**Santilli, C. V.; Bonnet, J. P.; Dordor, P.; Onillon, M.**
Anisotropy of electrical properties in $\alpha$-$Fe_2O_3$ ceramics.—73-16410

**Santinelli, C.** See Gallet, D.

**Santini, Giampietro** See Bandini, Alessandro

**Santopadre, P.** See Marabelli, M.

**Santoro, L.** See Beretka, Julius

**Santos, D. R.** See Knobel, M.

**Santos, E.** See Avalle, L.

**Santos, L. F.; Goncalves, M. C.; Almeida, R. M.**
XPS and NEXAFS study of fluoride glass structure using synchrotron radiation.—73-14127

**Santos, M.** See Chen, W.

**Santra, K.; Sarkar, C. K.; Mukherjee, M. K.; Ghosh, B.**
Copper oxide thin films grown by plasma evaporation method.—73-09050

**Santucci, S.** See Alfonsetti, R.

**Sanyal, A. S.** See Das, T.

**Sanygin, V. P.** See Zhalilov, N. S.

**Sanygin, V. P.; Raukhman, A. M.; Lazarev, V. B.**
Anisotropy of surface energy of monocrystals of cadmium diarsenide.—73-10917

**Sanz, A.** See Lira, Joaquin

**Sanz, E.** See Caceres, J.

**Sanz, J. M.** See Soriano, L.

**Sanz, J.** See Franco, M. J.

**Sanz, Javier Fernandez** See Alvarez, Luis Javier

**Sanz, Jesus** See Sanchez-Soto, P. J.

**Sanz-Garcia, J. A.** See Vergara, I.

**Saoudre, R.; Hollinger, G.; Gagnaire, A.; Ferret, P.; Pitaval, M.**
Very thin silicon dioxide film thickness determination using transmission electron microscopy, spectroscopic ellipsometry, and X-ray photoelectron spectroscopy.—73-08458

**Sapega, V. F.** See Mirlin, D. N.

**Sapega, V. F.; Belitsky, V. I.; Shields, A. J.; Ruf, T.; Cardova, M.; Ploog, K.**
Resonant one-acoustic-phonon Raman scattering in multiple quantum wells.—73-11421

**Sapi, Lajos**
Technological changes in sheet glass manufacture.—73-03408

**Saponjic, Zoran V.** See Rajh, Tijana

**Sapozhnikov, A. N.**
Modulated structure of lazurite from Southwestern Pamirs deposits.—73-16220

**Sapozhnikova, L. M.** See Babinskii, A. V.; Barash, I. S.

**Sapozhnikova, L. V.** See Golovenchits, E. I.

**Sappey, Andrew D.** See Butt, Darryl P.

**Saptaru, Nicolae; Popescu, Veronica; Mihelis, Angela**
Characterization of the *n*-$TiO_2$/electrolyte interface through photoelectrochemical measurements.—73-12753

**Saraie, J.** See Fan, Y.

**Saraswat, K. C.** See Islam-Raja, M. M.; Pavelescu, C.

**Sarda, C.; Bonino, C.; Mollard, P.; Rousset, A.**
Barium-doped iron oxide pigments for high-density magnetic recording: thermal stability and magnetic properties.—73-15306

**Sardin, G.** See Costa, J.

**Sargankova, I.** See Kopsansky, P.

**Sargankova, I.; Timko, M.; Kovac, J.**
Synthesis of Y-Ba-Cu-O fine powder and some of its magnetic properties.—73-06100

**Sargeant, G. K.** See Emblem, H. G.

**Sargeant, Winslow L.** See Hayat, Majeed M.

**Sargent, Bradly L.** See Lauer, James L.

**Sargent, Gordon A.** See Lu, Jyh-Woei

**Sargent, M., III; Paul, A. E.; Koch, S. W.**
Nearly degenerate multiwave mixing in quasi-equilibrium semiconductors.—73-11345

**Sargent, R. B.** See Lehan, J. P.

**Sargent, T. N., Jr.** See Bennert, D. M.

**Sarin, V. A.** See Maksimov, B. A.

**Saris, Leo** See Boes, Josef

**Sarkar, A.** See Mishra, S. K.

**Sarkar, Arnab** See Wang, Shi-Ho

**Sarkar, Asok K.**
Reaction bonding mechanisms in regular and retarded magnesium ammonium phosphate cement systems.—73-10130

**Sarkar, B.; Reddy, Y. S.; Sharma, R. G.**
Comparative study of the synthesis techniques to obtain high-$T_c$ single phase in bismuth-based superconductors.—73-01508; Effect of silver addition to the bismuth-lead-strontium-calcium-copper-oxygen superconductor: enhancement in critical current density.—73-08039

**Sarkar, C. K.** See Santra, K.

**Sarkar, M.** See Gonzo, L.

**Sarkar, Partho** See Bissinger, Melinda; Nicholson, Patrick S.; Whitehead, M.

**Sarkar, Partho; Huang, Xue; Prakash, Om; Nicholson, Patrick S.**
Electrophoretic deposition to synthesize advanced ceramic/ceramic laminar composites.—73-09116

**Sarkar, Partho; Prakash, Om; Wang, G.; Nicholson, Patrick S.**
Microlaminate ceramic/ceramic composites (YSZ/$Al_2O_3$) by electrophoretic deposition.—73-16867

**Sarkar, Shondeep L.** See Bonen, David; Moukwa, M.; Xu, A.

**Sarkar, Shondeep L.; Aitcin, Pierre-Claude**
Phenomenological investigation of concrete deterioration in a median barrier.—73-00163

**Sarkar, Shondeep L.; Dasgupta, A.; Singh, P.**
Update on the properties of clinker and cement derived from industrial chemical wastes.—73-03551

**Sarkar, Shondeep L.; Xu, A.**
Preliminary study of very early hydration of superplasticized $C_3A$+gypsum by environmental SEM.—73-10090

**Sarkar, Shondeep L.**
Microstructural investigation of renaissance mortar from Montreal, Quebec, Canada.—73-10048

**Sarkar, T.** See Uma, Seetharaman

**Sarkisov, P. D.** See Budov, V. V.

**Sarkisov, P. D.**
Modern state of technology of glass-ceramic for construction.—73-10459

**Sarkisova, M. Kh.** See Gulamova, D. D.

**Sarma, M. S.** See Mukherjee, P. S.

**Sarma, R. V. G. K.; Radhakrishna, S.**
Spectroscopic studies of pure and chromium-doped lead fluorophosphate glasses.—73-00401; Transport studies on silver borotungstate glasses.—73-00570

**Sarott, F.-A.; Bradbury, M. H.; Pandolfo, P.; Spieler, P.**
Diffusion and adsorption studies on hardened cement paste and the effect of carbonation on diffusion rates.—73-03452

**Sarrion, M. L. Martinez; Sanchez, M. Morales**
Preparation and characterization of thermistors with negative temperature coefficient $Ni_xMn_{3-x}O_4$ ($1 \geq x \geq 0.56$), from formate precursors.—73-04449

**Sarsembinov, Sh. Sh.; Prikhod'ko, O. Yu.; Mal'tekbasov, M. Zh.; Maksimova, S. Yu.; Averyanov, V. L.**
Ambipolar photoconductivity of amorphous $As_2Se_3$ films.—73-01072

**Sartinskaya, L. L.** See Osipova, I. I.

**Sartwell, B. D.** See Youchison, D. L.

**Saruhan, B.; Albers, W.; Schneider, H.**
Improved densification and mullitization by seeding of reaction-sintered mullite with a sol-gel-derived precursor.—73-16832

**Sarukhanishvili, A. V.; Shashek, L.; Shapakidze, E. V.**
Waste materials from the production of electrolytic manganese dioxide in the glass container industry.—73-07188

**Sarvahi, R.** See Singh, N. B.

**Sarvin, V. V.** See Kuchinsky, S. A.

**Sarycheva, E. A.** See Berezkina, L. G.

**Sas, A.** See Kalibaeva, G. M.

**Sasa, Shigenhiko** See Tomioka, Takeshi

**Sasa, Tadashi** See Oka, Akihiro; Shigegaki, Yasuhiro

**Sasada, I.; Oonaka, Y.; Harada, K.**
Measurement of trapped flux distribution in a high-$T_c$ superconductor using a flux-gate magnetometer.—73-04767

**Sasagawa, Harukuni** See Kurihara, Kenro

**Sasago, Y.** See Hase, M.

**Sasajima, Yasushi**
Computer simulation study of thin-film formation process.—73-05719

**Sasaki, A.** See Nomura, Takashi

**Sasaki, G.** See Maruyama, Kazunori

**Sasaki, Gen** See Suganuma, Katsuaki

**Sasaki, Gen; Nakase, Hirofumi; Suganuma, Katsuaki; Fujita, Teruaki; Niihara, Koichi**
Mechanical properties and microstructure of $Si_3N_4$ matrix composite with nanometer-scale SiC particles.—73-06245; 73-13562

**Sasaki, Gen; Suga, T.; Yanai, Tomohiro; Suganuma, Katsuaki; Niihara, Koichi**
Microstructure of $B_4C$/$TiB_2$ composite fabricated by reaction sintering of $B_4C$ and TiC.—73-17168

**Sasaki, Gen; Suganuma, Katsuaki; Fujita, Teruaki; Hiraga, Kenji; Niihara, Koichi**
Interface structure of $Si_3N_4$ matrix composite with nanometer-scale SiC particles.—73-06237

**Sasaki, Hirokazu** See Sugiura, Nozomi

**Sasaki, Hirokazu; Yakawa, Chiori; Otoshi, Shoji; Suzuki, Minoru; Ippommatsu, Masamichi**
Reaction mechanism of electrochemical vapor deposition [EVD] of yttria-stabilized zirconia film.—73-13227

**Sasaki, Hiroshi** See Kudaka, Katsuya; Matsuki, Ryuichi; Niihara, Koichi
**Sasaki, K.** See Okada, A.
**Sasaki, Kaori** See Ishida, Hideki; Isu, Norifumi; Okada, Yoshihiko
**Sasaki, Kaori; Ishida, Hideki; Mitsuda, Takeshi**
Cement-based building material coated with glaze at 900°C.—73-09842
**Sasaki, Katsuhiro; Grigorieva, Irena; Bagnall, Kate; Midgley, Paul; Mori, Takeshi; Wilson, John**
Hexatic vortex glass [observed] in [4%] Al-doped $YBa_2Cu_3O_{7-x}$ single crystals.—73-15498
**Sasaki, Kazunori; Motoie, Katsuhiko; Kawasaki, Tadashi**
Bonding strength of alumina joint bonded under the alternating stress.—73-06335; 73-13802
**Sasaki, Kenichi** See Kawarada, Motonobu
**Sasaki, M.** See Kumakura, H.
**Sasaki, M.; Sugizaki, M.**
Quantitative analysis of boric oxide in borosilicate glasses by electron probe microanalysis [EPMA].—73-15835
**Sasaki, Makoto** See Someno, Yoshihiro
**Sasaki, Makoto; Hirai, Toshio**
Fabrication and properties of functionally gradient materials.—73-00232
**Sasaki, Masahiro; Yoshida, Seikoh**
Stoichiometry- and bond-structure-dependent decomposition of trimethylgallium on As-rich GaAs(100) surfaces.—73-07812
**Sasaki, Morimasa** See Ueda, Kunihiro
**Sasaki, N.** See Wada, Hideo
**Sasaki, Nobuo**
Process for producing bismuth-based oxide superconducting films.—73-11996
**Sasaki, S.** See Aida, Toshiyuki; Nagamune, Y.
**Sasaki, S.; Miura, N.; Horikoshi, Yoshiji**
Magnetic-field-induced saddle points in GaAs/AlAs short period superlattices.—73-07653
**Sasaki, Shinya**
Environmental effects on friction and wear of ceramics.—73-12798
**Sasaki, T.** See Kittaka, S.; Oguchi, T.; Watanabe, M.
**Sasaki, T.; Matsumoto, Y.; Hombo, J.; Ogawa, Y.**
New preparation method of $LaMnO_3$ perovskite using electrochemical oxidation.—73-02903
**Sasaki, T.; Tomono, M.; Oda, N.**
CdTe epitaxial growth on (211)B GaAs by molecular beam epitaxy.—73-07400
**Sasaki, T.; Watanabe, M.; Fujiki, Yoshinori; Kitami, Y.; Yokoyama, M.**
Crystal structure of octatitanate $M_2Ti_8O_{17}$ (M=K, Rb).—73-02208
**Sasaki, Takahiro** See Kawashima, Riki
**Sasaki, Takatomo** See Furusawa, Shinichi
**Sasaki, Takayoshi** See Fujiki, Yoshinori
**Sasaki, Takuya**
Debinding behavior for injection-molded alumina compacts.—73-02761
**Sasaki, Tatsuya** See Kato, Tomoaki
**Sasaki, Y.** See Abe, Y.; Yanagawa, T.
**Sasaki, Yasuhiro** See Uehara, Kaneo
**Sasaki, Yasuhiro; Uehara, Kaneo; Inoue, Takeshi**
Piezoelectric ceramic transformer being driven with thickness extensional vibration.—73-01445
**Sasaki, Yasumasa** See Oyobe, Akira
**Sasaki, Yukichi** See Ikuhara, Yuichi; Michishita, Kazuo
**Sasame, Akira** See Yamakawa, Akira
**Sasamoto, Tadashi** See Yamamoto, Osamu
**Sasamoto, Tadashi; Enomoto, Sumie; Shimoda, Zenya; Saeki, Yuzo**
Effect of hydrolysis conditions on thermal transformation of alkoxide-derived titanium dioxide.—73-05761; 73-16730
**Sasek, L.** See Mika, Martin; Pospisilova, M.
**Sashida, Norikazu** See Yamagishi, Chitake
**Sashin, I. V.** See Muzichka, Y. U.
**Sass, S. L.** See Dieckmann, Rudiger; Subramanian, Ramesh; Ustundag, E.; Yang, J. C.
**Sassa, Michinari** See Manabe, Katsuhide
**Sassella, A.** See Borghesi, A.
**Sasserath, J.** See Meyyappan, M.
**Sastry, Pamidi V. P. S. S.** See Rajagopal, H.
**Sata, Toshiyuki; Mochizuki, Yoshihisa; Suenaga, Tomoko; Nagata, Masanori**
Reactions between $YBa_2Cu_3O_{7-x}$ superconducting oxide and metallic copper and prevention of them.—73-01645; 73-11888
**Sata, Toshiyuki; Mochizuki, Yoshihisa**
Reactions between $Bi_2Sr_2CaCu_2O_x$ superconducting oxide and metallic copper and their prevention.—73-04799; 73-11887
**Satake, Tadaaki** See Sugano, Mikio
**Satanin, A. M.**
Impedance of superconductors with random inhomogeneities.—73-04737
**Satava, Vladimir**
Hydrothermal reactions in the system $3CaO{\cdot}SiO_2$-$CaSO_4{\cdot}2H_2O$-$H_2O$.—73-12598
**Satek, Larry C.; McKenna, Stephen T.; Smith, Vincent F., Jr.**
Crystalline metalloaluminum borates.—73-05211
**Sater, Janet M.** See Hong, William S.
**Sathish, Shamachary; Yost, William T.; Cantrell, John H.; Generazio, Edward R.; Bhatt, Ramakrishna T.; Eldridge, Jeffrey I.**
Acoustic microscopic characterization of fiber/matrix interface of SiC fiber-reinforced reaction-bonded $Si_3N_4$ matrix composites.—73-12102
**Sathish, Shamachary; Yost, William T.; Cantrell, John H.; Generazio, Edward R.; MacKay, Rebecca A.; Taminger, Karen M. B.**
Scanning acoustic microscopy of SCS-6 SiC fibers in titanium matrices.—73-12191
**Sati, R.** See Prasad, K.
**Satinelli, C.** See Gendry, M.
**Sato, Akinobu** See Tsukamoto, Yuji
**Sato, Akinobu; Tsukamoto, Yuji**
Changes in surface structure of sputtered glasses [observed] by AFM upon water absorption.—73-03711; 73-13933
**Sato, Atsushi** See Hashimoto, Kenji; Takeda, Yasuo
**Sato, Bunryo** See Kubo, Hiroyuki
**Sato, Bunryo; Yogo, Nobukazu; Tanaka, Hiroe; Nomura, Takeshi; Kubo, Hiroyuki**
Method of manufacturing a glass optical part.—73-10644
**Sato, H.** See Fujiura, K.; Sugano, Mikio
**Sato, H.; Minami, T.; Takata, S.; Miyata, T.; Ishii, M.**
Low-temperature preparation of transparent-conducting ZnO:Al thin films by chemical beam deposition.—73-10248
**Sato, H.; Minami, T.; Takata, S.; Mouri, T.; Ogawa, N.**
Highly conductive and transparent ZnO:Al thin films prepared on high-temperature substrates by dc magnetron sputtering.—73-10956
**Sato, H.; Minami, T.; Takata, S.; Yamada, T.**
Transparent-conducting *p*-type NiO thin films prepared by magnetron sputtering.—73-10998
**Sato, H.; Minami, T.; Yamada, E.; Takata, S.; Ishii, M.**
Transparent and conductive GaN thin films prepared by an electron cyclotron resonance plasma metallorganic chemical vapor deposition method.—73-09380
**Sato, H.; Minami, Tadatsugu; Takata, S.**
Highly transparent and conductive group IV impurity-doped ZnO thin films prepared by radio frequency magnetron sputtering.—73-14965
**Sato, Hideki; Sugiura, Yasuyuki**
Aluminum nitride substrate and method for producing [the] same.—73-04187
**Sato, Hirohiko; Kojima, Norimichi; Kagoshima, Seiichi**
Structural phase transitions of the quasi-two-dimensional metal $(K_{1-x}Rb_x)_3Cu_8S_6$: X-ray scattering studies.—73-08753
**Sato, Hiromasa; Ogata, Haruhiko**
Example of computer control of glass-melting furnace.—73-05113
**Sato, Hiroshi S.** See Zhang, Huan-Bo
**Sato, Hiroshi** See Hirai, Takayuki
**Sato, Hiroya** See Kataoka, Shoei
**Sato, Hisanao** See Tohmon, Genji
**Sato, Hisashi** See Hosono, Hideo
**Sato, Hisayoshi** See Snomoto, Toshiyuki
**Sato, Ichiya; Yoneyama, Takao; Okamura, Hisanori; Kokura, Satoshi; Yanagibashi, Minoru**
Bonded type piezoelectric apparatus, method for manufacturing the same, and bonded type piezoelectric element.—73-15303
**Sato, Isao** See Inoue, Michiko; Yanagisawa, Masaaki
**Sato, K.** See Nishikawa, T.
**Sato, K.; Ishizaki, Kozo; Chen, G.-H.; Frefer, A.; Suryanarayana, C.; Froes, F. H.**
Fine structure analysis of mechanically alloyed titanium aluminides.—73-05808
**Sato, K.; Nagata, T.; Watanabe, M.; Nakayama, H.**
Failure mechanism of chromium-silicon-oxide resistive films stressed by electric pulse loading.—73-07323
**Sato, K.; Yoshida, Y.; Koinuma, Hideomi**
Design of hybrid films composed of inorganic and organic materials with desired properties.—73-14831
**Sato, Kaoru** See Torizuka, Shiro
**Sato, Katsuaki; Tominaga, Katsuhiko; Saka, Tsutomu; Kawamura, Osamu; Takahashi, Teruo; Kakiuchi, Arata**
Secondary hardening type high-temperature wear-resistant sintered alloy.—73-05335
**Sato, Kazuhisa; Yamauchi, Takayasu; Arima, Yusuke; Yonemoto, Toshikuni; Tadaki, Teiriki**
Measurement of calcite growth rate in seeding continuously stirred tank crystallizer.—73-13749
**Sato, Kazunori; Tanaka, Kohichi; Nakano, Yoshinori; Mori, Tsutomu**
Microstructure and anelastic properties of $Si_3N_4$ ceramics.—73-03166
**Sato, Kazushi** See Nakane, Yuji
**Sato, Keiji**
Sintered SiC parts.—73-02089
**Sato, Kenichi** See Hikata, Takeshi; Nagata, Masayuki
**Sato, Kenichi; Hikata, Takeshi**
Method of manufacturing oxide superconducting wire.—73-11974
**Sato, Kenichi; Mukai, Hidehito; Shibuta, Nobuhiro**
Superconducting conductor.—73-11999
**Sato, Kenji; Sekine, Satoshi; Kondo, Yasuhiro; Yamamoto, M.**
Simultaneous operation of ten-channel tunable DFB laser arrays using strained InGaAsP multiple quantum wells.—73-15163
**Sato, Kimihiko** See Hamashima, Kazuo
**Sato, Kiyoshi; Suzuki, Tadashi; Funayama, Osamu; Isoda, T.**
Fabrication of silicon-nitride-based composites by impregnation with perhydropolysilazane.—73-05805; 73-13056
**Sato, Koji** See Kitaoka, Satoshi
**Sato, Manabu** See Mizuno, Fumio
**Sato, Masao** See Ikabata, Tatsuo
**Sato, Masatoshi** See Sera, Masafumi; Tanaka, Shukichi
**Sato, Masatoshi; Shamoto, Shinichi; Kiyokura, Takanori; Kakurai, Kazuhisa; Shirane, Gen; Sternlieb, B. J.**
Magnetic excitations in superconducting $YBa_2Cu_3O_{6+x}$ crystals studied by neutron inelastic scattering.—73-01593
**Sato, Masayoshi** See Furukawa, Yasunori
**Sato, Masayuki; Horiba, Ryuichirou; Nagasaka, Keigo**
Electronic band structure of $Bi_2Sr_2Ca_{1-x}Y_xCu_2O_y$ (x=0.4–1) determined by ir-induced intersite transition.—73-15452
**Sato, Matsuhiro** See Watanabe, Kenji
**Sato, Michitaka** See Nishio, Hiroaki
**Sato, Mineo; Hama, Yoshiki**
Structure of new perovskite-related compounds, $LiCuM_3O_9$ (M=Nb, Ta).—73-05503
**Sato, Mineo; Kono, Yasuhisa; Jin, Tetsuro**
Structural characterization and ion conductivity of $MCa_2NaNb_4O_{13}$ (M=Rb, Na) with four units of perovskite layer.—73-16321
**Sato, N.** See Chen, J.-H.; Wakai, Fumihiro
**Sato, Noriaki** See Takeda, Naoya
**Sato, Norihiro** See Hayashi, Takao
**Sato, Osamu; Tanaka, Yukio; Hasegawa, Akira**
Energy spectrum of the quasi-particle of $Tl_2Ba_2CaCu_2O_8$ under coexistence of interlayer pairing and intralayer pairing.—73-08060
**Sato, Rikiya; Takahashi, Koji; Yoshino, Masao; Kato, Hiroshi; Ohshima, Shigetoshi**
Synthesis and characterization of Ba ß-diketonate complexes for chemical vapor deposition of thin-film superconductors.—73-15644
**Sato, Ritsu** See Imai, Osamu
**Sato, Ryuji** See Kim, Hyun-Gyu; Komatsu, Takayuki
**Sato, Ryuji; Komatsu, Takayuki; Kuken, Yusuke; Matusita, Kazumasa; Sawada, Kazuhiko; Hiraoka, Makoto**
Effect of $Cu^+/Cu^{2+}$ ratio on the thermal stability and crystallization in $Bi_2Sr_2CaCu_2O_x$ glass.—73-01527
**Sato, Ryuji; Komatsu, Takayuki; Kuken, Yusuke; Matusita, Kazumasa**
Formation mechanism of superconducting crystals in Bi-Sr-Ca-Cu-O glasses.—73-15479
**Sato, Ryuji; Komatsu, Takayuki; Matusita, Kazumasa**
Effect of $Cu^+$ content on properties of $Bi_2Sr_2CaCu_2O_x$ glass.—73-07015
**Sato, S.**
Vuv [vacuum ultraviolet] photochemical reactions over solid surfaces.—73-17070
**Sato, Sennosuke; Imamura, Y.; Kurumada, A.; Kawamata, K.; Ishida, R.; Awaji, Hideo**
Evaluations of the thermal shock resistances and fracture toughnesses of graphite and C-C composites by arc discharge heating.—73-05562
**Sato, Shinji** See Yokoo, Kuniyoshi
**Sato, Shinji; Koyama, Akira**
Internal friction measurement of carbon-carbon composites by lateral vibration method.—73-12149
**Sato, Shoji** See Watanabe, Makoto
**Sato, Shuichi** See Sumiya, Hitoshi
**Sato, Susumu** See Sato, Yuichi
**Sato, T.** See Kamiyama, T.; Kobayashi, T.; Shinohara, A. H.
**Sato, Tadao** See Sekine, Toshimori
**Sato, Tadao; Sugiura, Toshiharu; Shimakage, Kazuyoshi**
Microwave joining of ceramics, silicon nitride and silicon carbide.—73-05919; Microwave joining of ceramics, silicon nitride and silicon carbide.—73-16869
**Sato, Takashi** See Nakajima, Yoji
**Sato, Takashi; Baba, Kazutaka; Hirozawa, Toru; Shiraishi, K.; Kawakami, S.**
Fabrication techniques and characteristics of Al-$SiO_2$ laminated optical parameters.—73-13836
**Sato, Takashi**
Active device and active matrix display having ferroelectric layer as active layer.—73-11630
**Sato, Tsugio; Okuwaki, Akitsugu**
Intercalation of benzenecarboxylate ions into the interlayer of hydrotalcite.—73-00981
**Sato, Tsugio; Tamura, Kazuhiro; Okuwaki, Akitsugu**
Corrosion behavior of silicon carbide ceramics in caustic alkaline solutions at high temperature.—73-13469
**Sato, Tsuguo** See Hihara, Hiroshi
**Sato, Tsuyoshi** See Tazawa, Eiichi
**Sato, Y.** See Hashimoto, A.; Tamura, S.
**Sato, Y.; Sakurai, C.; Ueki, Masanori; Sugita, K.**
Characterization of hot-pressed silicon nitride ceramics with alkoxide-derived oxide mixtures as the sintering aid.—73-06196
**Sato, Yasushi; Joguchi, Hiromu; Hiroki, Nobuyoshi**
Test results of alumina-spinel castable for steel ladle.—73-14628
**Sato, Yoshiaki; Nagamatsu, Seiki; Takeda, Yoshitsugu**
Method for determining saturated surface dry state of fine aggregate.—73-10043
**Sato, Yoshifumi** See Kawachi, Shinji
**Sato, Yuichi; Atsuki, Tsutomu; Sato, Susumu**
Preparation of lead-based perovskite-type thin films by an alternate evaporation method.—73-09265; 73-16924
**Sato, Yuichi; Kiya, Tsutomu; Taguchi, Haruo; Iwaya, Syoichi; Sato, Susumu**
Junctions of Pr-Co-O thin films and semiconductive $BaTiO_3$ and their electrical properties.—73-15004
**Sato, Yuichi; Sato, Susumu**
Electrical and optical properties of InN-$In_2O_3$ thin films.—73-16472
**Sato, Yutaka** See Mishima, Masaaki
**Sato, Yutaka; Ueki, Masanori**
Processing and mechanical properties of $Si_3N_4$-SiC whisker-TiN system composite materials.—73-05995; 73-16948
**Satoh, Akira** See Nomura, Takeshi
**Satoh, Katsumi** See Akiyama, Hajime
**Satoh, Kouichi; Kodama, Katsumi**
Flexural behavior of repaired reinforced concrete beams using FRP [fiber-reinforced plastic] and some kind of mortar.—73-09964
**Satoh, Masaki** See Ogihara, Masahiro
**Satoh, Megumi**
Semiconductor integrated circuit having silicon nitride provided as insulator of capacitor.—73-11051
**Satoh, Ryoichi** See Onodera, Takaki
**Satoh, S.** See Matsuyama, I.
**Satoh, T.** See Akaishi, M.
**Satoh, Tomohisa** See Kobayashi, Yuichi
**Satoh, Toshiki** See Ikeda, Tsutomu
**Satoh, Yuji** See Mori, Toshiyuki
**Satoshi, Fujii** See Masafumi, Kobune
**Satou, Kohichi** See Shiomi, Haruhisa
**Satou, M.** See Miyake, S.; Nitta, A.

**Satou, Mamoru** See Fukumi, Kohei
**Satyavathi, S.** See Muralidhar, M.
**Saucier, F.** See Carles-Gibergues, Andre
**Sauer, H.** See Bier, L.
**Sauer, N. J.** See Chang, T. Y.
**Sauerbrunn, Steve; Gill, Phil**
Technique for differential scanning calorimetry (DSC).—73-12201
**Sauereisen, William**
Manufacture of more efficient infrared heaters through use of electrical insulating cement.—73-03494
**Sauerzopf, T. M.** See Wiesinger, H. P.
**Saukura, Nobuhiko; Ishida, Yuzo**
Ultrashort pulse generation from a passively mode-locked Ti:sapphire-based system.—73-07851
**Sauls, J. A.** See Sun, Y. S.
**Sauman, Zdenek**
Principle of the formation of efflorescence on the surface of autoclaved porous concrete products.—73-10094
**Saunders, C. R.; Kusy, R. P.**
Surface modification methodologies for polycrystalline alumina: effects on morphology and frictional coefficients.—73-17204
**Saunders, G. A.** See Senin, H. B.; Stoddart, P. R.
**Saunders, Phil** See Marwick, A. D.
**Saunders, Winston A.** See Vahala, Kerry J.
**Saunin, E. I.** See Lipson, A. G.
**Saupe, M.** See Reetz, Teja
**Saur, O.** See Waqif, Mohamed
**Saussey, J.** See Busca, Guido
**Sauter, M.** See Bischoff, E.; Kozlowski, F.
**Sauvajol, J. L.** See Woignier, T.
**Sauvinet, M. Vincent; Oudard, M. Jean-Francois**
Nozzle with nonsymmetrical feed for the formation of a coating layer on a ribbon of glass, by pyrolysis of a gas mixture.—73-12090
**Savage, S.** See Marks, L. D.
**Savaguti, N.; Kavamura, K.; Iokokava, T.**
Modeling of the structure of melts of the system $Na_2O$-$B_2O_3$-NaCl by the molecular dynamics method.—73-14040
**Savall, C.** See Bruyere, Jean-Claude
**Savall, C.; Bustarret, E.; Stoquert, J. P.; Bruyere, Jean-Claude**
Room temperature photoluminescence spectra of annealed PECVD silicon nitride thin films.—73-05633
**Savant, Gajendra D.; Rich, Christopher C.; Pelka, David G.**
Diamondlike carbon thin film protected hologram and method of making [the] same.—73-12463
**Savard, M. E.; Speyer, Robert F.**
Effects of particle size and [1 wt%] additions of $Na_2SO_4$ and $NaNO_3$ on the reactions in soda-lime-silica glass batches.—73-10524
**Savariault, H. J. M.** See Schnuriger, B.
**Savatinova, I.** See Ziling, C.
**Savchenko, A. P.** See Bolgov, S. S.
**Savel'ev, B. I.** See Panova, G. Kh.
**Savel'ev, I. G.** See Bystrov, S. D.; Kreshchuk, A. M.; Tuan, L.
**Savel'ev, V. L.** See Barinova, N. A.
**Savenko, O. M.; Gering, G. I.**
Structural levels of destruction of ionic crystals under dynamic loading.—73-17436
**Savenkova, M. A.** See Mardirosova, I. V.
**Savic, I. M.** See Lee, S. L.
**Savikhin, F. A.** See Kyarner, T.
**Savikhina, T. I.** See Dem'yanets, L. N.
**Savin, Chris R.** See Sherrit, Stewart
**Savin, Ronald R.**
Low-cost cathodic and conductive coating compositions comprising lightweight hollow glass microspheres and a conductive phase.—73-04213
**Savina, G. V.** See Yakubovich, O. V.
**Savina, I. M.; Bespalov, V. P.; Levitin, L. Ya.**
Analysis of the working of a high-productivity flat-glass furnace using a physical modeling method.—73-08462
**Savina, I. M.; Bespalov, V. P.; Levitin, L. Ya.**
Operation of a high-capacity furnace for sheet glass [analyzed] by the method of physical modeling.—73-12235
**Savitskii, A. F.** See Bayukov, O. A.
**Savitskii, I. V.** See Bolesta, I. M.
**Savitskii, V. G.** See Yafyasov, A. M.
**Savkina, N. S.** See Anikin, M. M.
**Savosta, M. M.** See Doroshev, V. D.
**Savoy, Richard J.** See MacManus-Driscoll, Judith L.
**Savranskii, Semen D.; Ivanov, Vladimir G.**
Direct observation of medium-range order in glasses by means of electron field emission.—73-13961
**Savranskii, Semen D.**
Formation and characteristics of medium-range order in single-phase glasses and their melts.—73-14384; Model of the medium-range order formation in glasses and their melts.—73-14039; Model of the Nernst-Ettinghausen effect in chalcogenide glasses.—73-01247
**Savvides, N.; Bell, T. J.**
Hardness and elastic modulus of diamond and diamondlike carbon [DLC] films.—73-05575; Microhardness and Young's modulus of diamond and diamondlike carbon films.—73-13572
**Savvides, N.; Katsaros, A.**
In situ growth of epitaxial $YBa_2Cu_3O_7$ thin films by on-axis unbalanced dc magnetron sputtering.—73-04739
**Savvin, V. V.** See Ashtakhova, V. V.
**Sawabe, A.; Senna, Mamoru; Itoh, Mitsuru; Nakamura, T.**
Delamination and oriented molding of the Bi(Pb)-Sr-Ca-Cu-O system for higher critical current density.—73-08016
**Sawada, Akikatsu** See Wada, Mitsuo
**Sawada, Kazuhiko** See Sato, Ryuji
**Sawada, Kazuo; Inazawa, Shinji; Yamada, Kouichi**
Method of manufacturing inorganic insulation.—73-12385
**Sawada, Kiyoshi; Yoshida, Shoji; Suzuki, Toshio**
Adsorption of phosphate on vaterite.—73-05352
**Sawada, Shozo** See Takashige, Masaaki
**Sawada, T.** See Itoh, Mitsuru
**Sawada, Takayuki** See Okamoto, Keiichi
**Sawada, Y.** See Krishna Murthy, G. G.
**Sawaguchi, Akihiro; Toda, Kohji; Niihara, Koichi**
Mechanical and electrical properties of $Al_2O_3$/SiC nanocomposites.—73-05594
**Sawai, Keijiro** See Ohzuku, Tsutomo
**Sawai, M.** See Murawala, P. A.
**Sawai, S.** See Kondo, Kenichi
**Sawai, Yuichi; Ishizaki, Kozo; Narukawa, Yutaka**
Infrared spectroscopy and Raman spectroscopy evidences of silver replacement into Cu(1) site in $YBa_2Cu_4O_8$.—73-15518
**Sawaki, Daisuke** See Hanehara, Shunsuke; Uchida, Shunichiro; Uchikawa, Hiroshi
**Sawamura, Kentaro** See Uchikoba, Fumio
**Sawamura, Shuji** See Ide, Ichio
**Sawano, H.** See Ueno, Yoshiyasu
**Sawano, Kiyoshi** See Morita, Mitsuru
**Sawant, S. R.** See Patil, B. L.
**Sawaoka, Akira B.** See Dan, Koji; Paisley, M. J.; Tanabe, Yasuhiro; Yamada, Kenjiro
**Sawatari, H.; Oda, O.**
Schottky diodes on *n*-type InP with $CdO_x$ interfacial layers grown by the adsorption and oxidation method.—73-11438
**Sawicki, Kazimierz** See Corbin, N. D.
**Sawyer, James W.; Rothgeb, Timothy**
Load transfer and failure of joints in carbon-carbon material.—73-13560
**Saxena, A.** See Liaw, P. K.
**Saxena, P.** See Holt, R. T.
**Sayano, Akio** See Asayama, Masahiro
**Sayer, M.** See Petroff, T. E.
**Sayer, M.; Vasant Kumar, C. V. R.; Cheng, C.-C.**
Temperature measurements in rapid thermal annealing.—73-01932
**Sayer, M.**
Ferroelectric memory programs in Canada.—73-11574
**Sayir, Ali; Greer, Lawrence C.; Goldsby, Jon C.; Oberle, Lawrence G.**
Laser speckle microstrain measurements on small-diameter fibers.—73-15810
**Sayir, Ali**
Time-dependent strength of sapphire fibers at high temperatures.—73-09687
**Sayir, M. B.; Hausler, K.; Partl, M.**
Impact behavior of corrugated sheets of fiber-reinforced cement.—73-09995
**Sayle, D. C.** See Sayle, T. X. T.
**Sayle, T. X. T.; Catlow, C. Richard A.; Sayle, D. C.; Parker, S. C.; Harding, J. H.**
Computer simulation of thin-film heteroepitaxial ceramic interfaces using a near-coincidence-site lattice theory.—73-08580
**Sazavova, Sylvia**
Glass information center.—73-17483
**Sazeev, I. Yu.** See Petrov, S. A.
**Sazhnev, N. P.** See Garnashevich, G. S.
**Sazonov, A. I.** See Stefanovskii, S. V.
**Sazonov, A.** See Kuzmin, A.
**Sazonov, S. V.; Yakupova, L. S.**
Propagation of ultrashort electromagnetic videopulses [$\approx 10^{-14}$ s] in ceramic ferroelectrics.—73-15283
**Scafidi, P.; Ignat, M.; Dupeux, M.**
Mechanical stability of passivation films deposited on aluminum substrates.—73-03614
**Scaglione, S.** See Caneve, L.
**Scaglione, S.; Mariucci, L.; Mattacchini, A.; Pecora, A.; Fortunato, G.**
Plasma-deposited oxynitride films: structural and electrical characterization.—73-04149
**Scalapino, D. J.** See Balut, N.; Kirtley, J. R.
**Scalbert, D.** See Boujdaria, K.; Maaref, M.
**Scales, Peter J.; Grieser, Franz; Healy, Thomas W.; White, L. R.; Chan, D. Y. C.**
Electrokinetics of the silica-solution interface: a flat plate streaming potential study.—73-16483
**Scalet, B. M.**
Environmental question in the glass industry.—73-03841
**Scalettar, R. T.** See Sudbo, A.
**Scamarcio, G.** See Cingolani, R.
**Scamarcio, G.; Gadaleta, C. K.; Sibilano, M.; Ploog, K.**
Determination of superlattice structural parameters by means of far- and mid-ir reflectivity.—73-04281
**Scandellari, M. L.** See Barbon, F.; Daneo, Antonio
**Scarano, D.** See Zecchina, A.
**Scarano, D.; Spoto, G.; Bordiga, Silvia; Coluccia, Salvatore; Zecchina, A.**
CO adsorption at 77 K on CoO/MgO and NiO/MgO solid solutions: an FTIR study.—73-02164
**Scarano, D.; Zecchina, A.; Bordiga, Silvia; Geobaldo, F.; Spoto, G.; Petrini, G.**
FTIR and Raman spectra of pure and Al-, B-, Ti-, and Fe-substituted silicalites: stretching-mode region.—73-12589
**Scardi, P.** See Tomasi, A.
**Scardi, P.; Lutteroti, L.; Tomasi, A.**
XRD characterization of multilayered systems.—73-12735
**Scardina, F.** See Azzoni, C. B.
**Scardovi, Italo**
Die for ceramic tiles.—73-15766
**Scattergood, R. O.** See Morrison, C. T.
**Scavia, G.** See Ingo, G. M.
**Schaaf, Franz-Peter** See Natorff, Mieczyslaw
**Schacham, S. E.** See Fenigstein, A.
**Schachter, L.** See Ivers, J. D.
**Schachter, L.; Ivers, J. D.; Nation, J. A.; Kerslick, G. S.**
Diode with a ferroelectric cathode.—73-07881
**Schad, R.; Jentzsch, F.; Henzler, M.**
Conducting changes in Ni films on Si(111) following compound formation during annealing.—73-07421
**Schade, H.** See Folsch, J.; Rubel, H.
**Schade, U.** See Unger, Brita
**Schadler, Linda S.** See Elkind, Alexander
**Schaefer, Daniel T.** See Mikeska, Kurt R.
**Schaefer, Dean A.** See Moravec, Thomas J.
**Schaefer, J. A.; Stietz, F.; Woll, J.; Wu, H. S.; Yu, H.; Lapeyre, G. J.**
Etching of InP(100) 4×2 and molecular beam epitaxially grown GaAs(100)-*c*(4×4) with atomic hydrogen.—73-11198
**Schaefer, J.** See Liaw, P. K.
**Schaefer, M. R.** See Minehan, W. T.
**Schaefer, Peter C.** See Iacovangelo, Charles D.
**Schaeffer, H. A.** See Muller-Simon, H.
**Schafer, G. W.; Weppner, W.; Cheng, T. T.; Mayer, J.; Ruhle, Manfred**
Characterization of the defect structure of polycrystalline Sr-ß-alumina ceramics using high-resolution transmission electron microscopy.—73-06143
**Schafer, L.** See Lochel, B.
**Schafer, P.; Hoffmann, N.; Parthier, L.; Jacobs, K.**
Etching of zinc selenide and zinc telluride epitaxial films in a secondary afterglow plasma: a statistical experimental design study.—73-05794
**Schafer, W.** See Kim, Dai-Sik
**Schaldach, Max** See Bolz, Armin
**Schamber, F. H.**
SEM for nontraditional users.—73-08441
**Scharen, M. J.; Skoglund, D. L.; Forse, R. J.**
Low rf loss, bondable ohmic contacts on $Tl_2Ba_2CaCu_2O_{8-\delta}$ for microwave devices.—73-01590
**Scharff, W.** See Stiegler, J.; Ullmann, J.
**Scharman, Alan J.; Matarese, Alfred P.; Eaton, Harry E., Jr.**
Ceramic composite coating material.—73-10305
**Scharman, Alan J.; Yonushonis, Thomas M.**
Ceramic thermal barrier coating for rapid thermal cycling applications.—73-13914
**Scharpf, William J., Jr.; Boczar, Bruce P.; Dewey, C. F.**
CdTe and CdMnTe quasi-phase-matched optical parametric oscillator and amplifier—[analysis].—73-11092
**Scharrer, Karin**
Isostatic pressing of bone china.—73-10861; Utilization of isostatic pressing in the industry of vessels.—73-12069
**Schatke, K.** See Rossow, U.
**Schattenburg, M. L.** See Chu, W.
**Schaub, E. F.**
Carbon-carbon: bringing it to the marketplace.—73-05260
**Schaub, M.** See Takacs, J.
**Schaupp, Christopher** See Kennedy, John H.
**Schaus, Gerald P.**
Archaic imported fine wares from the Acropolis, Mytilene.—73-09775
**Schauwecker, R.** See Lee, S. L.
**Scheetz, Barry E.** See Roy, Della M.
**Schefer, J.** See Guillaume, M.
**Scheffler, Matthias** See Methfessel, M.; Pankratov, Oleg
**Schegolev, I. F.** See Bulaevskii, L. N.
**Scheid, E.; Kouassi, L. K.; Henda, R.; Samitier, J.; Morante, J. R.**
Silicon nitride elaborated by a low-pressure chemical vapor deposition from $Si_2H_6$ and $NH_3$ at low temperature.—73-03002
**Scheidler, Herwig** See Hinz, Paul; Kristen, Klaus
**Scheiner, P.** See Gartner, E. M.
**Scheiwe, Michael** See Gudenau, Heinrich Wilhelm
**Schelhorn, Jean E.; Olinger, John L.; Berdan, Clarke, II**
Insulation assembly.—73-10637
**Schels, Thomas; Camara, Boubacar; Dannheim, Henning**
ESR studies of iron-containing lithium, sodium, and potassium silicate glasses before and after irradiation with γ- and X-rays.—73-10373
**Schelter, Heinrich; Herrmann, Rudiger**
Finned-tube heat exchanger.—73-02095
**Schempp, Ellery** See Joshi, Chandrashekhar H.
**Schenck, P. K.** See Brody, P. S.
**Schenuit, E.**
Reliable hardness testing with a fast ultrasonic method (UCI).—73-12185
**Scheppokat, Sven** See Holz, Dietmar
**Scheps, Richard; Myers, Joseph F.**
Efficient, scalable, internally folded Nd:YAG laser end pumped by laser diodes.—73-14864
**Scherban, T.; Villeneuve, R.; Abello, L.; Lucazeau, G.**
Raman scattering study of $BaCeO_3$ and $SrCeO_3$.—73-05465
**Scherberich, F.-D.** See Li, Z.
**Scherer, George W.** See Jagota, Anand
**Scherer, George W.**
Freezing gels.—73-00631
**Scherer, J.** See Fuchs, A.
**Scherer, M.** See Gehman, B. L.
**Scherrer, Stanislas** See Chaissac, Martine; Kiessling, Uta
**Schervan, Adrian** See Wannagat, Ulrich
**Schetzina, J. F.** See Doty, F. P.; Hoffman, C. A.; Lansari, Y.; Ren, J.; Vaudo, R. P.
**Scheuer, A.** See Schurmann, W.
**Scheuer, A.; Ellerbrock, H.-G.**
Possible ways of energy conservation in cement manufacture.—73-03520
**Schicht, Heinz; Schmidt, Uwe; Nedon, Wolfgang**
Hard material coatings on flat glass and their applications.—73-00637
**Schiebel, P.; Hoser, A.; Prandl, W.; Heger, G.; Schweiss, P.**
Orientational disorder in $Ni(NH_3)_6I_2$. Evidence for rotation-translation coupling.—73-05444
**Schiebel, R. A.; Blanks, D.; Bartholomew, D.; Kinch, M. A.**
Evidence for 1/*f* noise in diffusion current due to insulator trapping and surface recombination velocity fluctuations.—73-11200
**Schiefer, B. F. J.** See Bullard, R. L.
**Schieferstein, William** See Milkie, W. Eugene
**Schier, M.** See Cremer, C.
**Schierz, Claus** See Staudte, Wolfgang

**Schiff, Edward A.** See Joshi, Chandrashekhar H.
**Schill, Petr** See Chmelar, Josef; Nemec, Lubomir
**Schill, Petr**
Mathematical modeling of complex shapes of glass tanks.—73-15885
**Schille, J. P.; Sainctavit, P.; Cartier, C.; Lefebvre, D.; Brouder, C.; Kappler, J. P.**
Magnetic circular X-ray dichroism at high magnetic field and low temperature in ferrimagnetic $HoCo_2$ and paramagnetic $Ho_2O_3$.—73-07949
**Schiller, B.; Ellerbrock, H.-G.**
Grinding and properties of cements with several principal constituents.—73-09976
**Schilling, A.** See Brawner, D. A.
**Schilling, A.; Jin, R.; Guo, J. D.; Ott, H. R.**
Irreversibility line of monocrystalline $Bi_2Sr_2CaCu_2O_8$: experimental evidence for a dimensional crossover of the vortex ensemble.—73-15524
**Schilling, C. H.; Bergstrom, L.; Ker, H.-L.; Aksay, Ilhan A.**
Particle attraction effects on the centrifugal casting and extrusion of alumina.—73-09231
**Schilling, Curtis L., Jr.; Williams, Thomas C.**
Self-curing ceramicizable polysiloxanes.—73-12516
**Schilling, M.; Goerke, F.; Merkt, U.**
Laser deposition of epitaxial $YBa_2Cu_3O_7$ films with low droplet densities.—73-11815
**Schilling, Paul J.; Butler, Leslie G.; Roy, Amitava; Eaton, Harvill C.**
$^{29}Si$ and $^{27}Al$ MAS-NMR of NaOH-activated blast-furnace slag.—73-16301
**Schilling, Paul J.; Roy, Amitava; Eaton, Harvill C.**
Activation of ground blast-furnace slag by alkali-metal and alkaline-earth hydroxides—reply.—73-08546
**Schimert, T. R.** See Tyan, Y. L.
**Schimmel, Gunther; Kotzian, Michael; Panter, Herbert; Tapper, Alexander**
Process for producing crystalline sodium silicates having a layered structure.—73-02062
**Schimmel, Gunther; Kotzian, Michael; Tapper, Alexander; Wingefeld, Gerd**
Process for the preparation of sodium silicates.—73-05151
**Schindler, Hubert** See Schwarz, Martin
**Schindler, J. L.** See Neumayer, Deborah A.
**Schindler, Joachim; Schultheiss, Volker**
Determination of crack growth parameters and validation of a $v$-$K_1$ relation from statistical and dynamic experiments.—73-03261
**Schinker, Martin** See Grau, Peter
**Schippel, S.** See Stolze, F.
**Schipper, W. J.** See Blasse, G.
**Schipper, W. J.; Blasse, G.**
Luminescence of ytterbium(II) in alkaline-earth fluorohalides.—73-02633
**Schirber, J. E.** See Hammel, P. C.
**Schirm, K. M.** See Mangat, P. S.
**Schirm, K. M.; Soukiassian, P.; Mangat, P. S.; Hurych, Z.; Soonckindt, L.; Bonnet, J. J.**
Role of defects in the passivation of III-V semiconductor surfaces modified by alkali metals: $O_2$/Rb/$p$- and $n$-type GaSb(110).—73-07776
**Schirmacher, Walter; Wagener, Michael**
Vibrational anomalies and phonon localization in glasses.—73-07101
**Schiroky, Gerhard H.** See Claar, Terry D.; Fareed, A. S.
**Schirone, Antonio** See Nobili, Maurizio
**Schittenheim, H.-J.**
Interaction of chemical elements in enamel frits.—73-03738
**Schlachetzki, A.** See Hahn, D.; Lubnow, A.; Zwinge, G.
**Schlafer, D.** See Kretzschmar, C.
**Schlapp, W.** See Dinges, H. W.
**Schlarb, U.; Betzler, K.**
Refractive indices of lithium niobate as a function of wavelength and composition.—73-02681
**Schlautmann, James J.; Riccitiello, Salvatore R.**
High-temperature oxidation failure of C/SiC continuous fiber ceramic matrix composites.—73-13474
**Schlecht, B.** See Wunsch, D.
**Schlegel, Christian** See Salge, Henning; Thometzek, Peter
**Schlegl, Gerhard**
Technology of high-temperature furnaces.—73-05132
**Schlenker, C.** See Raghaven, S. Lakshmi; Rotger, A.
**Schlenker, John L.** See Chen, Catherine S. H.
**Schlesinger, Mark E.** See Chung, Yau-Don
**Schlesinger, T. E.** See Misra, R.
**Schlesser, R.** See Zgonik, M.
**Schlief, T.** See Gross, J.
**Schlom, D. G.** See Eckstein, J. N.
**Schlom, Darrell** See Lichtenberg, F.
**Schmackpfeffer, R.; Martin, M.**
Tracer diffusion and defect structure in Ga-doped CoO.—73-13370
**Schmahl, W. W.** See Vogt, T.
**Schmalian, J.; Baumgartel, G.; Bennemann, K. H.**
Doping dependence of local magnetic moments and antiferromagnetism in high-$T_c$ superconductors: asymmetry between electron and hole doping.—73-04696
**Schmalian, S.; Baumgartel, G.; Bennemann, K. H.**
Elementary excitations in the metallic $CuO_2$ planes of high-$T_c$ systems.—73-08056
**Schmalle, H.** See Williams, T.
**Schmalzried, Clemens; Hennicke, Hans-Walter**
Aluminum titanate as a material in relation to texture problems.—73-10696
**Schmalzried, H.** See Muir, Z. A.
**Schmauder, S.** See Ge, X.
**Schmedt, R.**
Throughput measurements in the nonmetallic minerals industry.—73-12067
**Schmelzer, J.** See Gutzow, I.
**Schmelzer, J.; Pascova, R.; Moeller, J.; Gutzow, I.**
Surface-induced devitrification of glasses: the influence of elastic strains.—73-07180
**Schmenk, Myron**
Try hard turning.—73-05281
**Schmeussser, S.** See Yakovlev, D. R.
**Schmid, B.** See Sebastian, K.
**Schmid, Chiara** See Sergo, Valter
**Schmid, Frederick; Khattak, Chandra P.; Felt, D. Mark**
Producing large sapphire for optical applications.—73-08521
**Schmid, Herbert K.** See Caceres, Pablo G.
**Schmid, J.**
Computer-integrated finishing of slip-cast ceramics by industrial robots.—73-01768
**Schmid, P. E.** See Taguchi, I.; Tang, H.
**Schmid, Wolfgang; Brohs, Friedrich; Horhager, Sylvia**
Influence of density and grain size on the bending strength of Si-impregnated silicon carbide.—73-03315
**Schmidbauer, E.; Aggarwal, K.; Schneider, H.**
Thermoremanent magnetization of Fe-Ge andalusite spin glass.—73-15372
**Schmidt, B. E.** See Chen, Ling
**Schmidt, Frank; Rostasy, Ferdinand S.**
Method for the calculation of the chemical composition of the concrete pore solution.—73-13755
**Schmidt, G.** See Ullmann, J.
**Schmidt, H.** See Hohn, N.; Kasemann, R.; Mennig, M.; Spanhel, L.
**Schmidt, H.**
Inorganic-organic sol-gel processing for glasses and nanocomposites.—73-03852; Synthesis of organically modified glasses by sol-gel techniques.—73-14510
**Schmidt, Harald; Hradil, Klaudia; Wersing, Wolfram**
Method for producing a superconductor layer of $YBa_2Cu_3O_7$ on a sapphire substrate.—73-11967
**Schmidt, Howard K.** See Krauss, A. R.
**Schmidt, Howard K.**
Low-energy ion doping of growing diamond by CVD.—73-02102
**Schmidt, Joachim** See Burckhardt, Hans-Georg
**Schmidt, Juregen** See Benker, Werner
**Schmidt, K. H.** See Agullo-Rueda, F.
**Schmidt, K.** See Hulsenberg, D.
**Schmidt, M. T.** See Lu, Z.; Ma, Q. Y.
**Schmidt, M.** See Gauvin, R.
**Schmidt, M.**
Cement with interground additives—capabilities and environmental relief: I.—73-09840; Cement with interground additives—capabilities and environmental relief: II.—73-09841; Efficient quarrying equipment at the Mannersdorf Cement Works, Austria.—73-03463
**Schmidt, Martin A.** See Bang, Christopher A.
**Schmidt, Michael; Harr, Klaus; Boeing, Raymond**
Blended cement according to ENV 197 and experiences in Germany.—73-09832
**Schmidt, P. C.** See Mishra, K. C.
**Schmidt, T. M.; Fazzio, A.**
Many-electron effects on the structural properties of $sp$ impurities in semiconductors.—73-07661
**Schmidt, Uwe** See Schicht, Heinz
**Schmidt, W. A.** See Ernst, N.; Melmed, A. J.
**Schmidt, W. D.** See Ge, Wei-Kun
**Schmidt, W.** See Gerhauser, W.
**Schmidt, Walter; Laul, Virgil**
Brinellium—a harder, stronger, and more wettable form of aluminum oxide.—73-15920
**Schmidt-Basler, M.**
Emission control for ceramic kilns.—73-01948
**Schmidt-Reinholz, C.**
Limiting efflorescence and leaching in facing brick masonry—causes, reduction through technological measures, additives, and posttreatment.—73-07192
**Schmidt-Zum Berge, Anke; Radlein, Edda; Frischat, Heinz Gunther**
Twin-roller quenching of $Bi_2Sr_2Ca_2Cu_3O_{10}$ melts.—73-07185
**Schmidtke, C.** See Munshi, M. Z. A.
**Schmieg, Steven J.** See Belton, David N.
**Schmitkons, Thomas A.** See Lee, Tony C.
**Schmitt, J. J.** See Golz, John W.; Zhang, J.-Z.
**Schmitt, Rolf-Erhard** See Davidovits, Joseph
**Schmittrink, S.** See Kim, Dai-Sik
**Schmitz, T.** See Thormann, P.
**Schmitz, T.; Kupper, D.**
Influence of rheological parameters of the process of interparticle comminution in twin roll presses: I.—73-12037
**Schmitz, W.** See Crucenau, E.
**Schmucker, Martin** See Schneider, H.
**Schmutzler, Hans J.; Antony, Michael M.; Sandhage, Kenneth H.**
Novel reaction path to $BaTiO_3$ by the oxidation of a solid metallic precursor.—73-04146
**Schmutzler, Hans J.; Sandhage, Kenneth H.**
Formation of high-temperature structural ceramics and ceramic matrix composites by the oxidation of solid metal-bearing precursors.—73-16789
**Schnabel, Hans-Dieter** See Dusdorf, Wolfgang
**Schnabel, Michael** See Fickel, Albrecht F.
**Schnabel, Michael; Hansel, S.**
Microwave radiation of refractory bricks: II, Experiments and results.—73-01958; Microwave radiation of refractory bricks: III, Conclusions for practical application.—73-01959
**Schnack, H. G.** See Van Eenige, E. N.
**Schnedecker, G.** See Gourlaouen, V.
**Schneemeyer, L. F.-S.** See Rodriguez, E.
**Schnegg, A.** See Graf, D.
**Schneider, A.** See Heuken, M.
**Schneider, A.; Geyzers, K. P.; Sollner, J.; Heuken, M.**
Stabilization and growth interruption effects at $ZnS_xSe_{1-x}$/ZnSe quantum-well interfaces grown by metallorganic vapor phase epitaxy.—73-11451
**Schneider, B.** See Fatehi, D.
**Schneider, D.; Krell, Andreas; Weiss, T.; Reich, T.**
Creep in $(Al_2O_3+ZrO_2)$ ceramics [investigated] by ultrasonic surface waves.—73-17266
**Schneider, Gerold A.** See Cinibulk, Michael K.; Hoffmann, M. J.; Magerl, Franz
**Schneider, Gerold A.; Magerl, Franz; Hahn, Iris; Petzow, Gunter**
In situ observations of unstable and stable crack propagation and $R$-curve behavior in thermally loaded disks.—73-06455
**Schneider, Gerold A.; Petzow, Gunter**
Thermal Shock and Thermal Fatigue Behavior of Advanced Ceramics (NATO Advanced Science Institutes Series E: Applied Sciences 241).—73-17540
**Schneider, H.** See Asselmeyer, B.; Saruhan, B.; Schmidbauer, E.
**Schneider, H.; Frohner, M.; Hovelborn, W.**
New loading and transporting equipment at Heidelberger Zement AG's Nussloch quarry.—73-15737
**Schneider, H.; Okada, K.; Pask, Joseph**
Mullite and Mullite Ceramics.—73-17533
**Schneider, H.; Rodewald, Katia; Eberhard, Emil**
Thermal expansion discontinuities of mullite.—73-02709
**Schneider, H.; Schmucker, Martin; Ikeda, Ko; Kayser, W. A.**
Optically translucent mullite ceramics.—73-02659
**Schneider, H.; Staudt, Armin**
Method for producing an optical fiber of halide glass, particularly an infrared permeable fiber of heavy metal fluoride glass.—73-03943
**Schneider, T.; Heng, N.; Martienssen, W.**
Stable three-frequency quasi-periodicity in conductivity oscillations of BSN crystals.—73-16600
**Schneider, U.; Nagele, E.**
Stress corrosion of cement mortars in ammonium sulfate solution.—73-03541
**Schnelle, W.** See Buchner, B.
**Schnick, Wolfgang** See Baldus, Hans-Peter
**Schnoes, M. L.** See Kopf, R. F.
**Schnuriger, B.; Enjalbert, R.; Savariault, H. J. M.; Galy, J.**
Synthesis and crystal structure of ß-$SrV_2O_6$.—73-02478
**Schnyder, B.** See Kotz, R.
**Schoenbach, K. H.** See Joshi, R. P.
**Schoenberger, R.** See Pechen, E. V.
**Schoenborn, Philippe** See Patrick, Roger
**Schoennahl, Jacques P. R.; Dussaulx, Michel**
Refractory materials consisting of grains bonded by a binding phase based on aluminum nitride containing boron nitride and/or graphite particles and process for their production.—73-10787
**Schofield, Paul F.; Redfern, Simon A. T.**
Temperature and composition dependence of the ferroelastic phase transition in $(Cu_xZn_{1-x})WO_4$.—73-05509
**Scholes, Addison B.**
Method and apparatus for coating glassware.—73-10640
**Scholl, E.; Knofel, Dietbert**
Effect of $SO_2$ and $CO_2$ on cement paste.—73-00077
**Scholl, M.** See Heuken, M.
**Schollmeyer, Julie R.** See Rohrbach, Ronald P.
**Scholten, Huibert F.; Dortmans, Leonardus J.; De With, G.**
Application of mixed-mode fracture criteria for weakest-link failure prediction for ceramic materials.—73-17239
**Scholten, M.** See Van den Meerakker, J. E. A. M.
**Scholtes, Berthold**
Glaze preparation with an annular gap mill.—73-01785
**Scholz, Ferdinand** See Dornen, Achim
**Scholz, Ferdinand; Weber, Jurgen; Pressel, Klaus; Dornen, Achim**
MOVPE of rare-earth-doped III-V semiconductors.—73-04412
**Scholz, H.; Guenther, R.; Rodel, Jurgen; Greil, P.**
Formation of $Al_2O_3$ fiber-reinforced AlN/Al matrix composites by Al(Mg) melt nitridation.—73-06793
**Scholz, R.** See Barth, H.-J.; Hunlich, T.
**Scholz, R.**
Influence of optical phonon emission by holes on the hot cw luminescence linewidth.—73-07597
**Scholz, S. M.; Muller, A. B.; Richter, W.; Zahn, D. R. T.; Westwood, D. I.; Woolf, D. A.**
Molecular beam epitaxial growth of InAs on GaAs(100) [analyzed] by reflection anisotropy spectroscopy.—73-07678
**Schon, Stefan** See Janssen, Rolf
**Schon, Stefan; Prielipp, Helge; Janssen, Rolf; Rodel, Jurgen; Claussen, Nils**
Effect of microstructural scale on thermal shock resistance of aluminum-reinforced alumina.—73-03578
**Schonberger, R.** See Piehler, A.
**Schone, W.** See Golla, D.
**Schoner, A.** See Gotz, W.; Karmann, S.
**Schonfelder, H.** See Passing, G.
**Schoolar, Richard; Price, Stephen; Rosbeck, Joseph P.**
Generation-recombination currents in HgCdTe midwavelength infrared photodiodes.—73-07546
**Schoonman, J.** See Luyten, J.
**Schoonman, J.; Dekker, J. P.; Broers, J. W.; Kiwiet, N. J.**
Electrochemical vapor deposition of stabilized zirconia and interconnection materials for solid oxide fuel cells.—73-05786
**Schops, W.; Beer, H.; Hauser, J.**
Granulation of barium ferrite in the fluidized bed.—73-11656
**Schorr, J. Richard; Fronk, Dale A.**
Kiln operation and firing practices.—73-08478
**Schott, Marvin** See Damewood, Peggy L.
**Schotte, K. D.** See Kulic, M. L.
**Schowalter, L. J.** See Fathauer, Robert W.; Yang, K.; Zhang, X.-C.
**Schra, P. P. J. M.** See Kalikmanov, Vitaly I.
**Schram, J.** See Luyten, J.
**Schrantz, Gregory A.; Linn, Jack H.; Beicher, Richard W.**
Bonded wafer process incorporating diamond insulator.—73-04509

**Schrappe, B. J.** See Notari, A. C.
**Schrawyer, L. R.** See Jankowski, A. F.
**Schreiber, Bernhard A.** See Saetta, Anna V.
**Schreiber, Charlotte W.** See Schreiber, Henry D.
**Schreiber, H.** See Bruckner, W.; Griessmann, H.
**Schreiber, Henry D.; Fowler, R. W.; Ward, C. C.**
Sulfate as a selective redox buffer for borosilicate melts.—73-10409
**Schreiber, Henry D.; Kochanowski, Brian K.; Schreiber, Charlotte W.**
Compositional effects on the iron redox state in model glasses for nuclear waste immobilization.—73-08289
**Schreiber, Henry D.; Schreiber, Charlotte W.**
Polyselenide formation in borosilicate glasses.—73-03751
**Schreiner, T.** See Brugger, T.
**Schreiner, W. H.** See Huber, R.; Soares, M. R.
**Schroder, F.; Storm, W.; Altebockwinkel, M.; Wiedmann, L.; Benninghoven, A.**
Passivating oxide and surface contaminants on GaAs(100) [analyzed] temperature-dependent and angle-resolved X-ray photoelectron spectroscopy and time-of-flight secondary ion mass spectrometry.—73-07710
**Schroder, Glenn L.** See Lu, Hsin-Chun
**Schroder, U.** See Fritsch, J.
**Schroeder, John** See Moynihan, C. T.; Tsoukala, V. G.
**Schroeder, John; Saha, S. K.; Silvestri, Markus R.; Lee, M.; Moynihan, C. T.**
Inelastic light scattering in halide glasses at high temperatures: boson peaks and the degree of disorder.—73-07038
**Schroeder, John; Whitmore, Michael A.; Silvestri, Markus R.; Saha, S. K.; Moynihan, C. T.**
Light scattering in halide glasses at high temperatures: anomalous scattering and nanoscale inhomogeneities.—73-07044
**Schroeder, N.** See Ratz, S.
**Schroeder, N.; Bottner, R.; Ratz, R.; Marquardt, S.; Dietz, E.; Gerhardt, U.**
Surface-induced modifications in the electronic structure of $YBa_2Cu_3O_{7-\delta}$.—73-15643
**Schroer, A.** See Huber, R.; Ullmann, J.
**Schrotter, Jean-Christophe** See Drache, Michel
**Schubert, E. F.** See Vredenberg, A. M.
**Schubert, E.; Bergmann, H. W.**
Surface modification of ceramic materials using excimer lasers.—73-17016
**Schubert, G.** See Bruckner, W.
**Schubert, J.** See Copetti, C. A.
**Schubert, R.** See Kaps, Christian
**Schubert, V.** See Petrullat, J.
**Schuette, George F.; Carter, Michael C.; Gerhold, Bruce W.**
Production of silicon product containing both carbon and nitrogen.—73-12514
**Schuette, George F.; Gerhold, Bruce W.**
Method for producing a ceramic product.—73-05313
**Schulle, Wolfgang** See Bartusch, R.; Clauss, Ulrich; Gotze, S.; Petrov, Iwailo; Petters, Cornelia
**Schulle, Wolfgang; Horn, K.; Krockel, O.**
Moisture expansion in the lobes of isostatically pressed high voltage insulators.—73-01800
**Schulle, Wolfgang; Rudolph, W.**
Property beneficiation of clay raw materials.—73-12059
**Schulle, Wolfgang**
Press forming in the ceramic industry.—73-12180
**Schuller, C.; Kraus, J.; Latussek, V.; Ebeling, J. K.**
Collective intersubband excitation in a *p*-doped GaAs/AlGaAs multiple quantum well.—73-01105
**Schuller, I. K.** See Fullerton, Eric E.
**Schulte, B.** See Maul, M.
**Schulte, K.; Minoshima, K.**
Damage mechanisms under tensile and fatigue loading of continuous-fiber-reinforced metal-matrix composites.—73-03259
**Schulte, Meinhard** See Golder, Peter
**Schultheiss, Volker** See Schindler, Joachim
**Schultrich, B.; Weiss, Hans-Jurgen; Bahr, Hans-Achim**
Thermal damage by erosion and cracking under pulsed irradiation.—73-05655
**Schultz, Douglas J.** See Friedman, Gerald M.
**Schultz, J. A.** See Krauss, A. R.
**Schultz, J. C.; Klausmeier-Brown, M. E.; Ristow, M. L.; Partain, L. D.; Al-Jassim, M. M.; Jones, K. M.**
Development of high-quantum-efficiency, lattice-mismatched, 1-eV GaInAs solar cells.—73-07444
**Schultz, L.** See Von Helmolt, T.
**Schultz, Mark A.; Struble, Leslie J.**
Use of oscillatory shear to study flow behavior of fresh cement paste.—73-00202
**Schultz, P. J.** See Ellingboe, S.
**Schultz, Richard A.; Bradt, Richard C.**
Cleavage of ceramic and mineral single crystals.—73-06342
**Schultz, William N.** See Levinson, Lionel M.
**Schultze, Dietrich; Kolsch, Peter; Jancke, Karin; Finger, G.; Kornatowski, J.**
Reversible thermal transformation in the molecular sieve $AlPO_4$-5.—73-08726; 73-16297
**Schultze, J. W.** See Michaelis, A.
**Schulz, D. L.** See Chen, J.; Duray, S. J.; Han, Bin; Neumayer, Deborah A.
**Schulz, D. L.; Richeson, D. S.; Malandrino, G.; Neumayer, Deborah A.; Marks, T. J.; DeGroot, D. C.**
Heteroepitaxy of high-$T_c$ superconducting Tl-Ba-Ca-Cu-O films on metal-coated substrates.—73-11781
**Schulz, Dieter** See Kramer, Carl
**Schulz, G.** See Hellmold, P.
**Schulz, H.** See Klein, N.
**Schulz, H.-J.** See Goetz, O.
**Schulz, I.** See Adler, J.
**Schulz, Peter A.** See Wall, K. F.
**Schulz, R. L.; Clark, David E.; Lodding, A. R.; Friesel, M.; Tipton, A. W.; Wicks, George G.**
Comparison of U.S. and international glass/metal interactions after five years' burial in salt.—73-08288
**Schulz, Rebecca L.** See Clark, David E.; Fathi, Zak
**Schulz, Rebecca L.; Clark, David E.; Hutcheon, Ronald M.; Wicks, George G.**
Microwave processing of simulated nuclear waste glass: II.—73-04894
**Schulz, Rebecca L.; Folz, D. C.; Clark, David E.; Wicks, George G.**
Microwave destruction/vitrification of electronic components.—73-06579
**Schulze, D.** See Ermisch, R.; Schwedes, J.
**Schulze, Horst A.** See Garcia-Rosales, Carmen
**Schulze, Klaus** See Hettich, B.
**Schulze, P.** See Hahn, R.
**Schulze, S.** See Ullmann, J.
**Schulze, Walter A.; Gopalakrishnan, Sudhakar**
Molten salt synthesis of anisotropic powders.—73-04857
**Schulze-Kloff, G.** See Tkachenko, Olga P.
**Schumacher, R. F.; Ramsey, W. Gene**
Conditions for precipitation of copper phases in DWPF [Defense Waste Processing Facility] waste glass.—73-08290
**Schumacher, R. F.**
Monitoring and analyzing waste glass compositions.—73-12209
**Schumaker, P.** See Berube, D.
**Schumaker, R. F.; Jantzen, Carol M.; Plodinec, M. J.**
Status of vitrification for DOE low-level mixed waste forms.—73-08310
**Schumann, J.** See Heinrich, A.
**Schunk, P. R.** See Brinker, C. Jeffrey
**Schurmann, W.; Scheuer, A.; Sylla, H.-M.**
Optimization of planetary cooler operation by accurately controlled injection of water.—73-00155
**Schussler, Andreas; Bartos, Jozsef; Zum Gahr, Karl-Heinz**
Microstructure and abrasive wear of composite layers formed by laser processing.—73-13873
**Schuster, Julius C.**
Design criteria and limitations for SiC-metal and $Si_3N_4$-metal joints derived from phase diagram studies of the systems Si-C-metal and Si-N-metal.—73-03574
**Schuster, T.; Koblischka, M. R.; Kuhn, H.; Glucker, M.; Ludescher, B.; Kronmuller, H.**
Flux penetration of melt-processed $YBa_2Cu_3O_{7-\delta}$: direct observation of anisotropy.—73-08082
**Schuth, F.** See Grebner, M. D.
**Schutz, J.** See Bi, J. Q.
**Schutzendube, P.** See Daweritz, L.
**Schvoerer, M.** See Mueller, P.
**Schwab, R. G.; Steiner, R. A.; Mages, G.; Beie, H. J.**
Properties of $CeO_2$ and $CeO_{2-x}$ films: II, High-temperature properties.—73-12868
**Schwab, Stuart T.** See Blanchard, Cheryl R.
**Schwab, Stuart T.; Davidson, David L.; Pan, Yi-Ming; Blanchard, Cheryl R.; Graef, Renee C.; Dec, Steven F.**
Processing and properties of polymer-derived $Si_3N_4$ composites.—73-13217
**Schwab, Stuart T.; Graef, Renee C.; Blanchard, Cheryl R.; Pan, Yi-Ming; Davidson, David L.**
Infiltration/pyrolysis processing of fiber-reinforced silicon nitride.—73-05861
**Schwab, Stuart T.; Graef, Renee C.; Blanchard, Cheryl R.; Pan, Yi-Ming; Maciel, Gary E.; Hawkins, Bruce L.**
Preceramic polysilazanes for structural applications.—73-15969
**Schwab, Stuart T.; Graef, Renee C.; Pan, Yi-Ming; Curry, Donald M.; Pham, Vuong T.; Milhoan, James D.**
Arc-jet testing of damaged RCC-3 repaired using preceramic polymers.—73-12412
**Schwab, Stuart T.**
Polysilazane precursors for silicon nitride and resultant products.—73-12506
**Schwartz, Bradley D.** See Feng, Tom
**Schwartz, D. S.; Devletian, J. H.; Chen, S. J.; Gould, J.**
Capacitor discharge and flash welding of SiC-reinforced high-temperature Al alloys.—73-00212
**Schwartz, Geraldine C.** See Vender, David
**Schwartz, Ira C.; Noche, Orlando L.; Klein, Keith**
Pack mixture composition for SiC pack cementation coating of carbonaceous substrates.—73-12504
**Schwartz, J.** See Goretta, K. C.
**Schwartz, James H.** See Claassen, George R.
**Schwartz, Justin; Wu, Shi-Ming**
Enhanced flux-line pinning in $Bi_2Sr_2CaCu_2O_x$ by neutron irradiation and Li($n$, $^3T$)$\alpha$ reaction-induced charged-particle defects.—73-01543
**Schwartz, P. V.** See Sturm, J. C.
**Schwartz, Robert W.** See Dimos, Duane
**Schwartzkopf, Louis A.** See Finnemore, Douglas K.
**Schwarz, Martin; Morach, Eugen; Schindler, Hubert; Junger, Sabine**
Thermally sprayed lead-containing thick layers.—73-04887
**Schwarz, R.** See Beaudoin, M.
**Schweda, E.; Bevan, D. J. M.; Eyring, L.**
$PrO_{2n-2}$ [$n$=7, 9, 10, 11, 12] series of oxides and the structure of $Pr_{24}O_{44}$: an investigation by high-resolution electron microscopy.—73-02407
**Schwedes, J.** See Ermisch, R.
**Schwedes, J.; Schulze, D.**
Examples of up-to-date silo design.—73-01780
**Schweiger, Michael J.** See Hrma, Pavel; Kim, Dong-Sang
**Schweiss, P.** See Schiebel, P.
**Schweitz, J. A.** See Ljungcrantz, H.
**Schweitzer, J. W.** See Martinson, L. S.
**Schweizer, A.; Herbert, P. K.; Loffler, J. C.**
Fuel gas obtained from tree bark for operating a rotary lime kiln in a sulfate pulp plant.—73-01952
**Schweizer, H.** See Kaden, C.
**Schweizer, Steven E.** See Carswell, Martin G.
**Schwenzien, J.** See Woydt, M.
**Schwerk, U.; Engelke, F.; Kleber, R.; Michel, D.**
Characterization of hydrogenated amorphous carbon films by nuclear magnetic resonance techniques.—73-08569
**Schwier, G.** See Wotting, G.
**Schwietert, H. R.; Steif, Paul S.**
Tensile strength of a fiber-reinforced ceramic.—73-03363
**Schwoeble, A. J.** See Clark, B. A.
**Sciacca, M. Dean; Mayur, A. J.; Oh, Eu-Soon; Ramdas, A. K.; Rodriguez, S.**
Infrared observation of longitudinal optical modes in MBE-grown polar semiconductor films.—73-14989
**Scian, Alberto N.; Aglietti, Esteban F.; Caracoche, Maria C.; Rivas, Patricia C.; Pasquevich, Alberto F.; Lopez Garcia, Alberto R.**
Phase transformations in monoclinic zirconia caused by milling and subsequent annealing.—73-12657
**Scian, Alberto N.; Porto Lopez, J. M.; Pereira, E.**
Mechanochemical activation of high-alumina cements [HAC]: I, Hydration behavior.—73-00137
**Sciau, P.** See Baldinozzi, G.
**Scieszka, S. F.; Dutkiewicz, R. K.**
Testing abrasive wear in mineral comminution.—73-01833
**Scilla, G.** See Kuech, T. F.
**Scoberg, David** See Grieser, Franz
**Scott Thomas, J.** See Landheer, D.
**Scott, B.** See Bularzik, J.
**Scott, C. G.** See Khattak, G. M.
**Scott, J. F.; Melnick, Brad M.; Paz De Araujo, C. A.; McMillan, L. D.; Zuleeg, R.**
Dc leakage currents in ferroelectric memories.—73-11558
**Scott, P. F.**
Changing role of the glass bottle maker.—73-00592
**Scott, Ronald S.; Dumin, D. J.**
Voltage, fluence, and polarity dependence of trap generation inside of thin silicon oxide films.—73-03772
**Scott, Timothy C.** See Harris, Michael T.
**Scott, V. D.; Bleay, S. M.; Chapman, A. R.**
Interface compatibility in Nicalon-fiber-reinforced metal and ceramic composites.—73-03155
**Scott, William R.** See Perez, Ignacio M.
**Scotti Beatriz, Irene**
Ceramic Restoration.—73-06601
**Scotti, C.; Gharbage, B.; Lauret, H.; Levy, M.; Hammou, A.**
Thermal expansion and electrical conductivity of yttria-substituted lanthanum strontium manganites.—73-16626
**Scotti, Roberto** See Di Nola, Patrizia; Morazzoni, Franca
**Scotto, Cathy S.** See Zhang, Zhi-Fan
**Scripsick, M. P.; Fang, X. H.; Edwards, G. J.; Halliburton, L. E.; Tyminski, J. K.**
Point defects in lithium triborate ($LiB_3O_5$) crystals.—73-03107
**Scriven, L. E.** See Glasrud, G. G.
**Scrivener, Karen L.** See Bergstrom, T. B.; Wang, Shao-Dong
**Scrivener, Karen L.; Monteiro, Paulo J. M.**
Alkali-silica reaction in a monolithic opal.—73-13676
**Scrivener, Karen L.**
Effect of heat treatment on inner product CSH.—73-09908
**Scruby, C. B.** See Briggs, G. A. D.; Lawrence, C. W.
**Seabaugh, A. C.** See Randall, J. N.
**Seabury, C. W.** See McDermott, B. T.
**Seager, C. H.; Kanicki, Jerzy**
Effects of uv light on ir absorption in chemically vapor deposited a-$SiN_x$:H films.—73-05552
**Seager, C. H.; Warren, W. L.; Tuttle, Bruce A.; Nasby, R. D.; Dimos, Duane**
Charge trapping centers in ferroelectric ceramics.—73-04540
**Seager, C. H.; Warren, W. L.**
Photodarkening and paramagnetism in ultraviolet-exposed lead lanthanum zirconate ceramics.—73-07905
**Seah, K. H. W.** See Goh, T.-N.
**Seaman, C. L.** See Almasan, C. C.
**Seamannischenko, G.** See Gerhauser, W.
**Searcy, Alan W.** See Beruto, Dario; Bullard, Jeffrey W.
**Searcy, Alan W.; Bullard, Jeffrey W.**
Thermodynamics and kinetics of surface area changes of faceted particles.—73-16379
**Searle, Barry G.** See Kuiper, Pieter
**Searle, T. M.** See Stanley, A. T.
**Searle, T. M.; Stanley, A. T.; Harris, E. A.; Parker, J. M.**
Visible and uv upconversion from diode-pumped neodymium-doped fluoride glasses.—73-03818
**Sears, Marilyn R.** See Skeels, Gary W.
**Sebastian, K.; Roggendorf, H.; Tiesler, Hartmut; Freund, T.**
XPS investigations of corroded manmade mineral fibers.—73-14128
**Sebastian, K.; Tiesler, Hartmut; Conradt, R.; Roggendorf, H.; Schmid, B.**
Corrosion of fibrous silicates in electrolyte solutions.—73-14148
**Sebastian, M. T.** See Paulose, K. V.
**Sebastian, P. J.** See Fernandez, A. M.
**Sebastian, P. J.; Campos, J.; Nair, P. K.**
Effect of postdeposition treatments on morphology, structure, and optoelectronic properties of chemically deposited CdS thin films.—73-05765
**Sebastian, P. J.; Nair, P. K.**
Influence of bath composition on the photocurrent response and morphology of chemically deposited CdS thin films.—73-07591
**Sebastian, P. J.**
Electrical properties of vacuum-evaporated stoichiometric and nonstoichiometric CdTe thin films for optoelectronic applications.—73-11182
**Sebilleau, D.** See Gota, S.
**Sebire-Lhermitte, I.; Gomina, Mousse; Vicens, J.**
TEM observations of SiC-SiC composites with a carbon interphase layer annealed in air at high temperatures.—73-03205
**Sechkarev, A. V.** See Beger, V. N.
**Sechko, A. G.** See Volkov, V. P.

**Sedalia, Narayan M.**
Cleanability study of pyrolytic enamels.—73-13808
**Seddon, A. B.; Lana, S. L.**
Sol-gel-derived ORMOSIL's [organically modified $SiO_2$ materials]—spectroscopic monitoring of hydration level with atmosphere.—73-03890
**Sedeek, K.; Fadel, M.**
Electrical and optical studies in some Bi-doped amorphous chalcogenide thin films.—73-07482
**Sedgwick, T. O.** See Grutzmacher, D. A.
**Sedlar, Miroslav** See Kubeckova, Marta
**Sedlar, Miroslav; Pospisilova, M.; Matejec, Vlastimil**
Preparation of piezoelectric ceramic layers on glass and metallic substrates.—73-04568
**Sedmale, G. P.** See Kabanov, V. O.
**Sedmidubsky, David; Juklicek, Jiri; Kutzendorfer, Jaroslav; Matousek, Josef**
Preparation of $YBa_2Cu_3O_{7-\delta}$ powder by chemical methods.—73-04790
**Sedov, V. E.** See Gutkin, A. A.
**Seeber, Wolfgang** See Ebendorff-Heidepriem, Heike; Ehrt, Doris
**Seed, R. G.** See Dorsey, P. C.
**Seefeld, Verena; Bertram, Rainer; Muller, Dirk; Gressner, Wolfgang**
$^{27}Al$ NMR spectroscopic investigations on intercalation in oxyhydroxyl aluminum cations in the interlayer space of hectorite.—73-02143
**Seege, A.** See Voigt, Manfred
**Seeger, J.** See Breslin, Michael C.
**Seeger, O.** See Millet, P.
**Seehra, Mohindar S.; Kannan, R.; Ibrahim, Manjula M.**
Magnetic specific heat and critical magnetic susceptibility of the diluted antiferromagnet $Co_pMg_{1-p}O$.—73-04625
**Seehra, S. S.; Gupta, Saroj; Kumar, Satander**
Rapid setting magnesium phosphate cement [MPC] for quick repair of concrete pavements—characterization and durability aspects.—73-00181
**Seeley, Robert**
Grinding composites into shape.—73-03415
**Seelmann-Eggebert, M.**
Photoemission spectroscopic techniques to assess physical and chemical properties of mercury cadmium telluride.—73-07720
**Seels, R. S.** See Bour, David P.
**Seemann, K.** See Goll, G.
**Seetharaman, Seshadri** See Zhang, Ping
**Seetharamu, S.** See Krishnamoorthy, P. R.
**Seferis, James C.** See Nam, J. D.
**Seff, Karl** See Heo, Nam-Ho
**Segal, David**
Developments in the synthesis of advanced ceramic powders.—73-16707
**Segall, B.** See Lambrecht, W. R. L.
**Segaud, J. P.** See Gadenne, M.
**Segaud, J. P.; Drevillon, B.; Pascual, E.; Ossikovski, R.; Monnier, G.; Rimbourg, L.**
Spectroscopic variations of optical constant and emissivity of Pt-$Al_2O_3$ cermet thin films.—73-10278
**Segawa, Hideo** See Sakashita, Yukio
**Segawa, Ken** See Iwasaki, Kazuharu
**Segawa, Yusaburo** See Nomura, Shintaro
**Seghier, D.** See Benyattou, T.
**Segmuller, Armin**
Characterization of epitaxial thin films by X-ray diffraction.—73-01889
**Segovia, M. A.** See Ajimine, Eric M.
**Seguchi, Tadao** See Okamura, Kiyohito; Shimoo, Toshio
**Seguchi, Tadao; Kasai, Noboru; Okamura, Kiyohito; Sugimoto, Masaki; Mitsuhashi, Tsuyoshi**
Ultra-high-strength refractory silicon carbide fiber and process for producing [the] same.—73-16022
**Segui, Y.** See Sahli, S.
**Segura, A.** See Martinez-Pastor, J.
**Seguy, P.; Zigone, M.; Martinez, G.**
Bound phonons and DX centers in GaAs under hydrostatic pressure.—73-11086
**Sehnke, Errol D.**
Bauxite.—73-12258
**Sei, Tadanori** See Kikuchi, Naoto; Kinoshita, Hiroaki; Tsuchiya, Toshio
**Sei, Tadanori; Okano, T.; Tsuchiya, Toshio**
High-temperature superconducting BSCCO thin films from sol-gel process and properties.—73-11786
**Seiberling, L. E.; Lyman, P. F.; Grant, M. W.**
Transmission ion channeling facility for structural studies of monolayer films on clean semiconductor surfaces.—73-07842
**Seibig, Bernd**
Method of making a shaped part comprising a metallic member and a ceramic member.—73-10328
**Seibold, G.; Sigmund, E.**
Metal-insulator transition in doped bismuthate superconductors.—73-08132
**Seibt, E. W.; Jeremie, A.; Flukiger, R.**
Effects of carbon impurities in high-$T_c$ superconducting tapes using Auger electron spectroscopy.—73-04707
**Seidel, Hans-Georg**
Hot-end handling on high-speed production lines.—73-10549
**Seidel, P.** See Heinz, E.
**Seidensticker, David G.** See Clifft, Greg; Neupert, Richard H.
**Seidler, G. T.; Carrillo, C. S.; Rosenbaum, T. F.; Welp, U.; Crabtree, G. W.; Vinokur, V. M.**
Vanishing magnetization relaxation in the high field quantum limit in $YBa_2Cu_3O_{7-\delta}$.—73-15664
**Seidov, M. Yu.** See Suleimanov, R. A.
**Seifert, E.** See Clauss, Ulrich
**Seifert, F.; Petrov, V.**
Difference-frequency generation of near-infrared picosecond pulses by noncritical temperature twinning of $LiB_3O_5$.—73-12768; Synchronous pumping of a visible dye laser by a frequency-doubled mode-locked Ti:sapphire laser and its application for difference frequency generation in the near ir.—73-08975
**Seifert, W.** See Maximov, I.
**Seiffert, V.**
Nondestructive measurement of localized density of sintered materials—especially grinding wheels.—73-01921
**Seiger, R.** See Gudenau, Heinrich Wilhelm
**Seigneur, Frederic** See Autran, J. L.; Plossu, C.
**Seike, Satoru** See Itatani, Kiyoshi
**Seikovskaya, A. A.** See Vysochanskii, Yu. M.
**Seikovskii, I. D.** See Popik, Yu. V.
**Seiler, D. G.** See Kopanski, Joseph J.; Littler, C. L.; Lowney, Jeremiah R.
**Seino, Y.; Nagai, S.**
Temperature dependence of the Young's modulus [YM] of diamond thin film prepared by plasma chemical vapor deposition.—73-03360
**Seino, Yasuhiro; Ogasawara, Haruhiko; Kotani, Akio**
Calculation of Cu-2*p* resonant photoemission spectra in CuO.—73-05365
**Seiple, J.; Pecquet, J.; Meng, Z.; Peiz, J. P.**
Elevated-temperature oxidation and etching of the Si(111) 7×7 surface observed with scanning tunneling microscopy.—73-09449
**Seireg, A. A.** See Ghodssi, R.
**Seisyan, R. P.** See Aliev, G. N.; Ilyinskaya, N. D.; Kokhanovskii, S. I.
**Seisyan, R. S.** See Aliev, G. P.
**Seitz, B. P.** See Pingitore, Nicholase E., Jr.
**Seitz, Rick**
Keeping noise under control.—73-12155
**Sekar, M. M. A.; Dhanaraj, G.; Bhat, H. L.**
Synthesis of fine-particle titanates by the pyrolysis of oxalate precursors.—73-06089
**Sekar, M. M. A.; Patil, Kashinath C.**
Combustion synthesis and properties of fine-particle dielectric oxide materials.—73-10924
**Sekhar, B. R.** See Nerrien, N.; Saini, N. L.; Srivastava, P.
**Sekhar, Jainagesh A.** See Lakshmikantha, Medamaranahally; Li, H. P.
**Sekhar, Jainagesh A.**
Bonding of bodies of refractory hard materials to carbonaceous supports.—73-14634
**Seki, Hideya** See Abe, Hisao
**Seki, Hisashi** See Takahashi, Naoyuki
**Seki, Kohji** See Nakamura, Akihiro
**Seki, Masanobu** See Takahashi, Satoshi
**Seki, Noriaki** See Inoue, Takanori
**Seki, S.** See Yamamoto, H.
**Seki, Tsutomu** See Koumoto, Kunihito
**Sekiba, Toru; Okada, Akihide; Uchikawa, Fumihiro**
Catalysts for the purification of exhaust gas.—73-02027
**Sekido, Masakatsu; Nakayama, Hironori; Nukaya, Michio; Noro, Yoshihisa**
Injection molding of metal or ceramic powders.—73-04979
**Sekiguchi, H.** See Anayama, C.
**Sekiguchi, Itsuma** See Shimokawa, Katsuyoshi
**Sekiguchi, Junnosuke** See Imai, Hisao
**Sekikawa, Taro; Yao, Hiroshi; Hayashi, Toyoharu; Kobayashi, T.**
Electromodulation spectroscopy of CdS microcrystallites embedded in polymer films.—73-04309
**Sekine, Kenichiro; Kagawa, Yutaka**
Crack-fiber interaction in SiC fiber-reinforced glass matrix composite.—73-06202; 73-10425; Effects of residual stress and frictional sliding on *R*-curve behavior in fiber-reinforced ceramics.—73-06398
**Sekine, Masahiro** See Katayama, Shingo; Mizushima, Yasuyuki
**Sekine, Rika** See Kawai, Maki
**Sekine, Satoshi** See Sato, Kenji
**Sekine, T.** See Julien, C.
**Sekine, Toshimori; Sato, Tadao**
Shock-induced mechanisms of phase transformation from rhombohedral BN to cubic BN.—73-08730
**Sekino, Tohru** See Niihara, Koichi
**Sekino, Tohru; Nakahira, Atsushi; Niihara, Koichi**
Fabrication of $Al_2O_3$/W nanocomposites.—73-10228
**Sekita, Masami** See Lawson, Simon C.
**Sekiwa, Hideyuki** See Morita, Shoji
**Sekiya, Masahiko** See Hirasaka, Masao
**Sekiya, Tadashi** See Kusumoto, Keiji
**Sekiya, Takao; Mochida, Norio; Ohtsuka, Atsushi; Soejima, Ayako; Yasumori, Atsuo; Yamane, Masayuki**
$^{11}B$ MAS NMR spectra of $BO_{3/2}$-$TeO_2$ glasses.—73-06884
**Sekiya, Takao; Mochida, Norio; Ohtsuka, Atsushi**
Raman spectra of $BO_{3/2}$-$TeO_2$ glasses.—73-10396
**Sekizawa, Kazuhiko** See Inoue, Shunji
**Sekizawa, Koshi** See Chai, Mao-Rong
**Sekkat, A.** See Etienne, S.
**Sekula-Moise, P. A.** See Namavar, Fereydoon
**Sel'tser, V. B.; Gur'yanov, V. S.**
Inelastic deformation of strip glass in a molten metal.—73-07144
**Sela, I.** See Bolognesi, C. R.
**Selci, S.** See Cricenti, A.
**Selcuker, Ahmet R.; Johnson, Michael A.**
Termination sintering in multilayer ceramic capacitors: microstructural interpretation.—73-01036
**Seleznev, B. L.** See Vlasov, Yu. G.
**Seleznev, B. L.; Bychkov, E. A.; Vlasov, Yu. G.**
Diffusion of silver into glasses of the silver-arsenic-selenium-tellurium system.—73-00324
**Seleznev, B. L.; Kallion, R. V.; Bychkov, E. A.; Vlasov, Yu. G.**
Chalcogenide glasses of the system Ag-Cu-As-Se investigated by differential thermal analysis.—73-14140
**Seleznev, B. L.; Kallion, R. V.; Bychkov, E. A.**
Transport processes in chalcogenide glasses of silver-copper-arsenic-selenium system.—73-00569
**Seleznev, V. A.** See Bobrov, A. V.
**Seleznev, V. N.** See Terekhov, V. A.
**Self, K. W.** See Wang, X.-S.
**Self, K.** See Pond, K.; Wang, X.-S.
**Selin, A. A.** See Davarashvili, O. I.
**Selinder, T. I.; Helmersson, U.; Han, Z.; Wallenberg, L. R.**
Structural characterization of yttria ($Y_2O_3$) inclusions in $YBa_2Cu_3O_{7-\delta}$ films: growth model and effect on critical current density.—73-08211
**Selitskii, A. G.** See Krichevtsov, B. B.
**Selker, Mark D.**
Self-frequency-doubling glass-fiber laser.—73-07074
**Sell, Jeffrey A.** See Doll, Gary L.; Heremans, Joseph P.; Meng, W. J.
**Sella, C.** See Gadenne, M.
**Selman, J. R.** See Topor, D. C.
**Selmi, F. A.** See Herner, S. B.
**Seltzer, Michael D.** See Gruber, John B.; Merkle, Larry D.
**Seltzer, Michael D.; Gruber, John B.; Hills, Marian E.; Quarles, Gregory J.; Morrison, Clyde A.**
Multisite optical spectra and energy levels of trivalent thulium ions in yttrium scandium gallium garnet.—73-08674
**Selvaduray, G.; Sheet, L.**
Aluminum nitride: review of synthesis methods.—73-12410
**Selvamanickam, Venkatakrishnan** See Salama, Kamel
**Selverian, J. H.** See Kang, S.
**Selverian, J. H.; O'Neil, D.**
Strength and toughness measurement of thin brittle coatings on substrates: I, Theory and measurement.—73-13592; Strength and toughness measurement of thin brittle coatings on substrates: II, Experimental determination.—73-13593
**Semak, D. G.** See Mikla, V. I.
**Semancik, S.** See Poirier, G. E.; Sobolewski, M. A.; Vetrone, Jim
**Semenchev, A. F.** See Dul'kin, E. A.
**Semenenko, N. P.** See Danilenko, N. V.
**Semenkov, S. G.** See Breguet, J.
**Semenov, A. D.** See Gorshunov, B. P.
**Semenov, N. N.** See Gorokhovskii, A. V.
**Semenov, V. G.** See Kalyamin, A. V.
**Semenova, G. N.** See Klad'ko, V. P.
**Semenova, G. N.; Klad'ko, V. P.; Kryshtab, T. G.; Sadofev, Y. G.; Svitel'skii, A. V.; Koryttsev, S. V.**
Structure defects and photoluminescence of epitaxial $In_xGa_{1-x}As$ films.—73-15186
**Semenova, G. V.; Grekova, I. I.; Kalyuzhnaya, M. I.; Goncharov, E. G.**
Composition of the vapor phase in the ternary system In-As-P.—73-16061
**Semenova, O. I.; Gorokhov, E. B.; Noskov, A. G.**
Composition, structure, and mechanical stresses of $SiN_x$:H films obtained in hf-discharge plasma.—73-05375
**Semenova, O. N.** See Borisov, V. G.
**Semenovskaya, S.; Khachaturyan, A. G.**
Secondary and tertiary ordering in nonstoichiometric $YBa_2Cu_3O_{6+\delta}$.—73-01656
**Semerikov, V. I.** See Slavov, V. I.
**Semikin, E. I.; Vashin, A. E.; Rumyantsev, V. D.**
Calculation of heat transfer in a tank-type glassmaking furnace with correction for selectivity of the radiation of furnace gases.—73-12211
**Semikolenova, N. A.** See Bogdanova, V. A.
**Semin, E. G.** See Gusarov, V. V.
**Semin, V. V.** See Belopol'skaya, T. V.
**Semirova, V. P.** See Gryazina, Z. S.
**Semler, Charles E.**
Refractories for the New World Economy UNITECR '93 highlights.—73-04016
**Semmler, Hans J.** See Ernst, Josef
**Sempere, R.; Bourret, D.; Sivade, A.**
$SiO_2$-$Nb_2O_5$ thin films using sol-gel technology.—73-13272
**Sempolinski, Daniel R.; Swaroop, Latha I.**
Low-sodium zircon refractory and fused silica process.—73-14639
**Semykina, L. N.** See Nemets, I. I.
**Semyonov, S. L.** See Bubnov, M. M.
**Sen, Nirupa; Randyopadhyay, A. K.; Sen, P.; Tiwari, U.; Varandani, D.; Awana, V. P. S.**
Effect of $^{58}Ni$ ion irradiation on the resistivity of $Bi_{1.7}Pb_{0.35}Sr_2Ca_2Cu_3O_{10+x}$ at low ion fluence.—73-11728
**Sen, P.** See Sen, Nirupa
**Sen, R.** See West, G. F.
**Senaratne, Chandana** See Baker, Mark D.
**Senaris-Rodriguez, M. A.; Hetherington, C. J. D.; Varez, A.; Moran, E.; Alario-Franco, M. A.**
Structural consequences of the chemical reaction of $YBa_2Cu_3O_{7-y}$ with *n*-butyl lithium.—73-01666
**Senbetta, Ephraim; Doich, William L.**
Effects on cement paste of treatment with an extended set control admixture.—73-00082
**Senbhagaraman, S.; Row, T. N. G.; Umarji, A. M.**
Structural refinement using high-resolution powder X-ray diffraction data of $Ca_{0.5}Ti_2P_3O_{12}$, a low thermal expansion material.—73-05495
**Senda, Tetsuya** See Takahashi, Chiori
**Senda, Tetsuya; Bradt, Richard C.**
Twinning in ZnO ceramics with $Sb_2O_3$ additions.—73-02532
**Senda, Tetsuya; Takahashi, Chiori**
Structural change in plasma-sprayed alumina coatings by laser melting: I, On continuous wave mode treatment.—73-05490
**Senda, Tetsuya; Yamamoto, Yoichi; Ochi, Yasuo**
Friction and wear tests of titanium boride ceramics at elevated temperatures.—73-06444; 73-17336
**Senden, Tim J.; Ducker, William A.**
Surface roughness of plasma-treated mica.—73-17206
**Sendlinger, B.** See Evers, J.
**Senegas, J.** See Bobe, J. M.; El Omari, M.; Kyung-Soo, S.

**Senemaud, C.; Driss-Khodja, M.; Gheorghiu, A.; Harel, S.; Dufour, G.; Roulet, H.**
Electronic structure of silicon nitride studied by both soft X-ray spectroscopy and photoelectron spectroscopy.—73-13395
**Senesi, F.** See Michelotti, F.
**Senet, P.** See Lambin, P.
**Seneviratne, A. M. G.** See Dhir, R. K.
**SenGupta, A.; Bhatnagar, A. K.; Gopinathan, K. P.; Sundar, C. S.**
Annealing of native defects in Te-doped GaAs.—73-14774
**Sengupta, K.** See Chaudhuri, S. P.
**Senin, H. B.; Sidek, H. A. A.; Ford, P. J.; Saunders, G. A.; Wang, Q.; Draper, R. C. J.**
Comparison between the elastic and nonlinear acoustic properties of neodymium and samarium phosphate glasses.—73-03780
**Senior, S. A.; Kendrick, J. L.**
Reclaimed ceramic material for use in road construction.—73-09743
**Senna, Mamoru** See Hashi, Yoko; Isobe, T.; Kobayashi, Katsuhiro; Komatsubara, Satoru; Sawabe, A.
**Senoh, Masayuki** See Nakamura, Shuji
**Senoo, Tatsuya; Yamaguchi, Katsuhiko; Nakahara, Muneo**
Optical glass.—73-14555
**Senouci, A. B.** See Eldin, Neil N.
**Senoussi, S.** See Aguillon-Levillain, C.; Gu, H.
**Senoussi, S.**
Review of the critical current densities and magnetic irreversibilities in high-$T_c$ superconductors.—73-08191
**Senter, Howard J.; Wagner, William R.; Lariviere, Richard L.**
Spinal disk implant.—73-12406
**Sentieiro, J.** See Farmer, D.
**Sentoku, Eiichi; Naka, Tsutoma**
Fracture model of machinable ceramics.—73-17328
**Seo, Do-Won; Choi, Duck-Kyun**
Formation of $PbTiO_3$ thin films by thermal diffusion from multilayers.—73-10950
**Seo, Jeong-Min; Shin, Dae-Yong; Choi, Sung-Il; Han, Sang-Mok**
Preparation of porous silica glass by the sol-gel method—change of properties of gel by addition of formamide.—73-07163
**Seo, Jung-Chui** See Jeong, Hong-Sik
**Seo, Won-Seon** See Koumoto, Kunihito; Takeda, Shunji
**Seo, Won-Seon; Pai, Chul-Hoon; Koumoto, Kunihito; Yanagida, Hiroaki**
Microstructure development and stacking fault annihilation in ß-SiC powder compact.—73-06255; Effects of additives on the stacking fault annihilation in ß-SiC powder compacts.—73-02246; Roles of stacking faults in the phase transformation of SiC.—73-02425; 73-12677
**Seo, Y.-W.** See Whang, K.-W.
**Seo, Yong-Gyo; Miyayama, Masaru; Yanagida, Hiroaki**
Vibration absorption of PZT piezoelectric ceramics.—73-15300
**Seo, Yong-Gyo; Yanagida, Hiroaki**
Oriented barium titanate ceramics made from fiber-state powder.—73-16889
**Seog, In-Sig; Kim, Chong-Hee**
Preparation of monodispersed spherical silicon carbide by the sol-gel method.—73-09266
**Seong, Dae-Jin; Lee, Sang-Suk; Youm, Do-Jun**
Exponential decrease of the XPS signal of substrate with the initial growth of $Y_1Ba_2Cu_3O_{7-\delta}$ overlayer.—73-04721
**Sepe, A.** See Kosmac, T.
**Sepold, Gerd** See Nowak, Rainer
**Septier, Helene** See Fely, Daniel
**Sepulveda, Juan L.; Jech, D. E.; Ferguson, G.**
Using SPC for the dry pressing of beryllia parts.—73-04183
**Sequeira, A.** See Bhargava, S. C.; Rajagopal, H.; Saini, N. L.
**Sera, Masafumi; Nishikawa, Takashi; Sato, Masatoshi**
Substitution effects on the thermoelectric power of $La_{2-x}Sr_xCu_{1-y}M_yO_4$ (M=Zn and Ni) and $YBa_2Cu_{3-z}Zn_zO_{7-\delta}$.—73-02697
**Sera, Masafumi; Tanaka, S.; Sato, Masatoshi; Fujishita, H.**
Anomalous thermoelectric power of $Bi_{1.6}Pb_{0.5}Sr_{1.9-y}La_yCu_{1.05}O_z$.—73-02553
**Serafini, D.** See Caneiro, A.
**Sercel, P. C.** See Vahala, Kerry J.
**Serdyuk, V. V.** See Krasnov, A. N.
**Serebryakova, T. I.** See Golovko, E. I.
**Seregin, N. P.; Nasredinov, F. S.; Masterov, V. F.; Seregin, P. P.; Saidov, Ch. S.**
Electric-field gradient of Cu sites and distribution of the conductivity electrons in $Nd_{1.85}Ce_{0.15}CuO_4$ superconductor.—73-16128
**Seregin, P. P.** See Masterov, D. F.; Seregin, N. P.
**Serezhkin, V. N.** See Ivanenko, A. A.
**Sergeenkov, S.** See Bougrine, H.
**Sergeev, D. V.** See Evstropov, V. V.
**Sergeeva, E. S.** See Ben'kov, V. N.
**Sergeeva, G. G.**
Dissipation mechanisms at the resistivity transition of HTSC in a magnetic field.—73-08023
**Sergeeva, O. G.** See Finkel, V. M.
**Sergent, M.** See Muralidhar, M.
**Sergienko, S. S.** See Udovenko, A. A.
**Sergievskii, V. V.** See Bondarenko, M. A.
**Serginov, M.** See Rud, V. Yu.
**Sergo, Valter; Schmid, Chiara; Meriani, Sergio; Evans, Anthony G.**
Mechanically induced zone darkening of alumina/ceria-stabilized zirconia composites.—73-17393
**Serier, B.; Treheux, D.**
Silver-alumina solid-state bonding: influence of the work hardening of the metal.—73-03640
**Serna, C. J.** See Andres-Verges, M.
**Sernetz, Friedrich**
Shaped bodies of transparent, polycrystalline alumina.—73-02067
**Seron, A.; Maimoun, I. Ben; Crespin, M.; Beguin, F.**
Production of ß′-SiAlON's through carbon/oxide nanocomposites obtained from montmorillonite/aromatic-ammonium complexes.—73-13219
**Serov, A. Yu.** See Aguekian, V. F.
**Serova, N. A.** See Isaev, D. G.
**Serpi, A.** See Fortin, E.
**Serpone, Nick** See Zhao, Jin-Cai
**Serra, J.** See Gonzalez, P.
**Serrano, A.; Vas Serra, A.; Goncalves, V.**
Integrated recuperation of heat between kiln and atomizer.—73-12228
**Serrano, D. P.** See Uguina, M. Angeles
**Serrano, M. D.** See Sochinskii, N. V.
**Serreze, H. B.** See Yellen, S. L.
**Serry, M. A.; Mandour, M. A.; Weisweiler, Werner**
Phase equilibria, microstructure, and properties of some MgO-$Al_2O_3$ refractories.—73-10755
**Sersale, Riccardo; Cioffi, Raffaelle.; Frigione, Giuseppe**
$SO_3$ content of portland and blended cements: porosity and behavior of the resultant mortars.—73-13779
**Sersale, Riccardo; Cioffi, Raffaelle; Frigione, Giuseppe; Zenone, F.**
Relationship between gypsum content, porosity, and strength in cement: I, Effect of $SO_3$ on the physical microstructure of portland cement mortars.—73-00183
**Sersale, Riccardo**
Advances in portland and blended cements.—73-09807
**Sertain, E.** See Duvierre, Gerard; Zanoli, A.
**Servant, Y.** See Berger, R.; Haddad, M.
**Serykh, R. L.; Yarmakovskii, V. N.**
Strength increase of concrete over time.—73-13781
**Seshadri, R.** See Rurow, T. N. G.
**Seshasayee, M.** See Patnaik, S.; Uma, Seetharaman
**Sessa, V.** See Terranova, M. L.
**Sestakova, V.** See Hubik, P.
**Setchenkov, M. S.** See Doroshenko, R. A.
**Seth, Jayshree; Babu, S. V.**
Fluorohydrogenated amorphous carbon (a-C:H, F) films prepared by the rf plasma decomposition of 1.3-butadiene and carbon tetrafluoride.—73-09134
**Seth, V. P.; Gupta, Sanjeev; Jindal, Anjana; Gupta, S. K.**
ESR of vanadyl ions in $Li_2O$-$BaO$-$B_2O_3$ glasses.—73-06914
**Sethi, S.** See Gupta, S.
**Sethupathi, K.** See Leonyuk, L. I.
**Setoyama, Katsumi** See Takahashi, Satoshi
**Setsuhara, Y.** See Miyake, S.
**Setsune, Kentaro** See Kohiki, Shigemi
**Sette, F.** See Chen, C. T.
**Setter, Nava** See Colla, E. L.; Chu, F.; Reaney, Ian M.
**Settimo, Randy J.** See Herzog, Josef
**Settles, G. S.** See Hackett, C. M.
**Settles, N. S.** See Pederson, L. R.
**Sevenyuk, A. A.** See Nikishkin, V. A.
**Seveque, J. L.; De Cayeux, M. D.; Elert, M.; Nouguier, H.**
Mathematical modeling of radioactive waste leaching.—73-04892
**Severi, Alberto**
Hardening furnace for sheets of glass and the like.—73-12250
**Severin, Harold** See Boothe, David T.
**Seydel, R.** See Rettel, A.
**Seyer, Johannes** See Gugel, Ernst
**Seyferth, Dietmar** See Bryson, Nathan
**Sezer, Basri**
Turkey: a rapidly expanding market.—73-17509
**Sezzi, Graziano**
Big name in ceramics: Villeroy & Boch.—73-17463; Fin Riwal: a world group.—73-17478; Laufen: a Swiss multinational.—73-17492
**Sferco, S. J.** See Albanesi, E. A.
**Sglavo, V. M.** See Dal Maschio, Roberto; Soraru, G. D.
**Sglavo, V. M.; Dal Maschio, Roberto; Soraru, G. D.; Bellosi, A.**
Fabrication and characterization of polymer-derived $Si_2N_2O$-$ZrO_2$ nanocomposite ceramics.—73-16769
**Sha, Ho-Sen** See Bashkirov, Sh. Sh.
**Sha, J.; Ma, K.; Wang, J.-S.; Jiao, Z.-K.; Zhang, Q.-R.; Zhou, Y.-R.**
Anomalous voltage drop on the *V-I* characteristics of Bi(2223)/Ag-sheathed tapes.—73-15392
**Sha, Yi-Gao** See Wiedemeier, Heribert
**Sha, Yi-Gao; Wiedemeier, Heribert**
Effects of growth conditions on the composition of CVT and PVT [chemical and physical vapor transport] grown $Hg_{1-x}Cd_xTe$ epitaxial layers.—73-14862
**Shaaban, M. H.** See Ahmed, A. A.
**Shaaban, M. H.; El Nimr, M. K.; Ahmed, A. A.**
Electrical conductivity of field-assisted ion-exchanged glass with molten $PbCl_2$ salt.—73-14170
**Shaari, A. H.; Sidek, H. A.; Hashim, M.**
Fabrication of yttrium iron garnet using a front-loading hot-press furnace.—73-16779
**Shabana, El-Said I.** See El-Naggar, I.; Misak, Nasr Z.
**Shabanov, A. G.; Lalykin, N. V.; Shutov, A. M.**
Time and temperature in pressing sheet glass components.—73-07184
**Shabanov, A. G.; Shutov, A. I.; Markov, V. P.**
Making bent chilled items.—73-00655; Method of predicting glass fracture during tempering.—73-00661; Model for the complex deformation of sheet glass.—73-00666; 73-00667
**Shabanov, S. S.** See Safaraliev, G. K.
**Shacham-Diamand, Y.** See Kocon, Waldemar W.
**Shackelford, James F.; Kusko, Bruce H.; Cahill, Thomas A.; Bihuniak, Peter P.; Hanson, Michael E.**
Characterization of glass surfaces and coatings using the proton milliprobe.—73-15780
**Shackelford, James F.; Risbud, S. H.; Kusko, Bruce H.; Cahill, Thomas A.; Bihuniak, Peter P.; Hanson, Michael E.**
Characterization of ceramics and glass using proton-induced X-ray emission.—73-01888
**Shadley, J. R.** See Han, W.
**Shadrin, E. B.** See Masterov, D. F.
**Shafik, S. S.** See Misak, Nasr Z.
**Shah, Akshay V.** See Frye, Robert C.
**Shah, D. O.** See Hingorani, S.; Kumar, P.
**Shah, H. U.; Iqbal, Zafar**
Evaluation of an optimum percentage addition of fluorspar in white cement raw mix containing 4% $SO_3$.—73-09949
**Shah, Jagdeep** See Kim, Dai-Sik; Vinattieri, A.
**Shah, S. Ismat** See Waite, M. M.
**Shah, S.** See Khan, M. N.
**Shah, Subhash N.**
Rheological properties of hydroxypropyl guar (HPG) slurries.—73-06023
**Shah, Surendra P.** See Lange, David A.; Moukwa, M.; Ouyang, Cheng-Sheng
**Shah, Surendra P.; Ouyang, Cheng-Sheng; Lange, David A.**
Fracture behavior of cement-based materials.—73-06660
**Shahi, K.** See Manoravi, P.; Padmanaban, V. P. N.
**Shahriari, Mahmoud R.; Iqbal, T.; Hajcak, P.; Sigel, George H., Jr.**
Effect of rare-earth ions on the thermal stability of $AlF_3$-based glasses.—73-07016
**Shahriari, Mahmoud R.** See Sigel, George, Jr.
**Shaikh, Aziz S.** See Muralidhar, S. K.
**Shaikh, I. A.** See Mohan, H.
**Shaikh, N.** See Ianno, Natale J.
**Shaikhutdinova, I. F.** See Ignatova, R. M.
**Shaina, Z.** See Budov, V. V.
**Shakhmatkin, Boris A.** See Vedishcheva, Natalia M.
**Shakhmin, A. L.** See Tyutikov, A. M.
**Shakhmin, A. L.; Tyutikov, A. M.**
X-ray photoelectron spectroscopy study of the structure of lead silicate glasses.—73-00428
**Shakhova, K. V.** See Panova, A. N.
**Shakhparonova, T. S.** See Pronkin, A. A.
**Shakhverdiev, E. M.**
Kinetics of nonequilibrium carriers and luminescence in $SrTiO_3$ under three-photon laser radiation absorption.—73-16527
**Shakina, T. V.** See Kuznetsova, G. N.
**Shakirzyanov, M. M.** See Bogdanova, Kh. G.
**Shaklee, Charles A.; Messing, Gary L.**
Growth of α-$Al_2O_3$ platelets in the HF-γ-$Al_2O_3$ system.—73-16807
**Shalaev, B. N.** See Ktitorov, S. A.
**Shalamova, I. V.** See Meshcheryakova, I. V.
**Shalayeva, E. V.** See Kuznetsov, M. V.
**Shalyapine, G. M.** See Gorbik, P. P.
**Shalz, M. L.; Daigleish, Brian J.; Tomsia, Antoni P.; Glaeser, Andreas M.**
Ceramic joining: I, Partial transient liquid-phase bonding of alumina via Cu/Pt interlayers.—73-06744; New approaches to joining ceramics for high-temperature applications.—73-03627
**Sham, L. J.** See Vinattieri, A.
**Sham, P. I.; Elistratova, N. Yu.; Anisimov, N. K.; Sidorov, V. P.; Maslennikov, A. V.**
Effects of melting parameters on the roof stability in a high-load electric steel-melting furnace.—73-00811
**Sham, P. I.; Nagornyi, S. A.; Kirsanova, E. A.**
Theory of heat treatment of resin-bonded refractories.—73-04023
**Shamirzaev, T. S.** See Zhuravlev, K. S.
**Shamkuwar, N. R.** See Patil, H. D.
**Shamoto, Shinichi** See Sato, Masatoshi
**Shamp, Donald E.; Slavejkov, Aleksandar G.; Neff, Glenn C., Sr.**
Emission control on a USA glass fiber furnace.—73-12218
**Shamp, Donald E.; Slavejkov, Aleksandar G.; Neff, Glenn, Jr.**
Oxy-fuel firing for emissions control on a fiberglass melter.—73-15888
**Shamrai, V. F.** See Babareko, A. A.
**Shamrikov, V. M.** See Kosenko, E. I.
**Shamshoum, Edwar S.**
Modified zeolite beta method of preparation.—73-05235
**Shamshurov, V. M.** See Barbanyagre, V. D.
**Shamsuddin, M.; Nasar, A.; Tare, V. B.**
Electrical conductivity of tellurium-deficient cadmium telluride.—73-11179
**Shamsutdinov, M. A.** See Karneeva, S. S.
**Shamuratova, Sh. M.** See Tadzhiev, F. Kh.
**Shan, W.** See Hou, H. Q.
**Shan, W.; Hwang, S. J.; Hays, J. M.; Song, J.-J.; Zhu, Zi-Qiang; Yao, Takafumi**
Optical properties of highly strained CdSe/ZnSe quantum wells.—73-11361
**Shanabrook, B. V.** See Davis, John L.; Katzer, D. S.
**Shanfield, S. R.** See Hoke, W. E.
**Shang, Jian-Ku** See Huang, C. H.; Yao, Da-Ping
**Shang, S.-S.; Meyers, M. A.; Yu, L.-H.; Hokamoto, K.**
Use of thermal energy in shock-wave compaction of ceramics and intermetallics.—73-06130
**Shang, S.-X.** See Wang, H.; Wang, X.-L.
**Shang, Xue-Bin** See Zhang, Hong-Xi
**Shangina, E. L.** See Kadushkin, V. I.
**Shank, S. M.; Varriano, J. A.; Koch, M. W.; Wicks, G. W.**
Characteristics of modulation-doped quantum well lasers grown by molecular beam epitaxy.—73-11099
**Shanker, K.** See Baik, Young-Min; Muscat, D.
**Shanker, K.; Tsantrizos, P. G.; Mavropoulos, L. T.; Drew, Robin A. L.**
Electrode properties of TaC metal matrix composites.—73-07318
**Shanks, H. R.** See Shinar, R.
**Shao, Bei-Ling; Liu, An-Sheng; Ren, Hong-Tao**
Effect of fast-neutron irradiation on critical current MTG bulk YBCO superconductors.—73-04700
**Shao, D.-L.** See Zhang, Xiu-Miao
**Shao, H.-Q.** See Zhang, J.-X.
**Shao, Ming-Shi** See Qu, Hai-Ming

**Shao, Z.-S.** See Mu, Xiao-Dong; Yue, Xue-Feng
**Shapakidze, E. V.** See Sarukhanishvili, A. V.
**Shapilova, M.; Timofeeva, I.; Kislyak, V.; Gorbunov, A.; Matrossov, A.**
Recovery of lead-containing dust when melting crystal glass.—73-14485
**Shapira, Y.** See Bindilatti, V.; Twardowski, A.; Vu, T. Q.
**Shapira, Yoram** See Golan, A.
**Shapiro, A. Y.** See Lyubutin, I. S.; Perekalina, T. M.
**Shapiro, Findley R.; Tuttle, John R.**
Meyer-Neldel rule in emission rates from defects in copper indium diselenide.—73-17086
**Shapiro, V. V.; Kachur, I. S.; Eremenko, A. V.**
Spectral properties of weakly ferromagnetic dielectric crystals $CoCO_3$ in nearly saturated paramagnetic state.—73-07356
**Shapkin, P. V.** See Korostelin, Yu. V.
**Shapoval, S. Y.; Petrashov, V. T.; Popov, O. A.; Yoder, M. D.; Maciel, P. D.; Lok, C. K. C.**
Electron cyclotron resonance plasma chemical vapor deposition of large-area uniform silicon nitride films.—73-01154
**Shapoval, T. A.** See Podchernyaeva, I. A.
**Shapovalov, N. A.** See Zlatkovskii, V. B.
**Shapovalov, V. N.** See Amosov, A. V.
**Shapovalov, V. S.** See Pitak, N. V.
**Shappir, Joseph; Rahat, Ido**
Composite dielectric for a semiconductor device and method of fabrication.—73-04193
**Shaqfeh, Eric S. G.** See Singh, Vivek K.
**Sharaf, N. A.** See Ahmed, A. A.
**Sharagov, V. A.; Sobolev, E. V.**
Physicochemical properties of glassware treated in electromagnetic field.—73-14253
**Sharaichuk, V. N.** See Moiseenko, V. N.
**Sharambeyan, M. S.** See Demishev, S. V.
**Shardakov, N. T.** See Makerov, A. V.
**Shardakov, N. T.; Karpov, I. B.; Kudyakov, V. Ya.**
Products of interaction of glass oxide melts with aluminized steels.—73-00259; Products of interaction of glass oxide melts with aluminum-coated steel.—73-00689
**Shardakov, N. T.; Karpov, I. B.; Shardakova, G. N.**
Impact strength of glass coatings on prealuminized steel.—73-00240
**Shardakova, G. N.** See Shardakov, N. T.
**Shareef, M. Y.; Messer, P. F.; Van Noort, R.**
Slip cast machinable hydroxyapatite ceramics.—73-03016
**Sharfin, W. F.** See Zou, Yao
**Sharkhatunyan, R. O.** See Petrosyan, A. M.
**Sharma, Ashutosh** See Saha, Atanu
**Sharma, K. M.; Bhargava, R.; Yadav, D.**
Metallurgical slags as blending materials for cement manufacture.—73-06686
**Sharma, K. M.; Sharma, R. N.; Yadav, D.**
Effect of pozzolana additions on hydration and performance of portland slag cement.—73-13710
**Sharma, L. R.** See Maan, A. S.
**Sharma, M.** See Padam, G. K.; Royle, M.
**Sharma, Meenu; Vishwamittar; Harchand, K. S.; Raj, D.**
Mossbauer and X-ray diffraction studies of two dry and hydrated portland cements and their clinkers.—73-00148
**Sharma, P. S.** See Ali, M. M.; Laxmi, S.
**Sharma, Pramod K.** See Voecks, Gerald E.
**Sharma, R. C.; Jain, N. K.; Ghosh, S. N.**
Semitheoretical method for the assessment of reactivity of fly ashes.—73-03537
**Sharma, R. C.; Jain, N. K.**
Indian fly ash with high percentage of cenospheres.—73-05143
**Sharma, R. G.** See Jha, S. R.; Sarkar, B.
**Sharma, R. N.** See Sharma, K. M.
**Sharma, R. N.; Ghosh, S. N.; Mathur, V. K.**
Morphology and microstructure of activated Indian fly ash.—73-15907
**Sharma, R. N.; Rastogi, A. C.**
Compositional and electronic properties of chemical-vapor-deposited $Y_2O_3$ thin film–Si(100) interfaces.—73-13384
**Sharma, R.; Hinode, H.; Eyring, L.**
Decomposition of praseodymium hydroxy carbonate and praseodymium carbonate hydrate.—73-02227
**Sharma, S. K.** See Jayaraman, A.; Srivastava, P.
**Sharma, S. V.; Sudhakar, N.; Majumdar, A. K.; Gupta, K. P.; Ahadur, D. B.**
Structural and electrical resistivity studies on $Bi_{1.6}Pb_{0.4}Sr_2Ca_4Cu_4O_y$ composition synthesized by different routes.—73-08208
**Sharma, Surinder M.** See Somayazulu, M. S.
**Sharon, M.** See Mertelj, T.
**Sharonova, L. V.** See Kavalyauskas, Yu. I.
**Sharonova, O. M.** See Shor, A. M.
**Sharp, J. H.** See Bland, C. H.
**Sharpe, M. H.** See Hill, W. F.
**Sharps, P. R.; Posthill, J. B.; Timmons, M. L.**
Growth of $Ga_xIn_{1-x}As_yP_{1-y}$ using ethyldimethylindium and tert-butylphosphine.—73-14950
**Sharygin, L. M.** See Valiev, E. Z.
**Shashek, L.** See Sarukhanishvili, A. V.
**Shashkin, V. S.** See Ivanov, I. A.
**Shashkov, A. Yu.; Sigaev, V. N.; Grechanik, L. A.**
Reduced layers of microchannel films studied by methods of X-ray phase analysis and X-ray small-angle scattering.—73-00394; X-ray phase analysis and small-angle X-ray scattering study of the reduced layer of microchannel plates.—73-00427
**Shastri, S.** See Finkelstein, K. D.
**Shastry, M. C. R.** See Rao, K. J.
**Shastry, M. C. R.; Menetrier, M.; Levasseur, A.**
Thermal and electrical properties of new glasses in the binary system $Li_2S$-$As_2S_3$.—73-08983
**Shastry, M. C. R.; Rao, K. J.**
Ac conductivity and dielectric relaxation studies in AgI-based fast ion-conducting glasses.—73-00929
**Shatalov, P. I.; Alekseev, Yu. E.; Vereshchagin, V. I.**
Using diopside in the production of high-alumina ceramics.—73-02019
**Shatkov, V. M.** See Ivanov, I. A.
**Shatkovskaya, M. G.** See Slobodin, B. V.
**Shatlock, M. P.** See Cartlidge, S.
**Shatov, A. A.**
Gas concrete products with lime-containing binder based on solid wastes of soda industry.—73-00096
**Shaubach, Robert M.** See Gernert, Nelson J.
**Shavkunov, D. B.**
Raman study of sodium borosilicate glass containing cobalt oxide.—73-00393; Structure of sodium borosilicate glass with additions of cobalt oxide studied by Raman spectroscopy.—73-00417
**Shavrov, V. G.** See Buchel'nikov, V. D.
**Shaw, C. M.; Shelby, J. E.**
Hydrogen reactivity as a structural probe for glasses.—73-06925; Hydrogen reactivity of barium galliosilicate and related glasses.—73-10381
**Shaw, D.** See Khattak, G. M.
**Shaw, H. M.; Edirisinghe, M. J.; Holding, S.**
Binder degradation and redistribution during pyrolysis of ceramic injection moldings.—73-09023
**Shaw, J. L.** See Chang, S.
**Shaw, Jin-Chen; Liu, Kuo-Shung; Lin, I-Nan**
Phase boundary of an LMN-PZ-PT three-component system.—73-11596; Piezoelectric properties of hot-pressed 18PMN–41PZ–41PT ceramics.—73-07906; 73-07907
**Shaw, K. G.; MacCrone, R. K.**
Distribution of defects created by xenon implantation into silica.—73-06906
**Shaw, M. C.** See He, Ming-Yuan; Kaliszewski, Mary S.
**Shaw, M. P.** See Wu, K. F.
**Shaw, Raymond W.** See Smith, Thomas K.
**Shaw, T. M.** See Chern, M. Y.; Drennan, John
**Shayan, A.** See Way, S. J.
**Shayan, A.; Quick, G. W.**
Relative importance of deleterious reactions in concrete: formation of AAR [alkali aggregate reaction] products and secondary ettringite.—73-10138
**Shayan, A.**
Alkali reactivity of deformed granitic rocks: a case study.—73-15896
**Shayegan, M.** See Chen, W.
**Shchamakhalov, K. S.** See Gergel, V. A.
**Shchavelev, O. S.** See Golovin, A. I.; Livshits, V. Ya.; Plutalov, N. Yu.
**Shchegolev, B. F.**
Molecular modeling of oxygen bridges in amorphous and crystalline silicates and aluminosilicates.—73-00375
**Shchegrov, L. N.; Antraptseva, N. M.; Ryabtseva, N. V.**
Production and nature of crystal hydrates of double hydrophosphates of manganese and cobalt.—73-16281
**Shchennikov, V. V.; Stepanov, N. N.**
Electrical resistivity and Seebeck coefficient of ytterbium monosulfide under ultrahigh pressure up to 20 GPa.—73-16480
**Shcherbak, L. P.; Fodchuk, I. M.; Tikhonova, O. M.**
Impurity structural defects in CdTe single crystals.—73-03096
**Shcherbakov, I. A.** See Breguet, J.
**Shcherbakov, V. A.; Gryadunov, A. N.; Shteinberg, A. S.**
Macrokinetics of SHS compaction.—73-16857
**Shcherbakov, Yu. I.**
Dependence of magnetooptical activity on exchange fields in crystals with $FeO_6^{9-}$ octacomplexes.—73-15312
**Shcherban, A. P.** See Kovtun, G. P.
**Shcherbatyuk, O. K.** See Masterov, D. F.
**Shcherbina, O. D.** See Gogotsi, Yu. G.
**Shchetinin, N. M.; Kochelaeva, L. T.; Ivcieva, V. A.**
Analysis of the formation of glass waste in the electric lamp industry.—73-00589
**Shcheulin, A. S.** See Arkhangelskaya, V. A.; Korolev, N. E.
**Shchigol, E. E.** See Gololobov, Yu. P.
**Shchipalov, Yu. K.; Makarov, V. V.; Dubovik, T. V.**
Dielectric permeability of dehydrated kaolin of various chemical compositions.—73-02568
**Shchukin, V. A.** See Ipatov, I. P.
**Shchukin, V. M.** See Zel'tser, Yu. G.
**Shchur, D. V.** See Lavrenko, V. A.
**Shchurov, A. F.** See Malygin, N. D.
**Shchurov, V. A.** See Fedorova, I. V.
**Shea, Wei-Lu; Borade, Ramesh B.; Clearfield, Abraham**
Synthesis and properties of MgAPO-5.—73-13297
**Shearon, C. E.** See Bjorkman, C. H.
**Sheats, James R.; Taber, Robert C.; Merchant, Paul; Amano, J.**
Effects of processing on electrical properties of $YBa_2Cu_3O_7$ films: I, Postdeposition anneal process.—73-04710
**Shebanin, A. P.** See Mikla, V. I.
**Shechkus, J.** See Grivickas, V.
**Sheek, J. Grady** See Kaplan, Richard B.
**Sheen, S. R.** See Kao, Chin-Hai
**Sheet, L.** See Selvaduray, G.
**Shefer, G.-E.** See Rempel, A. A.
**Sheffield, Byford D.** See Croft, Alan P.
**Shegai, O. A.** See Zhuravlev, K. S.
**Shegai, O. A.; Moshegov, N. T.; Palkin, A. M.; Toropov, A. I.**
Cyclotron resonance in $(GaAs)_n(InAs)_m$ superlattices.—73-07431; Spectrum of shallow donor states in $(GaAs)_n(InAs)_m$ superlattices.—73-08201
**Shegai, V. V.** See Finkel, V. M.
**Shei, C.-Y.** See Chiang, Cyril; Hurng, Weir M.
**Sheina, T. V.** See Koren'kova, S. F.
**Sheinfel'd, A. V.** See Kaprielov, S. S.
**Sheinkman, A.** See Klestchov, D.
**Sheinkman, M. K.** See Buyanova, I. A.; Garyagdyev, G.
**Shek, K. L.** See Beall, M. W.
**Shekar, K. V.** See Burappa, K.
**Shekhtman, V. S.** See Afonikova, N. S.
**Shelby, J. E.** See Heslin, M. R.; Jewell, John M.; Kohli, J. T.; McGinnis, Peter B.; Shaw, C. M.; Spess, M. S.
**Shelby, J. E.; Minton, S. M.; Lord, C. E.; Tuzzolo, M. R.**
Formation and properties of yttrium aluminosilicate glasses.—73-00485
**Sheldon, Brian W.** See Lauten, Frederick S.
**Sheldon, Brian W.; Danforth, Stephen C.**
Ceramic Transactions, Volume 42: Silicon-Based Structural Ceramics.—73-17522
**Sheldon, P.; Keyes, B. M.; Ahrenkiel, R. K.; Asher, S. E.**
Minority carrier lifetimes in molecular beam epitaxy grown $Al_xGa_{1-x}As$/GaAs double heterostructures [DH's] doped with aluminum.—73-07673
**Shelef, M.** See Halasz, I.
**Sheleg, A. V.** See Tekhanovich, N. P.
**Shelekhov, A. I.** See Golovashkin, A. I.
**Shelestak, Larry J.** See Gulotta, Joseph A.
**Shelkovnikov, D. N.** See Tuan, L.
**Shelleman, David L.** See Trumbauer, Eric R.
**Shelton, R. N.** See Bennahmias, M.
**Sheludyakov, L. N.** See Dyshlova, T. A.
**Shelykh, A. I.; Kudinov, E. K.**
Current states of high-$T_c$ superconducting ring in Aaronov-Bohm configuration.—73-15410
**Shelyubskii, V. I.** See Brest, V. A.
**Shemansky, Frank A.** See Raupp, Gregory B.
**Shemelina, O. S.; Novototskii-Ulasov, Yu. F.**
Equilibrium parameters of deep bulk levels in InSb.—73-04323
**Shemyakov, A. A.** See Troyanchuk, I. O.
**Shemyakov, A. A.; Klochan, V. A.**
Quadrupole effects and magnetic anisotropy in the NMR spectra of Jahn-Teller $Mn^{3+}$ ions in lithium ferrite.—73-04644
**Shen, Al-Dong; Wang, Hai-Long; Wang, Zhi-Jiang**
Optical absorption of ZnSe-ZnTe strained-layer superlattices.—73-01263
**Shen, Bao-Gen** See Kong, Lin-Shu; Sun, Ji-Jun
**Shen, Bao-Gen; Kong, Lin-Shu; Cao, Lei**
Formation and magnetic properties of rapidly quenched $R_2Fe_{17}C_x$ (R=Gd and Ho) compounds with higher C concentrations.—73-05569
**Shen, Cheng-Fu; Zong, Xian-Fu; Zhu, Pei-Nan**
TEM observation of submicrocrystals in borosilicate glass.—73-03769
**Shen, De-Fang** See Zhou, Yong
**Shen, De-Jiu; Guan, Chang-Bin; Li, Rong-Xiang**
Effects of Al, Si, and $B_4C$ additives on oxidation resistance of $Al_2O_3$-C refractories.—73-07209
**Shen, De-Yuan** See Meng, Xian-Ren
**Shen, Der-Hsien** See Hwang, Chao-Lung
**Shen, Ding-Kun** See Du, Xin-Min
**Shen, Ding-Kun; Huang, Rui-Fu; Li, Han-Liang**
Phase separation and crystallization of a $CaO(MgO)$-$Al_2O_3$-$SiO_2$ slag glass-ceramic by DTEM.—73-03749
**Shen, Ding-Kun; Liu, Ping; Chen, Xian-Qiu; Xu, Shu-Hui**
Effect of fluorine on phase separation of $CaO$-$Al_2O_3$-$SiO_2$ glass.—73-13966
**Shen, Dong-Min** See Oprescu, Dan
**Shen, G.** See Folkard, M. A.
**Shen, H.** See Gerardi, G. J.
**Shen, H.-Y.; Zhou, Y.-P.; Lin, W.-X.; Zeng, Z.-D.; Zeng, R.-R.; Yu, G.-F.**
Second harmonic generation and sum frequency mixing of dual wavelength Nd:$YAlO_3$ laser in flux-grown $KTiOPO_4$ crystal.—73-07789
**Shen, Hong-Guo** See Li, Xiao-Ming
**Shen, Hui-Min** See Chen, Sha-Ou
**Shen, J. M.** See Palsule, C.
**Shen, J.-L.** See Chen, Y.-F.
**Shen, Jian-Yi** See Gao, Xing-Tao
**Shen, Jin-Xi; Zheng, Guo-Zhen; Guo, Shao-Ling; Tang, D.-Y.**
Acceptor-influenced transport behavior of *p*-$Hg_{0.953}Mn_{0.065}Te$.—73-06138
**Shen, Ju-Yun; Feng, Zhi-Jian; Li, Jia-Zhi**
Relationship between structural factor and photochromic behavior of AgX-containing glasses.—73-14271
**Shen, Kelvin K.**
Boron.—73-12262
**Shen, Li-Qing** See Zhou, Fu-Zheng
**Shen, Li; Salvador, Paul A.; Mason, Thomas O.**
Point defect modeling of $La_2CuO_4$-based superconductors.—73-04786
**Shen, Lu; Tan, Beng-Jit; Willis, William S.; Galasso, Francis S.; Suib, Steven L.**
Characterization of dip-coated boron nitride on silicon carbide fibers.—73-08568
**Shen, Lu; Willis, William S.; Suib, Steven L.; Galasso, Francis S.**
Preparation and mechanical properties of SiC/BN/SiC composites using different BN coating methods.—73-09658
**Shen, Min-Zhu** See Cao, Gou-Hui
**Shen, P.** See Liu, H.-S.; Tsaur, S.-S.
**Shen, P.; Chen, S.; Liu, H.-S.**
Annealing-induced defect clustering at $Ni_{1-x}O$-Y partially stabilized $ZrO_2$ interfaces.—73-09388; 73-03077
**Shen, Pei-Kang; Tseung, A. C. C.**
Electrodeposited tungsten trioxide thin films.—73-13042
**Shen, Pou-Yan** See Chen, Shuei-Yuan
**Shen, Pou-Yan; Hon, Yung-Shon**
Precipitation and solidification of calzirtite in liquid-phase-sintered $ZrO_2$ (10.8 mol% CaO) with $TiO_2$ additions.—73-13439
**Shen, Qi-Min; Liang, Pei-Hui**
Optical absorption and size effect in CdS and ZnS microcrystallites.—73-11357
**Shen, Qun** See Finkelstein, K. D.
**Shen, Rong-Gui; Righini, Giancarlo C.**
Characterization of reactive ion etching of glass and its applications in integrated optics.—73-00593

**Shen, T. C.** See Ma, Z.

**Shen, T. C.; Gao, G. B.; Morkoc, H.**
Recent developments in ohmic contacts for III-V compound semiconductors.—73-04466

**Shen, T.-D.; Wang, K.-Y.; Quan, M.-X.**
Formation of nanocrystalline Fe/SiC composite by mechanical alloying.—73-03589

**Shen, T.-H.; Ford, A. C.; Elliott, M.; Williams, R. H.; Westwood, D. J.; Woolf, D. A.**
Internal barriers in GaAs epitaxial layers produced by delta-doped dipoles.—73-07618

**Shen, X.-L.** See Zeng, You-Yi

**Shen, Xiang-Fan**
Complement and synergism of fly ash, granulated basic slag, and silica powder.—73-09861; Modified fly ash.—73-06691

**Shen, Xiao-Dong** See Wu, Xue-Quan

**Shen, Xiao-Hua** See Ma, Jian-Wei

**Shen, Yang; Xu, Zhong-Zi; Xie, Ping; Tang, Ming-Shu**
New method of enhancing cement-aggregate interfaces: I, Ideal aggregate and its effects on interfacial microstructures.—73-10066

**Shen, You-Quan**
Reforming common clay–brick production line into perforated brick one.—73-10689; Wear-resistant double rolls.—73-12207

**Shen, You-Sheng** See Liu, Mei-Lin

**Shen, Z.-G.** See Lin, Q.

**Shen, Z.-X.** See Dessau, D. S.; King, D. M.

**Shen, Z.-X.; Dessau, D. S.; Wells, B. O.; King, D. M.; Spicer, W. E.; Arko, A. J.**
Anomalously large gap anisotropy in the *a-b* plane of $Bi_2Sr_2CaCu_2O_{8+\delta}$.—73-15393

**Shen, Zhi-Jian; Li, Ting-Kai; Ding, Zi-Shang**
Toughening mechanism and mechanical properties of $SiC_w$/Y-TZP composites.—73-06541

**Shen, Zhi-Yuan**
High-temperature superconductor support structures for dielectric resonator.—73-15679

**Shendrik, A. V.** See Tomil'tsev, E. A.

**Sheng, Guang-Yao** See Anderson, Marc A.

**Sheng, Guang-Yao; Chu, Li-Xin; Zeltner, Walter A.**
Nanoparticulate alumina, silica, and aluminosilicate membranes.—73-13145

**Sheng, T. Y.** See Pihlstrom, B. G.

**Sheng, Zheng-Zhi** See Chen, Z. Y.; Xin, Ying

**Sheng, Zheng-Zhi; Hermann, Allen M.**
High-temperature superconductor system comprising $Tl_2Ba_2CuO_{6-}$.—73-04838

**Sheng, Zheng-Zhi; Li, Y. F.; Tang, Y. Q.; Chen, Z. Y.; Pederson, D. O.**
New superconducting 1201-type phase $(Tl,Cr)Sr_2CuO_5$.—73-01613

**Sheng, Zheng-Zhi**
CrTlSrCaCuO and related superconducting systems.—73-04833; M-Tl-Ba-Cu-O high-temperature superconductors wherein M is selected from the group consisting of Ti, Zr, and Hf.—73-11960

**Shepard, A. H.** See Yellen, S. L.

**Shepel'skii, G. A.** See Gasan-Zade, S. G.

**Shepeleva, M. N.; Shkrabina, R. A.; Fenelonov, V. B.**
Production of spherical granules of alumina with controlled porous structure.—73-02982

**Shepeleva, V. V.** See Sokolov, M. T.

**Shepelskii, G. A.** See Gasan-Zade, S. G.

**Shephard, M. S.** See Adjerid, S.; Beall, M. W.

**Shepherd, D. P.** See Hanna, D. C.

**Shepherd, F. R.** See Akano, U. G.

**Shepherd, Laurel** See Ishizaki, Kozo

**Shepherd, W.** See Sudhama, C.

**Shepilov, M. P.** See Zhilin, A. A.

**Shepilov, M. P.; Bochkariov, V. B.**
Calculation of phase separation kinetics in metastable systems for two models of particle nucleation.—73-13931

**Shepilov, M. P.; Zhilin, A. A.**
Modification of the classical theory of crystal nucleation as applied to glasses of nonstoichiometric and stoichiometric compositions.—73-00373

**Sheppard, Laurel M.**
Designing for manufacturing—an update.—73-04909; Pressing technology meets manufacturing challenges.—73-04943; Recent development and the outlook for electronic ceramics: surge in electronic materials continues: I.—73-13640; Three decades of expanding decorating horizons.—73-03425

**Sheppard, Norman** See Hussain, Ghulam

**Sheppard, T.** See Davies, C. H. J.

**Sher, A.** See Berding, M. A.; Chen, A.-B.; Mooney, John B.

**Sher, A.; Feldman, R. D.; Austin, R. F.; Opila, R. L.; Masaitis, R. L.; Zyskind, J. L.**
Fabrication of normal-native oxide *p*-ZnTe heterojunctions by the anodic oxidation of ZnTe MBE layers.—73-14912

**Sherby, O. D.** See Nieh, T. G.; Syn, C. K.

**Shercliff, H. R.** See Bannister, M.; Kaute, D. A. W.

**Sheregii, E. M.** See Virt, I. S.; Wal, A.

**Sheregii, E. M.; Ugrin, Yu. O.**
$Cd_xHg_{1-x}Te$ phonon spectra research by means of magnetophonon resonance.—73-04261

**Sheridan, Philip H.** See Winter, Charles H.

**Sherif, Fawzy G.** See Greco, Carl G.; Vreugdenhil, Willem

**Sheriff, Ali; Lalji, Bashir**
Waste-oil fired kiln.—73-12245

**Sherman, A. B.** See Barash, I. S.

**Sherman, Daniel C.** See Koradia, Pramod B.

**Sherman, E. Ya.** See Arslanbekov, A. Kh.

**Sherman, Jimmy**
Inside look at graphite.—73-15965

**Sherman, N.** See Beretka, Julius

**Shernyakov, Y. M.** See Evstropov, V. V.

**Sherriff, B. L.; Fleet, M. E.; Burns, P. C.**
Tetrahedral site ordering in synthetic gallium albite: a $^{29}Si$ MAS NMR study.—73-02519

**Sherrill, G. K.** See Cukauskas, E. J.

**Sherrit, Stewart; Savin, Chris R.; Wiederick, Harvey D.; Mukherjee, Binu K.; Prasad, S. E.**
Plasma-sprayed lead zirconate titanate–glass composites.—73-11601

**Shershnev, A. A.** See Karimov, Z. F.

**Shershnev, A. A.; Chekrygina, T. M.; Rusanov, Yu. V.; Filonenko, Yu. Ya.; Efremenko, G. N.**
Jet spraying for refractory linings in USTK units.—73-00829

**Sherstinov, V. S.** See Ktitorov, S. A.

**Sherstnev, V. V.** See Baranov, A. N.; Bresler, M. S.

**Sherwin, M. E.; Terry, F. L., Jr.; Munns, G. O.; Herman, J. S.; Woelk, E. G.; Haddad, G. I.**
Investigation and optimization of InGaAs/InP heterointerfaces grown by chemical beam epitaxy using spectroscopic ellipsometry and photoluminescence.—73-15001

**Sherwin, M.** See Nichols, D.

**Sherwood, David E., Jr.; Hardee, Johnnie R., Jr.**
Method for the reactivation of spent alumina-supported hydrotreating catalysts.—73-05228

**Sherwood, P. M. A.**
Corrosion inhibitor surface chemistry studied by core and valence band photoemission.—73-09441

**Shestakov, A. A.** See Krivoruchko, V. N.

**Sheta, N. H.** See Eissa, N. A.

**Sheth, Satish; Brady, A. Patrick**
Laboratory automation in a cement plant.—73-10025

**Shetty, Dinesh K.** See Chao, Luen-Yuan; Dey, Soumya; Ramachandran, N.; Tsai, Jing-Fong

**Sheu, Hwo-Shuenn** See Chao, Kuel-Jung

**Sheu, Jer-Yuan** See Chiou, Bi-Shiou

**Sheu, S.-E.** See Chen, Chia-Fu

**Sheu, Shie-Ping** See Chao, Kuel-Jung

**Sheu, Tzer-Shin**
Infiltration of reaction-bonded silicon nitride with equilibrium Y-Si-O-N melt.—73-05860; Microstructure and mechanical properties of the in situ $\beta$-$Si_3N_4$/$\alpha'$-SiAlON composite.—73-17159

**Shevchenko, N. V.** See Kriven, S. I.

**Shevchenko, O. A.** See Kuzenkova, M. A.

**Shevchenko, O. G.** See Xiang, Yu. N.

**Shevchenko, V. Ya.** See Galakhov, A. V.

**Shevchenko, V. Ya.**
Present status and development of high-technology ceramics in Russia.—73-13636

**Shevchenko, Vladimir Ya.** See Barinov, Sergej M.; zotov, Alexander D.

**Shevchenko, Yu. V.** See Atkarskaya, A. B.

**Shevel, V. N.** See Kosinskaya, A. V.

**Shevelevich, R. S.; Buevich, A. V.; Zhebrovskaya, E. B.; Trofimov, N. N.**
Extended high-temperature superconducting fiber channels based on the sol-gel method and effects of thermophysics of glass fiber forming.—73-15466

**Shevelevich, R. S.**
Glass formation as the recurrent process.—73-13995

**Shevelkov, A. V.; Dikarev, E. V.; Popovkin, B. A.**
Crystal structures of $Hg_4Sb_2I_8$ and $Cd_4Sb_2I_8$.—73-02220

**Shevkoplyas, A. G.** See Vlasov, V. V.

**Shevtsov, A. L.; Malyshev, I. P.; Beiokrys, G. A.**
Production parameters for ceramics based on waste at the Zaporozhe refractories factory.—73-01821

**Shevyakova, E. P.; Zelensky, V. F.; Neklyudov, I. M.; Lifshits, E.; Bereznyak, E. P.; Kanisedal, V. P.**
Effects of electron radiation and gas isostatic treatment on the crystallization of glasses.—73-14368

**Shew, Bor-Yaun; Huang, Jow-Lay**
Toughening mechanisms of $TiB_2/Si_3N_4$ composite.—73-06542; Chemical reactions in $TiB_2/Si_3N_4$ composites.—73-12941

**Shi, Ai-Ru; Jia, Yun-Fa; Shi, Xing-Jun**
Properties of $YBa_2Cu_3O_x$ doped with Si.—73-11880

**Shi, Bo-Rong** See Wang, Ke-Ming

**Shi, Bo-Rong; Wang, Ke-Ming; Wang, Zhong-Lie; Liu, Xiang-Dong; Xu, Tian-Bing; Zhu, Pei-Ran**
Radiation damage behavior of $LiNbO_3$ crystal by MeV F ion implantation.—73-07915

**Shi, C.-X.** See Wang, Y.-Q.

**Shi, Cai-Jun; Day, Robert L.; Wu, Xue-Quan**
Comparison of the microstructure and performance of alkali-slag and portland cement pastes.—73-13693

**Shi, Cai-Jun; Day, Robert L.**
Acceleration of strength gain of lime-pozzolana cement by thermal activation.—73-06620

**Shi, Cai-Jun; Wu, Xue-Quan; Tang, Ming-Shu**
Alkali-activated cementitious systems in China: a review.—73-06623

**Shi, Cai-Jun; Wu, Xue-Quan; Tang, Ming-Shu**
Hydration of alkali-slag cements at 150°.—73-00104

**Shi, De-Xiang** See Brown, Paul W.; Ma, Wei-Ping

**Shi, Di-Xiang** See Grutzeck, Michael W.

**Shi, Dong-Lu**
Factors dominating the transport critical current behavior in high-$T_c$ superconductors.—73-11762

**Shi, F.-L.** See Zhang, S.-J.

**Shi, F.; Xia, J. A.; Andrikidis, C.; Zhao, Y.; Liu, H. K.; Dou, S. X.**
*T*(I)-*O*-*T*(II) structural transition and superconductivity in the Sr-based 123 compounds $YSr_2Cu_{2.8}Mo_{0.1}W_{0.1}O_y$.—73-11930

**Shi, Guo-Hua** See Zhang, Xiu-Miao

**Shi, Guo-Lin** See Tian, Jin-Sheng

**Shi, J.-L.; Li, B.-S.; Yen, T.-S.**
Mechanical properties of $Al_2O_3$ particle–Y-TZP matrix composite and its toughening mechanism.—73-09634

**Shi, J.-L.; Lin, Zu-Xiang**
Characterization of nanosized $ZrO_2$ powder.—73-03124

**Shi, J.-L.**
Characteristic of the pore structures in the compacts of ultrafine zirconia powder.—73-02740

**Shi, Jian-Hui; Chepin, James; Roos, Joseph H., Jr.**
Magnetic-field effects in $NbSe_3$.—73-08909

**Shi, Jing-Zuo** See Wang, Ci-Chang

**Shi, Jing; Tian, Ming-Liang; Tian, De-Cheng; Wang, R.-P.**
Effect of impurities on thermoelectric power in thallium blue bronze $Tl_{0.3}MoO_3$.—73-16458

**Shi, Jun-Jie**
Calculation on design of small shaft kiln for firing bricks.—73-08463

**Shi, Ke-Xin; Jin, Ji-Rong; Yu, Zheng**
Effect of irradiation with neutrons of low fluence on $T_c$ of $Bi_2Sr_2CaCu_2O_y$.—73-11734

**Shi, Ke-Xing** See Zeng, Zhao-Yang

**Shi, Lei** See Wu, Wen-Bin

**Shi, Li-Ping** See Chen, Yi-Min; Zhang, Pei-Xing

**Shi, Lu-Ping; Wang, Ji-Yang; Jiang, Min-Hua; Liu, Yao-Gang; Wei, Jing-Qian**
Preparation of $KTiOPO_4$ crystal planar waveguides and measurement of their effective refractive indices.—73-08957

**Shi, Mei-Guang; Zhou, Fu-Zheng**
Ancient flat glass unearthed from China.—73-13660

**Shi, N.; Arsenault, R. J.**
Influence of the thermally induced plasticity and residual stresses on the deformation of SiC/Al composites.—73-03602

**Shi, Qiang** See Xiao, Han-Ning

**Shi, Shang-Zhao**
Relationships between toughening mechanisms of ceramics.—73-17420

**Shi, T.** See Zheng, L.

**Shi, Tian** See Desu, Seshu B.

**Shi, Xing-Jun** See Shi, Ai-Ru

**Shi, Y. J.** See Tang, Y. Q.

**Shi, Ying-Ming** See Yao, Shu-Gang

**Shi, Yuan; Ragey, J. P.; Haugen, H. K.**
Continuous wave, *Q*-switched, and mode-locked operation of a laser-pumped Nd:LNA laser.—73-16428

**Shi, Yuan; Ragey, J. P.; Poulsen, Ove**
Dye laser-pumped $Pr^{3+}$-doped fiber laser's basic parameter investigation, cw operation, and *Q*-switched operation.—73-14159

**Shi, Z. Q.** See Jia, Q. X.

**Shi, Z. Q.; Anderson W. A.**
Electrical and optical characterization of metal/*n*-InP interfaces formed by a cryogenic process in high vacuum.—73-08848

**Shi, Z. Q.; Jia, Q. X.; Anderson, W. A.**
Development and fabrication of thin film $BaTiO_3$ capacitors using radio-frequency magnetron sputtering.—73-07297

**Shi, Zhen-Zhu** See Zhuang, Jian

**Shi, Zheng-Rong**
Growth of thin-film silicon on glass substrates from Zn-based solutions.—73-05835

**Shi, Zhi-Cheng** See Shu, Xing-Tian

**Shi, Zhi-Xiang; Jin, Ji-Rong; Zhang, Yi-Tong**
Effects of slow neutron irradiation on superconductive films.—73-15446

**Shiau, F.-S.; Fang, T.-T.**
Effects of Mn dopant and Mn-La codopant on the sintering behavior and electrical properties of barium titanate.—73-04294

**Shiau, L.-I.** See Su, Y.-L.

**Shibagaki, Shigeki** See Akita, Chiyoshi

**Shibagaki, Shigeki; Ito, Kenji; Akita, Chiyoshi; Haneda, Hajime; Hishita, Shunichi; Tanaka, Junzo**
Conduction properties of grain boundary in $SrTiO_3$-$Bi_2O_3$ capacitors.—73-00940; 73-10926

**Shibagaki, Shigeki; Ito, Kenji; Haneda, Hajime; Tanaka, Junzo; Shirasaki, Shinichi**
Phase and microstructure of $MgTiO_3$ ceramic fired in reducing atmosphere.—73-10980; 73-01007

**Shibahara, H.** See Taguchi, H.

**Shibaoka, Kazuo** See Suzuki, Kouichi

**Shibaoka, Kazuo; Akimoto, Toshio; Suzuki, Kouichi**
Method of producing a glass front panel protected from coloring by electron rays.—73-03952

**Shibaoka, Kazuo; Miwa, Takao; Uehara, Masashi; Akimoto, Toshio; Kamisaku, Katsuya**
Glass pressure-vessel for a cathode ray tube.—73-00734

**Shibasaki, Nobuyuki** See Yuzawa, Yukio

**Shibasaki, Yasuo** See Oda, Kiichi; Ohshima, Kazuyuki; Sano, Saburo; Tone, Kisato

**Shibata, H.** See Ohta, Hiromichi

**Shibata, K.** See Nozaki, Hiroshi

**Shibata, Kazuyoshi** See Nanataki, Tsutomu

**Shibata, Kenichi** See Takahashi, Hisakazu

**Shibata, Kenichi; Kimura, Kohichi; Hara, Tomohiko; Takagi, Tatsuo; Goto, Yoshihiro**
Refractories for use in firing ceramics.—73-00890

**Shibata, M.** See Fukushima, Toru

**Shibata, Masatoshi; Isonage, Teruto; Kamiryo, Eiji; Shinohara, Kiyoshi**
Coating composition for glass containers.—73-10622

**Shibata, N.** See Jupina, M. H.

**Shibata, Noriyoshi** See Aoyama, Satoshi; Ishikawa, Yukari

**Shibata, Seigou** See Ino, Takashi

**Shibata, Shuichi; Kitagawa, Takeshi; Okazaki, Hisaaki; Kimura, Takao; Horiguchi, Masaharu**
Process for preparing oxide powders and superconducting oxides.—73-11991

**Shibata, Takashi** See Ishii, Yoshiro

**Shibata, Tsutomu** See Kubo, Fuminobu

**Shibukawa, Atsushi** See Katoh, Yujiro

**Shibuta, Nobuhiro** See Sato, Kenichi

**Shibutani, Kazuyuki** See Egi, Toshio; Chazono, Hirokazu

**Shibuya, Masaki** See Yamamura, Takemi

**Shibuya, Takehiro; Sakane, Takashi; Hashibe, Yoshio**
Colored crystallized glass article and method for producing the same.—73-10623

**Shibuya, Yotsugi; Wang, Su-Su**
Homogenization theory for fiber composites with imperfect interface at elevated temperatures.—73-03597

**Shichi, H.** See Arlinghaus, H. F.
**Shieh, C. L.** See Raghuraman, R.
**Shieh, Tsay-Jiu** See Klemer, David P.
**Shields, A. J.** See Sapega, V. F.
**Shields, Christopher S.** See Lawton, Carl W.
**Shields, P. J.** See Peterman, D. W.
**Shields, P. J.; Paget, K. M.; Wigen, P. E.**
Angular dependence of auto-oscillation in YIG.—73-04589
**Shifton, A.** See Bazil, M. A.
**Shiga, Hiroshi; Ismail, Mohamed G. M. U.; Katayama, Keiichi**
Sintering of $ZrO_2$-toughened mullite ceramic and its microstructure.—73-03012
**Shiga, Hiroshi; Tsunatori, Hideo; Ismail, Mohamed G. M. U.; Katayama, Keiichi**
Synthesis and sintering of MgO-doped mullite/$ZrO_2$ composite powders using the sol-gel method.—73-06083; 73-13300
**Shiga, Shoji; Uno, Naoki; Enomoto, Noritsugu; Kikuchi, Hiroyuki**
Method of manufacturing an oxide superconductor/metal laminate.—73-01720
**Shiga, Shoji; Uno, Naoki; Kikuchi, Hiroyuki**
Ceramic superconductor wire and method of manufacturing the same.—73-11947
**Shigaki, Noriyoshi** See Yamamoto, Yoshiharu
**Shigegaki, Yasuhiro; Inamura, Takashi; Suzuki, Akihiko; Sasa, Tadashi**
High-temperature fatigue properties of silicon nitride in nitrogen atmospheres.—73-06452
**Shigematsu, Ichinori** See Nakamura, Mamoru
**Shigematsu, Ichinori; Kanayama, Kouzou; Hirai, Yukio; Nakamura, Mamoru**
Machining of cordierite ceramics by $CO_2$ laser.—73-05905; 73-16856
**Shigematsu, Koji** See Ishikawa, Yuichiro
**Shigematsu, Toshihiko** See Machida, Nobuya
**Shigemitsu, Takashi** See Ni, Bao-Rong
**Shigemura, Takashi** See Ikuma, Yasuro
**Shigenaka, K.; Sugiura, L.; Nakata, F.; Hirahara, K.**
Effects of growth rate and mercury partial pressure on twin formation in HgCdTe(111) layers grown by metallorganic chemical vapor deposition.—73-11172
**Shigesato, Yuzo; Paine, David C.; Haynes, T. E.**
Effect of ion implantation on the electrical and microstructural properties of tin-doped indium oxide thin films.—73-02581
**Shigeta, Mitsuhiro** See Suzuki, Akira
**Shigeyama, Yoshihide** See Ihara, Chiaki
**Shigyo, Naoyuki** See Fukuda, Sanae
**Shih, C. F.** See He, Ming-Yuan
**Shih, C. K.** See Gwo, S.
**Shih, H. D.** See Strozier, J.
**Shih, H.-C.** See Tsai, M.-T.
**Shih, H.-C.; Sung, C.-P.; Fan, W.-L.; Hsu, W.-T.**
Growth and morphological changes of chemically vapor deposited diamond in the presence of argon.—73-16806
**Shih, I.** See Phong, L. Ngo
**Shih, M. C.** See Williams, S.
**Shih, O. W.; Aggarwal, R. L.; Vu, T. Q.; Becla, P.**
Band-edge magnetoreflectance and magnetization of $Cd_{1-x}Co_xTe$ [x=0.00383].—73-01084
**Shih, Wan-Y.** See El-Sherif, M. A.; Shih, Wei-Heng
**Shih, Wei-Heng; Lu, Qing; Shih, Wan-Y.**
Crystallization behavior in precursor-modified sol-gel lead titanate powders.—73-04543
**Shih, Wei-Heng; Shih, Wan-Y.; Kim, Seong-Il; Aksay, Ilhan A.**
Equilibrium-state density profiles of centrifuged cakes.—73-05791
**Shih, Y. H.** See Zhang, H. Y.
**Shih, Y.-C. A.; Neikirk, D. P.; Streetman, B. G.; Magee, C. W.**
Effects of As flux on Si delta-doped GaAs.—73-11170
**Shiina, Yasushi** See Nakamura, Yoshiko Oi; Ohuchi, Masahiko
**Shikano, Hiroshi** See Ikesue, Akio; Kawano, Fusao; Kawasaki, Hisato
**Shikano, Hiroshi; Harada, Tsutomu; Iitsuka, Shoji; Kataoka, Shinichirou**
Prevention of alumina deposition in submerged nozzles.—73-00840
**Shikano, Hiroshi; Harada, Tsutomu; Yamamoto, Hiroshi; Tamaki, Kenji**
Application of $Cr_2O_3$-bearing–magnesia raw materials to magnesia-carbon bricks.—73-00776
**Shikano, Hiroshi; Tsutomu, Harada; Yamamoto, Hiroshi; Tamaki, Kenji; Suruga, Toshihiro**
Permeability of MgO-C bricks.—73-00837
**Shikano, Tomoyuki** See Tsubaki, Junichiro
**Shikata, Ryoichi** See Tanaka, Keisuke
**Shikata, Shinichi** See Nakahata, Hideaki; Nakanishi, Hidenori
**Shikenbaru, Tohru** See Tomiki, Tetsuhiko
**Shikov, A. A.** See Panova, G. Kh.
**Shiktorov, N.** See Babeanskas, E.
**Shilelka, A.** See Kavalyauskas, Yu. I.
**Shilova, Z. V.** See Chichagov, A. V.
**Shim, J.-D.** See Park, T.-H.
**Shim, So-Jeong** See Shin, Woo-Suck
**Shim, Young-Jae** See Ahn, Chung-Sun
**Shima, Hiroshi; Nakatsuji, Takeshi; Ishii, Mitsuhiro; Kohno, Kiyoshi**
Strength development of lime mortar and cement mortar including pozzolana with different finenesses.—73-10167
**Shima, Masashi** See Yagi, Katsumichi
**Shima, Yoshinobu** See Suzuki, Makoto
**Shimabukuro, Hirofumi** See Tomiki, Tetsuhiko
**Shimada, Daisuke** See Ohuchi, Masahiko
**Shimada, Fumio; Kainuma, Tadashi**
Cemented carbide.—73-10304
**Shimada, H.** See Inumaru, Kei
**Shimada, Kinji** See Hirata, Yoshihiro
**Shimada, M.** See Taguchi, H.
**Shimada, Masahiko** See Endo, Tadashi; Kobayashi, T.; Takizawa, Hirotsugu
**Shimada, Shiro** See Ueda, Midori
**Shimada, Tadakatsu** See Edagawa, Noboru
**Shimada, Yoshihito; Machi, Yoshio**
Selective growth of diamond using an iron catalyst.—73-13249
**Shimada, Yuzo** See Kata, Keiichiro
**Shimahara, Hiroshi**
Antiferromagnetic transition temperature and spin correlations in quasi-two-dimensional spin-fermion model.—73-07989
**Shimakage, Kazuyoshi** See Sato, Tadao
**Shimakawa, Yuichi** See Manako, Takashi
**Shimamori, Toru** See Watanabe, Masakazu
**Shimazaki, M.; Hirota, Ken; Yamaguchi, Osamu; Fujii, Souichi; Tamamaki, Masahiro; Inamura, Suguru**
Metastable zirconia phases prepared from zirconium alkoxide and yttrium acetylacetonate: I. Formation and characterization of metastable zirconia solid solutions.—73-08666
**Shimchak, R.** See Karneeva, S. S.
**Shimek, Richard F.** See Blanchette, Curtis N.
**Shimizu, Akira** See Noge, Hiroshi; Tsumura, Tomoki
**Shimizu, Fuminao** See Takashige, Masaaki
**Shimizu, Hideaki** See Fukuoka, Hirofumi
**Shimizu, Hideki; Togashi, Takeyoshi; Higuchi, Hitoshi; Oda, Toshio; Yoshida, Hitoshi**
Oxide superconductor lamination.—73-11986
**Shimizu, Hideki; Togashi, Takeyoshi**
Superconductive tube for magnetic shielding and manufacturing method therefor.—73-04885
**Shimizu, Isamu** See Fujiwara, Hiroyuki
**Shimizu, J.** See Suzuki, K.
**Shimizu, Junichi** See Nido, Masaaki
**Shimizu, K.; Katayama, M.; Funaki, H.; Arai, E.; Nakata, M.; Ohji, Yuzuru**
Stoichiometry measurement and electric characteristics of thin-film $Ta_2O_5$ insulators for ultra-large-scale integration.—73-07358
**Shimizu, Kazuyuki** See Kaneko, Katsumi
**Shimizu, Koji** See Ogasawara, Toshio
**Shimizu, M.** See Shiosaki, T.
**Shimizu, Masataka** See Nakashima, Tadao
**Shimizu, Mutsuo** See Fukuoka, Hirofumi
**Shimizu, Noriyuki** See Kubo, Yukio; Michishita, Kazuo
**Shimizu, Noriyuki; Michishita, Kazuo; Higashida, Yutaka; Yokoyama, Hisanori; Hayami, Yumi; Kubo, Yukio**
Contact resistance and *I-V* characteristics in an Ag-doped Bi-Sr-Ca-Cu-O superconductor.—73-01510
**Shimizu, S.; Yamamuro, K.; Fuwa, K.; Yanagida, H.; Yamakawa, H.; Ino, S.**
In situ observation of the growth process of the InAs-GaAs heteroepitaxial system using scanning microprobe reflection high-energy electron diffraction–total reflection angle X-ray spectroscopy.—73-05419
**Shimizu, Tadao** See Ohara, Yoshinobu; Tsubone, Daisuke
**Shimizu, Tadashi**
Electric field gradient at copper nuclei in oxides.—73-02250; Ionic model of some aspects of Cu NQR spectra in superconducting oxides.—73-01583
**Shimizu, Takaaki; Takita, Masatoshi**
Synthetic silica glass articles and a method for manufacturing them.—73-10666
**Shimizu, Takashi** See Nonaka, Hidehiko
**Shimizu, Y.** See Machida, M.
**Shimizu, Yasuhiro** See Egashira, Makoto
**Shimizu, Yasuhiro; Feng, Chang-Dong; Nakamura, Yuichiro; Egashira, Makoto**
Intellectualization of semiconductor gas sensors by layer building of oxide thin films with heterostructure.—73-04370
**Shimizu, Yoshiaki** See Okuda, Hiroyuki
**Shimizu, Yoshio; Kotani, Shoji; Kawaguchi, Masatugi**
Semiconductor device having a mechanical buffer.—73-01383
**Shimizu, Youichi** See Deshimaru, Yuichi; Nagase, Katsumi
**Shimizu-Iwayama, Tsutomu; Ohshima, Mitsutoshi; Nilmi, Tetsuji; Nakao, S.; Saitoh, K.; Fujita, T.**
Visible photoluminescence related to Si precipitates in $Si^+$-implanted $SiO_2$.—73-09429
**Shimizugawa, Yutaka** See Kataoka, Masako; Nukui, Akihiko
**Shimmura, Kohji** See Nakamota, Ichiro
**Shimobayashi, Osamu** See Tsuchinari, Akihiro
**Shimoda, Atsushi** See Mallon, Thomas G.
**Shimoda, Kouhei** See Yamakawa, Akira
**Shimoda, Kouhei; Maeda, Takao; Sogabe, Kouichi; Miyake, Masaya**
Heat-conductive colored aluminum nitride sintered body and method of preparing the same.—73-12468
**Shimoda, Kouhei; Maeda, Takao; Sogabe, Kouichi; Miyake, Masaya**
Heat-conductive colored aluminum nitride sintered body.—73-12467
**Shimoda, Shuichiro** See Kuwajima, Hidegi
**Shimoda, Tatsuya** See Ishibashi, Toshiyuki
**Shimoda, Tatsuya**
Current status and future aspects of bonded rare-earth magnets.—73-04601; Science and technology of composite materials—resin-bonded magnet.—73-04649
**Shimoda, Zenya** See Sasamoto, Tadashi
**Shimojima, Hiromasa** See Ishii, Mamoru; Tsukamoto, Keizou
**Shimokawa, Katsuyoshi; Sekiguchi, Itsuma; Suzuki, Yoshikazu; Ueda, Yoshinobu**
Synthesis of Si-O-C fibers from rice husk carbide—explanation of formation condition.—73-03055; Synthesis of Si-O-C fibers from rice husk carbide—explanation of formation condition.—73-13310
**Shimokawa, Katsuyoshi; Sekiguchi, Itsuma; Suzuki, Yoshikazu; Yabe, K.; Ueda, Yoshinobu**
Synthesis of ceramic fibers in the Si-O-C system.—73-03044
**Shimomura, Kazuhiko; Arai, Shigehisa; Suematsu, Yasuharu**
Operational wavelength range of GaInAs(P)-InP intersectional optical switches using field-induced electrooptic effect in low-dimensional quantum-well structures.—73-01262
**Shimomura, Koji** See Okada, Toshitake
**Shimomura, Y.** See Enpuku, K.
**Shimono, Fujio**
Surface-treated glass for containers.—73-03893; Tick-proof ceramics.—73-05183
**Shimono, Isao; Konishi, Hajime**
Preparation of $(La_{1-x}Sr_x)_2MnO_4$ with the $K_2NiF_4$ structure and its electrical properties.—73-05619; 73-11400
**Shimono, Isao; Nagata, Shoichi; Konishi, Hajime; Hamaguchi, Yoshikazu**
Formation of Bi-Pb-Sr-Ca-Cu-O superconductor from precursors prepared by the citrate method.—73-15480; Preparation of Bi-Pb-Sr-Ca-Cu-O superconductor by the citrate method.—73-15594
**Shimono, Isao; Nagata, Shoichi; Konishi, Hajime**
Preparation of Bi-Pb-Sr-Ca-Cu-O superconductor using $Bi(Sr_{0.5}Ca_{0.5})O_x$ as a starting material.—73-15595
**Shimono, Isao; Sugawara, Tomoaki; Ishimori, Fumitaka; Ohara, Yoshinobu**
Preparation of $Pb(Zr_{1-x}Ti_x)O_3$ ceramic fibers by the alginate method.—73-16928
**Shimono, Isao**
Simplified method of synthesis for Bi-Pb-Sr-Ca-Cu-O superconductors via solid-state reaction.—73-04805; 73-15620
**Shimony, Y.** See Burshtein, Z.
**Shimoo, Toshio** See Inagaki, Hideya; Kakimoto, Kenichi
**Shimoo, Toshio; Chen, He-Min; Kakimoto, Kenichi; Okamura, Kiyohito**
Suppression of pyrolysis of Si-C-O fiber [Nicalon] with oxide film.—73-17203; 73-06074
**Shimoo, Toshio; Chen, He-Min; Okamura, Kiyohito**
Mechanism of oxidation of Si-C-O fibers.—73-03225; 73-13479; Pyrolysis of Si-C-O fibers (Nicalon) at temperature from 1473 to 1673 K.—73-02985; 73-13222
**Shimoo, Toshio; Hayatsu, Toshihide; Narisawa, Masanori; Takeda, Michio; Ichikawa, Hiroshi; Seguchi, Tadao**
Mechanism of ceramization of electron-irradiation-cured polycarbosilane fiber.—73-09201; 73-16860; Pyrolysis of low-oxygen SiC fiber prepared by electron-irradiation curing method.—73-16964
**Shimoo, Toshio; Kakimoto, Kenichi; Chen, He-Min; Okamura, Kiyohito**
Thermal stability of amorphous SiC fiber coated with oxide film.—73-05674; 73-17056
**Shimoo, Toshio; Kobayashi, Yasuhiro; Okamura, Kiyohito**
Kinetics of reaction between $Si_3N_4$ and Cr in $N_2$ atmosphere.—73-13857; Kinetics of reaction between $Si_3N_4$ and Mo.—73-13858; Kinetics of reaction of $Si_3N_4$ with Ni.—73-00247; 73-10247
**Shimoo, Toshio; Maeda, Takashi; Okamura, Kiyohito**
Pyrolysis of Si-C-O fiber in alumina powder.—73-16965
**Shimoo, Toshio; Sugimoto, Masaki; Okamura, Kiyohito**
Effect of oxygen on pyrolysis of SiC fiber synthesized from polycarbosilane.—73-05764; 73-13012; Kinetics of curing of polycarbosilane fiber by oxidation treatment.—73-05889
**Shimoo, Toshio**
Carbon removal and oxidation of SiC powder synthesized by carbothermic reduction of silica.—73-02733
**Shimosaka, Kenichi** See Kobayashi, Hidehiko
**Shimosaka, Kenichi; Kobayashi, Hidehiko; Mitamura, Takashi**
Preparation of ZrC/$Al_2O_3$ fine composite powders by thermite reaction.—73-16944
**Shimoyama, Junichi** See Kumakura, Hiroaki; Mizusaki, Junichiro
**Shimoyama, Junichi; Matsubara, Toshiya; Morimoto, Takeshi; Kondoh, Shinji**
Oxide superconductor comprising $BaBO_3$ (where B is Zr, Sn, Ce, or Ti).—73-01728
**Shimoyama, Yoshihide** See Inoue, Kazuhisa; Ueno, Masayuki
**Shimoyashiki, Kazuo** See Takizawa, Hirotsugu
**Shimozuma, M.** See Tochitani, G.
**Shimpo, Akihiro; Ide, Hideo; Ueki, Masanori**
ALON and its composite ceramics.—73-05258; ALON and its composite ceramics.—73-12912
**Shimura, F.** See Zhong, L.
**Shimura, H.; Hashimoto, F.; Yoshioka, J.**
Design of ultraprecision grinding machines for ductile mode grinding of brittle materials.—73-06371
**Shimura, K.** See Matsuda, Y.
**Shimura, Kenichi** See Daitoh, Yoshihiro
**Shimura, Sadanori** See Lee, Sung-Soo
**Shin, Byoung-Chul**
Selective sensing of carbon monoxide gas in CuO-banded ZnO ceramics.—73-15157
**Shin, C. H.; Bugli, G.; Djega-Mariadassou, G.**
Preparation and characterization of titanium oxynitrides with high specific surface areas.—73-02934
**Shin, Dae-Yong** See Choi, Sung-Il; Seo, Jeong-Min
**Shin, Dae-Yong; Han, Sang-Mok**
Control of pore characteristics of porous glass in the $ZrO_2$-$SiO_2$ system prepared by the sol-gel method.—73-10512
**Shin, Dong-Jin** See Lee, Hyung-Bock
**Shin, Dong-Won** See Kim, Kwang-Ho; Yeom, Sun-Min
**Shin, Dong-Woo; Tanaka, Hidehiko**
Low-temperature processing of ceramic woven fabric/ceramic matrix composites.—73-05902
**Shin, Dong-Wook; Tomozawa, Minoru**
Electrical resistivity of silica glasses.—73-14179
**Shin, H.-J.** See Han, K.-H.; Jeong, J.-I.

**Shin, H.-S.** See Kim, T.-W.; Yoon, Y.-S.

**Shin, Hyun-Ho** See Kim, Byoung-Ho

**Shin, Hyun-Ho; Berta, Yolande; Speyer, Robert F.**
Fiber matrix interaction in SiC fiber reinforced ceramic and intermetallic composites.—73-09452

**Shin, Hyun-Ho; Kirchain, Randolph; Speyer, Robert F.**
Effect of $Ta_2O_5$ matrix additions on the microstructure and mechanical properties of SiC fiber-reinforced lithia-alumina-silica composites.—73-17126

**Shin, Hyung S.**
Method of making metal oxide semiconductor field effect transistors with a lightly doped drain structure having a recess-type gate.—73-04524

**Shin, Hyung-Seop** See Maekawa, Ichiro

**Shin, Hyung-Sup; Kwon, Soon-Joo**
XRD study on the structures of ferrites: hematite, Ba ferrite, and $Zn_2Y(Ba_2Zn_2Fe_{12}O_{22})$.—73-12737

**Shin, Hyung-Sup; Lee, Sang-Gul; Kwon, Soon-Joo**
Properties of hexaferrite $Co_2Y(Ba_2Co_2Fe_{12}O_{22})$ prepared by coprecipitation method.—73-04643

**Shin, Hyung-Sup; Oh, Jae-Hee**
Microstructures and LPG sensing properties of maghemite ($\gamma$-$Fe_2O_3$).—73-03177

**Shin, J.; Geib, K. M.; Wilmsen, C. W.; Chu, P.; Weider, H. H.**
Thermal oxidation of AlGaAs.—73-01351

**Shin, Jong-Yoon** See Baik, Yong-Hyuck

**Shin, S. H.** See Arias, J. M.; Cheung, J. T.

**Shin, S. H.; Arias, J. M.; Edwai\. D. D.; Zandian, M.; Pasko, J. G.; DeWames, R. E.**
Dislocation reduction in HgCdTe on GaAs and Si.—73-07449

**Shin, S. H.; Arias, J. M.; Zandian, M.; Pasko, J. G.; Bubulac, L. O.; De Wames, R. E.**
Annealing effect on the *p*-type carrier concentration in low-temperature-processed arsenic-doped HgCdTe [MCT].—73-11068

**Shin, S.** See Huang, H.-H.

**Shin, Woo-Suck** See No, Kwang-Soo

**Shin, Woo-Suck; Shim, So-Jeong; No, Kwang-Soo; Jang, Gun-Eik; Kim, Won-Baek**
Directional growth of extruded $YBa_2Cu_3O_{7-x}$ superconductors.—73-15421

**Shin, Yu-Seon** See Jeong, Soo-Jong

**Shinar, R.; Leksono, M.; Shanks, H. R.**
Effect of boron doping on the surfaces of diamond thin films.—73-05754

**Shinbo, Takashi** See Saitou, Yoshiaki

**Shinbo, Yukio; Ono, Moriaki; Kabasawa, Makoto; Kosuga, Shigeyoshi**
Method for manufacturing oxide superconducting article.—73-01713

**Shinde, Subhash L.** See Casey, Jon A.

**Shindo, Kazuhiko** See Enoki, Toshiaki

**Shindo, Mikio** See Miyamoto, Yoshiko

**Shindo, Yasuhide** See Mumtaz, K.

**Shindo, Yasuhide**
Thermal shock of cracked composite materials with temperature-dependent properties.—73-05670

**Shinkai, S.** See Tomizaki, Marcelo

**Shinkuma, Yoshikane** See Machida, Nobuya

**Shinno, H.; Kitajima, M.**
Oxidation of silicon in rf plasma measured by rapid in situ during process ellipsometry.—73-06319

**Shinohara, A. H.; Sato, T.; Saito, F.; Tomioka, T.; Arai, Y.**
Novel method for measuring direct compressive properties of carbon fibers [CF's] using a micromechanical compression tester.—73-15826

**Shinohara, K.** See Murakami, S.

**Shinohara, Kiyoshi** See Shibata, Masatoshi

**Shinohara, Kunio; Murai, Takeshi**
Packing structure of powder compact [analyzed] by void-size distribution.—73-17179

**Shinohara, Masayuki** See Han, Xiao-Yi

**Shinohara, Nobuhiro** See Numata, Hideji; Sugiura, Isao

**Shinohara, Toshiyuki** See Enami, Hiroyoshi; Hoshizaki, Hiroki

**Shinohara, Yasuaki; Tamura, Shinichi**
Progress in application technology of refractories to steel industry.—73-04013

**Shinohara, Yoshikazu** See Shiota, Ichiro

**Shinomiya, Genichi** See Nakajima, Shigeharu

**Shinosaki, Akira** See Fujita, Hideo

**Shinosawa, Katsuhiro** See Bentz, Joseph C.

**Shinosawa, Noriko** See Yasumoto, Takaaki

**Shinozaki, Kazuo** See Funakubo, Hiroshi; Ikeda, Masaki; Kanda, Hajime; Kieda, Nobuo; Lee, Seok-Keun; Nishiyama, Shin; Otsu, Masato; Sakurai, Osamu; Sumino, Hiroyasu; Wakiya, Naoki; Yamamoto, Hiroki

**Shinozaki, S.** See Yasutomi, Yoshiyuki

**Shintaku, Hidetaka** See Fujimoto, Manabu

**Shintaku, Hidetaka; Nojima, Hideo; Koba, Masayoshi; Nagata, Masaya**
Method for fabricating oxide superconducting coatings.—73-15682

**Shintaku, Toshihiro; Uno, Takehiko; Kobayashi, Morio**
Magnetooptic channel waveguides in Ce-substituted yttrium iron garnet.—73-11665

**Shintani, Hideaki** See Liao, Wen-Ming

**Shintani, Y.** See Ueta, Yoshihiro

**Shinya, Y.** See Gomyo, K.

**Shioda, Yuji**
R&D trends in cement and concrete.—73-13771

**Shiogai, Tatsuya** See Yamagishi, Chitake

**Shiogai, Tatsuya; Nishi, Yoshitsugu; Yamagishi, Chitake**
Process for producing ß-SiAlON-based sintered bodies.—73-12510

**Shiohara, Y.** See Kanamori, Yasuo; Kikuchi, K.; Murakami, Hirohiko; Nishino, Junya; Sugimoto, Tsunemi

**Shiojiri, M.** See Takahashi, N.

**Shiokawa, N.** See Saiki, J.

**Shiomi, Haruhisa; Nakamura, Masahiko; Matsumura, Yoshiaki; Fujimura, K.; Ishigame, J.; Onoue, K.**
Influence of the matrix glass and $Al_2O_3$ substrate on the electrical conduction paths in the $SnO_2$ thick-film resistor system.—73-10962

**Shiomi, Haruhisa; Nakamura, Masahiko; Matsumura, Yushiaki**
Influence of the matrix glaze and $Al_2O_3$ substrate on the electrical conduction paths in the $SnO_2$ thick-film resistor system.—73-01211

**Shiomi, Haruhisa; Nakamura, Masahiko; Satou, Kohichi; Kobayashi, Tohru**
Semiconductive indium oxide glass composite: I, Influence of chemical composition of glass matrix on microstructure and electrical conductivity.—73-04478; 73-15158

**Shiomi, Haruhisa; Nakamura, Masahiko; Watanabe, Kunihiko**
Preparation of semiconductive tin oxide–glass composite by sol-gel process.—73-15114

**Shiomi, Hiromu; Nishibayashi, Yoshiki; Fujimori, Naoji**
Semiconductor device having differently doped diamond layers.—73-04533

**Shiomitsu, Toru** See Machida, M.

**Shiosaki, T.; Shimizu, M.**
Growth and characterization of ferroelectric thin films by the photo-CVD process.—73-15267

**Shiosaki, Tadashi**
Piezoelectric thin films.—73-01425

**Shiota, I.** See Yamada, Y.

**Shiota, Ichiro; Imai, Yoshio; Shinohara, Yoshikazu; Ikeno, Susumu**
Theoretical analysis for fiber orientation observed in one visual field.—73-06538

**Shioya, Jun** See Takahashi, Kenichi

**Shioya, Kazuhide** See Komatsu, Takayuki

**Shioya, Yoshihiro** See Yasue, Tamotsu

**Shioyama, H.; Narisawa, M.; Adachi, K.**
Preparation of carbon fiber/carbon composites using intercalated carbon fibers.—73-13184

**Shiozaki, Yoichi** See Haga, Hisashi

**Shipov, I. A.** See Chaplanov, Victor A.; Galkin, Igor M.

**Shipunova, S. Yu.** See Yablokov, Yu. V.

**Shipway, P. H.; Hutchings, I. M.**
Fracture of brittle spheres under compression and impact loading: I, Elastic stress distributions.—73-08873; Fracture of brittle spheres under compression and impact loading: II, Results for lead glass and sapphire spheres.—73-09600; Influence of nozzle roughness on conditions in a gas-blast erosion rig.—73-06461

**Shirafuji, Junji** See Fujii, Tatsuhiko

**Shiragami, Tsutomu; Ankyu, Hirofumi; Fukami, Shinako; Pac, C.; Yanagida, S.; Mori, H.**
Semiconductor photocatalysts: X, Visible-light-induced photoreduction or aromatic ketons and electron-deficient alkenes catalyzed by quantized CdS.—73-07793

**Shirai, H.** See Ossikovski, R.

**Shirai, Hajime** See Fujiwara, Hiroyuki

**Shirai, Hiroo** See Sagawa, Masato

**Shirai, Takayuki** See Kawai, Kazuyuki

**Shiraishi, Atsunori** See Katsuki, Hiroaki

**Shiraishi, Eiichi; Baba, Hideyuki; Tsuchitani, Kazuo; Ohata, Tomohisa**
Catalyst for purifyng automotive exhaust gas.—73-03673

**Shiraishi, K.** See Abdullah, M. H.; Sato, Takashi

**Shiraishi, M.; Yoshizawa, N.; Ohkawa, K.**
Microtexture of high surface area activated carbons.—73-13432

**Shiraishi, Minoru** See Maruyama, Katsuhisa

**Shirakawa, Yukihiko** See Yano, Yoshihiko

**Shiraki, Y.** See Fukatsu, Sumusu; Takahashi, Yutaka

**Shiraki, Yasuhiro** See Takahashi, Shigeki

**Shiralagi, K.** See Maracas, G. N.

**Shirane, Gen** See Sato, Masatoshi

**Shiranita, Akira** See Nakayama, Susumu

**Shirasaka, Tokuhiko** See Uchida, Shunichiro; Uchikawa, Hiroshi

**Shirasaka, Tokuhiko; Hirao, Hiroshi; Uchida, Shunichiro**
Pore structure of clinker and its grindability estimated by different grinding types in mill.—73-10085

**Shirasaki, Shinichi** See Izaki, Toru; Shibagaki, Shigeki

**Shirasu, Tetsuo**
Piezoelectric effect device.—73-04586

**Shiratani, Kazuhiko** See Sakashita, Keiichi

**Shirayone, S.** See Takahashi, Kazue

**Shirazi, M.** See Babic, D. I.

**Shirey, L. M.** See Dobisz, E. A.

**Shirkhanzadeh, M.; Azadegan, M.**
Hydroxyapatite particles prepared by electrocrystallization from aqueous electrolytes.—73-05851

**Shirkhanzadeh, M.**
Electrochemical fabrication of bioactive composite coatings on Ti6Al4V surgical alloy.—73-13832

**Shiroyama, M.; Komagata, K.; Tamamura, R.**
Glass shielding effects of protons in space.—73-14196

**Shiryaev, A. A.** See Orlov, A. V.

**Shiryaev, S. V.** See Dutov, A. G.

**Shishiba, Hideki** See Takeda, Shuichi

**Shishido, Hiroshi** See Ishizaki, Futoshi

**Shishkina, T. N.; Podlesov, V. V.; Stolin, A. M.**
Microstructure and properties of extruded SHS materials.—73-17163

**Shishkov, N. V.**
Superconducting glass-ceramics in the Bi-Sr-Ca-Cu-O system[—review].—73-08219

**Shisler, Robert W.** See Fleming, Michael P.

**Shitova, L. A.; Lalykin, N. V.; Kuznetsova, T. A.**
Glass edge quality and strength.—73-00490

**Shiue, Y.-S.** See Kao, Chin-Hai

**Shivalingappa, L.** See Al-Robaee, Mansour S.

**Shiwa, Mitsuharu** See Ohara, Yoshinobu

**Shiyan, L. N.** See Starodubtsev, V. A.

**Shizawa, Mitsuaki** See Honda, Masaru; Yoshida, Tomonori

**Shkadarevich, A. P.** See Bazylev, A. G.; Sobolev, A. B.

**Shkar, V. F.** See Grishin, A. M.

**Shkatova, G. V.** See Egorov, G. B.

**Shklyaev, A. A.** See Esaev, D. G.

**Shkol'nikov, E. V.; Bakulina, V. V.; Shkol'nikova, A. M.**
Kinetics of dissolution of $AgAsS_2$ glass in acid oxidizing media.—73-00363

**Shkol'nikova, A. M.** See Konorova, L. F.; Shkol'nikov, E. V.

**Shkrabina, R. A.** See Shepeleva, M. N.

**Shkrob, I. A.** See Mikhnevich, V. V.

**Shkumbatyuk, P. S.** See Andrukhiv, M. G.; Tsyutsyura, D. I.; Virt, I. S.

**Shlenskii, A. A.** See Govorkov, A. V.

**Shlopak, N. V.** See Bumai, Yu. A.

**Shlyakhtina, A. V.** See Mamsurova, L. G.

**Shlyukova, Z. V.** See Rastsvetaeva, R. K.

**Shmartsev, Y. V.** See Kavalyauskas, Yu. I.; Pyshnaya, N. B.; Tuan, L.; Zaretskii, Yu. G.

**Shmat'ko, G. N.** See Dubovik, T. V.

**Shmeleva, V. I.; Maslennikova, G. N.; Moroz, I. Kh.**
Formation and growth of mullite crystals in porcelain.—73-00908

**Shmurak, S. Z.** See Klimenko, V. I.

**Shmytko, I. M.** See Afonikova, N. S.

**Shneidman, V. A.; Weinberg, Michael C.**
Effects of transient nucleation and size-dependent growth rate on phase transformation kinetics.—73-06909

**Shoaib, M. M.** See El-Shennawi, A. W.

**Shobu, Kazuhisa** See Tani, Eiji; Watanabe, Tadahiko

**Shofman, V. G.** See Akimov, A. V.

**Shoichi, Katoh** See Jackson, John E.

**Shoji, Akira** See Kiryu, Shogo

**Shoji, Noriyuki** See Noma, Tatsuo

**Shoji, Shigeo** See Motomachi, Tsutomu

**Shokhor, S. L.** See Belousov, M. V.

**Shokoohi, F. K.** See Barboux, Philippe

**Shokorova, L. A.** See Kurakbaeva, R. Kh.

**Shon, Pong-Kyun** See Na, Hoon-Kyun

**Shono, M.** See Hamada, Hiroki

**Shonov, V. Y.** See Bokov, A. A.

**Shor, A. M.; Dubkov, A. A.; Rubaylo, A. I.; Pavlenko, N. I.; Sharonova, O. M.; Anshits, A. G.**
Ir spectroscopic study of $H_2O$ influence on $SO_2$ adsorption on $TiO_2$ surface.—73-13412

**Shor, Joseph S.** See Kurtz, Anthony D.

**Shor, Joseph S.; Kurtz, Anthony D.**
Porous silicon carbide (SiC) semiconductor device.—73-11539

**Shore, P.** See Ball, M. J.; Boettger, J. M.

**Shorrocks, N. M.** See Ainger, F.

**Short, S. W.** See Hu, B.

**Shotov, A. P.** See Davarashvili, O. I.

**Shott, A. Robert** See Davis, Michael W.

**Shoup, Robert D.**
Sol-gel ultra-low-expansion glass.—73-14497

**Show, Y.** See Izumi, T.

**Shoya, Masami; Sugita, Shuishi; Nabeya, Hiroshi**
Quality of concrete incorporated with two types of ferronickel slag fine aggregates.—73-10119

**Shoya, Masami; Tsukinaga, Yoichi; Sugawara, Takashi**
Improvement of concrete quality by making dense surface layer of concrete using permeable sheets.—73-09998

**Shpak, I. I.** See Rosda, I. I.

**Shpak, L. A.** See Bokov, A. A.

**Shpeizman, V. V.** See Orlova, T. S.; Smirnov, B. I.; Zhoga, L. V.

**Shpeizman, V. V.**
Kinetics of brittle fracture and possibilities of its prediction.—73-17369

**Shpilinskaya, L. N.** See Panova, A. N.

**Shpiro, Efim S.** See Stakheev, A. Yu.; Tkachenko, Olga P.

**Shrai, H.; Drevillon, B.; Ossikovski, R.**
In situ investigation of amorphous silicon/silicon nitride interfaces by infrared ellipsometry.—73-06230

**Shrakawa, Yukihiko** See Yano, Yoshihiko

**Shrivastava, K. N.**
Electric field effect in a superconducting film device.—73-15448

**Shrivastava, Keshav N.; Puri, Micky; Bear, John; Kevan, Larry**
Determination of the flux creep time from the microwave absorption in the high-temperature superconductor $YBa_2Cu_3O_{7-\delta}$.—73-08018

**Shrivastava, O. P.; Komarneni, S.; Breval, E.**
$Mg^{2+}$ uptake by synthetic tobermorite [T] and xonotlite [X].—73-00138

**Shrive, N. G.** See Wang, E. Z.

**Shriver, John A., III** See Bronson, Lance A.

**Shrout, Thomas R.** See Brodeur, Russell P.

**Shteinberg, A. S.** See Ponomarev, M. A.; Shcherbakov, V. A.

**Shtel'makh, S. V.** See Polyakov, S. M.

**Shtelmakh, K. F.** See Georgitse, E. I.

**Shter, Gennady E.; Grader, Gideon S.**
YBCO oxalate coprecipitation in alcoholic solutions—correction.—73-15673; YBCO oxalate coprecipitation in alcoholic solutions.—73-11946

**Shternberg, A. A.; Markov, L. S.; Fedorov, D. L.**
Optical studies of doping effect on anisotropy of zinc sulfide crystals.—73-16239

**Shtirts, V. R.** See Chukalkin, Yu. G.

**Shu, Xing-Tian; Fu, Wei; He, Ming-Yuan; Zhou, Meng; Shi, Zhi-Cheng; Zhang, Shu-Gin**
Rare-earth-containing high-silica zeolite having pentasil type structure and process for the same.—73-02066

**Shubina, T. V.** See Kalinovsky, V. S.

**Shubladze, N. N.** See Mamaladze, R. A.

**Shucavage, David**
Practical pointers for implementing an ISO 9000 quality system.—73-09740

**Shueh, Y.** See Tsaur, S.-S.

**Shuford, David M.** See Booth, Roy E.
**Shuford, David M.**
Post coating treatment of silicon carbide-coated carbon-carbon substrates.—73-16008; 73-16009
**Shugaev, V. A.; Rogachev, A. S.; Merzhanov, A. G.**
Structurization of SHS [self-propagating high-temperature synthesis] products [investigated] under model experiments.—73-13597
**Shuh, D. K.** See Eklund, E. A.
**Shui, Zhong-He; Sun, Fu-Qiang; Ma, Bao-Guo**
Improving properties of magnesia lime products.—73-06673
**Shukla, A. K.** See Singh, N. B.
**Shukla, A.** See Hoffmann, L.
**Shul'ga, E. P.** See Kryukova, I. V.
**Shul'ga, Yu. M.** See Komratov, G. N.; Zakhar'in, V. I.
**Shul'gin, B. V.** See Kveder, V. V.
**Shul'ts, M. M.** See Stolyarova, V. L.; Ushakov, V. M.
**Shul, Y.-G.** See Liew, J.-H.
**Shul, Yong-Gun; Lee, Dong-Jo; Lee, Jae-Suk; Wada, Tatsuo**
Incorporation of organic compound into silica matrix by a sol-gel process for NLO [nonlinear optical] applications.—73-05859
**Shuldiner, A. V.** See Zakrevskii, V. A.
**Shulga, M. I.** See Dmitriev, A. G.; Gol'dberg, Yu. A.
**Shulga, T. S.** See Gribkovskii, V. P.
**Shull, R. D.** See McMichael, R. D.
**Shull, R. D.; McMichael, R. D.; Ritter, J. J.; Bennett, L. H.**
Nanocomposites for magnetic refrigeration.—73-04631
**Shulov, S. Ya.** See Samsonova, L. A.
**Shultz, M. M.**
Modern ideas concerning chemical structure of glasses.—73-14041
**Shum, Kai** See Wang, W. B.
**Shum, Kai; Wang, W. B.; Alfano, R. R.; Jones, K. M.**
Observation of the 1*P* excitonic states in Cd(S,Se) glass quantum dots.—73-06947
**Shum, Ming S.** See Gonczy, Stephen T.; Leung, Roger Y.
**Shupegin, M. L.** See Bublik, V. T.
**Shur, M.** See Gelmont, B. L.
**Shushpanova, L. S.** See Ignatyuk, V. A.
**Shushtarian, S. S.** See Ardakani, H. Kordi
**Shuskus, Alexander J.; Cowher, Melvyn E.**
TEOV doping of gallium arsenide.—73-04536
**Shuster, G.** See Nozik, Yu. Z.
**Shustikova, E. S.** See Sinyaev, V. A.
**Shustov, L. D.** See Teterin, Yu. A.
**Shustrov, B. A.** See Polyakov, S. M.
**Shut, V. N.** See Mikhnevich, V. V.
**Shutov, A. I.** See Belousov, Yu. L.; Shabanov, A. G.
**Shutov, A. I.; Lalykin, N. V.; Akhtyamov, A. V.**
Inclusion of the nonlinearities of the physical contents in an algorithm for calculation of quenching stresses.—73-08885
**Shutov, A. I.; Lalykin, N. V.**
Algorithm for determining instantaneous and residual quenching stresses.—73-00433
**Shutov, A. I.; Sakulina, E. P.**
Guaranteed heat transfer coefficients in quenching glass.—73-00496; Volterra principle in calculating sheet glass deformation.—73-00580
**Shutov, A. M.** See Shabanov, A. G.
**Shutov, D. A.** See Kravetskii, I. V.
**Shuvaeva, V. A.; Antipin, M. Yu.; Fesenko, O. E.; Smotrakov, V. G.; Struchkov, Yu. T.**
X-ray diffraction study of $PbZrO_3$ ferroelectric phase induced by strong electric field.—73-15301
**Shuvaeva, V. A.; Antipin, M. Yu.; Lindeman, S. V.; Fesenko, O. E.; Smotrakov, V. G.; Struchkov, Yu. T.**
X-ray diffraction study of $NaNbO_3$ single crystals in electric field.—73-16393
**Shuvalov, L. A.** See Belushin, A. V.; Merinov, B. V.
**Shuvalov, V. A.** See Malov, V. V.
**Shvaiko-Shvaikovskii, V. E.** See Garshin, A. P.
**Shvangiradze, P. P.** See Artemova, K. K.
**Shvechikov, I. Y.** See Kalinovsky, V. S.
**Shvedun, V. G.** See Raikhel, A. M.
**Shvets, E. A.** See Voronin, B. M.
**Shvetsov, V. A.**
Improving the technology for making cupelas used in lead-alloy cupellation.—73-00826
**Shwe, C.; Gal, M.; Gross, M.**
Direct optical observation of hydrogenation-induced damage in GaAs.—73-01129
**Shy, Der-Shiuh** See Chao, Kei-Jung
**Shykind, David N.** See Buratto, Steven K.
**Shyu, Wan-Tsai** See Ju, Yan-Fei
**Si, Jie; Desu, Seshu B.**
Ferroelectric bismuth titanate films by hot wall metallorganic chemical vapor deposition.—73-04552
**Si, Wen-Jie** See Su, Qing-Ping
**Siapkas, D. I.** See Mitsas, C. L.
**Sibbett, W.** See Burns, D.; Spence, D. E.
**Siberman, E.** See Azoulay, M.; Burshtein, Z.
**Sibikin, A. B.** See Sokolov, A. N.
**Sibilano, M.** See Scamarcio, G.
**Sibilia, C.** See Bertolotti, M.
**Sibold, J. D.** See Chen, Ning-Wei; Krutyholowa, M. W.; Reed, C. T.
**Siborov, Aleksei V.** See Beutel, Tilman
**Sicart, J.** See Jean-Jean, P.
**Sichina, W. J.**
Accurate measurement of heat capacities using oscillating DSC (differential scanning calorimetry).—73-12101
**Sickafus, Kurt E.** See Vollath, Dieter
**Sickinger, A.** See Barbezat, G.; Disam, J.
**Siconolfi, D. J.** See Frankenthal, R. P.
**Siddique, M.** See Arshed, M.
**Siddle, J. R.** See Gallego, J. M.
**Sidek, H. A.** See Senin, H. B.; Shaari, A. H.
**Sidhu, R. K.** See Muqtader, S. A.
**Sidhwa, A. J.; Goh, F. C.; Naseem, H. A.; Brown, William D.**
Reactive ion etching of crystalline silicon using $NF_3$ diluted with $H_2$.—73-07762
**Sidikova, Kh.** See Rasulov, R. Ya.
**Sidler, Werner**
Glassware forming machine having a pivotally supported mold mechanism which facilitates replacement thereof.—73-04975
**Sidorchuk, P. G.** See Andrukhiv, A. M.
**Sidorchuk, V. V.** See Belyakova, L. A.; Varvarin, A. M.
**Sidorenko, F. A.** See Mamontova, M. Yu.
**Sidorenko, I. N.** See Boiko, V. S.
**Sidorov, A. A.** See Sirota, N. N.
**Sidorov, M. V.** See Pechen, E. V.
**Sidorov, M. V.; Oktyabrsky, S. R.; Krasnosvobodtsev, S. I.**
Microstructure of barium-deficient superconducting Y-Ba-Cu-O thin films: observations using transmission electron microscopy.—73-04772
**Sidorov, M. V.; Oktyabrsky, S. R.**
Microstructural features of Y-Ba-Cu-O thin films grown on single-crystal MgO.—73-01607
**Sidorov, V. A.; Stepanov, N. N.; Tsiok, O. B.**
Effect of high pressure on electrical properties of europium and ytterbium hexaborides.—73-02580
**Sidorov, V. P.** See Sham, P. I.
**Siebein, K. N.** See Corbin, N. D.
**Siebel, E.** See Sprung, Siegbert
**Siebers, Friedrich** See Kiefer, W.
**Siebers, Friedrich**
Glass powder which is crystallizable to yield a sintered glass-ceramic containing hexagonal cordierite as the principal crystalline phase.—73-03924
**Siebert, Elisabeth** See Fabry, Pierre
**Siebold, T.; Ziemann, P.**
Test of a binary mixture model for the thermoelectric power of ion-bombarded NbN films.—73-16615
**Siedel, H.; Hempel, S.; Hempel, R.**
Secondary ettringite formation in heat-treated portland cement concrete: influence of different w/c ratios and heat-treatment temperature.—73-03535
**Sieg, Robert M.; Alterovitz, Samuel A.; Warner, Joseph D.**
Ellipsometric study of ambient-produced overlayer growth rate on $YBa_2Cu_3O_{7-\delta}$ films.—73-01542
**Siegel, Peter H.; Mehdi, Imran; Wilson, Barbara**
Composite GaAs-on-quartz substrate for integration of millimeter-wave passive and active device circuitry.—73-11514
**Siegel, Richard W.**
Synthesis and properties of nanophase materials.—73-13298
**Siegel, S.** See Herrmann, M.; Wagner, R.
**Siegrist, T.** See Cava, R. J.; Hessen, B.; James, A. C. W. P.; Phillips, J. C.
**Siejka, J.** See Cattan, E.
**Siek, K. H.** See Xiong-Skiba, P.
**Sieraski, K.; Szatkowski, J.**
Tight binding model for $Zn_3P_2$ valence bands.—73-15211; Universal tight-binding model for II-VI semiconducting compounds.—73-04506
**Sierks, J.; Eschner, J.; Baev, V. M.; Toschek, P. E.**
Sensitivity of intracavity absorption measurements with Ti:sapphire laser.—73-16593
**Sieurs, J.** See Luyten, J.
**Siffert, Bernard** See Papirer, Eugene
**Siffert, Paul** See Ventura, Laurent
**Sigaev, V. N.** See Shashkov, A. Yu.
**Sigalov, G. M.** See Manevich, L. I.
**Sigarev, S. E.** See Genkina, E. A.; Mikhailov, V. I.
**Sigarev, S. E.**
Superionic conductors with mixed $[M_2P_3O_{12}]_\infty$ framework: crystal structure and physical properties: I, Lithium-conducting phosphates.—73-14737
**Sigaryov, S. E.** See Kravchenko, V. V.
**Sigel, George H., Jr.** See Lin, Chi-Hsien; Shahriari, Mahmoud R.; Wu, Feng-Qing
**Sigel, George, Jr.; Shahriari, Mahmoud R.; Zhou, Quan**
Method for making porous glass optical fiber sensor.—73-03819
**Sigg, H.** See Krieger, M.
**Sighel, Corrado** See Della Mea, Gianantonio
**Sigmund, E.** See Seibold, G.
**Signoret, P.** See Orsal, B.
**Signoretto, M.** See Zeng, Y. W.
**Signorini, E.; Ginori, Richard**
Influence of the grinding of hard materials on porcelain and vitreous tableware.—73-01791
**Sigrist, M.** See Rice, T. M.
**Siguin, D.; Ferreira, S.; Froufe, L.; Garcia, F.**
Relationship between isomorphic substitutions and swelling in montmorillonites.—73-16586
**Siikamaki, Raiji** See Rajala, Markku
**Siiman, Olavi; Burshteyn, Alexander**
In situ use of gelation or an aminodextran in the preparation of uniform ferrite particles.—73-01487
**Sikalidis, K.** See Varsos, Dimitrios
**Sikiritsa, M.** See Kotur, B. Ya.
**Sikka, S. K.** See Somayazulu, M. S.
**Sikonia, John G.** See Leung, Roger Y.
**Sil'vestrov, A. L.** See Kiselev, I. Yu.
**Sil'vestrova, I. M.; Maslov, V. A.; Pisarevskii, Yu. V.**
Elastic and piezoelectric properties of $KTiOPO_4$ crystals.—73-15258
**Silberglitt, Richard** See Ahmad, Iftikhar; Saadaldin, Hussamaldin S.
**Silenko, V. V.** See Lisitsa, M. P.
**Silich, L. M.** See Bobkova, N. M.
**Silich, L. M.; Zayats, N. I.; Chudakov, O. P.**
Glass-ceramic bioimplants.—73-07032
**Siligardi, C.** See Barbieri, Luisa; Corradi, Anna Bonamartini
**Silin, A. R.; Latse, L. A.**
Equilibrium concentration of inherent defects in vitreous silicon dioxide.—73-13979
**Silin, A. R.**
Hydrogen and chlorine impurities' influence on high-temperature defects in fused silica.—73-14001
**Silin, V. P.** See Zverev, V. M.
**Silliman, S. C.; Gualtieri, D. M.; Stancil, D. D.**
Improvement of FMR linewidth in Bi-substituted lutetium iron garnet thin films for the MSW-optical-mode interaction.—73-04615
**Silova, M. Y.** See Karpov, S. Yu.
**Silsbee, Michael R.** See Roy, Della M.; Steinke, Richard A.
**Silva, Dileize Valeriano** See Hiratsuka, Renato Satoshi
**Silva, F. I. F.** See Monteiro, R. C. C.
**Silva, R. F.; Moreira, A. P.; Gomes, J. M.; Miranda, A. S.; Vieira, J. M.**
Role of nitrogen in the intergranular glass phase of $Si_3N_4$ on high-temperature applications and wear.—73-12676
**Silver, M.** See Jones, G.
**Silver, R. M.** See Dagata, J. A.
**Silverman, Lee A.** See Chiang, Yet-Ming
**Silverman, P. J.** See Fitzgerald, E. A.; Kuo, J. M.
**Silvestri, Markus R.** See Schroeder, John
**Simanova, S. A.; Boichinova, E. S.; Nikol'skaya, L. V.; Krylova, G. S.; Kuznetsova, G. V.**
Separation of Pt metal complex chlorides on hydrated zirconia and their isolation from nonferrous mtals.—73-16594
**Simanovich, Ellen V.** See Maslovsky, Vladimir M.
**Simanovskii, Ya. O.** See Bagratashvili, V. N.
**Simard, M.-A.; Nkinamubanzi, P.-C.; Jolicoeur, C.; Perraton, D.; Aitcin, Pierre-Claude**
Calorimetry, rheology, and compressive strength of superplasticized cement pastes.—73-06630
**Simchick, T. R.** See Sorokach, S. E.
**Simeckova, M.** See Hybler, J.
**Simioli, Matteo Luca**
Antistatic flooring.—73-14642; Ease of cleaning of ceramic tiles.—73-14652; PEI method gains ground.—73-15829
**Simkin, D. J.; Koningstein, J. A.; Myslinski, P.; Boothroyd, S. A.; Chrostowski, J.**
Upconversion dynamics of $Er^{3+}$:$YAlO_3$.—73-08787
**Simko, J. P.; Meguro, T.; Iwai, S.; Ozasa, K.; Aoyagi, Y.; Sugano, T.**
Surface photoabsorption study of the laser-assisted atomic layer epitaxial [ALE] growth process of GaAs.—73-04494
**Simko, Joseph S., Jr.**
Insulating ceramic fiber batting module, anchoring system, ladle cover assembly and method of assembly.—73-00887
**Simko, Stephen J.** See McGuire, G. E.
**Simkovich, George** See Yuan, Dah-Wei
**Simmins, J.** See De Marco, M.
**Simmons, Art** See Kopanski, Joseph J.
**Simmons, J. G.** See Kakasaki, B. W.; Kovacic, S. J.; Landheer, D.; Ye, F.
**Simmons, J. H.** See Al-Assafi, S.; El-Bayoumi, O. H.
**Simon, A.** See Mukherjee, P. S.
**Simon, A.; Mukherjee, P. S.; Guruswamy, P.**
Mechanical properties of (Bi,Pb)-Sr-Ca-Cu-O/Ag superconducting composite.—73-03329
**Simon, J. M.** See Collins, J. F.
**Simon, J.-F.; Wertz, V.**
Automated bottom temperature control for a glass-melting furnace.—73-15867
**Simon, Jiri**
Trends in production and consumption of container glass.—73-03410
**Simon, John M.** See Hayati, Igan
**Simon, John M.; Barwise, Christopher H.**
Beneficiation of calcium borate minerals.—73-01847
**Simon, K. Y.** See Halasz, I.
**Simon, Randy W.** See Newman, Nathan
**Simon, S.** See Ardelean, I.; Cozar, O.; Iiescu, T.
**Simon, V.** See Ardelean, I.
**Simonis, F.** See Muysenberg, Hendrikus P. H.; Simons, D. R.; Van Nijnatten, P. A.
**Simonov, A. Y.** See Gammel, P. L.
**Simonov, M. A.; Karpov, O. G.; Dimitrova, O. V.**
Crystal structure of $Na^{[7]2}Zn^{[6]2}[P_2{}^{[4]}O_6(OH)]^{*18}$.—73-02200
**Simonov, V. I.** See Golubev, A. M.; Maksimov, B. A.; Novikova, M. S.; Radaev, S. F.; Tamazyan, R. A.
**Simons, D. R.; Faber, Anne J.; Simonis, F.; De Waal, Henk**
Luminescence quenching in Pr-doped glasses for fiber amplifiers.—73-14418
**Simons, David S.** See Kyono, C. S.; Martin, Jaime M.; Thompson, Philip E.; Vellanki, Jayadev
**Simonsen, Harald R.**
Frequency noise reduction in visible InGaAlP laser diodes by different optical feedback methods.—73-14931
**Simoyama, Yoshihide** See Kubota, Hiroyasu
**Simpson, C. J.** See Pickles, C. A.
**Simpson, Catherine A.**
Fluid particle separation equipment.—73-08338
**Simpson, D. E.; Voller, V. R.; Everett, M. G.**
Efficient algorithm for mineral processing data adjustment.—73-01779
**Simpson, G.** See Hill, W. F.
**Simpson, J. C.; Joseph, I.; Palmiter, T. V.; Eaton, W. C.; Jain, Vijay**
Microstructural and electrical resistivity investigation of melter floor sludge.—73-08301
**Simpson, J.; Wang, S. Y.; Stewart, H.; Wallace, J.; Adams, S. J. A.; Hauksson, I.**
Electrical and optical characterization of *p*-type ZnSe for diode laser structures.—73-04301
**Simpson, William A., Jr.** See Moorhead, Arthur J.
**Simpson, William A., Jr.; McClung, Robert W.**
Ultrasonic evaluation of silicon carbide whisker-reinforced ceramic composites.—73-08453
**Sims, Richard**
Energy saving in forehearths.—73-15873
**Simura, Tsutomu** See Okamura, Hideko
**Simurka, P.; Liska, Marek**
Regression models of the glass physical properties dependence on temperature and composition and their application to the glass composition optimization.—73-14270

**Simurov, A. V.** See Belyakova, L. A.
**Sin, Kyusik; Sivertsen, John M.; Judy, Jack H.; Hoshi, Youichi; Speliotis, Dennis E.**
Preparation and characterization of thin films of M-type barium ferrite on microcrystalline carbon substrates with diffusion barrier sublayers.—73-04636
**Sinchenko, A. A.** See Elesin, V. F.
**Sinclair, B. D.** See MacKinnon, N.
**Sinclair, D. C.** See Johnston, D. E.
**Sinclair, J. D.** See Frankenthal, R. P.
**Sinclair, Roger N.** See Vedishcheva, Natalia M.; Wright, Adrian C.
**Sindzingre, T.; Ermolieff, A.; Marthon, S.; Martin, P.; Pierre, F.; Peccoud, L.**
Plasma-enhanced chemical vapor deposition silicon oxides as studied by X-ray photoelectron spectroscopy, Rutherford backscattering, electron recoil detection analysis, infrared spectroscopy, and electron spin resonance.—73-08702
**Sinenko, Yu. A.** See Rozenberg, A. S.
**Sinerius, D.** See Eiche, C.
**Sines, George** See Yan, Yong-Nian
**Sinevich, A. K.**
Furnace design for melting spectacle glasses.—73-01953
**Sinevich, A. K.**
Melting, processing, and color control of zinc sulfide glasses.—73-07149
**Sing, Kenneth S. W.** See Kenny, Martyn B.
**Singer, J. M.** See Morgenstern, I.
**Singer, K. E.** See Peaker, A. R.
**Singh, A. P.; Mishra, S. K.; Pandey, Dhananjai; Prasad, C. D.; Lal, R.**
Low-temperature synthesis of chemically homogeneous lead zirconate titanate (PZT) powders by a semiwet method.—73-13124
**Singh, A. P.**
Comparison of iron and aluminum silicates with the ton topology.—73-12554
**Singh, A.; Cova, P.; Masut, R. A.**
Energy density distribution of interface states in Au Schottky contacts to epitaxial $In_{0.21}Ga_{0.79}As$:Zn layers grown on GaAs by metallorganic vapor phase epitaxy.—73-11193
**Singh, Abha** See King, A. H.
**Singh, B.** See Majumdar, Amal J.
**Singh, B.; Majumdar, Amal J.**
Hydration of calcium dialuminate and its mixtures containing slags.—73-09989
**Singh, David J.**
Calculated electric field gradients in ferroelectric $KNbO_3$.—73-15250
**Singh, Dileep** See Singh, J. P.; Wagh, Arun S.
**Singh, Dileep; Singh, Jitendra P.; Majumdar, Saurin; Kupperman, David S.; Cowdin, Eric; Bhatt, Ramakrishna T.**
Effect of processing variables on interfacial properties of an SiC-fiber-reinforced reaction-bonded $Si_3N_4$ matrix composite.—73-16738
**Singh, J. P.** See Wagh, Arun S.
**Singh, J. P.; Singh, Dileep; Lowden, Richard A.**
Effect of fiber coating on mechanical properties of Nicalon fibers and Nicalon fiber/SiC matrix composites.—73-17284
**Singh, J.** See Lam, Yee-Loy; Nichols, D.
**Singh, Jitendra P.** See Singh, Dileep
**Singh, Jitendra P.; Bosak, Andrea L.; McPheeters, Charles C.; Dees, Dennis W.**
Electrically conductive material.—73-01052
**Singh, Jogender; Vellaikal, M.; Narayan, J.**
Laser-enhanced synthesis and processing of diamond films from liquid hydrocarbons.—73-02885
**Singh, Jogender; Vellaikal, M.**
Nucleation of diamond during hot-filament chemical vapor deposition.—73-02911
**Singh, K. N.; Russo, T. J.; Fash, R. E.**
Robotic-sprayed tundish linings at Sparrows Point.—73-14622
**Singh, M.; Pawlik, R.; Salem, Jonathan A.; Behrendt, D. R.**
Mechanical properties of reaction-formed silicon carbide ceramics containing silicon and refractory disilicide phases.—73-09640
**Singh, Manjit; Garg, Mridul**
Microstructure of glass-fiber-reinforced water-resistant gypsum binder composites.—73-03499
**Singh, N. B.; Shukla, A. K.; Prabha, Singh S.; Sarvahi, R.**
Hydration of brick kiln ash blended white portland cement.—73-09987
**Singh, N. B.; Singh, S. P.; Shukla, A. K.**
Formation and solid-state properties of ß-dicalcium silicate.—73-09967
**Singh, N.; Rys, A.**
Thermal oxidation and electrical properties of silicon carbide metal-oxide-semiconductor structures.—73-01350
**Singh, Narendra** See Slade, Robert C. T.
**Singh, Neelam** See Tiwari, Vidya S.
**Singh, P.** See Sarkar, Shondeep L.
**Singh, R. A.** See Pandit, A. K.
**Singh, R. N.** See Devrajan, J.; Kumaria, S.; Reddy, S. K.; Wang, Hong-Yu; Zhou, H.
**Singh, R. N.**
Interfacial properties and high-temperature mechanical behavior of fiber-reinforced ceramics.—73-09627
**Singh, R. S.** See Pandit, A. K.
**Singh, R.** See Ashokan, R.
**Singh, R.; Sinha, S.; Hsu, N. J.; Ng, J. T. C.; Chou, P.; Thakur, Randhir P. S.**
Reduced thermal budget processing of Y-Ba-Cu-O high-temperature superconducting thin films by metallorganic chemical vapor deposition.—73-01647
**Singh, Rajiv K.; Viatella, John; Fathi, Zak; Clark, David E.**
Thermal analysis of microwave processing of ceramics.—73-06115
**Singh, Rajiv K.; Viatella, John**
Personal computer-based simulation of laser interactions with materials.—73-13160
**Singh, Rajiv R. P.** See Glenister, Rodney L.
**Singh, S. K.; Stachowicz, L.; Girshick, S. L.**
Thermal plasma synthesis of SiC from rice hull (husk).—73-06117
**Singh, S. P.** See Kumar, Anil; Singh, N. B.
**Singh, S. P.; Kumar, Anil**
Cuprous-cupric redox equilibrium in binary alkali silicate glasses.—73-10359
**Singh, S.** See Ray-Chaudhuri, A. K.
**Singh, Sanjeep; Srivastava, R. C.; Chand, Prem; Khan, D. C.; Wigen, P. E.**
Electrical and magnetic properties of $Zn_xCa_{1-x}Fe_2O_4$ ($x$=0–1).—73-05554
**Singh, Vijay P.; Xu, Qin; McClure, John C.**
Phosphor currents in ZnS:Mn ac thin-film electroluminescent display devices.—73-11374
**Singh, Vipin Kant**
Sintering study of calcium aluminate-II.—73-13269
**Singh, Vivek K.; Shaqfeh, Eric S. G.**
Effect of surface reemission on the surface roughness of film growth in low-pressure chemical vapor deposition.—73-05773
**Singru, R. M.** See Johri, U. C.
**Sinha, K. P.**
Have we known the mechanisms of high-temperature superconductivity for a long time.—73-11780
**Sinha, K.** See Alonso, R. G.
**Sinha, S. K.** See Bhargava, S. C.; Plakhty, V.
**Sinha, S.** See Luo, J. S.; Singh, R.
**Sinha, Shome N.** See Kim, Seung-H.
**Sinha, Urvija** See Mathur, S. C.
**Sinharoy, S.** See Buhay, H.
**Sinharoy, S.; Buhay, H.; Francombe, M. H.; Takei, W. J.; Doyle, N. J.; Rieger, J. H.**
Growth and characterization of ferroelectric $BaMgF_4$ films.—73-01416
**Sinii, I. G.; Smirnova, T. A.; Kruzina, T. V.**
Paraphase symmetry and phase transition of dynamics in $Na_{1/2}Bi_{1/2}TiO_3$.—73-01421
**Sinitsyn, E. V.** See Bostrem, I. G.
**Sinn, E.** See Batlle, Xavier
**Sinnema, Sido** See Kranendonk, Winfried G. T.
**Sinsley, Wayne A.**
Ceramic log molding process.—73-04963
**Sinyaev, V. A.; Levchenko, L. V.**
Effect of the nature of the cation on the P–O bond in vitreous alkali and alkaline-earth polyphosphates.—73-13968
**Sinyaev, V. A.; Temirova, S. S.; Shustikova, E. S.**
Possible nature of the forms of Fe(II) in iron-containing vitreous sodium polyphosphates.—73-14073
**Sinyaev, V. A.; Vecherkina, T. D.; Tokseitova, G. A.**
Interaction of sodium cyclotriphosphate with aluminum.—73-12607
**Sinyushko, V. G.** See Levin, E. M.
**Sioji, Yasuhiro** See Yamamura, Takemi
**Sioshansi, Piran; Bricault, Raymond J., Jr.**
Modular IBAD apparatus for continuous coating.—73-01870
**Siperko, L. M.; Landis, W. J.**
Atomic force microscopy imaging of hydroxyapatite.—73-09433
**Sipovskaya, M. A.** See Baranov, A. N.
**Sipp, A.** See Guillemet, C.
**Siracki, Michael A.**
Chisel insert [made of WC] for rock bits.—73-15982
**Sirazhiddinov, N. A.** See Azizkhodzhaeva, M. M.
**Sirazhiddinov, N. A.; Akramova, N. N.; Velikanova, F. I.**
Ceramic pigments based on chain-structure silicates.—73-08493
**Sirazhiddinov, N. A.; Irkakhodzhaeva, A. P.**
Effect of disubstituted oxides of alkaline earth metals on opacified glazes.—73-07247
**Sirenko, A. A.** See Mirlin, D. N.
**Sirochenko, V. P.** See Zav'yalova, A. A.
**Siroki, M.** See Cizmek, Ankica
**Sirota, A. V.** See Gritsyuk, B. N.
**Sirota, N. N.** See Popov, P. A.
**Sirota, N. N.; Popov, P. A.; Ivanov, I. A.**
Thermal conductivity and phonon mean free path length in calcium-gallium-germanium garnet single crystals [at 5–300 K].—73-16619
**Sirota, N. N.; Popov, P. A.; Sidorov, A. A.; Kutukov, V. I.; Moiseev, N. V.; Egorov, G. V.**
Thermal conductivity and thermal properties of the substituted strontium hexagallate, $SrGa_{11}Mg_{0.5}Zr_{0.5}O_{19}$, in the temperature range 5–300 K.—73-02705; Thermal conductivity, specific heat, elastic constants, and thermal expansion of doped gadolinium-gallium garnets.—73-16622
**Sisk, P. J.** See Sundaram, K. B.
**Sitar, Z.** See Sumakeris, J.
**Sitar, Z.**
Band engineering of high band gap semiconductors by superlattices.—73-04251
**Sitdikov, A. M.** See Aluker, E. D.
**Sitter, H.** See Faschinger, W.; Hauzenberger, F.
**Sitter, H.; Faschinger, W.**
Ultrahigh vacuum atomic layer epitaxy of CdTe.—73-04503
**Siu, G.-G.** See Zhang, J.-X.
**Siu, G.-G.; Zeng, W.-G.**
Phase transition toughening of high-$T_c$ superconducting ceramics.—73-15579
**Sivade, A.** See Sempere, R.
**Sivakumar, P.** See Surappa, M. K.
**Sivananthan, S.** See Chen, Y. P.; Sporken, R.; Vitomirov, I. M.
**Sivasubramanian, V.** See Raju, K. C. James
**Sivasundaram, V.; Malhotra, V. M.**
Properties of concrete incorporating low quantity of cement and high volumes of ground granulated slag.—73-00173
**Sivco, D. L.** See Li, X.
**Sivertsen, John M.** See Sin, Kyusik
**Sivieri, E.** See Ardizzone, S.
**Siwierka, William A.** See Nutter, William A.
**Sizelove, J. R.** See Look, D. C.
**Sizintseva, L. G.** See Bulakh, V. L.
**Sizmann, R.** See Chu, J. H.
**Sizonenko, A. P.** See Kreitsberga, V. Z.
**Sizonenko, A. P.; Chekhovskii, V. G.**
Infrared spectra of quartz glass in the 20–1100°C temperature range.—73-00352; 73-00353
**Sizov, F. F.** See Darchuk, S. D.; Plyatsko, S. V.
**Sjoberg, Jorgen; Ericsson, T.; Lindqvist, O.**
Local structure of ß'-SiAlON's: an EXAFS study.—73-02321
**Sjoberg, Jorgen; Harris, Robin K.; Apperley, David C.**
$^{29}Si$, $^{27}Al$, and $^{15}N$ magic angle spinning nuclear magnetic resonance study of O'-SiAlON's and some related phases.—73-12680
**Skab, I. P.** See Vlokh, R. O.
**Skakle, J. M. S.; West, Anthony R.**
Subsolidus relations in the $La_2O_3$-CuO-CaO phase diagram and the $La_2O_3$-CuO binary join.—73-16342
**Skala, R.** See Low, I. M.
**Skalny, Jan** See Clark, B. A.; Draper, E. A.; Johansen, Vagn; Wagner, Keith E.
**Skamser, Daniel J.** See Day, Paul S.; Johnson, D. Lynn
**Skamser, Daniel J.; Bentz, Dale P.; Coverdale, R. Tate; Spotz, Mark S.; Martys, Nick; Jennings, Hamlin M.**
Calculation of the thermal conductivity and gas permeability in a uniaxial bundle of fibers.—73-16661
**Skamser, Daniel J.; Day, Paul S.; Jennings, Hamlin M.; Johnson, D. Lynn; Spotz, Mark S.**
Hybrid microwave-assisted chemical vapor infiltration of alumina fiber composites.—73-16823
**Skandan, Ganesh; Foster, C. M.; Frase, H.**
Phase characterization and stabilization due to grain size effects of nanostructured $Y_2O_3$.—73-12650
**Skandan, Ganesh; Hahn, Horst; Roddy, Mike; Cannon, W. Roger**
Ultrafine-grained dense monoclinic and tetragonal zirconia.—73-13331
**Skanthakumar, S.** See Sumarlin, I. W.
**Skanthakumar, S.; Lynn, J. W.; Peng, J. L.; Li, Z. Y.**
Field dependence of the magnetic ordering of Cu in $Ru_2CuO_4$ (R=Nd,Sm).—73-05568
**Skaribas, Stellos P.; Pomonis, Philip J.; Grange, Paul; Delmon, B.**
Controlled architecture of solids with micro- and mesoporosity obtained by pillaring of montmorillonite with an $LaNiO_3$ binary oxide.—73-09049
**Skeaff, Jim** See Dubreuil, Alain
**Skeels, Gary W.; Flanigen, Edith M.**
Activated zeolite beta and its use for hydrocarbon conversion.—73-05185
**Skeels, Gary W.; Ramos, Richard**
Substituted aluminosilicate compositions and process for preparing.—73-05245
**Skeels, Gary W.; Sears, Marilyn R.**
Zeolite LZ-276 and process for preparing [the] same.—73-02077
**Skelland, N. D.** See Nistor, L. C.; Wood, R. A.
**Skelton, Earl F.** See Lechter, William L.; Qadri, S. B.
**Skenderovic, B.** See Kostic, N.
**Skiba, P. A.** See Volkov, V. P.
**Skidan, B. S.** See Yurkov, A. L.
**Skinner, N. G.** See Landheer, D.
**Skipetrov, E. P.** See Brandt, N. B.
**Skipidarov, S. Y.** See Kul'bachinskii, V. A.
**Sklad, P. S.; McHargue, C. J.; White, C. W.**
Analytical electron microscopy [AEM] of $Al_2O_3$ implanted with iron ions.—73-03120
**Sklyarenko, S. K.** See Pereverzeva, L. P.
**Skoczny, Michael** See Eisen, Gunther
**Skoda, William G.** See Fenlon, Paul F.
**Skoglund, D. L.** See Scharen, M. J.
**Skokov, V. N.; Ryutin, S. B.; Ivakin, V. B.**
Thermal failure of superconductivity of $YBa_2Cu_3O_{7-x}$ thin films under various conditions of heat removal.—73-15652
**Skomorovskaya, L. A.** See Nestertsov, A. I.
**Skopina, V. I.** See Gurevich, S. A
**Skopp, A.; Woydt, M.**
Ceramic-ceramic composite materials with improved friction and wear properties.—73-15962
**Skorikov, V. M.** See Kargin, Yu. F.
**Skorokhod, V. V.** See Bykov, I. P.
**Skoryatina, E. A.** See Didik, V. A.; Gafarov, S. F.; Malkovich, R. Sh.
**Skotheim, T. A.** See Yang, X.-Q.
**Skou, E.** See Krogh Andersen, I. G.
**Skou, E.; Palombari, R.; Guerrini, F.; Casciola, M.**
Proton-metal ion conduction in polyhydrated α-$ZrHM_{0.5}(PO_4)_2$ and α-$ZrH_{0.5}Cr_{0.5}(PO_4)_2$ studied by ac/dc conductivity and emf measurements.—73-01018
**Skove, M. J.** See Tritt, T. M.
**Skovgaard, Niels H.** See Haslov, Peter
**Skowrenek, Russell K.; Walker, John W.**
European ceramics and the elusive "Cittie of Kaleigh."—73-06615
**kowronek, Charles J.** See Wang, Hsin-Fu
**Skowronski, M.** See Evwaraye, A. O.
**Skowronski, Raymond P.**
Glass-ceramic coatings for titanium aluminides.—73-06798
**Skripov, V. N.** See Blankova, E. B.
**Skrivan, Miroslav** See Fanderlik, Ivan
**Skrovankova, Dana; Bennerova, Lenka; Hlavac, Jan**
Vitrification of simulated intermediate-level waste from nuclear power plants: I, Melting behavior and properties of selected glasses.—73-08313
**SSkryl, Y. I.** See Abashkina, S. A.
**Skuchene, A.** See Ashmontas, S.

**Skuja, I.**
Time-resolved low-temperature luminescence of nonbridging oxygen [NBO] hole centers in silica glass.—73-00567
**Skvara, Frantisek**
Hydration of $C_3A$ in the presence of additives replacing the effects of gypsum.—73-09988
**Skverskii, N. A.** See Zolotarskii, A. Z.
**Skvor, Z.; Hoffmann, K.; Kasa, Stanislav; Lysy, A.; Novotny, K.**
New method of the calculation of a power field in the melting tank of an all-electric glass-melting furnace.—73-15887
**Skvortsova, V.** See Mironova, N.
**Slabodsky, Francis**
Float glass ribbon thickness measurement.—73-14380
**Slade, Robert C. T.** See Meinhold, Richard H.
**Slade, Robert C. T.; Knowles, James A.**
Conductivity variations in composites of α-zirconium phosphate and alumina.—73-00943
**Slade, Robert C. T.; Singh, Narendra**
Systematic examination of hydrogen ion conduction in rare-earth-doped barium cerate ceramics.—73-01033
**Slade, Robert C. T.; Young, Kevin E.; Bonanos, Nicholas**
Hydronium and ammonium Nasicon's: investigations of conductivity and conduction mechanism.—73-00977
**Sladek, R.**
Bone china, a high-quality soft porcelain.—73-10802; Development of kiln construction for the ceramic industry: 1950-1990.—73-12215; Firing techniques to improve the quality of bone china.—73-10847; Furnaces with efficient utilization of energy for firing sanitary ware and porcelain.—73-12220; Is the refractories industry able to cope with the steadily increasing demand for ceramic fast-firing technology.—73-10737; Modern design basics for whiteware firing technology in the 1990's.—73-10870; Successful kilns for structural ceramics.—73-08488; Ten years of experience with thermoanalyses.—73-12203
**Sladkov, A. S.**
Three-chamber grinding mixer with improved rotor.—73-01834
**Slanicka, Stefan**
Influence of condensed silica fume on the concrete strength.—73-00114
**Slaoui, Abdelilah** See Ventura, Laurent
**Slater, Peter R.; Greaves, C.**
Synthesis and conductivity of new lithium-containing Nasicon-type phases: $Li_xM_y^{II}M_{2-x}^{III}(SO_4)_{3-x}(SeO_4)_x$ and $Li_x[Li_{x/2}M_{2-x/2}^{III}](SO_4)_{3-x}(SeO_4)_x$.—73-05647
**Slattery, R. L.** See Westerheim, A. C.
**Slavejkov, Aleksandar G.** See Bazarian, E. Robert; Eleazer, Prince B.; Shamp, Donald E.
**Slavens, G. J.** See Jong, B. W.
**Slavov, V. I.; Zadorozhnaya, V. N.; Semerikov, V. I.**
Means of raising the quality of white titanium enamels.—73-06817; X-ray control of white titanium enamel production.—73-06880
**Slavova, V.** See Peshev, P.
**Sleat, W. E.** See Spence, D. E.
**Sleigh, A. K.; McKinnon, W. R.**
Structure and electrochemistry of $Li_xWO_2$ [0<r<1].—73-02459
**Sleight, A. W.; Gillson, J. L.; Bierstedt, P. E.**
High-temperature superconductivity in $BaPb_{1-x}Bi_xO_3$ system.—73-15503
**Slemmons, Whit; Redmond, Pat; Woolston, Frank; Messner, Jay; Minson, Roy**
Nondestructive TAB bond testing for multichip modules.—73-05075
**Slezov, V. V.** See Abyzov, A. S.
**Slichter, C. P.** See Imai, T.
**Slifkin, M. A.** See Zegadi, A.
**Slike, W., III** See Raman, R.
**Slinkina, M. V.; Dontsov, G. I.; Zhukovsky, V. M.**
Diffusion penetration of silver from electrodes into PZT ceramics.—73-13346
**Slobdyanyuk, A. V.** See Niilisk, A.
**Slobodchikov, S. V.** See Kovalevskaya, G. G.; Meredov, M. M.
**Slobodchikov, S. V.; Kovalevskaya, G. G.; Pentsov, A. V.; Salikhov, K. M.**
Multiplication of photocurrent in Pd-$SiO_2$-$n(p)$-Si diode structures.—73-11341
**Slobodin, B. V.; Fotiev, A. A.; Pakhomova, N. A.**
System CaO-SrO-CuO.—73-16358
**Slobodin, B. V.; Kiseleva, N. V.; Shatkovskaya, M. G.**
Interactions of nickel metavanadate with metavanadates of rubidium, cesium, and silver.—73-02300
**Slobodin, B. V.; Ostapenko, I. A.; Fotiev, A. A.**
System $Bi_2O_3$-SrO-CuO—73-11929
**Slobodyanik, N. S.** See Nagornyi, P. G.
**Sloczynski, J.; Bobinski, W.**
Autocatalytic effect in the processes of metal oxide reduction: I, Kinetic model of reduction.—73-02145; Autocatalytic effect in the processes of metal oxide reduction: II, Kinetics of molybdenum oxide reduction.—73-02730
**Sloggett, G. J.** See Bendavid, A.
**Slota, Rudolf** See Rajczyk, Krystyna
**Slotwinski, J. A.; Hsu, N. N.; Blessing, G. V.**
Ultrasonic measurement of surface and subsurface structure in ceramics.—73-05094
**Slovokhotova, O. L.** See Belokoneva, E. L.
**Slowik, Jacek** See Chaissac, Martine
**Sluchanko, N. E.** See Demishev, S. V.
**Sluchinskaya, I. A.** See Lebedev, A. I.
**Slupinski, T.** See Baj, M.
**Slutz, David E.** See Knemeyer, Friedel S.; McEachron, Roger
**Slutz, David E.; Knemeyer, Friedel S.**
Method for producing CVD diamond film substantially free of thermal-stress-induced cracks.—73-12487
**Sluzky, Esther** See Kinsman, Karin M.
**Slyn'ko, E. I.** See Akimov, B. A.; Vygranenko, Yu. K.
**Slyn'ko, V. V.** See Vygranenko, Yu. K.
**Smaihi, M.; Petit, D.; Gourbilleau, F.; Chaput, F.; Boilot, Jean-Pierre**
Sol-gel preparation and lithium dynamics in the $Li_4SiO_4$-$Li_3PO_4$ solid solution.—73-04170
**Smaihi, M.; Petit, D.; Korb, J. P.; Boilot, Jean-Pierre**
Lithium-aluminate-doped lithium orthosilicate: sol-gel ceramics and lithium dynamics.—73-02887
**Smakotn, N. F.** See Strel'nikov, V. I.
**Smallen, M.** See Lee, H. J.
**Smandek, B.** See Eichler, H. J.
**Smart, John** See Fok, Siu L
**Smart, John; Fok, Siu L.**
Numerical evaluation of failure theories for brittle materials.—73-17407
**Smedley, J. W.** See Cable, M.
**Smeets, J.** See Blanpain, B.; De Kempeneer, E. H. A.
**Smeets, J.; Van den Bergh, V.; Jacobs, R.; Eersels, L.; Meneve, J.; Dekempeneer, E.**
Plasma diagnostics of rf discharges used for the deposition of hydrogenated amorphous carbon coatings.—73-09242
**Smeets, J.; Van den Bergh, V.; Meneve, J.; Dekempeneer, E.; Dewilde, L.**
Deposition of wear-resistant BN coatings by rf plasma-assisted chemical vapor deposition.—73-03573
**Smekalin, K. E.** See Andreev, V. M.; Mintairov, A. M.
**Smelkova, A. V.** See Kazantseva, S. I.
**Smentkowski, V. S.; Yates, J. T., Jr.**
Temperature control and measurement for diamond single crystal in ultrahigh vacuum.—73-17053
**Smid, V.** See Hinomaz, P.; Hubik, P.
**Smietana, James M.**
Intake or exhaust valve actuator.—73-00284
**Smilgys, Russell V.; Robey, Steven W.; Chiang, C. K.; Hsieh, T. J.**
Reactive coevaporation of DyBaCuO superconducting films: the segregation of bulk impurities on annealed MgO(100) substrates.—73-08185
**Smillie, S.; Mouiin, E.; Macphee, Donald E.**
Freshness of cement: conditions for syngenite $CaK_2(SO_4)_2{\cdot}H_2O$ formation.—73-06661
**Smirnitskaya, Yu. Ya.** See Belokoneva, E. L.
**Smirnov, A. S.; Chumaevskii, O. V.; Evgen'yeva, M. I.**
Optimal operating conditions of MgO thermo- and mechanochemical activation.—73-16887
**Smirnov, A.** See Mironova, N.
**Smirnov, B. I.** See Egorov, V. M.; Nikolaev, V. I.; Orlova, T. S.; Zakrevskii, V. A.
**Smirnov, B. I.; Chudnova, R. S.; Shpeizman, V. V.**
Large local deformations under high-temperature loading of LiF crystals.—73-16528
**Smirnov, B. I.; Krishtopov, S. V.; Orlova, T. S.**
Effect of strong electric field on conductivity of high-$T_c$ superconducting ceramics of YBaCuO system.—73-15434
**Smirnov, I. A.** See Egorov, V. M.
**Smirnov, N. V.** See Evstrop'ev, S. K.
**Smirnov, O. V.** See Gyunner, T. V.
**Smirnov, S. N.** See Dolgin, A. M.
**Smirnov, V. A.** See Andrukhiv, A. M.; Basiev, T. T.; Georgitse, E. I.; Ivanov-Omskii, V. I.; Mamedov, A. A.
**Smirnov, V. M.** See Bublik, V. T.
**Smirnov, Yu. S.** See Murav'eva, K. K.
**Smirnov, Yu. I.** See Abov, Yu. G.
**Smirnova, E. I.; Kuryleva, E. F.**
Aqueous oligomer solutions as cutting fluids for glass polishing.—73-07108
**Smirnova, E. V.** See Urusovskaya, I. B.
**Smirnova, I. S.** See Molotkov, S. N.
**Smirnova, O. I.** See Belopol'skaya, T. V.
**Smirnova, R. P.** See Livshits, V. Ya.
**Smirnova, S. A.** See Baryshevsky, V. G.
**Smirnova, T. A.** See Sinii, I. G.
**Smirnova, T. P.** See Voronkov, V. P.
**Smirnova, T. V.** See Malashkevich, G. E.
**Smirnova, Yu. V.** See Vikhrov, M. N.
**Smit, I.** See Kosanovic, Cleo
**Smit, W.** See Van Schaik, W.
**Smith, A. B.; Naeem, Z.**
Chemically vapor deposited alumina coatings on high-speed steel cutting tools.—73-10203
**Smith, A. R.** See Gwo, S.
**Smith, B. H.** See Hutcheon, Ronald M.
**Smith, B. V.** See Jayasundere, N.
**Smith, C. W.; Reinertson, R. C.; Dolan, P. J., Jr.**
Temperature dependence of point-contact spectra for $Ag:Nd_{1.85}Ce_{0.15}CuO_{4-\delta}$.—73-08246
**Smith, Charles H.** See Herrington, Tommy L.
**Smith, D. L.** See Park, Y. C.; Yang, K.
**Smith, D. M.** See Ackerman, William C.
**Smith, Dennis W.** See Borrelli, Nicholas F.
**Smith, Donald E.** See Hrma, Pavel; Kim, Dong-Sang
**Smith, Donald L.**
Controlling the plasma chemistry of silicon nitride and oxide deposition from silane.—73-09551
**Smith, Douglas M.** See Deshpande, Ravindra; Fahrenholtz, William G.; Huling, Jeffrey C.
**Smith, F. W.** See Liliental-Weber, Z.; Lin, Ya-Yun; Sommer, M.
**Smith, F. W.; Efstathiadis, H.; Yin, Z.**
Dangling bonds in amorphous silicon nitride alloys: predictions of the free energy model [FEM].—73-06147
**Smith, G. M.** See Springthorpe, A. J.
**Smith, G. O.; Juhasz, T.; Bron, W. E.; Levinson, Y. B.**
Interaction of an electron-hole plasma with optical phonons in GaP.—73-07611
**Smith, G. W.** See Lovering, D. J.
**Smith, Gary A.** See Chuang, Mei-Chem
**Smith, Gaylord D.** See Bell, James A. E.
**Smith, Gregory C.** See Kumar, Sunil
**Smith, Guy A.** See Tucker, Dennis S.
**Smith, Hal D.; Elwell, Dennis F.**
HTCC/LTCC use of multiple ceramic tapes in high-rate production.—73-15768
**Smith, J. L.** See Fowler, C. M.; Takigawa, M.
**Smith, J. M.** See Chung, G. Y.
**Smith, J. R.** See Hong, T.
**Smith, J. S.** See Verma, Ashish K.
**Smith, J.** See Eastwood, B.
**Smith, Jacob W.** See Adler, Stuart B.
**Smith, Jerome F.**
Lead minerals and compounds.—73-12282
**Smith, Joseph V.; Pluth, Joseph J.; Andries, Koen J.**
Framework topology of magnesium aluminophosphate structure type 36.—73-08631
**Smith, L. K.** See DeLoach, Laura D.
**Smith, Larry K.** See Payne, Stephen A.
**Smith, Londa J.** See Lewis, Michele A.
**Smith, M. A.**
Instrumental considerations for acquiring quantitative Auger electron spectra.—73-01908
**Smith, M. F.** See Neiser, R. A.
**Smith, Mark E.** See Bastow, Timothy J.
**Smith, Mark P.** See Bloom, Richard L.
**Smith, N. A.** See Moze, O.
**Smith, Neil** See Jeffers, Frederick J.
**Smith, P. A.** See Powell, K. L.; Pryce, A. W.
**Smith, P. L.** See Kepten, A.
**Smith, P. M.** See Ballingall, J. M.
**Smith, P. V.** See Craig, B. I.
**Smith, Paul A.** See Lawson, Simon
**Smith, Peter A.; Kerch, Helen M.; Krueger, Susan; Long, Gabrielle G.; Keller, Joseph; Haber, Richard A.**
Pore sizes and filtration rates from two alumina slips.—73-13168
**Smith, R. L.; West, Anthony R.**
Crystal structure of $\alpha$-$Li_{2.5}Al_{0.5}SiO_4$.—73-02185
**Smith, R. W.** See Knight, R.; Thompson, P. D.
**Smith, R. W.; Keszler, D. A.**
Synthesis, structure, and properties of the orthoborate $SrCu_2(BO_3)_2$.—73-02508
**Smith, R. W.; Lugscheider, E.; Jokiel, P.; Mueller, U.; Merz, J.; Wilbert, M.**
Synthesis of composite materials by reactive plasma-spray processing.—73-06860
**Smith, Redd H.** See Lin, Tze-Pin
**Smith, Richard L.; Miller, Homer E.; Erb, Roger L.**
Mold clamping mechanism for glass container forming machine.—73-12088
**Smith, Rosemary L.; Collins, Scott D.**
Formation of silicon nitride by nitridation of porous silicon.—73-15991
**Smith, Russell G.** See Aghajanian, Michael K.
**Smith, S. R.** See Evwaraye, A. O.; Li, S. H.
**Smith, S. T.** See Chetwynd, D. G.
**Smith, Sandra L.; Hazen, Brian J.**
Method of protecting aluminum nitride circuit substrates during electroless plating using a surface oxidation treatment.—73-11037
**Smith, Thomas K.; Shaw, Raymond W.; Heathcock, Christopher J.; Edwards, Leslie C.; Couper, Malcolm J.; Xia, Ke-Nong**
Method of making ceramic microspheres.—73-02051
**Smith, Todd W.**
New developments in high-efficiency particulate air filtration.—73-04932
**Smith, Vincent F., Jr.** See Satek, Larry C.
**Smlyan, O. D.** See Torchinskaya, T. V.
**Smol'skii, I. L.** See Zvereva, O. V.
**Smotrakov, V. G.** See Shuvaeva, V. A.
**Smout, Adrianus D.** See Linke, Erich A. E.
**Smrcek, Antonin**
European pressed glass, 1986 to 1990.—73-06568; Modern container glass compositions.—73-03401
**Smrcek, Josef**
Glass melt current and homogenizing in electric tank furnaces.—73-15876
**Smrcok, Lubomir** See Cernansky, Marian
**Smreck, A.**
Influences of heat consumption during glass melting in tank furnaces.—73-15884
**Smt, C.** See Blom, P. W. M.
**Smulyanskii, I.**
Ecological problems in glass-melting process.—73-14356
**Smurov, I. Yu.** See Ignatiev, M.
**Smutnyi, V. N.** See Kaplan, I. G.
**Smyrl, W. H.** See Munshi, M. Z. A.
**Smyth, Donald M.** See Liu, D.-H.; Warren, W. L.
**Smyth, J. A.; Tulchinsky, D. A.; Awschalom, D. D.;**
**Samarth, N.; Luo, H.; Furdyna, J. K.**
Femtosecond scattering dynamics in magnetic semiconductor spin superlattices.—73-14923
**Snail, K. A.; Vardiman, R. G.; Estrera, J. P.; Glesener, J. W.; Merzbacher, C.; Craigie, C. J.**
Diamond growth in turbulent oxygen-acetylene flames.—73-12984
**Snaper, Alvin A.; Benfield, Charles W.**
Plasma arc apparatus for producing diamond semiconductor devices.—73-04530
**Snedden, J. D.**
Prediction of creep reliability of ceramics: some approximate engineering techniques.—73-17412
**Sneddon, L.** See Nowakowski, M.
**Sneddon, Larry G.** See Zank, Gregg A.
**Snegirev, A. I.; Znev, M. G.; Pivovarova, V. I.**
Zirconia-, yttria-, and ceria-based ceramics with high electrical conductivity.—73-10999
**Snegirev, V. V.** See Hadjiiskii, Yu. A.

**Snetivy, Daniel; Vancso, G. Julius**
Distance measurements by atomic force microscopy [AFM] on the angstrom scale: the effect of the specimen height.—73-08396
**Snezhkov, V. I.** See Prisyazhny, V. D.
**Snezhnoi, G. V.** See Panchenko, T. V.
**Snitzer, Elias** See Dejneka, Matthew; Wu, Feng-Qing
**Snitzer, Elias; Vogel, Eva M.; Wang, Jau-Sheng**
Tellurite glass and fiber amplifier.—73-03970
**Snoeks, E.** See Custer, J. S.
**Snoeks, E.; Van den Hoven, G. N.; Polman, A.**
Optical doping of soda-lime-silicate glass with erbium by ion implantation.—73-06949
**Snoke, D. W.; Ruhle, W. W.; Lu, Y.-C.; Bauser, E.**
Nonthermalized distribution of electrons in ps time scale in GaAs.—73-07697
**Snomoto, Toshiyuki; Tani, Yasuhiro; Sato, Hisayoshi**
Single-point machining technology of a supersmooth surface using a flying tool.—73-15755
**Snowling, David C. H.; Grovenor, Christopher R. M.**
Effect of addition of chromium(VI) oxide on the formation of Tl-Sr-Ca-Cu-O 1212 phase.—73-04699
**Snyder, B. S.** See Leonard, S. R.
**Snyder, C. W.** See Sudijono, J.
**Snyder, Craig L.** See Gavigan, William J.
**Snyder, Gordon E. D.; Ehrlich, Shelton**
Refractories in fluidized-bed combustors.—73-14613
**Snyder, P. G.** See Ianno, Natale J.; Nafis, Suraiya
**Snyder, Paul G.** See Pittal, S.; Xiong, Yi-Ming
**Snyder, R. L.** See Chen, Bin-Jiang; De Marco, M.; Kudesia, R.
**Snyder, Theresa M.**
Consider a career in technical sales.—73-17472
**Snyder, William J.; Steigman, Frederic N.; Tasco, Abilio**
Considerations and results in applying oxygen firing to industrial melters.—73-08467
**So, Myoung-Gi** See Lee, Seoung-Ho
**Soane, David S.** See Monk, David J.
**Soar, Martin** See Knight, Kevin S.
**Soares, J. C.** See Alves, E.
**Soares, J. C.; Agullo-Lopez, F.**
Portuguese-Spanish collaboration on $LiNbO_3$.—73-07909
**Soares, M. R.; Dionisio, P. H.; Baumvol, I. J. R.; Schreiner, W. H.**
Influence of sputtering parameters on the composition and crystallinity of tin oxide.—73-09178
**Sobata, Kaoru** See Nagae, Hajime
**Sobata, Tamotsu** See Endo, Koetsu
**Sobczyk, Marek** See Dasgupta, Sankar
**Sobiesierski, Z.; Westwood, D. I.; Woolf, D. A.; Fukui, T.; Hasegawa, H.**
Photoluminescence [PL] spectroscopy of near-surface quantum wells: electronic coupling between quantized energy levels and the sample surface.—73-11382
**Sobiesierski, Z.; Woolf, D. A.; Frova, A.; Phillips, R. T.**
Photoluminescence and photoluminescence excitation spectroscopy of H-related defects in strained $In_yGa_{1-y}As$/GaAs(100) quantum wells.—73-07724
**Sobiesierski, Z.; Woolf, D. A.; Westwood, D. I.; Frova, A.; Coluzza, C.**
Creation of radiative hydrogen-related states within strained $In_yGa_{1-y}As$/GaAs quantum wells by hydrogenation.—73-01115
**Sobishchanskii, B. M.** See Makhnii, V. P.
**Sobol, A. A.** See Voronko, Yu. K.
**Sobolev, A. B.** See Lushnikov, P. V.
**Sobolev, A. B.; Bikmetov, I. F.; Lobach, V. A.; Mitkovets, A. I.; Stavrov, A. A.; Shkadarevich, A. P.**
Electronic structure of $Cr^{4+}$-center in yttrium aluminum garnet.—73-02260
**Sobolev, A. B.; Lushnikov, P. V.; Gorbunov, S. V.**
Ground state parameters of *F* center in BeO.—73-16162
**Sobolev, A. T.** See Kravchenko, V. B.
**Sobolev, B. P.** See Fedorov, P. P.; Golubev, A. M.; Kolesik, M.; Krivandina, E. A.; Otroshchenko, L. P.; Sorokin, N. I.
**Sobolev, E. V.** See Fedorova, R. A.; Sharagov, V. A.
**Sobolev, I. A.** See Ozhovan, M. I.
**Sobolev, M. M.** See Brunkov, P. N.
**Sobolev, M. M.; Gittsovich, A. V.; Papentsev, M. I.; Kochnev, I. V.; Yavich, B. S.**
Degradation mechanism of GaAs/AlGaAs quantum well lasers.—73-07440
**Sobolev, N. A.** See Radautsan, S. I.
**Sobolev, Yu. S.** See Pavlovskii, V. K.
**Soboleva, K. L.** See Samkova, L. G.
**Sobolevskii, S.** See Vityaz, P.
**Sobolewski, M. A.; Semancik, S.; Hellman, E. S.; Hartford, E. H.**
Effects of oxidation and air exposure on $Rb_xBa_{1-x}BiO_3$ superconducting thin films.—73-01535
**Sobolik, Jeffrey L.; Wang, Hong; Thomson, William J.**
Effect of particle size on binary reactions common to the Y-Ba-Cu-O system.—73-15433
**Sobotta, H.** See Syrbu, N. N.
**Sobrados, Isabel** See Sanchez-Soto, P. J.
**Sobue, Masahisa** See Sakai, Junji; Yasutomi, Yoshiyuki
**Sobue, Masahisa; Sakai, Junji**
Development of computer simulation method for slip casting process.—73-16703
**Sochava, S.; Buse, K.; Kratzig, E.**
Nonsteady-state photocurrent technique for the characterization of photorefractive $BaTiO_3$.—73-06265
**Sochinskii, N. V.; Babentsov, V. N.; Tarbaev, N. I.; Serrano, M. D.; Dieguez, E.**
Low-temperature annealing of *p*-cadmium telluride in gallium bath.—73-07645
**Socie, Darrell F.** See Dey, N.; Wesling, Kevin F.
**Sodeoka, Satoshi** See Ueno, Kazuo
**Soderholm, L.; Loong, C.-K.; Xue, J. S.; Hammonds, J. P.; Greeden, J. E.; Maric, M.**
Electronic transitions of Ho in $Pb_2Sr_2HoCu_3O_8$ observed by inelastic neutron scattering.—73-04715
**Soderholm, S.** See Rogelet, T.
**Sodhi, R.** See Jedral, L.; Liao, H. M.
**Sodini, C. G.** See Richardson, J. T.
**Sodolski, H.; Mondalski, P.; Godlewski, J.**
Electrical conductivity of dry silica gel under high pressure.—73-10435
**Soeda, Koichi** See Tsuchiya, Kazuyoshi
**Soeda, Koichi; Hayashi, Hiroshi; Tsuchiya, Kazuyoshi**
Influence of hydration degree and pore structure on the expansive stress of nonexplosive demolition agent.—73-10008
**Soeda, Koichi; Hida, Toshiharu; Hayashi, Hiroshi; Kanbayashi, Masayuki**
Influence of additives on the expansive stress of quicklime.—73-00110
**Soejima, Ayako** See Sekiya, Takao
**Soejima, Yuji** See Aomine, Nobutaka
**Soeta, Atsuko** See Doi, Toshiya
**Soeya, Susumu** See Nakamura, Shin
**Soeya, Susumu; Tadokoro, Shigeru; Imagawa, Takao; Fuyama, Moriaki; Narishige, Shinji**
Magnetic exchange coupling for bilayered $Ni_{81}Fe_{19}$/NiO and trilayered $Ni_{81}Fe_{19}$/NiFeNb/NiO films.—73-11659
**Soga, Kohei** See Inoue, Satoru
**Soga, Naohiro** See Benino, Y.; Hanada, Teiichi; Hirao, Kazuyuki; Kawamoto, Y.; Li, P.; Matsuoka, Jun; Nakanishi, Kazuki; Tanabe, S.; Tanaka, Katsuhisa; Todoroki, Shinichi; Zhang, Zu-Yi
**Soga, Naohiro; Nakanishi, Kazuki; Takahashi, R.**
Synthesis and structure control of inorganic porous gels by the polymer-incorporated sol-gel method.—73-17024
**Soga, Naohiro**
Glass science and glass industry in Japan.—73-06570
**Sogabe, Koichi** See Yamakawa, Akira
**Sogabe, Kouichi** See Shimoda, Kouhei
**Sogabe, Kouiti** See Yamakawa, Akira
**Sogawa, Satori**
Vitreous or porcelain enamel and enameling steels.—73-03663
**Sogo, Seiji** See Tanaka, Katsuhisa
**Sogo, Shigeyuki** See Kanazawa, Katsuyoshi
**Sohda, Y.** See Kohno, T.
**Sohler, W.** See Brinkmann, R.
**Sohlstrom, Hans; Svantesson, Kjell**
Performance of a fiber optic magnetic field sensor utilizing a magnetooptical garnet.—73-15355
**Sohn, Byung-Ki** See Chung, Wan-Young
**Sohn, H.** See Werner, P.
**Sohn, Hyun-Chul** See Fujioka, Hiroshi
**Sohn, S. H.; Hyun, D. G.; Deguchi, K.**
Electroluminescence in $ZnS_{1-x}Te_x$:$CeF_3$ thin-film devices.—73-02605
**Sohn, S. H.; Hyun, D. G.; Noma, M.**
Effects of oxygen on electroluminescent characteristics of ZnS:TbOF and ZnS:TmOF devices.—73-11173
**Sohr, J. M.** See Blades, B.
**Soininen, P.** See Ritala, Mikko
**Sokol, Alexander; Pines, David**
Toward a unified magnetic phase diagram of the cuprate superconductors.—73-15659
**Sokol, I. V.; Krasnova, T. V.**
Composition of titanium boride synthesis products.—73-12555
**Sokolinskaya, M. A.; Zabava, L. K.; Tsybulya, T. M.**
Strength properties of basalt fibers.—73-00548
**Sokolov, A. N.; Kvyatkovskii, A. V.; Sibikin, A. B.**
Compounds for semidry hot repair of the lining of the legs of a circulation vacuum degasser.—73-00790; Corundum hydraulically hardening compound with addition of titanium slag for steel ladle vacuum degassers.—73-00794
**Sokolov, A. P.** See Malinovskii, V. K.; Mikla, V. I.
**Sokolov, A. P.; Rossler, E.; Kisliuk, A.; Quitmann, D.**
Dynamics of strong and fragile glass formers: differences and correlation with low-temperature properties.—73-13964
**Sokolov, I. A.** See Karpov, S. Yu.
**Sokolov, J.** See Sunil, D.
**Sokolov, M. I.** See Demidenko, L. M.
**Sokolov, M. T.; Shepeleva, V. V.; Garkovich, N. V.**
Thermodissociation and reduction of calcium phosphates in presence of silica.—73-16374
**Sokolov, S. V.**
Heterogeneity of carbonatites.—73-08635
**Sokolov, V. V.** See Basiev, T. T.
**Sokolova, E. V.** See Rastsvetaeva, R. K.; Zhilin, A. A.
**Sokolova, E. V.; Nadezhina, T. N.; Pautov, L. A.**
Crystal structure of new natural manganese silicate from epidote group.—73-02206
**Sokolova, M. N.; Suchkova, E. M.; Vlasova, E. V.; Golovanova, T. I.; Kartashov, P. M.; Kovalenko, V. S.**
New data on natural and synthetic fenaksite.—73-15909
**Sokolova, N. V.** See Belokoneva, E. L.
**Sokolova, T. N.** See Rastsvetaeva, R. K.
**Sokolovich, V. V.**
Metal-semiconductor transition in $Cr_{1-x}S$ ($x \leq 0.12$).—73-15040
**Sokolyanskii, G. Kh.** See Bunina, L. K.; Dubinskaya, O. F.; Kudzin, A. Yu.
**Sokov, V. N.**
Theoretical and practical principles for obtaining lightweight refractories from self-densifying bodies.—73-14629
**Solanki, R.** See Dosluoglu, T.
**Solar, Jeffrey P.** See Fanelli, Anthony J.
**Solazzi, Monte J.**
Comminution device for X-ray spectrochemical analyses.—73-12118
**Solc, Jitka; Kleweno, Douglas G.**
Ceramic-filled thermally conductive composite containing fusible semicrystalline polyamide and/or polybenzocyclobutenes for use in microelectronic applications.—73-01046
**Solc, Zdenek** See Trojan, Miroslav
**Solc, Zdenek; Trojan, Miroslav; Cernosek, Z.**
Nontraditional types of ceramic pigments.—73-00919
**Solc, Zdenek; Trojan, Miroslav; Coufalova, Olga**
Ceramic pigments of rutile type.—73-14647
**Soldatenko, Yu. N.** See Vas'ko, F. T.
**Soldatenkov, O. I.** See Vendik, O. G.
**Soldati, Alfredo; Andreussi, Paola; Banerjee, Sanjoy**
Direct simulation of turbulent particle transport in electrostatic precipitators.—73-15716
**Soldatov, A. V.; Mazuritskii, M. I.; Ivanchenko, T. S.**
Application of X-ray absorption spectroscopy (XANES) for the investigation of $SiO_2$ glass local structure.—73-13926
**Soldatov, P. I.** See Parshin, P. P.
**Sole, J. G.** See Vergara, I.
**Soled, S.** See Bai, C.-S.
**Soled, Stuart L.** See Saleh, Ramzi Y.
**Soled, Stuart L.; McVicker, Gary B.; Gates, William E.; Miseo, Sabato**
Group IVB oxide addition to noble metal on rare-earth-modified silica alumina as hydrocarbon conversion catalyst.—73-05215
**Soled, Stuart L.; McVicker, Gary B.; Gates, William E.**
Metal on rare-earth-modified silica–alumina as hydrocarbon conversion catalyst.—73-02047
**Solheim, Svein** See Holroyd, Bill
**Soliman, Hussein M.** See Molenda, Janina
**Soliman, L. I.** See Abo El Soud, A. M.
**Solin, S. A.** See Lee, Mark
**Solina, A.** See Valentini, R.
**Solinov, V. F.** See Belostotskii, V. I.; Gorokhovskii, A. V.; Zyabnev, A. M.
**Solinov, V. F.; Kapkina, T. V.; Gorokhovskii, A. V.**
Relationship between thermomechanical properties and shaping parameters for sheet silicate glass.—73-07072; Composition of a protective atmosphere on water-resistant surfaces of silicate glass.—73-00312; Protective atmosphere composition and surface water stability of silicate glass.—73-00692; Effect of composition of the protective atmosphere on the adhesion properties of the surface of silicate glass.—73-03786; 73-07124
**Solinov, V. F.; Povitkov, G. F.; Kaplina, T. V.**
Dependence of thermomechanical properties of silicate glass on the ratio of charge to cullet.—73-00609; Thermomechanical properties of silicate glass as a function of the batch-to-cullet ratio.—73-00712
**Solinov, V.** See Gorokhovskii, A. V.
**Solis, J.** See Ortiz, C.
**Solkner, G.** See Baur, G.
**Sollars, C. J.** See Hills, C. D.
**Sollner, J.** See Hermans, J.; Heuken, M.; Schneider, A.
**Solmon, Helene; Robinson, David; Dieckmann, Rudiger**
Oxygen transport in aluminum nitride substrates.—73-17091
**Solntsev, S. S.** See Nadtoka, I. V.
**Solomah, A. G.; Mannik, L.; Brown, S. K.**
Laser machining of silicon nitride ceramics.—73-05890
**Solomatov, V. I.** See Barabash, I. V.
**Solomon, James** See Kim, Hong-Koo
**Solonenko, O. P.; Gelfand, S. M.; Sorokin, A. L.; Zinoviev, A. P.**
Computer design of the plasma-spraying technology.—73-08327
**Soloshenko, L. N.** See Pirogov, Yu. A.
**Soloshenko, V. I.** See Vovk, O. V.
**Solov'ev, A. V.** See Klimenko, V. I.
**Solov'ev, E. E.** See Karnachev, A. S.
**Solov'ev, L. A.; Lobas, L. M.; Lupeiko, T. G.**
Fabrication of current-carrying surface layers on piezoceramics of lead zirconate titanate.—73-01410; Obtaining current-carrying surface layers on the piezoceramics based on lead zirconate titanate.—73-01003
**Solov'ev, S. A.; Belokeitseva, G. M.; Vlasenko, V. M.**
Low-temperature catalytic gas purification from CO.—73-16530
**Solov'ev, V. I.; Akhlestin, E. S.; Sysoev, E. P.**
Outlook for the development of powder technology of glass-ceramics.—73-09229
**Solov'ev, V. I.; Leshina, V. A.; Denisyuk, I. A.**
Dense-sintered and porous glass-ceramic dielectrics.—73-07294
**Solov'ev, V. V.** See Lyn'kov, L. M.
**Solov'eva, A. E.**
Formation of a conducting filament and breakdown in polycrystalline indium oxide.—73-07534; Microstructural features of $Sc_3TaO_7$.—73-13419; Reactions between the components of the powders in the Nb-$Y_2O_3$ system.—73-12671; Structural features of $Sc_3TaO_7$.—73-16323
**Solov'eva, E. A.** See Derlyukova, L. E.
**Solov'eva, L. P.; Tsybulya, S. V.; Zabolotnyi, V. A.**
Determination and refinement of structure of kuznetsovite mineral from X-ray powder pattern.—73-02232
**Solov'eva, N. D.** See Arbuzov, V. I.
**Solovei, N. P.** See Molochko, A. P.
**Solovei, N. P.; Molochko, A. P.; Bodnar, I. V.; Kotov, S. G.; Stavrov, A. A.**
$CuInS_2$ effect on spectral characteristics of borate and tellurite glasses.—73-14150
**Solovena, E. V.** See Gogoladze, D. T.
**Solozhenko, V. L.** See Kurdyumov, A. V.
**Soltani, P. K.** See Hua, Susan Z.
**Soltner, H.** See Copetti, C. A.; Prieto, P.
**Soltwisch, M.** See Malinovskii, V. K.
**Solymar, L.** See Takacs, J.
**Som, K. K.** See Chaudhuri, B. K.; Mollah, S.
**Soma, Takao** See Sakai, Hiroaki
**Somarjai, G. A.** See Vandentop, G. J.
**Somasundaran, P.** See Malbrel, C. A.
**Somasundaran, P.; Maltesh, C.**
Characterization of surfactant and polymer aggregates at the ceramic solid-solution interface using in situ spectroscopic techniques.—73-08378

**Somayazulu, M. S.; Sharma, Surinder M.; Garg, Nandini; Chaplot, S. L.; Sikka, S. K.**
Behavior of α-quartz and pressure-induced $SiO_2$ glass under pressure: a molecular dynamical study.—73-08555

**Sombra, A. Sergio Bezerra**
Nonlinear switching in semiconductor (CdSSe) doped glass.—73-15062; Optical bistability and nonlinear switching in CdSSe microcrystallite doped glass.—73-10463

**Somekh, R. E.** See Doyle, R. A.

**Somenkov, V. A.** See Kvardakov, V. V.

**Someno, Yoshihiro; Sasaki, Makoto; Hirai, Toshio**
Preparation of Al-C-O-N films by microwave plasma chemical vapor deposition.—73-05967; 73-16911

**Somervaille, L.**
Measuring lead in man.—73-13629

**Somiya, Shigeyuki** See Ioku, Koji; Kim, Kwang-Jin; Ochiai, Shouichi

**Sommer, M.; Smith, F. W.**
Effect of oxygen on filament activity in diamond chemical vapor deposition.—73-02789

**Sommers, James A.; Fenwick, Lloyd J.**
Method for the preparation of niobium nitride.—73-12489

**Sommers, James A.**
Process for the preparation of metal carbides.—73-02129

**Somogyi, A.; Robyns, G.**
Legislative challenges facing the EC container sector.—73-17493

**Somorjai, Gabor A.** See Fu, Sabrina S.; Weiss, Werner

**Son, Gun-Suk** See Kim, K.-T.

**Son, Gun-Suk; Suh, Jung; Baik, S.-K.; Kim, K.-T.**
Sintering characterization of alumina powders by hot-pressing after cold cyclic compaction—densification, grain growth, and fracture toughness.—73-09326

**Son, Gun-Suk; Suh, Jung; Park, Byoung-Hark; Kim, K.-T.**
Hot-pressing after cold cyclic compaction of alumina powder matrix mixtures—effects of cold cyclic compaction.—73-09164

**Son, Myung-Mo; Park, Hee-Chan; Lee, Heon-Soo**
Crystallization of passivation glass for electronic devices.—73-07291

**Son, S.-H.; Ahn, J.-W.; Lee, E.-C.**
Preparation of cobalt oxide powders by emulsion evaporation technique.—73-13185

**Son, Sang-Chul** See Lee, Byung-Ha

**Son, Yong-Bai** See Kim, Chong-Don

**Son, Young-Don; Jun, Byung-Sei**
Particle agglomerate effect on intermediate/final microstructure.—73-13436

**Sonda, Ivan; Zizka, Tomas**
Ecology activities of SVUS.—73-15717

**Sondermann, U.** See Von Helmolt, R.

**Sone, Tokuaki; Fujiyama, Osamu; Tanimura, Makoto**
Properties of concrete using low-heat cement containing large amount of belite.—73-10110

**Song, Dong-Sheng** See Sun, Shou-En

**Song, H.-S.** See Kim, Sang-Woo

**Song, H.-S.**
Injection molding of silicon nitride powders treated with coupling agents.—73-09184

**Song, Her-King** See Hettiarachchi, Samson

**Song, In-Sang** See Lee, Kie-Jin

**Song, J. J.** See Hou, H. Q.; Kim, Dai-Sik

**Song, J.** See Abernathy, C. R.

**Song, J.-J.** See Shan, W.

**Song, J.-T.** See Hwang, I.-S.

**Song, J.-T.; Byun, S.-H.; Ryou, D.-W.; Choi, S.-H.**
Synthesis and properties of hydroxyapatite-zirconia composite ceramics.—73-13296

**Song, Jeff** See Cuccio, John

**Song, Jin-Hua; Evans, Julian R. G.**
Die pressing test for the estimation of agglomerate strength.—73-05039

**Song, Jin-Soo** See Kim, Young-Wook

**Song, Jin-Tae** See Park, Jong-Hyun

**Song, Jong-Taek** See Cho, Tae-Hwan

**Song, Ki-Se** See Cho, Tae-Hwan

**Song, Ki-Yong** See Byun, Jae-Dong

**Song, Kug-Hyun; Park, Soon-Ja**
Factors determining the carbon monoxide sensing properties of tin oxide thick films calcined at different temperatures.—73-14914

**Song, L.** See Wang, Kai-Ying

**Song, Myoung-Youp** See Lee, Hee-Gyoun

**Song, Q. Wang; Zhang, Chun-Ping; Talbot, Pierre J.; Maurice, J.**
Anisotropic light-induced scattering and "position-dispersion" in $KNbO_3$:Fe crystal.—73-05529

**Song, S. N.** See Duray, S. J.

**Song, S. N.; Liu, J.; Chen, In-Gann**
Magnetic hysteresis of $p^+$ and $^3He^{++}$ irradiated melt-textured $YBa_2Cu_3O_{7-\delta}$.—73-11820

**Song, Seung-Won** See Choy, Jin-Ho

**Song, Shu-Sen** See Zheng, An-Zhong

**Song, Tae-Ho; Lee, Hong-Lim**
Synthesis of AlN powder from $Al_2(SO_4)_3{\cdot}18H_2O$: II, Deoxidation effect.—73-03041

**Song, Won-Seon** See Hyun, Sang-Hoon

**Song, X.-N.** See Littler, C. L.; Lowney, Jeremiah R.

**Song, Xiang-Yun; Chen, Da-Ren; Ma, Li-Tai**
Grain core–grain shell structure and domain of $BaTiO_3$ ceramics.—73-05411

**Song, Xiang-Yun; Chen, Da-Ren; Yin, Z.-W.**
Grain core–grain shell structure in Nb-doped $BaTiO_3$ capacitor ceramics.—73-10952

**Song, Xiao-Lan; Liu, Fu-Yi**
Sub-grain-boundary phenomenon in ZnO varistor ceramics during sintering.—73-11463

**Song, Xiao-Yu** See Yu, Ya-Qin

**Song, Y.** See Bao, G.; Phelan, P. E.

**Song, Y.-Q.; Halperin, W. P.; Tonge, Lauren M.; Marks, T. J.; Ledvij, M.; Kogan, V. G.**
Low-temperature fluctuations of vortices in layered superconductors.—73-15540

**Song, Y.-Q.; Kennard, Mark A.; Poeppelmeier, K. R.; Halperin, W. P.**
Spin susceptibility in $La_{2-x}Sr_xCuO_4$ system from underdoped to overdoped regimes.—73-15626

**Song, Yong-Yuan** See Lu, Xin-Liang; Yue, Xue-Feng; Zhang, Gui-Lan

**Song, Yuan** See Sperline, R. P.

**Song, Zhuan-Hua**
Calculation of refractoriness of ceramic products.—73-12113

**Soni, K. K.** See Williams, D. B.

**Soni, K. K.; Chabala, J. M.; Mogilevsky, R.; Levi-Setti, R.; Tseng, M. W.; Williams, D. B.**
Ion microprobe investigations of interfacial phenomena in composites.—73-06810

**Soni, N. C.** See Kumar, Shailendra; Ramanathan, S.

**Sonnenberg, N.; Longo, A. S.; Cima, Michael J.; Chang, B. P.; Ressler, K. G.; McIntyre, P. C.**
Preparation of biaxially aligned cubic zirconia films on Pyrex glass substrates using ion-beam-assisted deposition.—73-09257

**Sonntag, R.** See Zeiske, Thomas

**Sonoda, Hideto; Matsumoto, Toshiyuki**
Integrally molded ceramic alignment sleeve for optical fiber connector and method of producing the same.—73-02046

**Sonoda, Kazunori** See Tsubakino, Harushige

**Sonoyama, Mikako** See Moriya, Yoshihiro

**Sonube, Naohiro** See Kyotani, Takashi

**Sood, R. R.** See Holt, R. T.

**Soofi, Madjid** See Connors, Timothy L.

**Soon, Young-Gook** See Kim, Kyum

**Soonckindt, L.** See Schirm, K. M.

**Sopanen, Markku A.** See Huelt, Kari T.

**Soprunyuk, V. P.** See Kityk, A. V.

**Soraru, G. D.** See Babonneau, Florence; Sglavo, V. M.

**Soraru, G. D.; Sglavo, V. M.; Vulcan, F.; Babonneau, Florence**
Fabrication and characterization of ß-SiAlON components from polymeric precursors.—73-05798

**Sorathia, Usman A. K.; Castelli, Vincent**
Fire-resistant barriers for composite materials.—73-02038

**Sorba, L.** See Biasiol, G.; Franciosi, A.

**Sorbello, Robert** See Hegazi, Gamal M.

**Sordelet, D. J.; Ellis, T. W.**
Evaluation of plasma-arc-sprayed refractory metal crucible coatings for containing molten ceramic oxides.—73-06787

**Sorensen, B.** See Tritthart, Josef

**Sorensen, G.** See Bienk, E.-J.

**Sorenson, B. F.; Talreja, R.; Sorenson, O. T.**
Micromechanical analysis of damage mechanisms in ceramic matrix composites during mechanical and thermal cycling.—73-03340

**Sorenson, O. T.** See Sorenson, B. F.

**Soret, J. C.; Ammor, L.; Martinie, B.; Lecomte, J.; Odier, P.; Bok, J.**
Nonohmic conductivity, fluctuations, and dimensional crossover in YBaCuO.—73-01616

**Sorge, Georg** See Michalowsky, L.

**Soria, F.** See Alonso, M.; Jimenez, I.; Mendez, M. A.; Palomares, F. J.

**Soria, Raymond; Defalque, Corinne; Gillot, Jacques**
Filter membrane and method of manufacture.—73-02037

**Soriano, L.; Abbate, M.; Fuggle, J. C.; Jimenez, M. A.; Sanz, J. M.; Mythen, C.**
O1s X-ray absorption of transition-metal oxides $TiO_2$, $ZrO_2$, $HfO_2$, and $V_2O_5$, $Nb_2O_5$, and $Ta_2O_5$.—73-16236

**Soriano, L.; Abbate, M.; Fuggle, J. C.; Preto, P.; Jimenez, C.; Sanz, J. M.**
Thermal oxidation of TiN studied by means of soft X-ray absorption spectroscopy.—73-05513

**Sorman, E.** See Chen, W. M.

**Sornakumar, T.; Annamalai, V. E.; Krishnamurthy, R.; Gokularathnam, C. V.**
Mechanical properties of composites of alumina and partially stabilized zirconia.—73-09636; Thermal shock resistance of composites of alumina and partially stabilized zirconia.—73-08990

**Sorokach, S. E.; Simchick, T. R.; Fripp, A. L.; Debnam, W. J.; Barber, P. J.**
Characterization of Bridgman crystal growth using radiographic imaging.—73-12116

**Sorokin, A. L.** See Solonenko, O. P.

**Sorokin, I. N.; Malyutin, A. A.; Kuznetsova, T. A.; Piskunov, E. E.**
High-temperature abrasion of refractories.—73-00820

**Sorokin, N. I.** See Genkina, E. A.

**Sorokin, N. I.; Bokhigas, Kh.; Folch, A.; Tekhada, Kh.; Sobolev, B. P.**
Magnetic susceptibility of nonstoichiometric fluorides with fluorite structure.—73-16532

**Sorokin, N. I.; Ivanov-Shits, A. K.; Vistin, L. L.; Sobolev, B. P.**
Anionic conductivity in $Na_{0.5-x}R_{0.5+x}F_{2+2x}$ (R=Dy–La, Y; $x$≈0.1) single crystals with fluorite-type structure.—73-16030

**Sorokin, N. I.; Turkina, T. M.; Sobolev, B. P.**
Anion transport in $Ba_{0.5}Ce_{0.5}F_{2.5}$ single crystal with spatially oriented fluctuations of composition.—73-17072

**Sorokin, N. I.**
Ionic conductivity of $Ba_{1-x}Gd_xF_{2+x}$ crystals [$x$=0.25 and 0.4–0.41] at high temperatures.—73-16524; Relation between anionic conductivity and parameters of $^{19}F$ NMR spectra for nonstoichiometric fluorite fluorides.—73-02682; Schemes of isomorphous heterovalent cation substitutions in fluoride solid solutions with fluorite structure.—73-02426; Secondary compensation effect on conductivity of ionic crystals.—73-01023

**Sorokina, E. Yu.** See Berezkin, V. G.

**Sorokina, S. L.** See Mikheeva, M. G.

**Sorokina, S. L.; Kochubey, D. I.**
Structural investigations of binary glasses and solid solutions in the $SiO_2$-$GeO_2$ system by EXAFS spectroscopy.—73-14094

**Sorokina, T. P.; Kuntsevich, S. P.; Bezlepkin, L. A.; Kvashnin, G. M.**
Elastic and magnetoelastic properties of $PbFe_{12}O_{19}$ single crystals.—73-16470

**Soroushian, Parviz; Khan, Ataullah; Hsu, Jer-Wan**
Mechanical properties of concrete materials reinforced with polypropylene or polyethylene fibers.—73-00134

**Sorrentino, Francois P.** See Ayed, F.; Su, Mu-Zhen

**Sosa, Victor; Azamar-Barrios, J. A.; Pena, J. L.**
Influence of preparation conditions on characteristics of the $YBa_2Cu_3O_{7-\delta}$ compound.—73-01578

**Soshnikov, I. P.** See Bert, N. A.

**Soskic, Z.** See Stojic, B. B.

**Sosman, L. P.; Abritta, T.**
Optical spectroscopy of $MgGa_2O_4$:$Co^{2+}$.—73-12643

**Sosnovskii, V. R.** See Averkiev, N. S.; Gutkin, A. A.

**Sosonkina, Jane** See Xu, Xin

**Sosul'nikov, M. I.** See Teterin, Yu. A.

**Sotelo, J. L.** See Uguina, M. Angeles

**Soto, C.; Tysoe, W. T.**
Reaction pathway for the growth of alumina on high surface area alumina and in ultrahigh vacuum by a reaction between trimethyl aluminum and water.—73-02988

**Soubeyroux, J. L.** See Alami, M.

**Souchard, S.** See Huger, Marc

**Souda, R.; Hayami, W.; Aizawa, T.; Otani, S.; Ishizawa, Y.**
Electronic properties of ionic insulators on metal and semiconductor surfaces: RbCl on Si(100) and W(110).—73-04096

**Soudani, S.** See Granier, W.

**Soufiane, A.** See Messaddeq, Y.; Poulain, Marcel

**Soufiane, A.; Poulain, M.**
New fluorogallate glasses.—73-06940

**Souifi, A.; Bremond, G.; Benyattou, T.; Guillot, G.; Dutartre, D.; Berbezier, I.**
Characterization of $Si_{1-x}Ge_x$/Si(100) heterostructures by photoluminescence and admittance spectroscopy.—73-07409

**Souirti, A.** See Mercurio, J. P.

**Souirti, A.; Manier, M.; Mercurio, J. P.; Frit, B.**
Dielectric properties of some compounds with mixed bismuth oxide layer structure derived from $Bi_7Ti_4NbO_{21}$.—73-12766

**Soukiassian, P.** See Chen, W.; Huttel, Y.; Mangat, P. S.; Schirm, K. M.

**Soukiassian, P.; Mangat, P. S.; Huttel, Y.; Hurych, Z.; Gruzza, B.; Porte, A.**
Sb-induced surface stabilization of InP(100) wafer beyond 500°C.—73-11428

**Soulard, M.** See Guth, J. L.; Merrouche, A.

**Soulen, Robert J., Jr.** See Gubser, Donald U.; Osofsky, M. A.

**Souletie, B.** See Laborde, O.

**Soumura, Tetsuo; Tsutsui, Kazuhisa**
Li-doping effect on Bi-Sr-Ca-Cu-O superconductor prepared by arc-melting method.—73-15534

**Souriau, J. C.** See Moncorge, Richard

**Sourie, A.; Glasser, Fredrick P.**
Composition of melilites crystallized from CaO-$Al_2O_3$-$Fe_2O_3$-$SiO_2$ melts.—73-13695

**Sourisseau, C.; Cavagnat, R.; Fouassier, M.; Jobic, S.; Deniard, P.; Brec, R.**
Vibrational resonance Raman spectra and the valence force field of iridium dichalcogenides $IrS_2$ and $IrSe_2$.—73-02538

**Soutar, C.; Gillespie, W. A.; Cartwright, C. M.**
Effect of optical bias on grating formation dynamics in photorefractive BSO.—73-02586

**Southern, Jennifer**
Developments in alumina for ceramic use.—73-05166

**Southworth, S.** See Herrera-Gomez, A.

**Soutome, Y.** See Suwa, H.

**Sova, R. M.** See Grabow, B. E.

**Sovarova, Lenka** See Rybarikova, Ludmila

**Spaeth, J. M.** See Reinke, J.

**Spaeth, J. M.; Lappe, J. J.**
Magnetooptical investigation of shallow donors in GaP.—73-15033

**Spaggiari, C.; Bertoni, S.; Cerofolini, G. F.; Fumagalli, P.; Meda, L.**
Thin buried oxide in oxygen-implanted silicon.—73-07840

**Spagnolo, V.** See Cingolani, R.

**Spal, R. D.** See Long, Gabrielle G.

**Spalding, G. C.** See Achutharaman, V. S.; Liu, Jin-Xiang

**Spallek, Michael; Heinz, J.; Pannhorst, Wolfgang; Grathwohl, Georg; Meier, B.**
Ceramic-fiber-reinforced glasses.—73-14335

**Spallek, Michael**
Market prospects for special glasses.—73-09727

**Spalvins, T.** See Miyoshi, Kazuhisa

**Spang, Michael D.; Hennicke, Hans-Walter**
Recycling and environment protection in the porcelain enamel industry.—73-13641

**Spangenberg B.,** See Barth, R.

**Spanhel, L.; Mennig, M.; Schmidt, H.**
Sol-gel synthesis of metal nanocomposites.—73-14496

**Spann, J. Richard** See Toth, Louis E.

**Spanos, L.** See Xu, X.-L.

**Spanos, N.; Lycourghiotis, A.**
Coadsorption of $Mo^{VI}$ species and $Co^{II}$ ions on the surface of γ-alumina.—73-08822

**Sparks, A. J.; Hutchings, I. M.**
Effects of erodent recycling in solid particle erosion testing.—73-05042

**Sparlin, D. M.** See Carini, G. F.

**Spauszus, S.; Rauscher, H.-U.**
Forming principles and manufacturing limits for the production of ceramic tapes.—73-12029

**Spear, Karl E.** See Kelkar, G. P.; Pantano, Carlo G.; Qi, Gang
**Spear, Karl E.; Dismukes, John P.**
Synthetic Diamond: Emerging CVD Science and Technology (Electrochemical Society Series).—73-17538
**Spear, M. T.** See Arlinghaus, H. F.
**Spearing, S. Mark** See Heredia, Fernando E.
**Spearing, S. Mark; Zok, Frank W.; Evans, Anthony G.**
Stress corrosion cracking in a unidirectional ceramic-matrix composite.—73-06531
**Specht, R.** See Wewel, M.
**Speck, J. S.** See Ibbetson, J. P.; Pompe, W.
**Speck, J. S.; De Graef, Marc; Wilkinson, A. P.; Cheetham, A. K.; Clarke, David R.**
Hierarchical domain structures and in situ domain migration in the antiferroelectric ceramic PLSnZT.—73-08636
**Spector, M.; Pfeiffer, L. N.; Licini, J. C.; West, K. W.; Baraff, G. A.**
Narrow-band photoionization resonance transition at 0.65 eV in AlGaAs/GaAs heterostructures.—73-15052
**Speer, Dietrich; Kiss, Akos; Horst, J.**
Brown spinel pigments based on zinc chromite, method of their production and use.—73-05148
**Spelt, Burkhard** See Banfi, GianPiero; Raedlein, E.
**Spejtkova, Ivana** See Sysala, Otmar
**Speliotis, Dennis E.** See Sin, Kyusik
**Spence, D. E.; Sleat, W. E.; Evans, J. M.; Sibbett, W.; Kafka, James D.**
Time synchronization measurements between two self-mode-locked Ti:sapphire lasers.—73-16642
**Spence, Jarrett L.; Wright, Robert J.**
Inhibiting coke formation by coating gas turbine elements with alumina-silica sol-gel.—73-13916
**Spencer, James T.**
CVD method for forming metal boride films using metal borane cluster compounds.—73-12460
**Speranskii, A. V.** See Mineeva, R. M.
**Sperline, R. P.; Song, Yuan; Freiser, H.**
Fourier transform infrared attenuated total reflection spectroscopy linear dichroism study of sodium dodecyl sulfate adsorption at the $Al_2O_3$/water interface using $Al_2O_3$-coated optics.—73-12141
**Spess, M. S.; Shelby, J. E.**
Formation and properties of neodymium aluminoborate glasses.—73-00484
**Speyer, Robert F.** See Agarwal, G.; Lee, Chung-Kook; Lin, Wen-Yi; Savard, M. E.; Shin, Hyun-Ho; Sundaram, S. Kamakshi; Villalobos, Guillermo R.
**Spicak, Karel** See Kunes, Karel
**Spicer, W. E.** See Dessau, D. S.; Green, A. M.; Kendelewicz, T.; King, D. M.; Shen, Z.-X.
**Spicer, W. E.; Green, A. M.**
Reaching consensus and closure on key questions, a history of success, and failure of GaAs surfaces and interfaces at the Proceedings of the Physics and Chemistry of Semiconductor Interfaces.—73-11412
**Spiegel, L. B.** See Mendelson, M. I.
**Spielbuechler, P.; Gritzner, G.**
Mechanical properties of yttria- and ceria-doped zirconia ceramics.—73-03339
**Spieler, P.** See Sarott, F.-A.
**Spielman, S.; Dodge, J. S.; Lombardo, L. W.; Eom, C. B.; Fejer, M. M.; Geballe, T. H.**
Measurement of the spontaneous polar Kerr effect in $YBa_2Cu_3O_7$ and $Bi_2Sr_2CaCu_2O_8$.—73-08131
**Spierings, G. A.**
Wet chemical etching of silicate glasses in hydrofluoric acid-based solutions[—review].—73-14529
**Spiller, Timothy P.; Dunne, Lawrence J.; Clark, Terence D.**
Magnetic flux quantization in the repulsive electron correlation model for high-$T_c$ cuprate superconductivity.—73-08127
**Spindler, Jurgen; Richter, Sabine**
Joining of silicon carbide by chemically reduced, precipitated NiP interface layers.—73-02883
**Spindt, C. A.; Holland, C. E.; Rosengren, A.; Brodie, I.**
Field-emitter-array development for high-frequency operation.—73-11214
**Spinella, C.** See Coffa, S.
**Spink, D. M.** See Cranton, W. M.
**Spinosa, Emilo D.**
Vitrification of Superfund site soils and sludges.—73-09759
**Spiridonova, E. V.; Rozhkova, I. B.**
Prediction of solid solution formation in glass.—73-06955
**Spiridonova, E. V.**
Hydrolysis of borate glass surfaces.—73-07036; Microstructure of glass and crystalline phases in the system PbO-$TeO_2$-$B_2O_3$.—73-14036
**Spiro, Clifford L.** See Kehl, Randall J.
**Spiro, Clifford L.; Banholzer, William F.; McAtee, Daniel S.**
Chemical vapor deposition of novel electronic materials from carbon disulfide.—73-11111
**Spirov, K.; Stefanov, S.; Mitkova, E.**
Boric-zirconium porcelain—a new type of low-firing porcelain.—73-10803
**Spitsyn, V. A.** See Khrapunov, V. E.
**Spitulnik, F.** See Wang, X. W.
**Spitzer, J.; Gregora, I.; Ruf, T.; Cardona, M.; Ploog, K.; Briones, F.**
Difference frequency Raman scattering and confined optical phonons in ultrashort-period $(GaAs)_n/(AlAs)_n$ superlattices.—73-01126
**Spivack, Bruce D.** See Ransone, Philip O.
**Spivak, M. M.** See Khrapunov, V. E.
**Spohn, Mary T.**
Boron carbide.—73-12260
**Spooner, Steve** See Wang, Xun-Li
**Sporken, R.; Chen, Y. P.; Sivananthan, S.; Lange, M. D.; Faurie, J. P.**
Current status of direct growth of CdTe and HgCdTe on silicon by molecular beam epitaxy.—73-07430
**Sporn, D.; Raether, F.; Merklein, S.**
Preparation and properties of sol-gel nanostructured thin ceramic layers.—73-13177
**Sporn, D.**
Technology for the development of polycrystalline oxidic functional fibers at ISC Wurzburg[, Germany].—73-17052
**Spoto, G.** See Scarano, D.; Zecchina, A.
**Spotz, Mark S.** See Day, Paul S.; Johnson, D. Lynn; Skamser, Daniel J.
**Spousta, J.** See Montero, I.
**Spratt, Geoffrey W. D.** See Lee, Chung-Kook; Lekawat, L.
**Sprenger, D.; Bach, H.; Meisel, W.; Gutlich, P.**
Discrete bond model (DBM) of sodium silicate glasses derived from XPS, Raman, and NMR measurements.—73-06905
**Spriggs, Richard M.** See Adams, Margaret Byrd; Golubjatnikov, Ken A.
**Springholz, G.** See Koppensteiner, E.; Trofimov, V. T.
**Springholz, G.; Yuan, Shu; Bauer, Gunther; Kriechbaum, M.; Krenn, H.**
EuTe/PbTe superlattices: MBE growth and optical characterization.—73-04332
**Springthorpe, A. J.** See Miner, C. J.
**Springthorpe, A. J.; Arent, D. J.**
Arsenic reflection from GaAs and AlGaAs surface during molecular beam epitaxy.—73-11073
**Springthorpe, A. J.; Majeed, A.; Ingrey, S.; Smith, G. M.; Bassignana, I. C.; MacQuistan, D.**
Reactions between molten aluminum and pyrolytic boron nitride crucibles.—73-11413
**Springthorpe, A. J.; Majeed, A.; Miner, C. J.; Wasilewski, Z. R.; Aers, G. C.**
Improved thickness uniformity in molecular beam epitaxial growth of GaAs using a tilted conical insert crucible.—73-07575
**Springthorpe, A. J.; Moore, W. T.; Majeed, A.; Streater, R. W.**
Silicon spikes and impurity accumulation at interrupted growth interfaces during molecular beam epitaxy.—73-11445
**Springuel-Huet, M. A.; Fraissard, J. P.**
$Xe^{129}$ NMR study of dealuminated mordenites.—73-12732
**Sprosson, Derek W.** See Grebe, Vernon J.
**Sprosson, Derek W.**
Statistical process control: beyond chart keeping.—73-15756
**Sproul, W. D.** See Chen, Ming-Y.; Chu, X.; Li, Dong; Rohde, S. L.; Stone, D. S.; Wong, Ming-Show
**Sproule, I.** See Landheer, D.
**Sproull, J. F.** See Applewhite-Ramsey, A.
**Sprung, Siegbert; Delort, M.**
Effect of energy conservation and environmental control measures on clinker properties.—73-09903; Assessment of the suitability of limestone for producing portland limestone cement.—73-00027
**Sprung, Siegbert**
Reduction of environmental pollution by using secondary raw materials.—73-05147
**Spurcaciu, C.** See Balta, P.
**Spyrellis, N.** See Bouroushian, M.; Loizos, Z.
**Sravani, C.; Ramakrishna Reddy, K. T.; Jayarama Reddy, P.**
Influence of oxygen partial pressure on the physical behavior of CdO films prepared by activated reactive evaporation.—73-05584
**Srdanov, V. I.** See Tomiya, S.
**Sreekanth, Gutala** See Narayanan, Sankarasubbier
**Sreekumar, K. P.** See Ananthapadmanabhan, P. V.
**Sreenivas, G.** See Ang, S. S.
**Sreepad, H. R.** See Ravindrachary, V.
**Sreeram, A. N.** See Varshneya, Arun K.
**Sreeramalu, V.** See Ravindrachary, V.
**Sridhar, Narayanaswamy; Yang, Wu-Hua; Srolovitz, David J.; Fuller, Edwin R., Jr.**
Microstructural mechanics model of anisotropic-thermal-expansion-induced microcracking.—73-09480
**Sridhar, S.** See Owliaei, J.
**Sridharan, K.** See Sandstrom, P. W.
**Sridharan, S.; Tomozawa, Minoru**
Effect of various oxide additives on sintering of BaO-$SiO_2$ system glass-ceramics.—73-03836
**Srikanth, V.** See Subbarao, E. C.
**Srikanth, V.; Subbarao, E. C.**
Acoustic emission in ferroelectric lead titanate ceramics: origin and recombination of microcracks.—73-15248
**Srikrishnan, K. V.** See Cramer, J. Kalpathy
**Srinavasan, S. T.** See Guel, G.
**Srinivasan, A.; Madhusoodanan, K. N.; Ganesan, R.**
Threshold behavior in the nonisothermal properties of Ge-Sb-Se glasses.—73-03770
**Srinivasan, A.; Sadra, K.; Campbell, J. C.; Streetman, B. G.**
Influence of growth temperature on the photoresponse of low-temperature-grown GaAs:As *p-i-n* diodes.—73-14980
**Srinivasan, B.; Rao, B. Uma Maheshwar**
Magnetic ordering in amorphous $Bi_2O_3$-ZnO-$Fe_2O_3$ films sputtered at high temperatures.—73-04618
**Srinivasan, Gajawalli V.** See McMurtry, Carl H.
**Srinivasan, Gajawalli V.; Curtin, William A.**
Implications of fiber stress rupture on lifetimes of ceramic matrix composites.—73-17351
**Srinivasan, L. K.** See Augustin, C. O.
**Srinivasan, R.** See Ganesan, V.
**Srinivasan, Sreeram R.; Blau, Peter J.**
Effect of relative humidity on repetitive impact behavior of machined silicon nitride.—73-06388
**Sriram, Mandyam A.; Kumta, Prashant N.**
Thio sol-gel process for the synthesis of titanium disulfide.—73-09377
**Sristunov, I. V.** See Vardapetyan, R. P.
**Srivastava, C. M.** See Datta, Anusuya
**Srivastava, G. P.** See Ikonic, Z.
**Srivastava, M. P.** See Chatterjee, M.; Joshi, S. V.
**Srivastava, P.** See Nerrien, N.; Saini, N. L.
**Srivastava, P.; Sekhar, B. R.; Saini, N. L.; Sharma, S. K.; Garg, K. B.; Mercey, B.**
O1*s* XPS binding energy in $YBa_2Cu_3O_{7-\delta}$.—73-15570
**Srivastava, R. C.** See Singh, Sandeep
**Srivastava, Vipin**
Hierachical hopping in glasses.—73-14201
**Srivatsan, T. S.** See Sudarshan, T. S.
**Srivatsan, T. S.; Anand, S.; Troxell, J. D.**
Influence of heat treatment on microstructure and tensile properties of GlidCop dispersion-strengthened copper alloy.—73-13846
**Srivnivasan, R.** See Ganesan, V.
**Srolovitz, David J.** See Hong, T.; Sridhar, Narayanaswamy
**Srvirdov, E. V.** See Surowiak, Z.
**St. Arnaud, J.-M.** See Villeneuve, D.
**St. John, D. A.** See Goguel, R. L.
**St. John, W. D.; Wicksted, J. P.; Cantwell, G.**
Transverse structures in resonatorless absorptive switching in bulk ZnSe.—73-01357
**St. Julien, Dell J.** See Aitken, Bruce G.
**Staats, F. Dayton**
Late Woodland miniature pottery vessels from the Delaware Valley.—73-09788
**Stabbins, J. F.** See Huang, C. H.
**Stachel, D.** See Walter, C.
**Stachel, D.; Baz-Dolle, C.; Reiss, H.**
New structural interpretation of the "anomalous" binary magnesium phosphate glass system.—73-14052
**Stachiotti, M.** See Dobry, A.
**Stachowiak, G. B.** See Stachowiak, G. W.
**Stachowiak, G. W.; Stachowiak, G. B.**
Environmental effects on wear and friction of toughened zirconia ceramics.—73-09591
**Stachowicz, L.** See Singh, S. K.
**Stacy, A. M.** See Leonard, S. R.
**Stacy, T.; Zhao, G.; Liaw, B. Y.; Charlson, E. J.; Charlson, E. M.; Meese, J. M.**
Rectifying contact formation with indium on polycrystalline *p*-type hot-filament chemical-vapor-deposited diamond utilizing molecular ion implantation.—73-07355
**Stadelmann, C.** See Trettin, R.
**Stadnicar, Edward, Jr.; Allison, Kevin W.; Hankey, Dana L.; Roberts, Gordon J.**
Thick-film paste compositions for use with an aluminum nitride substrate.—73-10416
**Staehli, J. L.** See Bongiovanni, G.
**Stafeev, V. I.** See Abramyan, Yu. A.; Gorshkova, O. V.; Mukhitdinov, A. M.
**Stafsudd, O. M.** See Dai, H
**Stager, C. V.** See Gong, W. H.; Nakua, A.
**Stahl, K.** See Artioli, Gilberto
**Stahl, R. A.** See McKee, Mark A.
**Stahlbush, R. E.** See Zvanut, M. E.
**Stahli, Arthur W.**
Device on a double disk lapping machine.—73-15765
**Stahlman, Mark D.** See Olson, James R.
**Stakem, Doug**
Keeping workers safe from toxic gas exposure.—73-13627
**Stakheev, A. Yu.; Shpiro, Efim S.; Apijok, J.**
XPS and XAES [X-ray-excited AES] study of $TiO_2$-$SiO_2$ mixed oxide system.—73-02548
**Stalchuk, A. P.** See Anikin, M. M.
**Stalder, Jim**
PEI Marketing Committee Report.—73-17497
**Stalick, Judith K.** See Wong-Ng, Winnie
**Stall, R. A.** See Gurary, A.
**Stallmach, F.** See Karger, J.
**Stals, L. M.** See De Bruyn, K.
**Stam, G. T. M.; Van der Giessen, E.; Meijers, P.**
Recent developments in the modeling of crack growth in ceramics with transformation behavior.—73-09661
**Stambolova, I.** See Ratcheva, T.
**Stamm, U.** See Petrov, V.
**Stammberger, K.** See Becker, E.
**Stamov, I. G.** See Syrbu, N. N.
**Stan, M. A.** See Levenson, L. L.; Vitta, Satish
**Stanchina, W. E.** See Metzger, R. A.
**Stancil, D. D.** See Silliman, S. C.
**Standish, Nicholas** See Yu, Ai-Bing
**Staneheva, M.** See Ivanova, Y.
**Staneva, A.** See Dimitriev, Y.
**Stanevich, V. T.** See Kapustin, A. P.
**Stangle, Gregory C.** See Golubjatnikov, Ken A.
**Stanishevskii, Y. N.** See Zapol'skii, V. A.
**Stankevich, A. L.** See Bugaev, A. A.
**Stankov, K. A.; Hamal, K.; Jelinkova, H.; Prochazka, I.**
Mode-locking of the 1.66-μm transition of an Er:$YAlO_3$ laser.—73-07676
**Stanley, A. T.** See Searle, T. M.
**Stanley, A. T.; Harris, E. A.; Searle, T. M.; Parker, J. M.**
Upconversion in neodymium-doped fluoride glasses.—73-07096
**Stanley, David R.; Birchall, James D.; Hyland, J. N. K.; Thomas, L.; Hodgetts, K.**
Carbothermal synthesis of binary (MX) and ternary ($M^1$, $M^2X$) carbides, nitrides, and borides from polymeric precursors.—73-12934
**Stanley, G. M.** See Viel, Charles Henry
**Stanley, H. D.** See Camp, R. W.
**Stanley, M.**
Mathematical and physical modeling of glass conditioning.—73-00658
**Stanovov, O. N.** See Aivazov, A. A.
**Stanton, David L.**
Environmental concerns spur development of lead-free colors.—73-03840
**Stanton, Edward L.; Rahmann, Steven E.**
Constructing material databases for CAE systems.—73-06564
**Stanzione, Todd T.** See Parker, Anthony A.

**Stanzl, H.** See Naumov, A.
**Stanzl, H.; Wolf, K.; Bauer, S.; Kuhn, W.; Naumov, A.; Gebhardt, W.**
Low-temperature growth and characterization of ZnSe films grown on GaAs.—73-04387
**Starcha, A. V.** See Voronin, B. M.
**Starichenko, K. M.** See Vazhenin, V. A.
**Starikov, V. V.** See Boiko, B. T.
**Stark, I.; Stordeur, M.; Syrowatka, F.**
Thermal conductivity of thin amorphous alumina films.—73-05654
**Stark, Jochen** See Mielke, Ingo
**Stark, Jochen; Ludwig, H.-M.; Muller, Anette**
Transformations of hydrate phases at low temperature.—73-13790
**Stark, Miriam T.; Longacre, William A.**
Kalinga ceramics and new technologies: social and cultural contexts of ceramic change.—73-00010
**Starodubtsev, V. A.; Shiyan, L. N.; Portnyagin, A. S.**
Role of $PO_3^{2-}$ radicals in charge accumulation in irradiation of phosphate glasses with electrons.—73-01022
**Starodubtsev, V. A.; Shiyan, L. N.; Portnyagin, A. S.**
Role of the radicals $PO_3^{2-}$ in accumulation of charge upon irradiation of phosphate glasses by electrons.—73-00397
**Starostin, Yu. V.; Pesin, V. S.; Lipkin, F. M.**
Quantitative X-ray phase analysis of polycrystalline ferrite-garnet films.—73-16285
**Starr, Thomas L.** See Besmann, Theodore M.; Lyons, Jed S.
**Startsev, S. V.** See Anders, E. E.
**Startsev, S. V.; Anders, E. E.; Zvyagin, A. I.; Syrkin, E. S.; Feodos'ev, S. B.**
Anisotropy of low-temperature vibrational characteristics illustrated by example of thermal conductivity of ferroelastic $CsDy(MoO_4)_2$.—73-16032
**Startsev, V. S.; Viktorov, L. V.; Obukhov, V. T.**
Scintillation and thermoluminescence properties of beryllium phosphate glasses containing cerium.—73-00543
**Startsev, Yu. K.** See Livshits, V. Ya.
**Startsev, Yu. K.; Priven, A. I.**
Influence of heat treatment regime on property variations of surface layers of ion-exchanged glasses.—73-14007
**Startsev, Yu. K.**
Modeling of property variations of modified layers of glasses.—73-14229
**Starukhin, A. N.; Mikhailov, G. V.; Panfilov, A. G.; Pozina, G. R.; Razbirin, B. S.; Syrnikov, P. P.**
Ultraviolet photoluminescence [UVPL] of high-$T_c$ superconductors.—73-01701
**Stary, Z.** See Horak, J.
**Staryga, E.** See Mycielski, W.
**Starz, Karl A.** See Dorbath, Bernd
**Stashkevich, A. A.** See Matyushev, V. V.
**Stashkevich, A. A.; Gouzerh, J.**
Influence of annealing on magnetic properties of a Ge-doped garnet film.—73-07940
**Stasko, William; Pinnow, Kenneth E.**
Prealloyed high-vanadium, cold work tool steel particles and methods for producing the same.—73-00293
**Stassis, C.** See Hayden, S. M.
**Stastny, Edmund B.**
Transpiration-cooled ceramic fiber seal.—73-10789
**Stastny, P.** See Matacotta, F. C.; Mertelj, T.
**Stath, N.** See Kaden, C.
**Staton, James S.** See Hu, Patrick C.
**Staub, U.** See Guillaume, M.; Mesot, J.; Roessli, B.
**Staub, U.; Fauth, F.; Guillaume, M.; Mesot, J.; Furrer, A.; Dosanjh, P.**
Collective magnetic excitations of $Ho^{3+}$ ions in grain-aligned $HoBa_2Cu_3O_7$.—73-04681
**Staude, U.** See Liebig, H.
**Staudt, Armin** See Schneider, H.
**Staudte, Brigitte** See Beck, Kerstin
**Staudte, Wolfgang; Schierz, Claus**
Thermal insulation by layered, fibrous, two-material laminated mats.—73-00880
**Staufer, T.; Nemetschek, R.; Hackl, R.; Muller, P.; Veith, H.**
Superconducting order parameter on $Bi_2Sr_2CaCu_2O_8$ single crystals.—73-11916
**Stauss, G. H.** See Wagner, R. J.
**Stav, E.; Bentur, Arnon; Kohn, D. H.**
Polymerization of acrylamide in the presence of calcium sulfate hemihydrate: compressive strength and microstructure of the composite.—73-10083
**Stavber, S.** See Beltram, T.
**Stavnistyi, N. N.** See Ignatyuk, V. A.
**Stavrinides, T. S.** See Han, J.
**Stavrov, A. A.** See Molochko, A. P.; Sobolev, A. B.; Solovei, N. P.
**Steadman, Gregg W.; Brewster, J. R.; Budai, J. D.; Boatner, Lynn A.**
Textured coatings from colloidal suspensions of faceted oxide microcrystals.—73-06112
**Stebbins, Jonathan F.** See Xue, Xian-Yu
**Stebbins, Jonathan F.; McMillan, Paul F.**
Compositional and temperature effects on five-coordinated silicon in ambient-pressure silicate glasses.—73-06892
**Steblovskii, G. I.** See Lisovskii, I. P.
**Stebunov, A. A.** See Galakhov, A. V.
**Stechel, E. B.** See Sudbo, A.
**Steckenrider, J. Scott** See Stinson, Michael C.
**Steckenrider, J. Scott; Ellingson, William A.**
Application of laser scattering to the detection of surface and subsurface defects in $Si_3N_4$ components.—73-15777
**Steckl, A. J.** See Li, J. P.
**Steckl, A. J.; Li, J. P.**
Rapid thermal chemical vapor deposition growth of nanometer-thin SiC on silicon.—73-13225
**Stedile, F. C.** See Huber, R.
**Steeds, J. W.** See Vine, W. J.
**Steel, A. T.; Dooryhee, E.**
Time dependence of the structural changes occurring in $NH_4$-Y zeolite on dealumination: a preliminary study using energy-dispersive X-ray diffraction.—73-08783
**Steel, D. G.** See Wang, Hai-Lin
**Steele, Brian C. H.** See Steiner, Hermann J.
**Steele, Brian C. H.**
Materials for electrochemical energy conversion and storage systems.—73-07337
**Steele, C. B.; Beynon, J.; Hogarth, C. A.**
Hall effect and magnetoresistance in Au/$SiO_x$ thin films.—73-08877
**Steele, Duane C.; Strickland, William C.**
Process for forming protective base coatings on metals.—73-00295
**Steele, T. A.** See Folkard, M. A.
**Steele, W. A.** See Bakaev, V. A.
**Steen, M.** See Martins, C. Saraiva
**Steeper, T. J.; Rotolico, A. J.; Nerz, J. E.; Riggs, W. L., II; Varacalle, D. J., Jr.; Wilson, G. C.**
Optimizing plasma-sprayed alumina titania coatings using statistical methods.—73-09228; Taguchi design of experiment study of plasma-sprayed alumina coatings.—73-09368
**Stefaniak, R.** See Goworek, J.
**Stefanov, S.** See Spirov, K.
**Stefanova, S.** See Ivanova, Y.
**Stefanovich, L. I.; Feldman, E. P.**
Relaxation of the intermediate decay structure of glasses and of solid solutions to a state of complete thermodynamic equilibrium.—73-14272
**Stefanovich, S. Yu.** See Kalinin, V. B.; Mill, B. V.; Ol'khovik, I. V.; Vigdorchik, A. G.
**Stefanovich, S. Yu.; Mill, B. V.; Butashin, A. V.**
Ferroelectricity and phase transitions in stilwellite, $LaBGeO_5$.—73-15265
**Stefanovskii, S. V.** See Kuzmin, A.; Lifanov, F. A.
**Stefanovskii, S. V.; Ivanov, I. A.; Gulin, A. N.**
Ir and EPR spectra of aluminoborosilicate and aluminophosphate glasses simulating vitrified radioactive wastes.—73-01749
**Stefanovskii, S. V.; Lifanov, F.; Ivanov, I. A.**
Glass forms for incinerator ash immobilization.—73-13998
**Stefanovskii, S. V.; Sazonov, A. I.; Kuz'min, A. Yu.**
Local environment of cobalt atoms in borosilicate glasses.—73-00368; Local surroundings of cobalt atoms in borosilicate glasses.—73-00369
**Stefanyuk, I. V.** See Kurakevich, L. A.
**Steffen, H.; Wuiff, H.; Lunk, A.**
In and ex situ diagnostics of the growth of alpha-Ti thin films deposited by plasma-enhanced physical vapor deposition.—73-05854
**Steffens, Peter**
Fully automated palletizer for Belgian glassworks.—73-10536
**Steffes-Tun, W.** See Baier, H.
**Steglich, F.** See Lang, M.
**Stehle, J. L.** See Jin, G.; Pickering, C.; Piel, J.-P.; Zalczer, Gilbert
**Steidl, Juergen** See Komma, Ottmar
**Steif, Paul S.** See Meda, G.; Schwietert, H. R.
**Steif, Paul S.; Trojnacki, Andrzej**
Bend strength versus tensile strength of fiber-reinforced ceramics.—73-06329; Relationship between bending strength and tensile strength.—73-09663
**Steiger, Russ** See Rae, Alan
**Steigman, Frederic N.** See Snyder, William J.
**Steigmeier, Edgar F.** See Berz, Martin W.
**Steimle, Timothy C.** See Kuo, Chau-Hong
**Stein, Andreas; Wehrle, Bernd; Jansen, Martin**
Nitrogen incorporation in $AlPO_4$-5 molecular sieves by thermal ammonolysis.—73-08519
**Stein, D.** See Chaudhuri, S.
**Stein, Elfi** See Gerth, Kirsten
**Stein, H. J.** See Barbour, J. C.
**Stein, Joel A.; Braden, Stephen**
Recovering and reusing enamel waste.—73-13893
**Stein, R.** See Gotz, W.
**Steinbiss, E.**
New curved internal fittings for rotary and planetary coolers [of cement making rotary kilns].—73-10063
**Steinborn, G.; Berger, G.; Buchting, H.**
In vitro investigations of implant material solubility.—73-17224
**Steinborn, T.** See Maul, M.
**Steinbrech, Rolf W.** See Bleise, Detlef; Cook, Robert F.; Dransmann, Gerhard W.
**Steinbrech, Rolf W.**
*R*-curve behavior of ceramics.—73-06507
**Steinbruchel, C.** See Dulak, J.; Yoo, W. J.
**Steiner, Bruce; Comas, J.; Tseng, W.; Laor, U.; Dobbyn, Ronald C.; Rajan, K.**
Defects in III-V materials and the accommodation of strain in layered semiconductors.—73-09398
**Steiner, H. J.** See Lutz, H. D.
**Steiner, Hermann J.; Turrillas, Xavier; Steele, Brian C. H.**
Phase relationships and electrical properties of $Ti_3O_5$, $CrTi_2O_5$, and the pseudobrookite-type systems $Mg_xTi_{3-x}O_5$ and $Li_xTi_{3-x}O_5$.—73-05452
**Steiner, Jurgen**
Great son of a great father—on the occasion of the 100th birthday of Erich Schott.—73-03394; Otto Schott and the invention of borosilicate glass.—73-09735
**Steiner, P.** See Bucher, B.; Kozlowski, F.
**Steiner, P.; Karkinski, J.; Wachter, P.**
*I-V* characteristics of point contacts of untwinned $YBa_2Cu_4O_8$.—73-08098
**Steiner, R. A.** See Schwab, R. G.
**Steiner, W.**
Extrusion machines for plastic forming of ceramic bodies.—73-01781
**Steinfink, H.** See Kim, J. S.; Lee, J. Y.
**Steinike, Ursula; Hennig, Hans-Peter**
Mechanically induced reactivity of solids.—73-13131
**Steinitz, M. O.** See Misra, S. K.
**Steinke, R.** See Nebosis, R. S.
**Steinke, Richard A.; Silsbee, Michael R.; Agrawal, Dinesh K.; Roy, Rustum; Roy, Della M.**
Development of chemically bonded ceramics in the CaO-$SiO_2$-$P_2O_5$-$H_2O$ system.—73-00060
**Steinmeyer, F.** See Kleiner, R.
**Stejskalova, Eva; Baloun, Zdenek; Vanek, Vaclav**
Melting different types of glass melts, frits, and glazes.—73-14425
**Stelzner, Thomas; Heide, Klaus; Gerth, K.**
Degassing behavior of glass specimens from various industrial glass-melting tanks.—73-00607
**Stelzner, Thomas; Heide, Klaus**
Degassing behavior of optical glasses.—73-10515
**Stengl, G.** See Loschner, H.
**Stenin, S. I.** See Nikiforov, A. I.
**Stenkamp, D.** See Bimberg, D.
**Stenstrom, S.; Hermansson, M.**
Gypsum calcination in superheated steam—a new process with lower energy demand and better product quality.—73-09979
**Stenstrom, S.; Nilsson, L.**
Influence of temperature, particle size, and humidity on the gypsum dehydration process—investigations in a Cahn thermobalance.—73-10016
**Stentiford, Martin**
Is there life after ISO 9000.—73-09724
**Stepanchuk, A. A.** See Bobkova, N. M.
**Stepanek, B.** See Hubik, P.
**Stepanek, I.** See Musil, J.
**Stepanov, A. A.** See Bogdan, M. M.
**Stepanov, N. N.** See Shchennikov, V. V.; Sidorov, V. A.
**Stepanov, S. A.** See Edelman, I. S.; Merkulov, E. B.; Urusovskaya, I. B.
**Stepanov, S. A.; Urusovskaya, I. B.**
Effect of cerium oxide on radiation resistance of alkali fluorophosphate glasses.—73-14161
**Stepanov, S. I.** See Chusovitina, T. V.
**Stepanov, V. A.** See Gorima, J.
**Stepanov, Yu. P.** See Egorov, V. M.
**Stepanov, Yu. P.** See Kavokin, K. V.
**Stepanova, M. N.** See Il'inskii, A. V.; Urmanov, N. A.
**Stepanova, S. A.** See Novikova, N. I.
**Stepanyuk, V. S.** See Kalibaeva, G. M.
**Stepanyuk, V. S.; Grigorenko, B. L.; Katsnel'son, A. A.**
Structure of metal-nonmetal clusters.—73-17202
**Stephens, Alan** See Brown, John T.
**Stephens, Alan**
Successful glass temperature conditioning.—73-00708
**Stephens, C.** See McGovern, I. T.
**Stephens, D. J.** See He, S. S.; Lucovsky, G.
**Stephens, D. J.; He, S. S.; Lucovsky, G.; Mikkelsen, H.; Leo, K.; Kurz, H.**
Effects of thin-film deposition rates and process-induced interfacial layers on the optical properties of plasma-deposited $SiO_2/Si_3N_4$ Bragg reflectors—73-05783
**Stephens, Richard B.; Elsner, Frederick H.**
Contaminant diffusion barrier for a ceramic oxide superconductor coating on a substrate.—73-11949
**Stephens, Tony** See Wilson, Jim
**Stephenson, D. J.** See Boettger, J. M.
**Stephenson, T. F.** See Ames, W.
**Steren, L. B.; Fainstein, A.; Tovar, M.; Rouco, A.; Perez, F.; Obradors, X.**
Weak ferromagnetism induced by the external field above $T_c$ in $Gd_2CuO_4$.—73-04662
**Sterlev, A. N.** See Kovtun, G. P.
**Stern, M. B.; Medeiros, S. S.**
Deep three-dimensional microstructure fabrication for infrared binary optics.—73-07434
**Sterne, P. A.** See Adelman, D.
**Sternitzke, Martin** See Deubener, J.; Muller, Gerd
**Sternitzke, Martin; Muller, Gerd**
EELS study of oxygen diffusion in aluminum nitride.—73-06155
**Sternlieb, B. J.** See Sato, Masatoshi
**Sterns, Meta** See Thomas, Elizabeth S.
**Sternstein, Sandord S.** See Lara-Curzio, Edgar
**Sterr, A.** See Kikineshi, A.
**Steskca, Maria** See Kucharczyk, Robert
**Stesmans, A.** See Vanheusden, K.
**Stesmans, A.; Vanheusden, K.**
Depth profiling of oxygen vacancy defect generation in buried $SiO_2$.—73-06150
**Stesmans, A.**
New isotropic defect in as-oxidized thermal (111)Si/$SiO_2$ revealed by ESR.—73-13359; Relationship between stress and dangling bond generation at the (111)Si/$SiO_2$ interface.—73-15145
**Stets, I. N.** See Levin, E. M.
**Stetsenko, V. Ya.; Trofimov, N. N.; Khazanov, V. E.; Tchernov, V. A.**
Zirconium and silicon oxide fibers and microspheres produced by the sol-gel transition and plasma-chemical methods.—73-14531
**Stevanovic, D. V.** See Landheer, D.
**Stevens, E. D.** See Jung, J.-S.
**Stevens, Mark**
How to beat lightning bolts.—73-07571
**Stevens, R.** See Cranton, W. M.; Rainforth, W. M.; Wadsworth, I.; Yang, Ming
**Stevens, R.**
Advanced ceramics—an overview.—73-05153
**Stevens, Robert E.** See Dyer, Paul N.; Garg, Diwakar
**Stevenson, J. P.** See Collins, J. F.; Quill, K.

**Stevenson, Jeffry W.; Reidmeyer, Mary R.; Huebner, Wayne**
Fabrication and characterization of PZT/thermoplastic polymer composites for high-frequency phased linear arrays.—73-15261
**Stevenson, P. R.** See Leyland, A.
**Stevie, F. A.** See Lux, G. E.
**Stevie, F. A.; Wilson, R. G.**
Relative sensitivity factors for positive atomic and molecular ions sputtered from Si and GaAs.—73-01303
**Stevula, Ladislav** See Madej, Jan
**Stevulova, Nadezda** See Tkacova, Klara
**Stevulova, Nadezda; Tkacova, Klara; Hocmanova, Irena**
Influence of grinding medium on contamination of powdered silica.—73-01790
**Steward, Nigel I.** See Thomas, Michael P.
**Stewart, Gordon** See Hamlin, Chris
**Stewart, H.** See Simpson, J.
**Stewart, J. T.** See Yong, Y.-K.
**Stewart, Martin W. A.** See Mitamura, Hisayoshi; Vance, Eric R.
**Stewart, R. L.** See Larsen, D. C.
**Stewart, William H.**
Plunger assembly for forming glass containers.—73-12092
**Steyer, T. E.; Faber, K. T.**
DCB methods for examining toughening in alumina reinforced with carbon-coated SiC whiskers.—73-09057
**Stickney, John L.** See Villegas, Ignacio
**Stidham, Arthur C.** See Grebe, Vernon J.
**Stieger, Othmar; Wenger, Alfred**
Method and apparatus for testing containers.—73-15769
**Stiegler, J.; Roth, S.; Hammer, K.; Scharff, W.**
Plasma-assisted chemical vapor deposition of diamond by hollow cathode arc discharge.—73-13166
**Stieling, Patric**
Slip casting of zirconium silicate for the production of structural parts as an alternative to traditional extrusion methods.—73-12063
**Stietz, F.** See Schaefer, J. A.
**Stiles, Ernest D.** See DeBell, George C.
**Stillman, G. E.** See Moy, A. M.
**Stillwagon, Thomas L.; Twait, Douglas J.**
Porous ceramic filter and preparation thereof.—73-15950
**Stinchcomb, Wayne W.** See Elahi, Mehran; Lee, S. S.; Pastor, Michael
**Stingl, Peter**
Processing and applications of advanced ceramics.—73-05178
**Stinson, Michael C.; Lee, Owen W.; Steckenrider, J. Scott; Ellingson, William A.**
Recognition of subsurface defects in machined ceramics by application of neural networks to laser scatter patterns.—73-15841
**Stinton, David P.** See Graham, David W.
**Stirling, D.** See Baird, Thomas
**Stirner, T.** See Hagston, W. E.
**Stix, Gary**
Concrete solutions.—73-03446
**Stobbs, W. M.** See Williams, E. J.
**Stobierski, Ludoslaw** See Lis, Jerzy
**Stobierski, Ludoslaw; Ermer, Elzbieta; Pampuch, Roman; Lis, Jerzy**
Supersaturated solid solutions of boron in SiC by SHS.—73-09344
**Stoch, A.; Lejda, W.; Paluszkiewicz, C.; Dlugon, E.; Blaz, T.; Rakowska, A.**
Sol-gel preparation of silica or silicate-$Me_xO_y$ coatings on metal substrates.—73-13899
**Stoch, L.** See Dziembaj, R.; Laczka, M.
**Stoch, L.; Stoch, Z.**
Crystallization of glasses of the mixed structural network.—73-13954
**Stoch, L.; Swiatek, A.**
Influence of modifying additions on the crystallization of bioactive glasses containing apatite, wollastonite, and $AlPO_4$.—73-14411; Petrurgic materials obtained from rocks and industrial wastes.—73-14454
**Stoch, Z.** See Stoch, L.
**Stochowiak, G. W.** See Swick, K. J.
**Stock, S. R.** See Breunig, T. M.
**Stocker, Jon A.** See Foss, Colby A., Jr.
**Stocker, Michael** See Akporiaye, Duncan
**Stocker, P.** See Chevrier, J.
**Stockman, S. A.; Hanson, A. W.; Lichtenthal, S. M.; Fresina, M. T.; Hofler, G. E.; Hsieh, K. C.**
Passivation of carbon acceptors during growth of carbon-doped GaAs, InGaAs, and HBT's by MOCVD.—73-11371
**Stoddart, P. R.; Ngoepe, P. E.; Mjwara, P. M.; Comins, J. D.; Saunders, G. A.**
High-temperature elastic constants of yttrium aluminum garnet.—73-08880
**Stoebe, T. G.** See Yoo, H. M.
**Stoica, A. D.; Tarina, V.; Russu, R.; Gheorghe, G.**
Structural changes in mordenites revealed by two-dimensional Fourier synthesis of X-ray powder diffraction patterns.—73-12696
**Stojakovic, Djordje** See Batista, Jurka; Rajic, Nevenka; Vasovic, Dusanka D.
**Stojic, B. B.; Stojic, M.; Soskic, Z.**
High-temperature EPR linewidth in $Hg_{1-x}Mn_xSe$.—73-01187
**Stojic, M.** See Stojic, B. B.
**Stok, A.** See Konik, Z.
**Stokes, D.**
Current and future trends for efficient operator interfaces (or "If only they could talk").—73-01772
**Stoklosa, Andrzej** See Molenda, Janina
**Stolarski, T. A.** See Hadfield, M.
**Stolin, A. M.** See Podlesov, V. V.; Shishkina, T. N.
**Stoll, Thomas; Wei, William**
Knitted fiber-reinforcing material.—73-03687
**Stolle, Wolfgang**
Crushing strength determination of individual granules.—73-12962
**Stollenwerk, M.** See Meyer, R.
**Stoloff, N. S.** See Alman, D. E.
**Stolpakova, T. M.** See Kolesnichenko, K. A.
**Stolt, K.** See Loboda, M. J.
**Stolt, L.** See Hudner, J.
**Stolyar, S. V.; Besedina, S. A.**
Temperature dependence of isostructural viscosity of polyalkali glasses.—73-14517
**Stolyarova, V. L.; Ivanov, G. G.; Shul'ts, M. M.**
Mass spectrometric study of the thermodynamic properties of melts of the $B_2O_3$-$GeO_2$-$SiO_2$ system at 1373–1453 K.—73-00371; 73-00372
**Stolz, H.** See Permogorov, S.
**Stolze, F.; Zacharias, M.; Schippel, S.; Garke, B.**
Compositional investigations of sputtered amorphous $SiO_2$:H.—73-16062
**Stone, D. S.; Yoder, K. B.; Sproul, W. D.**
Hardness and elastic [modulus] of TiN based on continuous indentation technique and new correlation.—73-00237
**Stoner, B. R.** See Bergman, L.
**Stoner, B. R.; Glass, Jeffrey T.; Bergman, L.; Nemanich, R. J.; Zoltai, L. D.; Van der Sande, J. W.**
Electrical conductivity and photoluminescence of diamond films grown by downstream microwave plasma CVD.—73-16475
**Stoner, R. J.** See Campbell, J. W. M.
**Stoner, S. L.** See King, Wayne E.
**Stoquert, J. P.** See Savall, C.
**Stordeur, M.** See Stark, I.
**Storek, W.** See Kosslick, Hendrik
**Stori, H.** See Losbichler, P.
**Storm, Roger S.** See Chia, Kai Y.
**Storm, W.** See Schroder, F.
**Storozh, V. V.** See Dabizha, N. A.
**Storozhev, N. R.; Zavartsev, Yu. D.; Yakovloev, A. A.**
Surface tension of gallium garnet melts.—73-03033
**Storr, Manfred** See Kenj, H.; Volsgen, Fernando
**Stosser, R.** See Nofz, M.; Rager, H.
**Stosser, R.; Nofz, M.; Popp, Peter**
EPR investigations on manganese-doped glasses made by melting and by sol-gel processes.—73-13978
**Stott, Michael W.** See Gallois, Bernard M.
**Stout, Phillip J.; Keishner, Mark J.**
Monte Carlo simulation of surface kinetics during plasma-enhanced chemical vapor deposition of $SiO_2$ using oxygen/tetraethoxysilane chemistry.—73-16875
**Stover, D.** See Li, Z.; Mallener, W.; Vassen, R.
**Stover, Edward R.** See Bentson, Larry D.
**Stowers, Ron**
Andalusite—the Hillsborough deposit.—73-08490
**Stoyanov, A. V.** See Lemeshko, V. V.
**Stoyanova, G.** See Kozhukharov, V.
**Stoyanova, I. G.** See Abramov, A. A.
**Straboni, A.** See Faigon, A.; Mathiot, D.; Plossu, C.
**Strach, Larry; Wasyluk, David T.**
Experience with silicon carbide tiles in mass-fired refuse boilers.—73-15963
**Stradling, R. A.** See Ivanov-Omskii, V. I.
**Strafford, K. N.** See Subramananian, C.
**Strait, S. Jared; Bakis, Charles E.; Lewinsohn, Charles A.; Tressler, Richard E.**
Deformation of CVD silicon carbide monofilaments under variable mechanical loading.—73-17272
**Strakhov, L. P.** See Davydov, I. A.
**Strakna, T. J.** See Ives, L. K.; Jahanmir, Said
**Stranford, Gerald T.** See Leung, Roger Y.; Gonczy, Stephen T.
**Strange, W.** See Lindsay, R.
**Strashnikova, M. I.; Cherny, V. V.**
Features of temperature dependence of 1A-exciton decay constant in CdS crystal.—73-01164
**Strasser, S.**
Partial finish grinding: two-stage grinding of cement clinker.—73-00158
**Stratan, G. I.** See Syrbu, N. N.
**Stratford, S. E.** See Harrison, Carole C.
**Stratilatov, A.** See Plakhty, V.
**Straub, William D.** See Jean, Jau-Ho
**Straube, B.** See Hulsenberg, D.
**Strauss, A. J.** See Turner, G. W.
**Strauss, Carl R.** See Brandenburg, Kathryn L.
**Strauss, Carl R.**
Fibrous glass binders.—73-14537
**Strauss, R.** See Barrow, N. J.
**Streater, R. W.** See Hofstra, P. G.; Springthorpe, A. J.
**Streetman, B. G.** See Block, T. R.; Eyink, K. G.; Gwo, S.; Rogers, T. J.; Shih, Y.-C. A.; Srinivasan, A.
**Streit, D. C.** See Sadwick, L. P.
**Streit, D. C.; Tan, Kin-L.; Liu, Po-Hsin**
High-power pseudomorphic gallium arsenide high electron mobility transistors.—73-04516
**Strekalova, J. L.** See Zhilin, A. A.
**Strel'nikov, V. I.; Smakota, N. F.; Kozlova, A. P.**
Enamel coatings with improved working and aesthetic properties.—73-00226
**Strelchuk, V. V.** See Artamonov, V. V.
**Strelkov, Alexander V.; Rebane, Yan A.; Metlin, Yuri G.**
Experimental study of copper diffusion in $YBa_2Cu_3O_{7-x}$ polycrystals.—73-08070
**Strenkowski, J. S.; Larson, W. C.**
Tool flank wear in single-point diamond turning.—73-06539
**Strickland, William C.** See Steele, Duane C.
**Strinati, G. C.** See Arrigoni, E.
**Strite, S.; Lin, M. E.; Morkoc, H.**
Progress and prospects for GaN and the III-V nitride semiconductors.—73-15121
**Strite, S.; Morkoc, H.**
GaN, AlN, and TiN: a review.—73-08875
**Stritzker, B.** See Karl, H.; Lubig, A.
**Strobel, Klaus**
Fast single-fire decoration firing allows automation and energy savings.—73-00906
**Strobel, Tina M.; Hurley, John P.; Breder, Kristin; Holowczak, John E.**
Coal slag corrosion and strength degradation of silicon carbide/alumina composites.—73-17249
**Strock, Harold B.; Ault, Neil N.; Baer, Roy K.; Demetry, James D.; Goguen, J. D.; Trostel, Louis J., Jr.**
Extracurricular science enrichment program—a 35-year success story.—73-03391
**Strohmeier, Karl G.** See Vaughan, David E. W.
**Strojsa, Josef** See Kirsch, Roland
**Strom, Ulrich** See Culbertson, James C.; Ngai, K. L.
**Strong, R.** See Misra, R.
**Strong, Roger L.**
Metal-semiconductor work function differences with HgCdTe and their effect on radiation-induced flatband voltage shifts.—73-07669
**Stross, Howard F.**
Measuring glass furnace temperature.—73-15815
**Stroup, Robert C.** See Ruderer, Clifford G.
**Strozier, J.; Zhang, Y. A.; Horton, C.; Ignatiev, A.; Shih, H. D.**
Model calculations of optical properties for disordered GaAs/AlAs superlattices.—73-04409
**Struble, Leslie J.** See Schultz, Mark A.; Zukoski, Charles F.
**Struchkov, I. S.** See Vlasov, A. S.
**Struchkov, Yu. T.** See Shuvaeva, V. A.
**Struck, Lisa M.** See Yang, Yuemei L.
**Struck, Lisa M.; D'Evelyn, Mark P.**
Interaction of hydrogen and water with diamond (100): infrared spectroscopy.—73-09468
**Strukov, B. A.; Kozhevnikov, M. Yu.; Nizomov, Kh. A.; Volnyanskii, M. D.**
Thermal and elastic properties of $(Li_{1-x}Na_x)_2Ge_7O_{15}$ crystals [x=0, 0.08, 0.25].—73-16617
**Strumban, E. E.** See Kravetskii, I. V.
**Strumskis, M.** See Jursenas, S.
**Strunge, H.; Chatterji, Susanta; Jensen, A. Damgard**
Alkali-silica reaction [ASR]: VIII. Correlation between mortar-bar expansion and Δ values.—73-00021
**Strutt, P. R.** See Luo, Ping; Xiao, T. D.
**Strutt, P. R.; Xiao, T. D.; Boland, R.**
Chemical synthesis of an aluminum nitride/boron nitride nanostructured composite material.—73-16672
**Struzhko, V. L.** See Kosenko, E. I.
**Stryczek, S.** See Brylicki, W.
**Strygin, V. D.** See Sysoev, B. I.
**Strygina, N. I.** See Boldyreva, G. V.
**Stuart, J.** See Nada, R.
**Stubbins, J. F.** See Raghuraman, S.
**Stubican, Vladimir S.** See Trubelja, Mladen E.
**Stubican, Vladimir S.**
Diffusion of isotopes in surface layers of some oxides.—73-13345
**Stubicar, M.** See Kosanovic, Cleo
**Stuchlik, U.** See Hellmold, P.
**Stucky, G. D.** See Moran, Kelly L.; Morris, R. E.; Nenoff, Tina M.; Tomiya, S.
**Stucky, Galen** See Harrison, William T. A.
**Studenikin, S. A.; Panaev, I. A.; Kostyuchenko, V. Ya.; Torchinov, K. M. Z.**
Photomagnetic effect and photoconductivity of thin epitaxial $Cd_xHg_{1-x}Te$/CdTe films.—73-11389
**Studer, F.** See Battle, P. D.; Garg, K. B.; Nerrien, N.
**Studer, F.; Houpert, C.; Toulemonde, M.; Dartyge, E.**
Local environment of iron in heavy ion-irradiated amorphous magnetic oxides by Mossbauer and X-ray absorption spectroscopy.—73-01467
**Studer, Phillip A.** See Harris, Robert
**Studt, Tim**
Breaking down the barriers for ceramic matrix composites (CMC's).—73-02003
**Studzinski, Jan**
Simulation and control of glass-melting furnaces.—73-10597
**Stuff, M.** See Hovis, F. E.
**Stukan, L. V.; Bobrov, V. S.**
Effect of nonexchange processes on electrode characteristics of lithium borosilicate glasses.—73-14163
**Stumm, T.; Fitzer, E.; Wahl, G.**
Chemical vapor deposition of very thin coatings on carbon fiber bundles.—73-09042
**Stump, David M.; La Violette, Randall A.**
Effects of shear stresses on crack-growth microstructures in transformation-toughened ceramics.—73-09587
**Stump, David M.**
Toughening and strengthening of ceramics reinforced by dilatant transformations and ductile particles.—73-03370
**Stump, N. A.** See Chen, G.
**Sturge, M. D.** See Ge, Wei-Kun
**Sturgeon, Andrew J.** See Thomas, Michael P.
**Sturges, Derek J.**
Ultrasonic microscopy.—73-05095
**Sturlese, S.** See Ignatiev, M.
**Sturm, J. C.; Xiao, X.; Schwartz, P. V.; Liu, C. W.; Lenchyshyn, L. C.; Thewalt, M. L. W.**
Band-edge exciton luminescence from Si/strained $Si_{1-x}Ge_x$/Si structures.—73-08811
**Sturm, W.**
Environmental protection through and for ceramics.—73-02011
**Sturman, B. I.** See Odulov, S. G.
**Stus, N. M.** See Aidaraliev, M. Sh.; Gusev, O. B.; Kudryavtsev, Yu. A.; Kuznetsov, V. V.; Nagornyi, P. G.
**Stutz, C. E.** See Look, D. C.; Reynolds, D. C.; Talwar, D. N.; Yu, P. W.
**Stutzin, G. C.; Rozsa, K.; Gallagher, A.**
Deposition rates in direct current diode sputtering.—73-05739

**Styaponavichyus, A. A.** See Zuev, V. V.
**Su, C. B.** See Cheng, Wood-Hi
**Su, Chao-Chin; Hou, Hui-Qui; Lee, G. H.; Dai, Z. G.; Luo, W.-A.**
Identification of the volatile reaction products of the $Cl_2$+GaAs etching reaction.—73-11256
**Su, D.; Boechat, A. A. B.; Jones, J. D. C.**
Optimum beam launching conditions for graded index optical fibers: theory and practice.—73-15078
**Su, Da-Gen; Chen, Wei-Qing; Huang, Qi-Xiu**
Effect of $SO_3$ on mineral formation and properties of clinkers.—73-09918
**Su, Fang** See Wu, Xi-Jun
**Su, Fen-Wei; Yao, Shu-Dian**
New technique of wet processing of quartz sandstone and its application.—73-14440
**Su, Jing; Ruan, Mei-Ling**
Microstructure of Yixing red stoneware and its permeability.—73-14663
**Su, K.** See Nowakowski, M.
**Su, Kai** See Zank, Gregg A.
**Su, Mu-Zhen** See Chen, Yi-Min; Li, Pei-Quan
**Su, Mu-Zhen; Deng, Ju-Nan; Wu, Zong-Dao**
Chemical composition and microstructures of sulfoaluminate cement clinker.—73-09851
**Su, Mu-Zhen; Kurdowski, Wieslaw; Sorrentino, Francois P.**
Development in nonportland cements.—73-09888
**Su, Qiang** See Meng, Jian; Pei, Zhu-Wu
**Su, Qing-Ping; Si, Wen-Jie; Huang, Yong**
Stress-strain characteristic of Ce-TZP ceramics under compression.—73-06533
**Su, Qiu-Ying** See Feng, Jia-Rong
**Su, Shi-Mei; Zhang, Liang-Ying; Sun, Hong-Tao; Yao, Xi**
Preparation of porous $BaTiO_3$ PTC thermistors by adding graphite porosifiers.—73-15113
**Su, Sophia R.**
Formation of the high-$T_c$ 2223 phase in Bi-Sr-Ca-Cu-O by seeding.—73-15677; Process for producing superconducting wires.—73-11997
**Su, Y.-K.** See Chang, S.-J.; Hsu, Chin-Tsar; Li, J.-W.
**Su, Y.-L.; Lin, J.-S.; Hunge, J.-L.**
Tribological performance investigation of steels after various surface treatments, solid lubricant deposition and ceramic coatings.—73-13904
**Su, Y.-L.; Lin, J.-S.; Shiau, L.-I.; Wu, J.-D.**
Tribological investigation of physical vapor deposition TiN coatings paired with surface-treated steels for machine element applications.—73-06868
**Su, Y.-L.; Lin, J.-S.**
Friction and wear behavior of a number of ceramic-coated steels matched as sliding pairs to various surface-treated steels.—73-06795; Wear control in a variable-pitch lead screw with cylindrical meshing elements.—73-13906
**Su, Yan-Ren** See Zhang, Wei-Da
**Su, Z.; Bijen, J. M. J. M.; Larbi, J. A.**
Influence of polymer modification on the adhesion of cement pastes to aggregates.—73-00119; 73-00121; Influence of polymer modification on the hydration of portland cement.—73-00120; Interface between polymer-modified cement paste and aggregate.—73-00128
**Suard, E.** See Mirebeau, I.
**Suback, Gary P.** See Colon, Jose L.
**Subashiev, A. V.** See Gerchikov, L. G.
**Subba Rao, U. V.** See Laxmi Narsaiah, E.
**Subbanna, G. N.** See Ayyappan, S.; Rao, C. N. R.
**Subbarao, E. C.** See Srikanth, V.
**Subbarao, E. C.; Srikanth, V.; Walck, J. C.; Tarry, C. A.**
Acoustic emission [AE] study of $Si_3N_4$.—73-05351
**Subhan, Waseem** See Wagh, Arun S.
**Subhani, M. S.** See Malik, S.
**Subhash, G.** See Ravichandran, Guruswami
**Subhash, G.; Nemat-Nasser, S.**
Uniaxial stress behavior of Y-TZP.—73-16644
**Subotic, Boris** See Antonic, Tatjana; Cizmek, Ankica; Kosanovic, Cleo
**Subrahmanyam, A.**
Photovoltaic properties of reactive thermal evaporated indium oxide (IO)/silicon junctions.—73-04785
**Subrahmanyam, J.; Vijayakumar, M.**
Self-propagating high-temperature synthesis—review.—73-06033
**Subrahmanyam, T. V.** See Bhaskar Raju, G.
**Subramananian, C.; Strafford, K. N.**
Review of multicomponent and multilayer coatings for tribological applications.—73-08540
**Subramaniam, Vish V.** See Bhushan, Bharat
**Subramanian, C.** See Uma, Seetharaman
**Subramanian, K.; Redington, P. D.; Ramanath, S.**
Systems approach for grinding of ceramics.—73-06106; 73-08365
**Subramanian, M. A.** See Ganguli, A. K.; Greedan, J. E.; Whangbo, M.-H.
**Subramanian, M. A.; Ganguli, A. K.; Willmer, K. L.; Greedan, J. E.**
Synthesis and characterization of perovskite-type $BaTl_{0.5}Sb_{0.5}O_3$ and $BaTl_{0.5+x}Sb_{0.5-x}O_{3-x}$.—73-01340
**Subramanian, M. A.**
Superconducting metal oxide $(Tl,Bi)_1Sr_2Ca_2Cu_3O_y$.—73-04878
**Subramanian, Ramesh** See Ustundag, E.
**Subramanian, Ramesh; Dieckmann, Rudiger**
Nonstoichiometry and thermodynamics of the solid solution $(Fe,Mn)_{1-\delta}O$ at 1200°C.—73-12642
**Subramanian, Ramesh; Ustundag, E.; Diekmann, R.; Sass, S. L.**
In situ formation of metal-ceramic microstructures by partial reduction reactions.—73-06805
**Subramanian, S.; Laskowski, J. S.**
Adsorption of dextrin onto graphite.—73-08805
**Subramanian, S.; Swamy, C. S.; Karge, H. G.**
Formation of a new superconducting phase, YBCO-T* ($T_c$=87 K) in $YBa_2Cu_3O_{7-\delta}$.—73-08086
**Subramanyan, B.; Viswanathan, K. S.**
Elastic anomalies of barium titanate.—73-08609
**Subramanyan, S. V.** See Rabinal, M. K.
**Subramoniam, G.** See Asokamani, R.
**Such, Ron**
Equipment overview: from the simple to the complex.—73-12027
**Suche, H.** See Brinkmann, R.
**Suchicital, C. T. A.** See Dey, S.K.
**Suchkova, E. M.** See Sokolova, M. N.
**Suchocki, A.** See Grinberg, M.
**Suckut, Claudia; Howie, R. Alan; West, Anthony R.; Torres-Martínez, L. M.**
Synthesis and properties of hollandite-like $Ba_{3y}Li_{(2x+6y)}$
**Sucov, E. W.** See Halperin, A.
**Suda, Akihiko; Tajima, Ichiro; Ishii, Masahiko; Tada, Masaaki; Ukyo, Yoshio; Wada, Shigetaka**
ECR plasma etching of silicon nitride ceramics.—73-05748; 73-16720
**Suda, Katsumi** See Kataoka, Masako
**Sudarshan, T. S.; Srivatsan, T. S.**
Influence of environment on strength of ceramics.—73-03316
**Sudbo, A.** See Chang, A. M.
**Sudbo, A.; Varma, Chandra M.; Giamarchi, T.; Stechel, E. B.; Scalettar, R. T.**
Flux quantization and pairing in 1-D CuO models.—73-16155
**Sudds, Ian D. A.** See Doorbar, Phillip J.
**Sudersena Rao, T.** See Roth, A. P.
**Sudersena Rao, T.; Lacelle, C.; Roth, A. P.**
Growth of high-purity InP by chemical beam epitaxy [CBE].—73-11235
**Sudersena Rao, T.; Nozawa, K.; Horikoshi, Yoshiji**
Migration-enhanced epitaxial growth of GaAs on Si using $(GaAs)_{1-\delta}(Si_2)_\delta$/GaAs strained-layer superlattice buffer layers.—73-11316
**Sudhakar, N.** See Sharma, S. V.
**Sudhama, C.; Kim, J.; Chikarmane, V.; Shepherd, W.; Myers, E. R.**
Effect of lanthanum doping on the electrical properties of sol-gel-derived ferroelectric lead zirconate titanate for ultra-large-scale integration dynamic random access memory [DRAM] applications.—73-11563
**Sudijono, J.; Johnson, M. D.; Snyder, C. W.; Elowitz, M. B.; Orr, B. G.**
Surface evolution during molecular beam epitaxy deposition of GaAs.—73-07824
**Sudijono, J.; Johnson, M. D.; Snyder, C. W.; Orr, B. G.**
Scanning tunneling microscopy study of molecular beam epitaxial growth of GaAs on GaAs(001).—73-11435
**Sudo, H.** See Furuya, Akira
**Sudoh, Kazumi** See Hirashima, Hiroshi
**Sudoh, Kazumi; Hirashima, Hiroshi**
Preparation and physical properties of $V_2O_5$ aerogel.—73-13176
**Sudre, O.; Passilly, B.; Parlier, M.**
Evaluation of thermal residual stresses in SiC/MLAS and SiC/SiC composites by the microindentation push-down test.—73-03285
**Sudre, Olivier** See Heintz, Jean-Marc
**Sudreau, F.** See Olagnon, Christian
**Sudsina, Michael W.** See Chiaramonte, Francis P.
**Sue, Jiinjen A.; Troue, Harden H.**
Substoichiometric zirconium nitride coating.—73-02141
**Sueda, M.; Kobayashi, T.; Tsukamoto, H.; Rokkaku, T.; Morimoto, S.; Fukaya, Y.**
Fundamental research on the deposition of cubic boron nitride films on curved substrates by ion-beam-assisted vapor deposition.—73-05820
**Suefuji, Yoshihito** See Nakamura, Yoshikazu
**Suefuji, Yoshihito; Nakamura, Yoshikazu; Watanabe, Yoshihisa; Hirayama, Shigekazu; Tamaki, K.**
Effect of oxygen on hydrogenated amorphous carbon films.—73-13011
**Suehiro, Masayuki; Hirata, Takaaki; Maeda, M.; Hihara, Mamoru; Hosomatsu, H.**
GaAs/AlGaAs first-order gratings fabricated with electron beam lithography and very narrow linewidth long cavity DBR laser diodes.—73-14933
**Suehle, John S.** See Mayo, Santos
**Suemasu, Takeshi** See Yoshio, Tetsuo
**Suematsu, H.** See Reimanis, Ivar E.
**Suematsu, H.; Petrovic, John J.; Mitchell, Terence E.; Yano, T.**
Interfacial structure of $Si_3N_4$ brazed with an Ag-Cu-Ti alloy.—73-03610
**Suematsu, H.; Petrovic, John J.; Mitchell, Terence E.**
Deformation and toughness of α-silicon nitride single crystals.—73-06369
**Suematsu, Hisayuki** See Li, Hong
**Suematsu, Yasuhara** See Shimomura, Kazuhiko
**Suemitsu, Maki** See Abe, Toshimi
**Suemoto, T.** See Yugami, H.
**Suen, Meei-Lin** See Hsu, Jen-Yan
**Suenaga, M.** See Budhani, R. C.; Tesanovic, Zlatko; Wang, Y.-L.; Zhu, Yi-Mei
**Suenaga, Tomoko** See Sata, Toshiyuki
**Sueno, Sigeho** See Sakaguchi, Isao
**Sueta, A.** See Mizeris, R.
**Suga, H.** See Fukai, Mari
**Suga, Shigemasa** See Kimura, Akio
**Suga, T.** See Sasaki, Gen; Takahashi, Yutaka
**Suga, T.; Takahashi, Y.; Takagi, H.**
Surface-activated bonding {SAB}—an approach to joining at room temperature.—73-03648
**Sugahara, Hirohiko** See Klauser, Ruth
**Sugahara, Hirohiko; Oshima, Masaharu; Oigawa, Haruhiro; Nannichi, Y.**
Chemistry of S/GaAs and metal/S/GaAs systems.—73-04270
**Sugahara, Masanori** See Han, Xiao-Yi
Preparation of aluminum nitride from poly(isopropyliminoalane).—73-02943
**Sugahara, Yoshiyuki; Onuma, Tsutomu; Tanegashima, Osamu; Kuroda, Kazuyuki; Kato, Chuzo**
Preparation of aluminum nitride from poly(isopropyliminoalane).—73-13182; Clay-organic nanocomposite: preparation of a kaolinite-poly(vinylpyrrolidone) intercalation compound.—73-12945
**Sugahara, Yoshiyuki; Sugiyama, Tomohida; Nagayama, Tetsuji**
Clay-organic nanocomposite: preparation of a kaolinite-poly(vinylpyrrolidone) intercalation compound.—73-05709
**Sugai, Kazuyoshi**
Surface acoustic wave element.—73-11642
**Sugai, Tokuko; Imai, Syozo; Oya, Ginichiro; Yamashita, Tsutomu**
Phase equilibrium in the $SrCO_3$-$Bi_2O_3$-CuO pseudoternary system.—73-16252
**Sugama, T.; Carciello, N.; Miura, M.**
Fractal polyzirconosiloxane cluster coatings.—73-10233
**Sugama, T.; Carciello, N.**
Hydrothermally synthesized aluminum phosphate cements.—73-06669
**Sugama, Toshifumi**
Phosphate-bonded calcium aluminate cements.—73-00207
**Sugano, M.** See Furuya, Akira
**Sugano, Mikio; Satake, Tadaaki; Kisuki, Hiroyuki; Fujimoto, Y.; Sato, H.; Suganuma, E.**
Microstructural study of mechanical properties in $Si_3N_4$ ceramics.—73-06251
**Sugano, Mikio; Satake, Tadaaki; Kisuki, Hiroyuki; Tsukamoto, S.; Takahashi, T.**
Fatigue crack growth behavior of alumina plasma-sprayed stainless steel.—73-03588; 73-10229
**Sugano, Souichiro** See Mori, Toru
**Sugano, T.** See Simko, J. P.
**Suganuma, E.** See Sugano, Mikio
**Suganuma, Katsuaki** See Peteves, Stathis D.; Sasaki, Gen
**Suganuma, Katsuaki; Sasaki, Gen; Fujita, Teruaki; Okumura, Masatoshi; Niihara, Koichi**
Mechanical properties and microstructures of machinable silicon carbide.—73-03328
**Suganuma, Katsuaki**
Reliability factors in ceramic/metal joining.—73-00264; Simple fabrication process of intermetallic compounds utilizing low-temperature pressure casting of alumina.—73-03641
**Sugawa, Tomoki** See Onishi, Masashi
**Sugawara, H.** See Yoshizawa, M.
**Sugawara, Hiroto** See Otsuka, Akio
**Sugawara, Kazushi** See Sugimoto, Tsunemi
**Sugawara, M.** See Yamamoto, Tsuyoshi
**Sugawara, S.** See Fujiura, K.
**Sugawara, Takashi** See Shoya, Masami
**Sugawara, Tomoaki** See Shimono, Isao
**Sugawara, Yoshihiro** See Michishita, Kazuo
**Sugeta, Atsushi** See Jono, Masahiro
**Sugg, B.; Kahmann, F.; Rupp, R. A.; Delaye, Philippe; Roosen, G.**
Diffraction and two-beam coupling in GaAs along the [111] direction.—73-11139
**Sugie, Yosohiro** See Fujii, Satoshi; Kobune, Masafumi
**Sugie, Yosohiro; Kanda, Reiko; Fujii, Satoshi**
Preparation of $Y_2O_3$-doped $CeO_2$ ceramic for pH electrode.—73-01015; 73-10985
**Sugihara, Fumihito; Ishii, Takashi; Kurihara, Tooru**
Hardening material for medical and dental use.—73-02042
**Sugihara, Kiyoshi** See Owaki, Shigehiro
**Sugihara, Sunao; Fukushima, Kunihito**
Joining of semiconductive $BaTiO_3$ with YBCO thick film and their interfaces.—73-15526
**Sugihara, Sunao; Hirose, Yoko**
Wetting properties of AlN with electrode metals and their interfaces.—73-13909
**Sugihara, Sunao; Okazaki, Kiyoshi**
Interfaces and wetting properties between PLZT ceramics and electrode metals.—73-03607
**Sugihara, Tadashi** See Lee, W.-K.
**Sugihara, Tadashi; Takeshita, Takuo; Ouchi, Yukihiro; Sakurai, Takeshi**
Process for producing Bi-Ca-Sr-Cu-O, Tl-Ca-Sr-Cu-O, and Tl-Ba-Ca-Cu-O superconducting ceramics.—73-01736
**Sugii, Nobuyuki** See Adachi, Seiji
**Sugii, Nobuyuki; Matsuura, K.; Kubo, Koichi; Yamamoto, Kiyoshi; Ichikawa, Michiharu; Yamauchi, Hisao**
Superconducting $Sr_{0.875}Nd_{0.125}CuO_{2-\delta}$ thin films.—73-08223
**Sugimori, Kenichiro** See Fujita, Taketoshi
**Sugimoto, Akitoshi**
Method of cleaning porous ceramic filters.—73-01868
**Sugimoto, Eisuke** See Aono, Hiromichi
**Sugimoto, H.** See Itoh, Hideaki; Kishimoto, Akira
**Sugimoto, Jun** See Bekki, Katsutoshi
**Sugimoto, Kenji; Wignarajah, S.; Kimura, Keiichi; Kasuya, Masahiro**
Laser-induced glass layer formation in zeolite mortar.—73-10026
**Sugimoto, Kenji; Wignarajah, S.**
Mixing proportion, casting, and deformation behavior of decorating gypsum board.—73-10054
**Sugimoto, Makoto; Tanabe, Hiroyuki; Musasa, Mamoru**
Spark plug insulator and a method of sintering.—73-11053
**Sugimoto, Masaki** See Seguchi, Tadao; Shimoo, Toshio
**Sugimoto, Masaru** See Kohno, Osamu
**Sugimoto, Naoto** See Katoh, Yujiro
**Sugimoto, Osamu** See Nasu, Hiroyuki
**Sugimoto, Osamu; Nasu, Hiroyuki; Matsuoka, Jun; Kamiya, Kanichi**
Relation between third-order optical nonlinearity and structure of $Na_2O$-$GeO_2$ glasses.—73-06964

**Sugimoto, Tsunemi; Sugawara, Kazushi; Nakagawa, Mikio; Shiohara, Y.**
MOCVD of *a*-axis or *b*-axis-oriented superconducting Bi-Sr-Ca-Cu-O films.—73-04856
**Sugimoto, Y.** See Kawanishi, H.
**Sugimura, Takashi** See Ohsato, Hitoshi
**Sugita, Jun** See Sakai, Etsuo
**Sugita, K.** See Sato, Y.
**Sugita, Minoru** See Muto, Norio
**Sugita, Shuishi** See Shoya, Masami
**Sugita, Tadaaki** See Oguma, Noriyasu
**Sugita, Takaaki; Ueda, Takashi**
Pressure machining in relation to problems in machining of ceramics.—73-05989
**Sugiura, Hideyuki** See Imafuji, Osamu
**Sugiura, Hirotsugu** See Tsunooka, Tsutomu
**Sugiura, Isao** See Iwamoto, Yuji; Yanagisawa, Masaaki
**Sugiura, Isao; Nomura, Hiroshi; Shinohara, Nobuhiro; Tsubaki, Junichiro**
Effect of preparation conditions on properties of green and sintered body in alumina.—73-16735; 73-09107
**Sugiura, L.** See Shigenaka, K.
**Sugiura, Nozomi; Otoshi, Shoji; Kajimura, Atsuko; Suzuki, Minoru; Ohnishi, Hisao; Sasaki, Hirokazu**
Thermal expansion properties of A-site-deficient $La(Sr)CrO_3$.—73-08988; 73-16630
**Sugiura, Osamu** See Ishihara, Ryoichi
**Sugiura, T.** See Nogami, Masayuki
**Sugiura, Tatsumi** See Abe, Masahiro
**Sugiura, Toshiharu** See Sato, Tadao
**Sugiura, Yasuyuki** See Sato, Hideki
**Sugiyama, H.** See Hayashi, Kunio
**Sugiyama, K.** See Kuwabara, K.
**Sugiyama, K.; Ryu, H.-J.; Waseda, Yoshio**
Local ordering structure of meta-kaolinite and meta-dickite by the X-ray radial distribution function analysis.—73-08656
**Sugiyama, M.** See Asada, S.; Idemoto, Y.
**Sugiyama, Naohiro; Ukyo, Yoshio; Wada, Shigetaka**
Phase relations between α′- and ß′-SiAlON's in $Si_3N_4$-($SiO_2$)-AlN-$Y_2O_3$ system.—73-08694; 73-16255; Thermal stability of phases in $Si_3N_4$-($SiO_2$)-AlN-$Y_2O_3$ system.—73-16373
**Sugiyama, Osamu; Kato, Kazuaki; Miura, Teruyuki**
Application of X-ray photoelectron spectroscopy to quantitative analysis of PZT composition.—73-05359; 73-16034
**Sugiyama, Tomohida** See Sugahara, Yoshiyuki
**Sugizaki, M.** See Sasaki, M.
**Sugrue, Stan**
True resolution in laser diffraction particle sizing: I.—73-05092; True resolution in laser diffraction particle sizing: II.—73-05093
**Suh, Im-Choon; Lee, Won-Jun; Yeh, Byung-Hahn**
Pack cemented SiC coating on graphite by experimental design.—73-13488
**Suh, Jung** See Kim, K.-T.; Son, Gun-Suk
**Suh, N. P.** See Kim, D. E.
**Suhail, M. H.; Rao, G. Mohan; Mohan, S.**
Properties of zirconia films prepared by direct current reactive magnetron sputtering.—73-02676
**Suhir, E.**
Approximate evaluation of the elastic interfacial stresses in thin films with application to high-$T_c$ superconducting ceramics.—73-01494
**Suhr, Dong-Soo** See Eom, Tae-Hyoung; Han, In-Sub[; Han, Myoung-Seoup
**Sui, Jian-Guang** See Zheng, Jia-Fan
**Sui, Qing-Hai**
Development of bricks using fluidized bed slag and their production.—73-06646
**Sui, Z.-T.** See Xue, X.-M.
**Sui, Zhi-Feng** See Tuchman, Judah A.
**Suib, Steven L.** See Shen, Lu
**Suistun, V. M.** See Belyi, Ya. I.
**Suito, Hideaki** See Takaoka, Hidemitsu
**Sukach, G. A.** See Bogoslovskaya, A. B.
**Sukach, G. A.**
Effect of neutron bombardment on the displacement of the *p-n* junction interface in GaAsP:Zn light-emitting diodes.—73-11160
**Sukenari, Shiro** See Hosokawa, Kiyoshiro
**Sukhanov, V. I.** See Kuchinskii, S. A.
**Sukhodolova, V. I.** See Berezkina, L. G.
**Sukhorukov, Yu. P.** See Loshkareva, N. N.
**Sukhorukova, N. E.** See Ditrikh, I. V.
**Sukhov, A. V.** See Nikishkin, V. A.
**Sukhov, D. A.** See Yanush, O. V.
**Sukumar, B.** See Martina, S. M.
**Sulaimankulov, K.** See Nabakhtiani, G. N.
**Suleimanov, N. M.** See Drulis, H.
**Suleimanov, R. A.** See Abdulaev, G. B.; Alekperov, O. Z.
**Suleimanov, R. A.; Seidov, M. Yu.; Salaev, F. M.**
Dielectric anomaly in layered $TlInS_2$ crystal at transition to incommensurate phase.—73-16444
**Suleimenov, S. T.; Miringzakhodzhaev, A. A.; Yumankov, A. P.**
Controlling bioactive glass-ceramic crystal structure by thermal radiation.—73-07112
**Suleman, M.** See Mahmood, F.
**Sulimenko, L. M.**
Mechanoactivation of portland cement raw mixes.—73-10041
**Sullivan, B. T.** See Konevecki, M. W.
**Sullivan, Brian J.** See Buesking, Kent W.
**Sullivan, Brian J.; Buesking, Kent W.**
Effect of joint designs on vibration natural frequencies of carbon-carbon satellite truss.—73-12426
**Sullivan, E.** See Korenstein, R.
**Sullivan, G. J.** See Waldrop, J. R.
**Sullivan, G. J.; Farley, C. W.; Ho, W. J.; Pierson, R. L.; Szwed, M. K.; Lind, M. D.**
High gain AlInAs/GaAsSb/AlInAs NpN HBT's on InP.—73-11243
**Sullivan, J. D.; Buttrey, D. J.; Cox, D. E.; Hriljac, J.**
Conventional and high-resolution synchrotron X-ray diffraction study of phase separations in $Pr_2NiO_{4+\delta}$.—73-02172
**Sullivan, John D.** See Carswell, Martin G.
**Sullivan, Thomas A.**
Baselt-block heat-storage plant.—73-12315; Production of ultrastructural ceramics by supercritical processing of the ceramic precursor.—73-01877
**Sully, P.** See Burton, Julie D.
**Sultan, Akif** See Batra, Shubneesh
**Sultan, Akif; Lobo, Melvyn; Bhattacharya, S.; Banerjee, S.; Batra, Shubneesh; Manning, M.**
Physically based phenomenological model using Boltzmann-Matano analysis for boron diffusion from polycrystalline Si into single-crystal Si.—73-13361
**Sultanov, A. M.** See Avrutin, E. A.
**Sulyok, Tamas** See Batori, Jozsef
**Sulzbach, F. C.** See Wan, C. F.
**Sum, R.** See Haefke, H.
**Sumakeris, J.; Rowland, L. B.; Kern, R. S.; Tanaka, S.; Davis, Robert F.**
Layer-by-layer growth of SiC at low temperatures.—73-05894
**Sumakeris, J.; Sitar, Z.; Alley-Trent, K. S.; More, Karren L.; Davis, Robert F.**
Layer-by-layer epitaxial growth of GaN at low temperatures.—73-05893
**Sumarlin, I. W.; Skanthakumar, S.; Lynn, J. W.; Peng, J. L.; Li, Z. Y.; Jiang, W.**
Magnetic ordering of Sm in $Sm_2CuO_4$.—73-07952
**Sumatokhin, V.** See Medved, v, E.
**Sumbatov, A. A.** See Grinberg, S. A.
**Sumi, Atsushi** See Kim, Hyun-Tak
**Sumida, N.** See Mori, H.
**Sumida, Shin** See Sun, Cheng-Ko J.
**Sumin, V. I.; Makurin, Yu. N.**
Self-disseminating high-temperature synthesis: general principles.—73-16980; Self-propagating high-temperature synthesis (SHS): SHS-based technology.—73-14624
**Sumino, Hiroyasu** See Wakiya, Naoki
**Sumino, Hiroyasu; Sakurai, Osamu; Shinozaki, Kazuo; Mizutani, Nobuyasu**
Direct measurement of the PTC effect of a single grain boundary.—73-01128; 73-12769
**Sumino, Koji** See Yonenaga, Ichiro
**Sumita, M.** See Suzuki, Yoji; Tanaka, Katsumi
**Sumita, Masaya** See Ichitsuka, Takeshi
**Sumita, Shigekazu; Kobayashi, Makoto; Suzuki, Kazuaki**
Microstructure and microwave characteristics of Ba[(Mg, $Co)_{1/3}Nb_{2/3}]O_3$-based dielectrics.—73-00995
**Sumita, Shigekazu**
Influence of oxide additives, firing temperature, and dispersing media on sintered $Al_2O_3$.—73-05869
**Sumiya, Hitoshi; Sato, Shuichi; Yazu, Shuji**
Boron nitride system including an hBN starting material with a catalyst and a sintered cBN body having a high heat conductivity based on the catalyst.—73-15977
**Sumiya, Keiji** See Kuwajima, Hidegi
**Sumiya, Satoshi** See Muramatsu, Gyo
**Summer, Michael B.; Hettinger, William P.**
Mesophase pitches, carbon fiber precursors, and carbonized fibers.—73-02105
**Summerfelt, S. R.; Carter, C. Barry**
Morphology of $NiFe_2O_4$ precipitation in NiO.—73-17177
**Summerfelt, Scott R.** See Douglas, Monte A.
**Summerfelt, Scott R.**
Method of fabricating high-dielectric constant oxides on semiconductors using a GE buffer layer.—73-14751
**Summers, C. J.** See Benz, R. G.; Rajavel, D.
**Summers, Jerry**
Architects turn to laminated glass.—73-06557
**Summerscales, J.** See Guild, F. J.
**Sumner, M. J.** See Mhaisalkar, S. G.
**Sun, Bi-Wu; Zhang, Xiao-Pin; Zhang, Qin-Zhe**
Effect of atomic hydrogen and oxygen on diamond growth.—73-03134
**Sun, C. Jacob**
Method of controlling metal oxidation during waveguide formation.—73-00742
**Sun, Cheng-Ko J.; Sumida, Shin; Miyashita, Tadashi**
Optical waveguide of silica glass film on ceramic substrate.—73-03957
**Sun, Cheng-Xu** See Qu, Hai-Ming
**Sun, Da-Liang** See Zhang, Gui-Lan
**Sun, Ellen Y.; Nutt, Steven R.; Brennan, John J.**
Evolution of interface microstructure in a dual-coated silicon carbide fiber-reinforced BMAS [Ba-Mg aluminosilicate] glass-ceramic composite.—73-09450; Flexural creep and creep-rupture behavior of SiC/BN dual-coated Nicalon fiber-reinforced glass-ceramic matrix composites.—73-17320; Interfacial diffusion and reaction mechanisms in coated fiber-reinforced glass-ceramic composites.—73-14015; Interfacial microstructure and chemistry of SiC/BN dual-coated Nicalon fiber-reinforced glass-ceramic matrix composites.—73-09471
**Sun, Fu-Qiang** See Shui, Zhong-He
**Sun, G. F.** See Xin, Y.
**Sun, Geng-Chen** See Zhong, Wei-Bin
**Sun, Geng-Chen; Sun, Liu-Shuan; Zhong, Xiang-Chong**
Thermomechanical properties of $Al_2O_3$-C slide plate brick.—73-10776
**Sun, Guo-Kuang** See Lange, David A.
**Sun, Guo-Kuang; Young, J. Francis**
Quantitative determination of residual silica fume in DSP [densified with small particles] cement pastes by $^{29}Si$ NMR.—73-03524
**Sun, Guo-Mao**
Furnace transmutation glaze of iron system.—73-10850
**Sun, Hong-Tao** See Su, Shi-Mei
**Sun, Hyo-Nim** See Kim, Wang-Sup
**Sun, J.** See Zhang, Tong
**Sun, J.-S.**
Efficient modification of the production line at the Kaohsiung cement works in Taiwan.—73-09941
**Sun, Ji-Jun; Xue, De-Sheng; Zhang, Xian-Zhou; Li, F.-S.; Shen, Bao-Gen; Kong, Lin-Shu**
Mossbauer study of $Gd_2Fe_{17}C_{20}$ compound prepared by melt quenching.—73-08672
**Sun, Jin-Tao** See Li, Yong-Nian
**Sun, Jwo-Shiun; Wei, Chung-Chuang; Wu, Long**
Dielectric properties of (Ba, Sr)O-(Sm, $La)_2O_3$-$TiO_2$ ceramics at microwave frequencies.—73-02572
**Sun, Liu-Shuan** See Sun, Geng-Chen
**Sun, Q.** See Alam, M.
**Sun, Q.; Alam, M.**
Thermal oxidation characteristics of chemical vapor deposited diamond films.—73-03232
**Sun, Qing-Ping; Zhao, Zhi-Jun; Chen, Wei-Zhe; Qing, Xing-Lin; Xu, Xiao-Jian; Dai, Fu-Loon**
Experimental study of stress-induced localized transformation plastic zones in tetragonal zirconia polycrystalline ceramics.—73-09451
**Sun, Qing-Ying; Zhu, Xiu-Ying; Zhang, Yu**
Influence of micropowders on microstructure and properties of synthetic magnesite-chrome clinkers.—73-04007
**Sun, Ren-Hua** See Fan, Zhen-Kun
**Sun, Rong-Yao** See Hao, Shi-Ming
**Sun, S. Z.** See Guel, G.
**Sun, S.** See Pan, Wu-Yi
**Sun, Shan** See Pan, Wu-Yi
**Sun, Shao-Tung** See Barth, Howard G.
**Sun, Shou-En; Song, Dong-Sheng; Wang, Hai-Feng**
Development of chimney lining bricks using fly ash.—73-06647
**Sun, Shou-Jin** See Liu, Wen-Chuan
**Sun, Shou-Lin; Liu, Shen-Sheng**
Fabrication of quality silica brick using barium salt–lime slurry as mineralizer.—73-07212
**Sun, Shu-Zhen; Li, Da-Pong; Zhang, Hong-Quan**
Fabrication of movable artificial eye seat of hydroxyapatite bioceramics.—73-08515
**Sun, Su-Zhen** See Xu, Xiao-Hong
**Sun, W.-Y.** See Wang, P.-L.; Yen, T.-S.
**Sun, W.-Y.; Yen, T.-S.; Tien, T.-Y.**
Subsolidus phase relationships in the systems Re-Al-O-N (where RE=rare-earth elements [Ce, Pr, Nd, and Sm]).—73-02471
**Sun, X. K.** See Kong, J.
**Sun, X.; Yeomans, J. A.**
Toughening of alumina matrices by the inclusion of nickel particles.—73-00272
**Sun, Y. S.; Yip, S. K.; Sauls, J. A.**
Proximity effects of a thin film of unconventional superconductor in contact with a magnetic substrate.—73-11881
**Sun, Y.-M.; Ekerdt, J. G.**
Electron-induced nitridation of GaAs(100) with ammonia.—73-11188
**Sun, Y.; Bell, T.**
Role of oxidation in the wear of plasma-nitrided and PVD TiN-coated steel.—73-06852
**Sun, Yang; Li, Cheng-Fu; Li, Zhong-Ya**
Laser-induced damage in LN [$LiNbO_3$] crystals.—73-11586
**Sun, Yao-Jun** See Tang, Xiao-Yong
**Sun, Yong-Bin** See Kwon, Kee-Won
**Sun, Yu-Ping; Jiang, Jian-Yi; Hu, An-Ming**
$J_c$ and flux pinning of Ag-sheathed Bi(2223) tape at 15–77 K.—73-04750
**Sun, Yue; Zhang, Yong-Hong; Hu, Shan-Rong**
Activation energy and pinning potential in Bi-based tapes.—73-11682
**Sun, Z.** See Bhaskar Raju, G.
**Sun, Z.-J.** See Zhang, Hui
**Sun, Zhi-Jian; Li, Hai-Hong; Yang, Sen-Zu**
Fabrication of protective layers on surfaces of $YBa_2Cu_3O_{7-\delta}$ superconducting thin films.—73-08075
**Sun-Paduano, Q.** See Ren, F. Y. G.
**Sunada, Takashi** See Nagashima, Yukihito; Nakaguchi, Kunio
**Sunahara, Kazuo; Irisawa, Naosi; Nakahara, Katumasa; Watanabe, Kazunari; Takabatake, Mitsuo**
Hybrid package glass-ceramic substrate for the hybrid package, and composition for the glass-ceramic substrate.—73-11021
**Sunai, M.** See Wada, Hideo
**Sunamoto, Naoki** See Taniguchi, Masakazu
**Sunandana, C. S.** See Balaya, P.; Vidyullatha, M.
**Sundar, C. S.** See SenGupta, A.
**Sundaram, K. B.; Wahich, P. F.; Sisk, P. J.**
Characterization and optimization of cerium dioxide films deposited by rf magnetron sputtering.—73-12938
**Sundaram, K.; Choi, W.-K.; Ling, C.-H.**
Measurement of the current transcient in $Ta_2O_5$ films.—73-08913; Quasi-static and high-frequency *c-v* measurements on Al/$Ta_2O_5$/$SiO_2$/Si.—73-07354
**Sundaram, M.** See Lundstrom, T.
**Sundaram, S. Kamakshi; Hsu, Jen-Yan; Speyer, Robert F.**
Molten glass corrosion resistance of immersed combustion-heating tube materials in soda-lime-silicate glass.—73-10744
**Sundaram, S. L.** See Zirkle, Thomas E.
**Sundaram, V. S.; Fraas, L. M.; Samuel, C. C.**
Growth of $Al_xGa_{1-x}As$ by metallorganic chemical vapor deposition using trimethylgallium and trimethylamine alane.—73-11231
**Sundararaman, Chetlur S.; Currie, John F.**
Fabrication of novel self-aligned MISFET's on InP by S interface engineering technique.—73-07523
**Sundararaman, D.** See Kuppusami, P.
**Sundaresan, A.** See Mertelj, T.

**Sundaresan, Sankaran** See Ganguli, Partha S.
**Sundberg, G. J.** See Corbin, N. D.
**Sundell, David R.; Whittemore, Dwight S.**
Carbon-containing carbon-bonded refractories with improved physical properties.—73-14636
**Sundell, David R.**
MgO-C brick containing a novel graphite.—73-04037
**Sundgren, J. E.** See Hultman, L.; Kazansky, P. R.; Ljungcrantz, H.; Petrov, I.; Wahlstrom, U.; Wahab, Q.
**Sune, C. T.; Jones, G. W.; Vellenga, D.**
Fabrication of encapsulated silicon vacuum field emission transistors and diodes.—73-14907
**Sung, C.-P.** See Shih, H.-C.
**Sung, H.** See Voss, A.
**Sung, H.-H.** See Wang, L.-M.
**Sung, Hsiao-Miin** See Hsu, Jen-Yan
**Sung, Jae-Suk** See Park, Jeong-Hyun
**Sung, K. T.; Pang, S. W.**
Etching of Si with $Cl_2$ using an electron cyclotron resonance source.—73-07511; Oxidation of silicon in an oxygen plasma generated by a multipolar electron cyclotron resonance source.—73-05939
**Sung, Yung-Kwon** See Lee, Cheol-Jin
**Suni, Ilkka** See Hirvonen, J.-P.; Kattelus, H.
**Sunil, D.; Sokolov, J.; Rafailovich, M. H.; Kotyuzhanskii, B.; Gafney, H. D.; Wilkens, B. J.**
Microstructure of photodeposited Fe in porous Vycor glass.—73-07050
**Sunshine, S. A.** See Hessen, B.
**Suntola, T.** See Haukka, S.
**Suo, Z.** See Ho, S.; Pompe, W.
**Suo, Z.**
Cracking and debonding of microlaminates.—73-09557; Models for breakdown-resistant dielectric and ferroelectric ceramics.—73-07900
**Sur, Sandip K.; Heinsbergen, Janice Filion; Listinsky, Jay J.; Bryant, R. G.**
Electron spin resonance and nuclear magnetic relaxation dispersion studies of commercial clay minerals and zeolites.—73-05142
**Sura, Vivek M.** See Casey, Jon A.
**Surappa, M. K.; Sivakumar, P.**
Fracture toughness evaluation of 2040-Al/$Al_2O_3$ particulate composites by instrumented impact.—73-03300
**Surat, L. L.** See Zhuravlev, V. D.
**Surat, L. L.; Velikodnyi, Yu. A.; Zhuraviev, V. D.**
Isomorphic miscibility of the metavanadates of manganese, cadmium, and nickel.—73-12617
**Surdotovich, G. I.** See Basmaji, Pierre
**Sure, S.** See Gerhardt, R.; Luhrmann, R.
**Suren, J.** See Gardziella, A.
**Suresh, S.** See Ramamurty, U.
**Surinach, S.** See Baro, M. D.
**Surov, Yu. P.** See Kabyshev, A. V.
**Surowiak, Z.; Czekaj, D.; Margolin, A. M.; Srvirdov, E. V.; Aleshin, V. A.; Dudkevich, V. P.**
Structure and the piezoelectric properties of thin $Pb(Zr_{0.53}Ti_{0.45}W_{0.01}-Cd_{0.01})O_3$ films.—73-07921
**Suruga, Toshihiro** See Shikano, Hiroshi
**Suryanarayana, C.** See Chen, G.-H.; Frefer, A.; Mukhopadhyay, D. K.; Sato, K.
**Suryanarayanan, R.; Leelaprute, S.**
Influence of Ca on the irreversibility line of $YSr_2Cu_{2.67}Ti_{0.33}O_{6+\delta}$.—73-11802
**Suryanarayanan, R.; Ouhammou, L.; Rao, M. S. R.; Gorochov, O.; Mukopadhyay, P. K.; Pankowska, H.**
Critical carrier density and revival of superconductivity in Ca-substituted $YSrBaCu_{2.6}M_{0.4}O_{6+\delta}$ (M=Al, Fe).—73-08010
**Suryanarayanan, R.; Rao, M. S. R.; Ouhammou, L.; Lenagard, N.; Gorochov, O.; Gasgnier, M.**
Possible superconductivity and microstructural investigation in $Y_{1-x}Ca_xSrCu_{2.6}Fe_{0.4}O_{6+\delta}$ (x=0, 0.1).—73-01635
**Surzhenko, A. B.** See Bar'yakhtar, V. G.
**Susa, K.** See Matsuyama, I.
**Susa, M.; Li, F.; Nagata, K.**
Thermal conductivity, thermal diffusivity, and specific heat of slags containing iron oxides.—73-16623
**Suscavage, M. J.** See El-Bayoumi, O. H.
**Sushcheva, V. Ya.** See Dubovik, T. V.
**Sushkevich, K. D.** See Aliev, G. N.
**Susi, G. T.** See Chambers, D. L.
**Suslov, L. A.** See Bednyi, B. I.
**Suslova, E. I.** See Irisova, K. N.
**Sussman, Ricardo S.**
Apparatus for depositing of a material on a substrate by chemical vapor deposition.—73-15706
**Susuki, Junichi** See Abe, Fumio
**Sutcu, Leyla F.** See Yang, Yuemei L.
**Suter, J. J.** See Poret, J. C.
**Suthanthiraraj, S. Austin** See Chandrasekhar, V. G.; Viswanathan, A.
**Sutliff, J.** See Ballingall, J. M.
**Suto, T.** See Tsutsumi, C.
**Sutoh, K.; Murata, M.; Hashimoto, S.**
Operation control of the CKP-R pregrinding system.—73-04938
**Sutton, Willard H.** See Tinga, Wayne R.
**Sutton, Willard H.**
Key issues in microwave process technology.—73-05885
**Suttrop, W.** See Gotz, W.; Karmann, S.
**Suttrop, W.; Pensl, G.; Choyke, W. J.**
Hall effect and infrared absorption measurements on nitrogen donors in 6H-silicon carbide.—73-12808
**Suvorov, A. V.** See Ivanov, P. A.; Kumzerov, Yu. A.
**Suvorov, D.; Kolar, D.**
Reaction sintering and dielectric properties in the $BaTiO_3$-$CaZrO_3$-$TiO_2$ system.—73-13229
**Suvorov, E. M.** See Demidenko, L. M.
**Suvorov, S. A.** See Gusarov, V. V.
**Suvorov, S. A.; Tebuev, N. B.; Fishchev, V. N.**
Refractory products for refining molten metals by filtration.—73-00857
**Suvorov, S. A.; Tebuev, N. B.**
Rheological and technological properties of corundum-zirconia suspensions.—73-02996
**Suvorova, N. A.** See Veis, A. N.
**Suwa, H.; Kojima, K.; Soutome, Y.**
Weaving ability of pitch-based carbon fiber and its evaluation method.—73-12446
**Suwa, Yoshiko; Banno, Hideo; Mizuno, Mineo; Saito, Hajime**
Synthesis of compositionally regulated hydroxyapatite from $Ca(OH)_2$ and $H_3PO_4$.—73-17036
**Suwannasiri, Thitima; Safari, Ahmad**
Effect of rare-earth additives on electromechanical properties of modified lead titanate ceramics.—73-00952
**Suyama, Yoko** See Suzuki, Hisao
**Suyama, Yoko; Nagasawa, Mitsuru**
Synthesis of single-crystal barium titanium isopropoxide complex to form barium titanate.—73-06097
**Suyama, Yoko; Tomokiyo, Yoshitsugu; Terasaka, Kunihiro**
Grain-boundary structure of a ZnO-$Bi_2O_3$-CoO varistor.—73-01176
**Suzuki, A.** See Nido, Masaaki
**Suzuki, Akihiko** See Hayashi, Seijiro; Shigegaki, Yasuhiro
**Suzuki, Akira** See Furukawa, Katsuki
**Suzuki, Akira; Furukawa, Katsuki; Fujii, Yoshihisa**
Silicon carbide light-emitting diode and a method for the same.—73-01386
**Suzuki, Akira; Furukawa, Katsuki; Shigeta, Mitsuhiro; Fujii, Yoshihisa; Ogura, Atsuko**
Silicon carbide semiconductor device.—73-15246
**Suzuki, Akira; Furukawa, Katsuki**
Manufacture of silicon carbide (SiC) metal oxide semiconductor (MOS) device.—73-04518
**Suzuki, D.** See Kumakura, H.
**Suzuki, H.** See Noda, T.
**Suzuki, Hajime; Fujiwara, Yasuaki; Hirotsu, Yoshihiko; Yamashita, Tsutomu; Oikawa, Tetsuo**
In-plane orientations and grain boundaries of $YBa_2Cu_3O_{7-x}$ thin films on (001)MgO substrates grown by metallorganic chemical vapor deposition.—73-15511
**Suzuki, Haruhiko** See Takashige, Masaaki
**Suzuki, Hideo** See Kodama, Hironori
**Suzuki, Hiroshi** See Iyori, Masahiro; Kamino, Maruo
**Suzuki, Hiroshi; Takagi, Shigeyuki; Morimitsu, Hideki; Hirano, Shinichi**
Microstructure control of porous silica glass with monodispersed spherical silica particles.—73-00664; 73-10566
**Suzuki, Hiroshi**
Retrieval of documents on ceramics by JOIS.—73-09747
**Suzuki, Hisao** See Hayashi, Hiroaki
**Suzuki, Hisao; Saito, Hajime; Hayashi, Takashi**
Thermal and electrical properties of alkoxy-derived cordierite ceramics.—73-12887
**Suzuki, Hisao; Saito, Hajime; Tomokiyo, Yoshitsugu; Suyama, Yoko**
Processing of ultrafine mullite powder through alkoxide route.—73-03404
**Suzuki, Hisashi** See Kinoshita, Satoshi; Takahashi, Toshiyuki; Terada, Osamu
**Suzuki, Hitoshi; Yamagishi, Wataru; Niwa, Koichi; Hashimoto, Kaoru; Kamehara, Nobuo**
Process of producing multiple-layer glass-ceramic circuit board.—73-11047
**Suzuki, Isao** See Horikawa, Junichi
**Suzuki, K.** See Enoki, Toshiaki; Hirano, Masanori; Kobayashi, M.; Miyazawa, K.; Nishikawa, T.; Takahashi, Minoru; Uematsu, T.; Watanabe, Y.
**Suzuki, K.; Hashimoto, N.; Oyama, T.; Shimizu, J.; Akao, Y.; Kojima, H.**
Large-scale and low-resistance ITO films formed at high deposition rates.—73-03854
**Suzuki, K.; Uematsu, T.; Nakagawa, T.**
Highly efficient finishing of ceramics by helical scan grinding.—73-05843
**Suzuki, K.; Uematsu, T.; Yanase, T.; Nakagawa, T.**
On-machine electrodischarge truing for metal bond diamond grinding wheels for ceramics.—73-04937
**Suzuki, Katsumi** See Neumann, Christian
**Suzuki, Kazuaki** See Sumita, Shigekazu
**Suzuki, Kazuhiko** See Nakazawa, Tadahisa
**Suzuki, Kazuo; Arai, Kenji; Ueda, Hiroshi**
Apparatus for producing dies for extruding ceramic honeycomb bodies.—73-15763; Method for producing dies for extruding ceramic honeycomb.—73-04991
**Suzuki, Kazuo; Itoh, Yasuji; Saitoh, Tatuo**
Rapid measurement method for superplasticizer (development of the odor concentration meter for concrete).—73-10127
**Suzuki, Keiichiro**
Recent trend of research and development on silicon carbide.—73-02087
**Suzuki, Keizo** See Ono, Tetsuo
**Suzuki, Kenji** See Tanaka, Keisuke
**Suzuki, Kenzi** See Kawai, Chihiro
**Suzuki, Kouichi** See Shibaoka, Kazuo
**Suzuki, Kouichi; Shibaoka, Kazuo**
Glass panel resistant to coloring when irradiated with electron rays.—73-10630
**Suzuki, Kyoichi** See Kobayashi, Yoshio; Yanata, Kohei
**Suzuki, M.** See Horita, Masayoshi
**Suzuki, Makoto** See Aoki, Masahiro
**Suzuki, Makoto; Ohmura, Masanori; Fukuda, Shuzo; Shima, Yoshinobu; Suzuki, Takeshi; Ishiguro, Yasuhide**
Apparatus for manufacturing silicon single crystals.—73-04956
**Suzuki, Masaaki** See Okutani, Takeshi
**Suzuki, Masaaki; Nakata, Yoshinori; Okutani, Takeshi**
Preparation of SiC ultrafine particles from $SiH_2Cl_2$ and $C_2H_4$ gas mixtures by a $CO_2$ laser.—73-02967; Preparation of SiC-$Si_3N_4$ composite fine powders from chlorosilanes by rf thermal plasma.—73-02968
**Suzuki, Masaki** See Ryoke, Katsumi
**Suzuki, Masanobu** See Enami, Hiroyoshi; Hoshizaki, Hiroki
**Suzuki, Masao** See Yamaguchi, Shizuo
**Suzuki, Masayasu** See Uo, Motohiro
**Suzuki, Masayuki** See Tanaka, Masahiro
**Suzuki, Mineo; Moriyama, Minoru; Nishimura, Makoto; Hasegawa, M.**
Friction and wear of self-lubricating composites at temperatures to 450°C in vacuum.—73-06443
**Suzuki, Minoru** See Hosseini Teherani, Ferechteh; Sasaki, Hirokazu; Sugiura, Nozomi
**Suzuki, Minoru; Asano, Hidefumi; Kubo, Shugo**
Resistive transition in $EuBa_2Cu_3O_{7-y}$ epitaxial thin films.—73-15611
**Suzuki, Minoru**
Properties of $BaPb_{1-x}Bi_xO_3$ as observed in single-crystal thin films.—73-16576
**Suzuki, Morio; Komorita, Kazunori; Nakano, Hiroshi; Rinderer, Leo**
Tunneling studies of $BaPb_{0.75}Bi_{0.25}O_3$.—73-12903
**Suzuki, Nobuo** See Tanaka, Isao
**Suzuki, Norihiro** See Adachi, Sadao
**Suzuki, Ryosuke O.; Bohac, Petr; Gauckler, Ludwig J.**
Thermodynamics and phase equilibria in the Ca-Cu-O system.—73-05517
**Suzuki, Ryou** See Nakajima, Akira
**Suzuki, Ryouichi** See Nomura, Takehiko
**Suzuki, S.; Hayashi, I.; Mateushita, K.**
Experimental study of the parameters that determine take-off velocity and CSS performance of thin film disks.—73-08868
**Suzuki, Satoshi** See Tsuyuki, Naomitsu
**Suzuki, Seiji** See Iyori, Masahiro
**Suzuki, Setsuo** See Noda, Etsuo
**Suzuki, Shigenobu** See Takahashi, Yutaka
**Suzuki, Shuichiro** See Uchino, Kenji
**Suzuki, Shunichi** See Taimatsu, Hitoshi
**Suzuki, Suguru** See Ryu, Beyong-Hwan; Takahashi, Minoru
**Suzuki, Suguru; Nakane, Hideki; Ohshima, Masanari**
Fabrication of hydroxyapatite sheet by a sol-gel method and its ion-exchange characteristics.—73-13055
**Suzuki, T.** See Ikuhara, Yuichi; Kaneko, Katsumi; Kanezo, Katsumi; Miyake, M.; Uekawa, N.; Yokogawa, Yoshiyuki
**Suzuki, Tadashi** See Sato, Kiyoshi
**Suzuki, Takaaki** See Doi, Toshiya
**Suzuki, Takahiro** See Toriyama, Motohiro
**Suzuki, Takashi** See Akimoto, Ryouichi; Matsushita, Isao; Nakamura, Akihiro; Watanabe, Hideo
**Suzuki, Takeshi** See Matsui, Toshiyuki; Suzuki, Makoto
**Suzuki, Takeyuki** See Noma, Tatsuo
**Suzuki, Toshiko** See Pezzotti, Giuseppe
**Suzuki, Toshimasa** See Hotta, Katsuyoshi
**Suzuki, Toshio** See Sawada, Kiyoshi
**Suzuki, Toshiyuki** See Ikuhara, Yuichi; Matsushita, Junichi
**Suzuki, Y.** See Kanbara, Kunihiko
**Suzuki, Yasuhiko** See Nozaki, Shunkichi
**Suzuki, Yasunori** See Horiguchi, Koji
**Suzuki, Yasutoshi; Awano, Namoi; Hoshino, Kouichi; Inuzka, Hajime**
Semiconductor device.—73-01384
**Suzuki, Yoji; Uchino, Kenji; Gouda, Hironori; Sumita, M.; Newnham, Robert E.; Ramachandran, A. R.**
Mechanical dampers using piezoelectric composites.—73-01419
**Suzuki, Yoshihiko** See Kusaka, Tadaoki; Yotsuya, Tsutomu
**Suzuki, Yoshikazu** See Shimokawa, Katsuyoshi
**Suzuki, Yoshitaka; Matsuo, Yohtaro; Yasuda, Kouichi; Kimura, Shiushichi**
New theory for the dielectric breakdown of solid dielectrics.—73-01000; 73-10977
**Svane, Axel**
Electronic structure of $La_2CuO_4$ in the self-interaction-corrected density functional formalism.—73-08863
**Svantesson, Kjell** See Sohlstrom, Hans
**Svatovskaya, L. G.** See Venzel, B. I.
**Svatovskaya, L. G.; Venzel, B. I.**
Kinetics of porous glass dissolution in the alkaline solutions.—73-14025
**Svechnikov, S. V.** See Kirilova, S. I.
**Svechnikova, T. E.** See Korzhuev, M. A.
**Svegl, F.** See Orel, B.
**Svelto, O.** See Magni, Vittorio
**Svensson, G.**
Cluster intergrowth of perovskite and defect sodium-chloride-type structures in the K-Nb-O system: approximate structure of $KNb_4O_6$.—73-02163
**Sverdlov, B. N.** See Lin, M. E.
**Sverdlova, A. M.** See Kabanov, V. F.
**Sveshnikova, E. B.; Teneshev, L. N.**
Spectral luminescence and relaxation parameters of the $V^{3+}$ ion in glasses.—73-00546
**Svetchnikov, V.** See Traeholt, C.
**Svetik, Stefan; Kottas, Peter**
Modified STA-409/3/6 thermobalance for digital processing of T, DTA, and TG curves.—73-01917
**Svetlov, V. A.**
Predicting the optimum sizes of fillers in enamel slips.—73-00256; Prognosis of optimal size of filler in enamel slips.—73-00260
**Svidron, V.** See Kopsansky, P.
**Svirida, S. V.** See Vodakov, Yu. A.
**Sviridov, N. V.; Kovalenko, M. G.; Chesnokov, V. M.**
Mechanical properties of very hard cement concrete.—73-00135
**Sviridov, S. I.; Zhabrev, V. A.; Lopatina, N. P.**
Kinetics of interaction between titanium diboride and molten glasses.—73-00364
**Sviridov, V. N.** See Volzhenskii, A. V.
**Sviridov, V.** See Roizin, Ya.
**Svistov, A. E.** See Bryanov, D. I.
**Svistunov, I. V.** See Chudinov, S. M.

**Svistunov, V. M.; Grigut, O. V.; D'yachenko, A. I.**
Manifestation of Josephson medium in tunneling in Bi-Sr-Ca-Cu-O: experiment and model.—73-15549
**Svitel'skii, A. V.** See Klad'ko, V. P.; Semenova, G. N.
**Svob, L.** See Clerjaud, B.
**Svoboda, J.** See Riedel, H.
**Svoboda, Pavel; Taras, Peter**
Silicon nitrides and oxynitrides prepared in high-pressure plasmas.—73-03005
**Svoronos, Spyros A.** See Bajaj, J.
**Swab, Jeffrey J.; Quinn, George D.**
Results of round robin exercise on the fractography of advanced structural ceramics.—73-17194
**Swadzba, L.** See Formanek, B.
**Swain, Greg M.; Ramesham, Rajeshuni**
Electrochemical activity of boron-doped polycrystalline diamond thin-film electrodes.—73-04090
**Swain, Michael V.** See Bell, T. J.; Gogotsi, G. A.; Hannink, Richard H. J.; Lutz, Ekkehard H.
**Swain, Michael V.**
Significance of nonlinear stress-strain and *R*-curve behavior of thermal shock of ceramics.—73-06519
**Swainsom, Ian P.; Dove, Martin T.**
Low-frequency floppy modes in ß-cristobalite.—73-16200
**Swamy, C. S.** See Subramanian, S.
**Swamy, R. Narayan; Wan, W. M. Raymond**
Use of dynamic nondestructive test methods to monitor concrete deterioration due to alkali-silica reaction.—73-10185
**Swan, Robert B.** See Zurecki, Zbigniew
**Swanfeld, Edward R.**
Glassware forming machine with cooling system.—73-12080
**Swank, W. D.** See Fincke, J. R.
**Swanson, J. G.** See Di Marco, M.
**Swanson, M. L.** See Hughes, W. C.
**Swanston, D. M.** See Heskett, D.
**Swarnamani, S.** See Ramamurti, V.
**Swaroop, Latha I.** See Sempolinski, Daniel R.
**Swaroop, Srinivas H.; Wusirka, Raja R.**
Thermally stable chromium-exchanged zeolites and method of making [the] same.—73-02073
**Swarts, E. Lowell**
Bubble generation at glass/refractory interfaces: a review of fundamental mechanisms and practical considerations.—73-10705
**Swartzendruber, L. J.** See McMichael, R. D.
**Swartzlander, A. B.** See Nelson, Arthur J.
**Swei, Gwo S.** See Arthur, David J.
**Swiatek, A.** See Stoch, L.
**Swiatek, K.** See Godlewski, M.
**Swick, K. J.; Stochowiak, G. W.; Batchelor, A. W.**
Mechanism of wear of rotary percussive drilling bits and the effect of rock type on wear.—73-17395
**Swider, W.** See Liliental-Weber, Z.; Werner, P.; Zakharov, N. D.
**Swiech, W.** See Bauer, E.
**Swift, G.** See Jones, P. L.
**Swiler, D. R.** See Varshneya, Arun K.
**Swiller, T. P.** See El-Bayoumi, O. H.
**Swinford, R. W.** See Wolf, Paul J.
**Swinnea, J. S.** See Kim, J. S.; Lee, J. Y.
**Switzer, Jay A.** See Golden, Teresa D.
**Swoger, J. H.** See Kovacic, S. J.
**Sybertz, W.** See Prieto, P.
**Sychev, M. M.** See Barvinok, G. M.
**Sychugov, V. A.** See Vlasenko, O. A.
**Sylla, H.-M.** See Schurmann, W.
**Symko, Orest G.** See Artuso, Joseph F.
**Symons, W. T.** See Lu, Ping
**Syn, C. K.; Lesuer, D. R.; Sherby, O. D.**
Processing and mechanical properties of laminated metal composites of Al/Al-25 vol% SiC and ultrahigh carbon steel/brass.—73-03634
**Syoji, K.** See Kuriyagawa, T.
**Syono, Y.** See Mizoguchi, Y.; Ohishi, K.
**Syrbu, N. N.** See Karaman, M. I.
**Syrbu, N. N.; Kamertsel, A. Yu.; Stamov, I. G.**
Characteristics of the valence bands of some II-IV compounds.—73-01099
**Syrbu, N. N.; L'vin, V. E.; Zadnipru, I. B.; Neumann, H.; Sobotta, H.; Riede, V.**
Raman and ir vibrational spectra of $TlGaS_2$.—73-07760
**Syrbu, N. N.; Morozova, V. I.; Stratan, G. I.**
Absorption by bound and free excitons in $ZnP_2$-$D_4^8$.—73-07374
**Syrbu, N. N.; Neumann, H.; Sobotta, H.; Riede, V.**
Davydov multiplets in the vibrational spectra and effective ionic charges in $TlInS_2$ and $TlGaSe_2$ crystals.—73-14823
**Syrbu, N. N.; Pasechnik, F. I.**
Vibrational spectra and effective ionic charges in $AgAsS_2$ and $TlAsS_2$ crystals.—73-07858
**Syrbu, N. N.; Tezlovan, V. E.; Zadnipru, I. B.**
Depolarization of vibrational modes in $CdGa_2Se_4$ crystals.—73-01123
**Syrbu, N. N.**
Influence of nonstoichiometry on exciton, electron, and vibrational states in $ZnP_2$.—73-04367
**Syrkin, A. L.** See Anikin, M. M.
**Syrkin, E. S.** See Startsev, S. V.
**Syrkov, S. R.** See Mikhnevich, V. V.
**Syrnikov, P. P.** See Starukhin, A. N.; Zaitseva, N. V.
**Syrowatka, F.** See Stark, I.
**Syrykh, C.** See Dumas, P.
**Sysala, Otmar** See Kasik, Ivan
**Sysala, Otmar; Kasik, Ivan; Spejtkova, Ivana**
Preparation of preforms and optical fibers containing aluminum by solution-doping method.—73-00686
**Syska, Andrew**
Low-$NO_x$ staged air-recirculating burner undergoing field trials after excellent test performance.—73-08479
**Sysoev, A. M.**
Electrostriction, dielectric and piezoelectric nonlinearities of $KH_2PO_4$ crystals.—73-15795
**Sysoev, B. I.** See Mittov, O. N.
**Sysoev, B. I.; Bezryadin, N. N.; Kotov, G. I.; Strygin, V. D.**
Influence of surface treatment of GaAs in chalcogen vapors on the properties of Schottky barriers in Me-GaAs structures.—73-14985
**Sysoev, E. P.** See Solov'ev, V. I.
**Syt'ko, V. V.; Aleshkevich, N. I.; Anisova, L. A.**
Luminescence of phosphate glass coactivated by $UO_2^{2+}$ and $Ln^{3+}$ ions.—73-00511
**Syutkin, V. M.; Dmitryuk, A. V.; Tolkachev, V. A.**
Electrical relaxation in sodium-calcium-aluminum phosphate glass.—73-14178
**Syutkin, V. M.; Dmitryuk, A. V.; Tolkachev, V. A.**
Kinetics and mechanism of the destruction of $PO_4^{2-}$ centers in phosphate glasses activated by silver.—73-00362; Kinetics of the formation reaction of two- and three-nuclear complexes of silver in radiophotoluminescent glasses.—73-14026
**Sywe, B. S.** See Yu, Z. J.
**Szabo, I.; Frischat, G. H.**
Influence of Ag on nucleation and crystallization of fluorozirconate glasses.—73-06928
**Szabo, I.; Molnar, J.; Frischat, G. H.**
Effect of Se and Ag on the crystallization of fluorozirconate glasses.—73-14360
**Szabo, I.; Pannhorst, Wolfgang; Rappensberger, M.**
Effect of surface treatment and annealing on the surface crystallization of the $MgO$-$Al_2O_3$-$SiO_2$ glass.—73-14361
**Szabo, I.**
Crystallization of fluoride glasses.—73-00315
**Szabo, Miklos**
Dry grinding technology in Italian ceramic companies.—73-12024
**Szabo, V.** See Riedel, R.
**Szalewski, M.** See Dafinei, I.
**Szaniawska, K.; Murawski, L.; Gzowski, O.; Wicikowski, L.**
Preparation and densification of autoclave-dried $SiO_2$-$GeO_2$ gels.—73-14467
**Szatkowski, J.** See Sieraski, K.
**Szatmary, S. A.; Gyekenyesi, John P.; Nemeth, Noel N.**
Computing reliabilities of ceramic components.—73-09550
**Szcygiel, I.; Znamierowska, T.**
Phase equilibria in the system $CePO_4$-$Na_3PO_4$.—73-02381
**Szczepanski, P.** See Mossakowska, Agnieszka
**Szczyrbowski, Joachim** See Beister, Gunter
**Sze, P. W.** See Wang, Y.-H.
**Szebesta, D.** See Davey, S. T.
**Szebesta, D.; Davey, S. T.; Williams, J. R.; Moore, M. W.**
OH absorption in the low-loss window of ZBLAN(P) glass fiber.—73-06948
**Szepvolgyi, J.; Bertoti, I.; Mohai-Toth, I.; Gilbart, E.; Riley, F. L.; Patel, M.**
Comparative sintering study on nonconventional and commercial silicon nitride powders.—73-05716
**Szezerba, Jacek**
Aluminosilicate refractories—their quality and resistance to corrosive agents in cement and lime kilns.—73-10695
**Szirtes, L.; Raieh, A. O.**
Preparation of some intercalation compounds of layered γ-zirconium phosphate and zirconium phosphate-phosphite.—73-02405
**Szmyd, D.** See Wang, W. B.
**Szpunar, B.** See El-Sherik, A. M.
**Szu, S.-P.** See Colson, S.; Wakamatsu, H.; Wang, B.
**Szu, S.-P.; Greenblatt, M.; Klein, L. C.**
Effect of precursors on the ionic conductivity in lithium silicate gels.—73-05548
**Szustakowski, M.** See Marciniak, M.
**Szuszklewicz, W.; Znamierowska, T.**
System $YPO_4$-$Ca_3(PO_4)_2$-$Ca_2P_2O_7$.—73-02512
**Szwed, M. K.** See Sullivan, G. J.
**Szwedowska-Kotlinska, Joanna** See Wolna, Malgorzata,
**Szwedowska-Kotlinska, Joanna; Wolna, Malgorzata**
Hydrolytic resistance of the surface of soda-lime glass coated with silica layer.—73-03792; 73-14002
**Tabarov, T. S.** See Abashkina, S. A.
**Tabasky, M.** See Bulat, E. S.
**Tabata, Hitoshi** See Nishiyama, Yukio
**Tabata, Hitoshi; Kawai, Tomoji; Kawai, S.**
Strain and proximity effect in $(La,Sr)_2CuO_4$-based superconducting superlattices.—73-15630
**Tabata, Hitoshi; Kawai, Tomoji**
Atomic layer control of the growth of oxide superconductors using laser molecular beam epitaxy.—73-04674
**Tabata, Kenji** See Matsumoto, Tomohide
**Tabata, Masahiro** See Nishizawa, Kenichi; Tsuji, Masamichi
**Tabata, Takeshi** See Itoh, Hinenobu
**Tabbal, M.** See Lecours, A.
**Taber, Robert C.** See Ma, Zheng-Xiang; Sheats, James R.
**Tabet, M. F.** See Urban, F. K., III
**Tabet, N.** See Boussetta, H.
**Tabib-Azar, M.** See Nemati, Z. Ali
**Tabolin, A. R.** See Gutenev, M. S.
**Taborek, P.** See Zhang, Y. F.
**Tabuchi, Heiji; Kuriyama, Nobuya; Morimoto, Shigeki**
Effects of $SiO_2$ substitution on the structure and properties of low-melting phosphate glass.—73-13972
**Tabuchi, S.** See Tsuzuki, K.
**Tabuteau, A.** See Badot, Jean-Claude
**Tachez, M.** See Rousselot, C.
**Tachi, Shinichi** See Miki, Hiroshi
**Tachibana, Hiroyuki** See Inoue, Takayoshi
**Tachibana, Satoru** See Nakajima, Toshio
**Tachikawa, Kyoji; Zama, Koichi; Kikuchi, Akihiro**
Synthesis of Tl-base high-$T_c$ superconducting oxides through a diffusion process.—73-15647
**Tachikawa, Maki** See Kuze, Hiroaki
**Tackels, Guy**
Furnace emission challenge to French glassmakers.—73-14388; Reduction of pollution from glassworks furnaces: a new challenge for French glassmakers.—73-10595
**Tada, Akio** See Itoh, Hinenobu
**Tada, Masaaki** See Suda, Akihiko
**Tada, Masayuki** See Ito, Yasuhiko
**Tada, Tetsuya** See Yamaguchi, Atsuko
**Tadaki, Teiriki** See Sato, Kazuhisa; Yonemoto, Toshikuni
**Tadanaga, Kiyoharu** See Miyaji, Fumiaki
**Tadanobu, Kazuo** See Ohashi, Masao
**Tadayon, Bijan** See Kyono, C. S.
**Tadayon, Bijan; Fatemi, M.; Tadayon, Saied; Moore, F.; Dietrich, H.**
Electrical characterization of low-temperature GaAs layers, and observation of the extremely large carrier concentrations in undoped material.—73-07485
**Tadayon, Saied** See Tadayon, Bijan
**Tadokoro, Shigeru** See Soeya, Susumu
**Tadzhiev, F. Kh.; Ismatova, R. I.; Abbasov, S. N.**
Phase composition changes in quartzitic waste from grain processing in relation to firing temperature.—73-01992
**Tadzhiev, F. Kh.; Ismatova, R. I.; Shamuratova, Sh. M.**
Influence of the fineness of calcined kaolin on the sintering of electrical ceramic bodies based on Angrensk kaolins.—73-02873
**Tafeenko, V. A.** See Kalinin, V. B.
**Tafto, J.** See Zhu, Yi-Mei
**Taga, Y.** See Kageyama, Y.
**Taga, Yasunori; Owaki, Takeshi**
Hydrophobic surface formation on glass by ion implantation.—73-03736
**Tagagi, Kenichi** See Mosjouama, Latsijorp
**Tagami, Takashi; Tanaka, Shuhei**
Application of ion-implantation technology for optoelectronics.—73-05694
**Tagantsev, A. K.** See Chu, F.
**Tagashira, H.** See Tochitani, G.
**Tagashira, Kohsuke** See Meng, Fan-Jur
**Taggart, David G.** See Qin, Jia-Liang
**Tagiev, O. B.** See Aslanov, G. K.; Niftiev, N. N.
**Tagirdzhanov, M. A.** See Kolobov, A. V.
**Tagnit-Hamou, A.** See Kortbaoui, A.
**Tago, Teruoki** See Maruyama, Toshiro
**Taguchi, Akihito; Takahei, Kenichiro; Nakata, Jyoji**
Electronic properties and their relations to optical properties in rare-earth-doped III-V semiconductors.—73-04313
**Taguchi, E.** See Hanafusa, H.
**Taguchi, H.** See Kobayashi, T.
**Taguchi, H.; Matsuda, D.; Nagao, M.; Shibahara, H.**
Synthesis of $LaMnO_3$ using poly(acrylic acid) [PAA].—73-08768
**Taguchi, H.; Nagao, M.; Shimada, M.**
Electrical properties in the system $(Nd_{0.1}Ca_{0.9-z}Sr_z)MnO_{2.97}$ $(0 \le z \le 0.4)$.—73-02601
**Taguchi, H.; Nagao, M.**
Seebeck coefficient in the system $(Gd_{1-z}Ca_z)MnO_{2.98}$ $(0.6 \le z \le 0.95)$.—73-02684
**Taguchi, Haruo** See Sato, Yuichi
**Taguchi, I.; Pignolet, A.; Wang, L.; Proctor, M.; Levy, F.; Schmid, P. E.**
Raman scattering study of lead zirconate titanate thin films prepared on silicon substrates by radio-frequency magnetron sputtering.—73-12669
**Taguchi, M.; Chatterji, Susanta; Kawamura, Mitsunori**
Specific effect of ions on the rate of alkali-silica reaction.—73-10161
**Taguchi, S.** See Aida, Toshiyuki
**Taguchi, Seiji** See Yoshikawa, Fumiaki
**Taguchi, T.** See Kuribayashi, Hideyuki
**Taguchi, T.; Chatterji, Susanta; Kawamura, Mitsunori**
Comparison of different methods of detection of alkali-silica reactivity of aggregates.—73-05029
**Taguchi, Y.** See Tokura, Y.
**Taguchi, Yasushi** See Taniguchi, Masakazu
**Taguchi, Yutaka** See Eda, Kazuo
**Taguchik, Keisuke** See Mosjouama, Latsijorp
**Taha, F.** See Zaki, M. I.
**Taha, S.; Auf, M.**
Effect of heat treatment on the infrared absorption spectra of Sr-Na borosilicate glass.—73-03723
**Taheri, Bahman** See Foldyari, Istvan
**Taheri, F.; Crick, D.**
Computational modeling and parametric study of sintering of alumina.—73-09047
**Tai, Nyan-Hwa; Chou, Tsu-Wei; Ma, Chen-Chi M.**
Effects of deposition mechanisms in the modeling of forced-flow/temperature-gradient chemical vapor infiltration [FCVI].—73-05778
**Tai, W.-P.; Kim, S.-H.; Cho, S.-H**
Fracture behavior and degradation of piezoelectric properties in PZT.—73-11580
**Taimatsu, Hitoshi; Suzuki, Shunichi; Kitano, Masamichi; Kaneko, Hiroyuki**
Microstructures of metal oxide composites formed by solid-state displacement reaction.—73-17174
**Tairov, Yu. M.** See Safaraliev, G. K.
**Tait, W. S.** See Aita, Carolyn Rubin
**Tait, W. S.; Aita, Carolyn Rubin**
Aluminum nitride as a corrosion protection coating for steel: self-scaling porous electrode model.—73-00208
**Tajima, Ichiro** See Suda, Akihiko
**Tajima, Michio** See Terashma, Koichi
**Tajima, Toshiyuki** See Horita, Susumu
**Tajima, Yo** See Iio, Satoshi; Mitomo, Mamoru; Mizuno, Kenichi; Niwa, Tomonori; Otsuka, Jun; Urashima, Kazuhiro; Watanabe, Kenji
**Tajima, Yo**
Development of high-performance silicon nitride ceramics and their applications.—73-05266
**Tajima, Yoshimitsu** See Furukawa, Katsuki

**Takabataka, Kazuo** See Grumblatt, Gerard
**Takabatake, Minoru**
Method for producing carbon-carbon composite materials.—73-02112
**Takabatake, Mitsuo** See Sunahara, Kazuo
**Takacs, J.; Ellin, H. C.; Solymar, L.**
Multiple forward phase conjugation in a photorefractive bismuth silicate crystal.—73-08921
**Takacs, J.; Schaub, M.; Solymar, L.**
Subharmonics in photorefractive $Bi_{12}TiO_{20}$ crystals.—73-02695
**Takacs, Laszlo** See Pardavi-Horvath, M.
**Takacs, Laszlo**
Metal-metal oxide systems for nanocomposite formation by reaction milling.—73-09207; Nanocomposite formation and combustion induced by reaction milling.—73-05932
**Takada, Atsushi** See Kondo, Yoshihito
**Takada, Jun** See Egi, Toshio; Endo, Kazuyo; Ikeda, Yasunori; Kobayashi, Naoya; Kusano, Yoshihiro; Niinae, Toshinobu; Osaka, Akiyoshi
**Takada, Jun; Fujisaka, Kosei; Hosotani, Katsunori; Egi, Toshio; Kusano, Yoshihiro; Nanba, Tokuro**
Chemical and mechanical stability of the Ba-added high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O system.—73-01504
**Takada, Kazunori** See Tatsumisago, Masahiro
**Takada, Syuichi**
Relation between optical property and crystallinity of ZnO thin films prepared by rf magnetron sputtering.—73-01302
**Takada, Takahiro; Wang, Sea-Fue; Yoshikawa, Shoko; Jang, Sei-Joo; Newnham, Robert E.**
Effect of glass additions on BaO-$TiO_2$-$WO_3$ microwave ceramics.—73-10936; Effects of glass additions on (Zr,Sn)$TiO_4$ for microwave applications.—73-14699
**Takada, Tomonori** See Uchida, Masaru
**Takada, Toshimi; Yano, Tetsuji; Yasumori, Atsuo**
Preparation of quantum-size CdS-doped $Na_2O$-$B_2O_3$-$SiO_2$ glasses with high nonlinearity.—73-10584
**Takada, Toshimi; Yano, Tetsuji; Yasumori, Atsuo; Yamane, Masayuki**
Preparation of PbS quantum dot materials by the sol-gel process.—73-03873; 73-11402
**Takada, Toshio** See Kobayashi, Naoya
**Takada, Toshio; Terashima, Takahito; Iijima, Kenji; Yamamoto, Kazunuki; Hirata, Kazuto; Bando, Yoshichika**
Laminated film.—73-04839
**Takadoum, J.; Zsiga, Z.; Mairey, D.; Fromm, M.**
Frictional properties of SiC for several kinds of metals.—73-17338
**Takadoum, J.; Zsiga, Z.**
Effect of water vapor in air on friction and wear of $Al_2O_3$, $Si_3N_4$, and partially stabilized zirconia sliding on various metals.—73-09583
**Takagai, Y.** See Taruta, Seiichi
**Takagawa, M.** See Inamura, Suguru
**Takagi, Akihiro; Jinguji, Kaname; Kawachi, Masao**
Design and fabrication of a broad-band silica-based optical waveguide coupler with asymmetric structure.—73-07116
**Takagi, H.** See Suga, T.
**Takagi, H.; Batlogg, B.; Kao, H. L.; Kwo, J.; Cava, R. J.; Krajewski, J. J.**
Systematic evolution of temperature-dependent resistivity in $La_{2-x}Sr_xCuO_4$.—73-08243
**Takagi, H.; Cava, R. J.; Marezio, M.; Batlogg, B.; Krajewski, J. J.; Peck, W. F.**
Disappearance of superconductivity in overdoped $La_{2-x}Sr_xCuO_4$ at structural phase boundary.—73-08021
**Takagi, Hiroshi** See Kanba, Seiji
**Takagi, Hiroyoshi** See Awano, Masanobu; Katsuki, Hiroaki; Takao, Yasumasa
**Takagi, K.** See Mizunami, Toru
**Takagi, Kenichi** See Nishiyama, Katsuhiro
**Takagi, Kenichi; Komai, Masao; Isobe, Yoshihiko**
Heat-resistant sintered hard alloy.—73-00281
**Takagi, Nobuoki; Tokunaga, Hiroki**
Ceramic sintered body and process for preparation thereof.—73-02030
**Takagi, S.** See Yamane, Hisanori
**Takagi, Shigeyuki** See Suzuki, Hiroshi
**Takagi, T.** See Hashiba, M.
**Takagi, Tatsuo** See Shibata, Kenichi
**Takagi, Toshinori**
Concept and perspective of intelligent materials—consideration on the new materials of tomorrow.—73-06562; Perspective on intelligent materials.—73-06586
**Takagi, Y.** See Aguekian, V. F.; Kubecek, V.
**Takagi, Yoshio; Kobayashi, Albert S.**
Dynamic fracture responses of $Al_2O_3$, $Si_3N_4$, and $SiC_w/Al_2O_3$.—73-06375
**Takaha, Hiroshi** See Furusaki, Tsuyoshi
**Takahashi, Chiori** See Senda, Tetsuya
**Takahashi, Chiori; Senda, Tetsuya; Amada, Shigeyasu**
Structural change in plasma-sprayed alumina coating by laser melting: II, On pulsed mode treatment.—73-17011
**Takahashi, H.** See Iwamoto, Yuji; Okada, Akira
**Takahashi, Hideaki** See Hashida, Toshiyuki; Nakane, Yuji
**Takahashi, Hideaki; Ishikawa, T.; Okugawa, D.; Hashida, Toshiyuki**
Laser and plasma-arc thermal shock/fatigue fracture evaluation procedure for functionally gradient materials.—73-05061
**Takahashi, Hirokuni** See Hayashi, Satoshi; Watanabe, Akira
**Takahashi, Hiromi** See Kamei, Masayuki
**Takahashi, Hiroshi** See Miyamoto, Yutaka
**Takahashi, Hisakazu; Baba, Yoko; Ezaki, Kenichi; Okamoto, Yasuhiko; Shibata, Kenichi; Kuroki, Kazuhiko**
Microwave dielectric ceramic composition.—73-01061
**Takahashi, Hisakazu; Ezaki, Kenichi; Baba, Yoko; Shibata, Kenichi**
Microwave dielectric ceramic composition.—73-14754
**Takahashi, Ichiro; Yoshioka, Takakazu**
Young's modulus of ceramics at elevated temperature: I.—73-06553; Young's modulus of ceramics at elevated temperature: I.—73-13612
**Takahashi, Ikuo** See Fujishiro, Hiroyuki
**Takahashi, J.** See Nishikawa, T.
**Takahashi, Junichi** See Akazawa, H.; Akazawa, Toshiyuki; Furusaki, Tsuyoshi; Higuchi, Mikio; Takahashi, Minoru
**Takahashi, Junichi; Nishiwaki, Shiro; Kodaira, Kohei**
Sintering and microstructure of $Sr_{0.6}Ba_{0.4}Nb_2O_6$ [SBN:60] ceramics.—73-13447
**Takahashi, Junichi; Utsumi, Yuichi; Akuzawa, Housei; Kawashima, I.; Urisu, T.**
Irradiation effects of synchrotron radiation on silicon epitaxial growth using a disilane molecular beam epitaxy.—73-13107
**Takahashi, K.** See Dai, Y.; Konagai, M.; Miura, Yoshinari; Okamoto, Tamotsu; Takemura, Yasushi
**Takahashi, K.; Ishii, H.; Takahashi, Y.; Nishiguchi, K.**
Valence Auger analysis of the annealing effect on atomic interaction at titanium–sapphire, titanium–silica, and silver–silica interfaces.—73-10296
**Takahashi, Katsumasa; Ito, Toshimichi; Yoshikawa, Hiroaki; Hiraki, Akio**
Normal atmospheric preparation of $YBa_2Cu_4O_8$ superconductor from nitrate solution by freeze-drying method.—73-15568
**Takahashi, Kazue; Kawada, Hiroki; Ueda, Shinjiro; Furuse, M.; Shirayone, S.**
Origins and elimination of oval defects in GaAs layers grown by molecular beam epitaxy.—73-01268
**Takahashi, Kazuhiko** See Iyori, Masahiro; Kamino, Maruo
**Takahashi, Kenichi** See Michishita, Kazuo; Takano, Satoshi
**Takahashi, Kenichi; Yoshida, Noriyuki; Shioya, Jun; Yamaguchi, Yoichi; Mizoguchi, Akira; Hayashi, Noriki**
Method of forming superconducting circuit.—73-01717
**Takahashi, Kenji** See Ikuma, Yasuro
**Takahashi, Kiyoshi** See Aratani, Shinichi; Nozaki, Shinji
**Takahashi, Kiyoshi**
Intelligent materials in electronics.—73-06575
**Takahashi, Koichi** See Ikeda, Yasuhira
**Takahashi, Koji** See Sato, Rikiya
**Takahashi, M.** See Kawamoto, Y.; Umesaki, N.
**Takahashi, M.; Kanno, R.; Kawamoto, Y.; Tanabe, S.; Hirao, Kazuyuki**
Compositional dependence of upconversion luminescence of trivalent erbium ions in fluorozirconate glasses: II, Alkaline-earth fluoride dependence.—73-10423
**Takahashi, Minoru** See Ryu, Beyong-Hwan
**Takahashi, Minoru; Baba, Kazuyoshi; Nishizato, Osamu; Takamura, Akinobu; Katsube, Masayoshi**
Mechanical and electromechanical properties of monoclinic $ZrO_2$ fiber/PZT composites.—73-17376; Slip casting of monoclinic $ZrO_2$ fiber/PZT composites.—73-17000
**Takahashi, Minoru; Hayashi, J.; Suzuki, K.; Suzuki, Suguru; Takahashi, Junichi**
Use of coupling agents as a route to improvement of the compressibility of fine zirconia and alumina powders.—73-09383
**Takahashi, Minoru; Kihara, Hiroshi; Ota, Toshitaka; Suzuki, Suguru**
Mixing behavior in the ceramic oxide thermoplastic resin system near CPVC [critical powder volume concentration].—73-16871
**Takahashi, Minoru; Masuda, Yuichi; Suzuki, Suguru**
Compaction and sintering behavior of a high-purity alumina powder treated with coupling agents.—73-05715; 73-16678
**Takahashi, N.; Shiojiri, M.**
Stacking faults in hexagonal and rhombohedral $MoS_2$ crystals produced by mechanical operation in relation to lubrication.—73-08741
**Takahashi, Naoyuki; Kanematsu, Daigorou; Koukitu, Akinori; Seki, Hisashi; Kamioka, Yasuharu**
Preparation of (Bi, Pb)-Sr-Ca-Cu-O superconducting thin films by the mist microwave-plasma chemical vapor deposition method.—73-11869
**Takahashi, Osamu; Arai, Hiroaki**
Water-repellent metal oxide film coated on glass substrate and method of forming [the] same.—73-03973
**Takahashi, R.** See Soga, Naohiro
**Takahashi, S.** See Fujiura, K.
**Takahashi, Sadayuki; Hirose, Seji; Uchino, Kenji**
Stability of PTZ piezoelectric ceramics under vibration level change.—73-15288
**Takahashi, Satoshi** See Koguchi, Nobuyuki
**Takahashi, Satoshi; Seki, Masanobu; Setoyama, Katsumi**
Phase change of new products of $CaSO_4$-$SrSO_4$-$H_2O$ system.—73-00162
**Takahashi, Seiji** See Ohshima, Kenji
**Takahashi, Seizo** See Anzai, Masahiro
**Takahashi, Seizo; Kanai, Hiroshi; Nakagawa, Takeo**
Stepped cup forming from alumina granula by press powder flow compaction.—73-17009
**Takahashi, Seizo; Nakagawa, Takeo**
Deep cup forming and improvement in dimensional precision of sintered compact from alumina granules.—73-16693
**Takahashi, Shigeki; Shiraki, Yasuhiro**
Method of forming a pattern in semiconductor device manufacturing process.—73-01377
**Takahashi, Shiro** See Ohishi, Yasutake
**Takahashi, T.** See Sugano, Mikio
**Takahashi, Takanobu** See Tamamaki, Masahiro
**Takahashi, Takashi** See Yokoya, Takayoshi
**Takahashi, Teruo** See Sato, Katsuaki
**Takahashi, Tomonori** See Ichikawa, Shuichi
**Takahashi, Tomonori; Isomura, Manabu; Matsuhiro, Keiji**
Method of manufacturing silicon nitride sintered bodies.—73-02117
**Takahashi, Toshiyuki** See Yoshida, Kozaburo
**Takahashi, Toshiyuki; Katsumura, Yuji; Suzuki, Hisashi**
Cutting performance of white ceramic tools having high strength.—73-17269; Properties of alumina ceramics having extremely fine grains.—73-09659
**Takahashi, Tsukasa** See Osaka, Shigemi
**Takahashi, Y.** See Aoki, K.; Saito, Shinji; Suga, T.; Takahashi, K.; Tanihara, M.
**Takahashi, Y.; Nitobe, K.; Uramoto, J.; Momose, T.; Ishimaru, H.**
Aluminum oxide thin-film deposition by reactive ion plating using the cathode system composed of $LaB_6$ disk and Ta pipe.—73-09013
**Takahashi, Yasutaka; Hayashi, Hidehiko**
Aminoalkoxide sol-gel coating of transition metal oxide films.—73-12916
**Takahashi, Yoshikazu** See Muramatsu, Gyo
**Takahashi, Yusuke** See Fujii, Satoshi
**Takahashi, Yutaka; Kikuchi, Masao; Suzuki, Shigenobu; Suga, T.**
Transmission electron microscopy of surface damages resulting from wet polishing in a polycrystalline aluminum nitride substrate.—73-03211
**Takahashi, Yutaka; Muraki, Koji; Fukatsu, Sumusu; Kano, S. S.; Shiraki, Y.; Ito, R.**
In-plane transport of excitons in quantum well structures.—73-14976
**Takahashi, Yutaka; Okano, Kiyoshi; Suzuki, Shigenobu; Suga, T.**
Transmission electron microscopy of polished AlN with ultrafine alumina abrasive.—73-03210; 73-13462
**Takahata, Ryoichi** See Yotsuya, Tsutomu
**Takahei, Kenichiro** See Chang, S.-J.; Taguchi, Akihito
**Takai, A.** See Uomi, Kazuhisa
**Takai, Hiroshi** See Nishi, Tokumitsu; Okuda, Koji
**Takai, Minoru; Ikemachi, Takaaki; Niki, Kazuya; Yoshikawa, Shuichi; Yamano, Koji; Yoshisato, Yoshisato**
YBCO-BiO composite superconductor for granular-type Josephson microwave detector.—73-15674
**Takai, T.** See Ungar, P. J.
**Takaki, Yoshito; Taniguchi, Tomohiko; Hori, Kouichi**
Program package for obtaining unit-cell constants and possible space groups from X-ray powder diffraction data.—73-05080; 73-17499
**Takakura, E.; Horibe, S.**
Fatigue damage in ceramic materials caused by repeated indentation.—73-03292
**Takakuwa, Koichi** See Tanaka, Hironao
**Takamatsu, Atsushi; Makita, Kensuke**
Glass pane with reflectance reducing coating.—73-14541
**Takami, Akihide** See Ichikawa, Satoshi
**Takami, Akihiro** See Isshiki, Kunihiko; Ueno, Iwao
**Takami, Akio**
Functional ceramics for automobiles.—73-01170
**Takami, Tetsuya; Kuroda, Kenichi; Kojima, Kazuyoshi; Kataoka, Masayuki; Tanimura, Junji; Wada, Osamu**
45° grain-boundary junctions in (001)-oriented BiSrCaCuO films.—73-15483
**Takamori, Takeshi; Watanabe, Kenji; Kamijoh, Takeshi**
Lateral *npn* junction and semiinsulating GaAs current confinement structure for index-guided InGaAs/AlGaAs lasers by MBE.—73-15010
**Takamuku, Kenji** See Matsushita, Teruo
**Takamuku, Kenshi** See Ikeda, Kayuto
**Takamura, A.** See Zhao, Jin-Cai
**Takamura, Akinobu** See Takahashi, Minoru
**Takamura, Yuzuru** See Hirokawa, Yuichi
**Takanaga, Shigeyuki** See Hayashi, Satoshi
**Takanashi, Satohiko** See Ogita, Norio
**Takano, K. J.** See Wakatsuki, M.
**Takano, M.** See Adachi, H.; Hiroi, Zenji; Nishijima, M.; Takeda, Yasuo
**Takano, M.; Fujii, T.; Bando, Yoshichika**
Characterization of epitaxial iron oxide films by conversion electron Mossbauer spectroscopy [CEMS].—73-15308
**Takano, Mikio** See Azuma, Masaki; Ikeda, Yasunori; Kusano, Yoshihiro
**Takano, S.** See Nanba, T.
**Takano, Satoshi** See Hayashi, Noriki; Yoshida, Noriyuki
**Takano, Satoshi; Takahashi, Kenichi; Miyazaki, Kenji; Yoshida, Noriyuki; Inazawa, Shinji; Hayashi, Noriki**
Method for forming superconducting ceramic elongated body.—73-04846; Method for manufacturing superconducting ceramic elongated body.—73-01714
**Takano, Y.** See Lopez, M.
**Takano, Yoshishige** See Nishioka, Takao
**Takao, Hisaaki** See Itoh, Hideaki
**Takao, Kunihiro** See Takizawa, Kazutaka
**Takao, Yasumasa** See Awano, Masanobu
**Takao, Yasumasa; Awano, Masanobu; Takagi, Hiroyoshi**
Preparation and properties of $Ba_2YCu_3O_{7-x}$-$BaZrO_3$ superconductive composite by spray-drying method.—73-15587; Synthesis and properties of Ag-$YBa_2Cu_3O_{7-x}$ composite superconductor by mist-pyrolysis method.—73-01683; 73-11924
**Takao, Yuji** See Egashira, Makoto
**Takaoka, Hidemitsu; Suito, Hideaki**
Magnetoplumbite-corundum phase equilibria in the system Sr-Fe-Al-O at 1100°C.—73-05433
**Takaoka, S.; Tsukagoshi, K.; Wakayama, S.; Murase, K.; Gamo, K.; Namba, S.**
Ballistic and elastic mean free paths determined by magnetic electron focusing effect in GaAs/AlGaAs.—73-04250
**Takaoka, Yoichi** See Kumashiro, Yoshimasa
**Takarada, Takayuki; Tamura, Kotaro; Takezawa, Hideyasu; Nakagawa, Nobuyoshi; Kato, Kunio**
Effect of pretreatment in a fluidized bed upon diamond synthesis of particles by chemical vapor deposition.—73-09089
**Takariki, Kazuhiko** See Nakajima, Toshio
**Takase, A.** See Nonaka, K.
**Takashige, Masaaki** See Kojima, Seiji
**Takashige, Masaaki; Hamazaki, Shinichi; Tsukioka, Masayuki; Shimizu, Fuminao; Suzuki, Haruhiko; Sawada, Shozo**
Ferroelectricity in barium sodium tantalate [BNT], $Ba_2NaTa_5O_{15}$.—73-07890

**Takashima, Masayuki** See Ogihara, Takashi
**Takashima, Toshiyuki; Yamamoto, Tsuyoshi; Narita, Toshio**
Growth behavior of manganese-metallized layer on silicon nitride ceramics.—73-03595; Metallizing of silicon carbide ceramics with manganese vapor.—73-03617; 73-13871; Reaction layer of silicon nitride ceramics to metal joints using Ni-base solder.—73-00262; 73-10270
**Takashima, Yoichi** See Ikeda, Yasuhira
**Takashima, Yoshimasa** See Nishida, Tetsuaki
**Takashina, Hiroyuki** See Yashima, Masatomo
**Takasu, Hidemi**
Method for manufacturing semiconductor device having grown layer on insulating layer.—73-11528; Semiconductor device having field effect transistor using ferroelectric film as gate insulation film.—73-11544; Semiconductor device having silicon carbide grown layer on insulating layer and MOS device.—73-15243
**Takata, Masasuke** See Huybrechts, Ben; Ishii, Mamoru; Nakajima, Kensuke; Oh, Yong-Su; Ryu, Jae-Sang
**Takata, Masasuke**
NACSIS-IR database for academic conferences of the Ceramic Society of Japan.—73-09730
**Takata, Masayuki** See Watanabe, Yuichi
**Takata, S.** See Sato, H.
**Takatori, Kazumasa; Wada, Shigetaka; Kobayashi, Nobuo**
Quantitative estimation of intergranular glassy phase of silicon nitride ceramics.—73-06274; 73-17187
**Takatsu, Manabu** See Gao, Tie; Nishikawa, T.; Nishikawa, Tadahiro
**Takatsu, Rika** See Funayama, Osamu
**Takatsu, Sanae** See Watanabe, Kenji
**Takaya, H.** See Sano, T.
**Takayama, Hirotaka** See Fujitsu, Satoru
**Takayama, Kazuyoshi** See Aratani, Shinichi
**Takayama, Toru** See Imafuji, Osamu
**Takayama-Muromachi, E.** See Kanke, Y.
**Takayanagi, Takeshi** See Kobayashi, Keizo
**Takazawa, Akira** See Yamada, Masao
**Take, Shigeo; Kurosawa, Masaji**
Exhaust gas purifier for methanol-fueled engines.—73-05212
**Takebe, Hiromichi** See Chu, Judy; Kuromitsu, Yoshirou; Nageno, Yoshikazu
**Takebe, Hiromichi; Fujino, Shigeru; Morinaga, Kenji**
Refractive-index dispersion of tellurite glasses in the region from 0.4 to 1.71 μm.—73-14269
**Takebe, Hiromichi; Nageno, Yoshikazu; Morinaga, Kenji**
Effect of network modifier on spontaneous emission probabilities of $Er^{3+}$ in oxide glasses.—73-14162
**Takebe, Hiromichi; Teshima, Takuya; Nakashima, Masazumi; Morinaga, Kenji**
Powder processing technique for development of zirconia-nickel functionally gradient materials.—73-05953; 73-10263
**Takebe, Hiromichi; Yoshida, Masatomo; Hayashi, Koichi; Morinaga, Kenji**
Fabrication of alumina sheets by extrusion.—73-02823; 73-13053
**Takebe, Hiromochi** See Hayashi, Koichi
**Takebe, T.** See Kobayashi, K.; Nishikawa, T.; Yamamoto, Teiji
**Takeda, Kaoru; Miyake, Keita; Takeda, Kazuyoshi**
Phase transition in $NaTiO_2$: a candidate for $S=1/2$ triangular Heisenberg antiferromagnet.—73-05456
**Takeda, Kazuyoshi** See Takeda, Kaoru
**Takeda, Michio** See Okamura, Kiyohito; Shimoo, Toshio
**Takeda, Michio; Sakamoto, J.; Imai, Y.; Ichikawa, Hiroshi; Ishikawa, T.**
Properties of stoichiometric silicon carbide fiber derived from polycarbosilane.—73-17185
**Takeda, Mitsuaki** See Tanzil, Gunawan
**Takeda, Mizuho** See Nakajima, Shigeharu
**Takeda, Naoya; Tanaka, Katsunori; Kagawa, Masaki; Oyamada, Akira; Sato, Noriaki; Sakatsume, Shinichi**
De Haas-van Alphen [dHvA] studies of YbAs above and below Neel temperature.—73-08831
**Takeda, Nobou** See Yamade, Yoshiaki
**Takeda, Shinichi; Nakada, Shinji; Tari, Isao**
Surface-chemical study on stress corrosion of glass in aqueous solutions: II, Influence of alkali metal ions.—73-00419
**Takeda, Shinichi; Tari, Isao**
Effect of surface charge on subcritical crack growth [SCG] in glass.—73-03787
**Takeda, Shuichi** See Kudaka, Katsuya
**Takeda, Shuichi; Shishiba, Hideki; Kajiura, Takeji**
Ceramic die for molding glass member.—73-12450
**Takeda, Shuichi**
Method of forming ceramic layer on metallic body.—73-10327
**Takeda, Shunji; Pai, Chul-Hoon; Seo, Won-Seon; Koumoto, Kunihito; Yanagida, Hiroaki**
Thermoelectric properties of porous β-SiC fabricated from rice hull ash.—73-08995; 73-16638
**Takeda, Yasuo** See Kanno, R.; Kusano, Yoshihiro; Mukai, Yasuo; Nishijima, M.; Ogawa, Minoru
**Takeda, Yasuo; Tomida, Hideya; Mukai, Yasuo; Imanishi, Nobuyuki; Yamamoto, Osamu; Azuma, Masaki**
Electrochemical oxidation of $La_2CuO_4$ and $La_{2-x}A_xCuO_4$ (A=Bi and Pb).—73-01538
**Takeda, Yasuo; Tomita, Hideya; Mukai, Yasuo; Sato, Atushi; Imanishi, Nobuyuki; Yamamoto, Osamu**
Oxygen dope in bismuth- and lead-substituted lanthanum copper oxides by electrochemical and oxygen-HIP methods.—73-08157
**Takeda, Yasuo; Yoshikawa, K.; Yamamoto, Osamu; Takano, M.**
Superconductivity of $La_{2-x}Nd_xCuO_{4+\delta}$ prepared under high oxygen pressure: suppression of the phase separation seen in $La_2CuO_{4+\delta}$.—73-01680
**Takeda, Yoshihumi; Hayashida, Akira**
Method for manufacturing a hafnium-containing silazane polymer and a method for manufacturing a ceramic from said polymer.—73-12486
**Takeda, Yoshitsugu** See Sato, Yoshiaki
**Takeda, Yukio; Maeda, Kunihiro**
Mechanical properties of high thermal conductive SiC ceramics.—73-03331; Thermal shock resistance of high thermal conductive SiC ceramics.—73-02712
**Takeda, Yukio; Nakamura, Kousuke; Matsushita, Yasuo**
Influence of manufacturing conditions on the characteristics of SiC ceramics with addition of BeO.—73-02869
**Takehara, Zenichiro** See Imanishi, Nobuyuki
**Takei, Humihiko** See Akimoto, J.
**Takei, Humihiko; Sakai, Fumiko; Hasegawa, Masashi; Nakajima, Satoru; Kikuchi, Masae**
Crystal growth of Tl-based cuprate superconductors.—73-11716
**Takei, W. J.** See Sinharoy, S.
**Takekawa, S.** See Ichimura, Koichi; Iida, Junji; Kanke, Y.
**Takemoto, Mitsuo** See Kobayashi, Tsuneya
**Takemoto, Shoichi** See Moriga, Toshihiro
**Takemoto, Takatoshi** See Sakagami, Seigou
**Takemoto, Y.** See Lim, W.-Y.
**Takemura, Kazuo** See Ino, Juichi; Sakai, Yasuto
**Takemura, Yasuhiko**
Method of manufacturing oxide superconducting materials.—73-04852
**Takemura, Yasushi** See Konagai, M.
**Takemura, Yasushi; Konagai, M.; Yamasaki, Kaname; Lee, C.-H.; Takahashi, K.**
Atomic layer epitaxy of nitrogen-doped ZnSe.—73-04248
**Takemura, Yoshuke** See Sakagami, Seigou
**Takenaka, I.** See Agui, Akane
**Takenaka, K.** See Ito, T.
**Takenaka, Kazuhiro**
Semiconductor device with ferroelectric and method of manufacturing the same.—73-11545
**Takenaka, O.** See Kondo, Ichiharu
**Takenaka, Tadashi**
Using databases—in the author's case.—73-09756
**Takenaka, Takashi; Mori, Shigeto; Machida, Osamu**
Silicon carbide whisker production apparatus.—73-05012
**Takenaka, Y.** See Nakao, F.
**Takeno, S.; Nakamura, S.-I.; Nomaki, T.; Fukushima, Noburu; Ando, K.**
Polytypic study on a new layered perovskite vanadate $Sr_4V_3O_{10-x}$.—73-03183
**Takenoshita, Takeshi** See Ono, Takashi
**Takenouchi, Takeyoshi** See Matsuki, Ryuichi; Niihara, Koichi
**Takeo, Masakatsu** See Komori, Mochimitsu
**Takeshima, Kumiko** See Hirata, Yoshihiro
**Takeshita, Masaaki; Matsuda, Ohsaku; Watari, Takanori; Torikai, Toshio**
Sintering and mullite formation from kyanite-glass system.—73-16992
**Takeshita, S.; Nakajima, S.; Tanaka, C.; Amemiya, H.; Kondoh, K.**
Refining of glasses under subatmospheric pressures: II.—73-14487
**Takeshita, Takuo** See Sugihara, Tadashi; Yamaguchi, Tetsuro
**Taketomi, Susumu; Kawasaki, Kenji; Ozaki, Yoshiharu; Yuasa, Sinji; Otani, Yoshichika; Miyajima, Hideki**
Characteristics of yttrium iron garnet ultrafine particles prepared by the alkoxide method.—73-11647
**Takeuchi, Genki; Okazaki, Hiroshi; Yamaye, Makoto; Kito, T.**
Isopropylation of dibenzofuran over solid acid catalysts.—73-02625
**Takeuchi, Hideo** See Hirose, Toshikazu; Yamaga, M.
**Takeuchi, Hiroyasu**
Calcium phosphate ceramics as biomaterials.—73-12316
**Takeuchi, K.** See Endoh, Shigehisa; Oyama, T.
**Takeuchi, Masahito** See Narushima, Takayuki
**Takeuchi, Masashi** See Nakamura, Shizuo
**Takeuchi, Masayuki** See Kohno, Kiyoshi
**Takeuchi, Nobuyuki** See Ishikawa, Makoto
**Takeuchi, Seizi** See Doi, Toshiya
**Takeuchi, Shigeo**
Bending strength and microstructure of $Al_2O_3$-$Y_2O_3$-MgO and $Al_2O_3$-$Y_2O_3$-$ZrO_2$-MgO composite ceramics.—73-06331; 73-13495
**Takeuchi, Tatsuro; Mouri, Motoya; Sahara, Tetsuya**
Binders for forming a ceramic sheet and applications thereof.—73-01848
**Takeuchi, Tetsuhiko** See Miyashita, Satoru
**Takeuchi, Tetsuya; Watanabe, Atsushi; Manabe, Katsuhide; Amano, Hiroshi; Akasaki, Isamu**
Gallium nitride base semiconductor device.—73-01373
**Takeuchi, Tomonari; Ado, Kazuaki; Asai, Takashi; Kageyama, Hiroyuki; Saito, Yuria; Masqueller, Christian**
Thickness of cubic surface phase on barium titanate single-crystalline grains.—73-12724
**Takeuchi, Y.** See Fujiyasu, H.
**Takeuchi, Yasuhiro** See Tanahashi, Ichiro
**Takeuchi, Yukihisa; Kimura, Koji**
Piezoelectric/electrostrictive element having auxiliary electrode disposed between piezoelectric/electrostrictive layer and substrate.—73-11638
**Takeyama, S.** See Aguckian, V. F.
**Takeyama, Shojiro** See Yokoi, Hiroyuki
**Takeyasu, Shinobu** See Oda, Tetsuhiro
**Takezawa, Hideyasu** See Takarada, Takayuki
**Taki, Hiromitsu** See Fujimaru, Takuya
**Taki, Kensuke** See Nakajima, Kensuke
**Takigawa, H.** See Murakami, S.
**Takigawa, M.; Hults, William L.; Smith, J. L.**
Comparison of nuclear spin relaxation rates of Y and O sites in $YBa_2Cu_3O_{7-y}$.—73-15400
**Takihira, Kenji** See Nakashima, Kunihiko
**Takita, Ichiro** See Fujii, Kazuhiko
**Takita, Masatoshi** See Shimizu, Takaaki
**Takita, Yusaku** See Ishihara, Tatsumi; Mizuhara, Yukako
**Takizawa, Hirotsugu** See Endo, Tadashi; Kobayashi, T.
**Takizawa, Hirotsugu; Shimada, Masahiko; Shimoyashiki, Kazuo; Endo, Tadashi**
Stress-induced phase transformation in the systems $(Ho_{1-x}La_x)_4Al_2O_9$ and $(Y_{1-x}La_x)_4Al_2O_9$.—73-16316
**Takizawa, Kazutaka; Sakai, Toshihiko; Emura, Masaki; Sano, Mikihiro; Watanabe, Naoto**
Internal friction of $16.3Na_2O$-$33.7MgO$-$50SiO_2$ glass.—73-14019
**Takizawa, Kazutaka; Sakai, Toshihiko; Haga, Makoto**
Internal friction and oxygen diffusion in $xNa_2O$-$(1-x)B_2O_3$-$2SiO_2$ glasses: II, Oxygen diffusion.—73-10384; 73-00357
**Takizawa, Kazutaka; Sakai, Toshihiko; Takao, Kunihiro**
Internal friction and oxygen diffusion in $xNa_2O$-$(1-x)B_2O_3$-$2SiO_2$ glasses: I, Internal friction.—73-10385; 73-00356
**Takizawa, Kinji** See Kosuda, Tetsuo
**Takizawa, Takeo; Kanbara, Kohji; Morita, Mitsuru; Hashimoto, Misao**
Flux movement in quench- and-melt-grown YBCO generated by a pulsed magnetic field.—73-15475
**Takoe, Yasumasa** See Awano, Masanobu
**Takusagawa, Nobuo** See Kaneko, Yuji; Kitajima, Kunio; Taruta, Seiichi
**Takuwa, Toshio** See Fukuzawa, Yasushi
**Takwale, M. G.** See Goyal, D. J.; Rozati, S. M.
**Takyu, Choichi** See Ito, Hiromasa
**Takzei, G. A.** See Bar'yakhtar, V. G.
**Talako, T.** See Vityaz, P.
**Talakuev, N. P.** See Naumenko, V. A
**Talalakin, G. N.** See Aidaraliev, M. Sh.; Kuznetsov, V. V.
**Talanina, Irina B.; Collins, Michael A.; Agranovich, Vladimir M.**
Polariton solitons in semiconductors.—73-15105
**Talanov, V. M.** See Kravetskii, I. V.
**Talas, Emilia** See Gobolos, Sandor
**Talashmanova, N. V.** See D'yachkova, T. V.
**Talbot, Jan B.** See Abolmaali, S. B.
**Talbot, Pierre J.** See Song, Q. Wang
**Talero, R.; Palacios, J.**
Influence of the parameter "specific surface" in the qualification as high, or not, sulfate resistance of a portland cement.—73-13741
**Taliani, C.** See Wei, X.
**Talipov, N. Kh.** See Dvurechenskii, A. V.
**Talipov, N. Kh.; Popov, V. P.; Remesnik, V. G.; Nalkina, Z. A.**
Influence of annealing under anodic oxide on changes in the composition of the surface and conversion of the type of conduction of *p*-type $Cd_xHg_{1-x}Te$ ($x\approx0.2$) single crystals.—73-07590
**Tall, P. D.** See Rabier, J.
**Tallant, D. R.** See Panitz, Janda K. G.
**Tallon, J. L.** See Niedermayer, C.
**Talmy, Inna G.** See Zaykoski, James A.
**Talmy, Inna G.; Haught, Debbie A.; Martin, Curtis A.; Dallek, Steven; Janovsky, Amy E.**
Environmental stability of phosphate-bonded silicon nitride ceramics.—73-12799
**Talmy, Inna G.; Zaykoski, James A.**
Liquid-phase sintering of silicon-nitride-reinforced celsian ceramics for advanced radomes.—73-13118
**Talreja, R.** See Sorenson, B. F.
**Talvacchio, J.** See Buhay, H.; Owliaei, J.
**Talwar, D. N.; Mansasreh, M. O.; Stutz, C. E.; Kaspi, R.; Evans, K. R.**
Infrared studies of Be-doped GaAs grown by molecular beam epitaxy at low temperatures [LT].—73-14991
**Tam, M.-T.** See Weng, C.-C.
**Tam, P. W.** See Naylor, D. L.
**Tamagawa, T.** See Baude, P. F.
**Tamai, K.** See Hirao, Kazuyuki
**Tamaki, Akira** See Goto, Hideaki
**Tamaki, K.** See Suefuji, Yoshihito
**Tamaki, Kazunori; Watanabe, Yoshihisa; Nakamura, Yoshikazu; Hirayama, Shigekazu**
Nucleation of diamond particles by hot filament chemical vapor deposition.—73-16886
**Tamaki, Kenji** See Shikano, Hiroshi
**Tamaki, Masanori** See Enomoto, Ryo
**Tamamaki, Masahiro** See Matsumoto, Yousuke; Shimazaki, M.
**Tamamaki, Masahiro; Onoda, Yoshihiro; Takahashi, Takanobu; Tsuda, Koji**
Lapping abrasive of alumina–zirconia system and method for producing the same.—73-00001
**Tamamura, R.** See Shiroyama, M.
**Tamargo, M. C.** See Yeganeh, M. S.
**Tamari, Nobuyuki** See Ikeyama, Masami; Kondoh, Isao
**Tamari, Nobuyuki; Kondoh, Isao; Tanaka, Takahiro; Katsuki, Hiroaki**
Mechanical properties of alumina-mullite whisker composites.—73-17382
**Tamari, Nobuyuki; Tanaka, Takahiro; Kondoh, Isao; Kose, S.; Gotoh, K.**
Mechanical properties of zirconia–alumina whisker composite ceramics.—73-06485; 73-13568
**Tamasaku, K.; Nakamura, Y.; Uchida, Shinichi**
Charge dynamics across the $CuO_2$ planes in $La_{2-x}Sr_xCuO_4$.—73-07998
**Tamaura, Utaka**
Carbon recycling system using waste heat: studies on activated magnetite.—73-02004
**Tamaura, Y.** See Abe, M.; Nishizawa, Kenichi; Tsuji, Masamichi; Zhang, Q.
**Tamazyan, R. A.** See Genkina, E. A.; Maksimov, B. A.; Novikova, M. S.; Rastsvetaeva, R. K.
**Tamazyan, R. A.; Malinovskii, Yu. A.**
Microtwinning of Na, Ba, Nd silicate, $NaBa_6Nd[SiO_4]_4$.—73-02328

**Tamazyan, R. A.; Molchanov, V. N.; Simonov, V. I.; Kolesnikov, N. N.; Kulakov, M. P.; Korotkov, V. E.**
Nonsuperconducting oxide $TlBa_2LaCu_2O_7$ with 1212 structure.—73-16233
**Tambouris, D.** See Nassiopoulos, A. G.
**Taminger, Karen M. B.** See Sathish, Shamachary
**Tamiya, E.** See Uo, Motohiro
**Tamiya, Hiromichi** See Awaji, Hideo; Sakaida, Yoshihisa
**Tamm, Marina E.** See Akimov, B. A.; Ryabova, L. I.
**Tammaro, David A.**
Automated mass spectrometer for analysis of gas bubbles in glass.—73-08376
**Tamor, Michael A.** See Wu, Ching-Hsong
**Tamor, Michael A.; Willermet, Pierre A.; Vasseli, William C.; Gangopadhyay, Arup K.**
Powertrain component with adherent film having a graded composition.—73-03700
**Tamou, Takuya** See Nagasaki, Shunsuke
**Tampieri, Anna** See Bellosi, A.
**Tampieri, Anna; Masini, Roberto; Dimesso, Lucangelo; Guicciardi, Stefano; Malpezzi, M. Christina**
Densification of $Bi_{1.8}(Pb)_{0.35}$- $Sr_{1.9}Ca_{2.1}Cu_3O_x$ and texture development through sinter-forging.—73-11722
**Tamura, E.** See Hirashima, Hiroshi
**Tamura, Hideki** See Dan, Koji; Paisley, M. J.; Tanabe, Yasuhiro
**Tamura, Hiroshi** See Yamaguchi, Yoshimi
**Tamura, Hiroshi**
Microwave loss quality of $(Zr_{0.8}Sn_{0.2})TiO_4$.—73-14718
**Tamura, Hirotaka** See Yoshida, Akira
**Tamura, Hitoshi** See Okuno, Yasuo
**Tamura, Kazuhiro** See Sato, Tsugio
**Tamura, Kotaro** See Takarada, Takayuki
**Tamura, S.; Kimura, S.; Sato, Y.; Yoshida, H.; Yoshida, K.**
Laser damage threshold of $Sc_2O_3/SiO_2$ high-reflector [HR] coatings for a laser wavelength of 355 nm.—73-05587
**Tamura, Shigehisa** See Miyake, Yasunari
**Tamura, Shinichi** See Shinohara, Yasuaki
**Tamura, T.** See Okada, H.
**Tamura, Tetsuro** See Yamada, Masao
**Tan Bourdillon, N. X.** See Bourdillon, A.
**Tan, Aichun** See Kuo, Chu-Kun
**Tan, Aichun; Kuo, Chu-Kun; Nicholson, Patrick S.**
Hydronium exchange of polycrystalline K-Na ß˝/ß-$Al_2O_3$.—73-04110; Improved precursor ceramics for proton-conductive ß/ß˝-aluminas.—73-04113; Influence of grain boundaries on the conductivity and ion-exchange rate of ß˝-alumina polycrystalline isomorphs.—73-04116
**Tan, B. T. G.** See Gong, H.; Oh, K.-H.
**Tan, B.-H.** See Zhu, W.
**Tan, Beng-Jit** See Shen, Lu
**Tan, Chun-Yu; Xia, Yue-Yuan; Chen, You-Peng**
Depth profiles of ion-implanted fluorine in tin oxide films prepared by atmospheric pressure chemical vapor deposition.—73-02231
**Tan, F.-H.** See Ahn, Jae-Shin
**Tan, Gen-Lin; Bewtra, Naveen; Lee, Keith; Xu, J. M.**
Two 2-D nonisothermal finite element simulation of laser diodes.—73-15220
**Tan, H.-S.** See Ahn, Jae-Shin; Zhu, W.
**Tan, L.-H.** See Chang, Ying-Lan; Prater, C. B.
**Tan, L.-H.; Mirin, R.; Yasuda, T.; Hu, E. L.; Bowers, J.; Prater, C. B.**
Partial strain release and surface states formed on the sidewall of InGaAs quantum well wires.—73-07709
**Tan, Jia-Qi** See Yang, Zheng-Fang
**Tan, K. H.** See Li, Dien
**Tan, K.-L.** See Chia, W.-T.
**Tan, Kim H.** See Kasrai, Masoud
**Tan, Kin-L.** See Streit, D. C.
**Tan, M. R. T.** See Mars, D. E.
**Tan, Stew-Ann; Low, Boon-Hwee; Fwa, Tien-Fang**
Thermal properties of concrete from transient conduction of a thin slab.—73-06726
**Tan, T. A. N.** See Veuillen, J. Y.
**Tana, Sergio Dalla; Glass, Lain**
Modular approach to palletizing.—73-10567
**Tanabe, Hiroyuki** See Sugimoto, Makoto
**Tanabe, Keiichi** See Hosseini Teherani, Ferechteh
**Tanabe, Keiichi; Enomoto, Youichi; Asano, Hidefumi; Kubo, Shugo**
Electrical responses of Ln-Ba-Cu-O (Ln=Eu, Y), Ba-K-Bi-O, and Ba-Pb-Bi-O superconducting thin films to pulsed infrared radiation.—73-15449
**Tanabe, Keiichiro; Imai, Takahiro; Fujimori, Naoji**
Diamond and its preparation by chemical vapor deposition method.—73-05297
**Tanabe, N.** See Iijima, Y.
**Tanabe, Ryuichi; Nishihara, Yoshiyuki**
Resistor paste and ceramic substrate.—73-04230
**Tanabe, S.** See Hanada, Teiichi; Hirao, Kazuyuki; Kawamoto, Y.; Takahashi, M.
**Tanabe, S.; Ohyagi, Tomohito; Hanada, Teiichi; Soga, Naohiro**
Upconversion and local structure of $Er^{3+}$-doped aluminate glasses.—73-03817
**Tanabe, S.; Ohyagi, Tomohito; Todoroki, S.**
Relation between the $\Omega_6$ intensity parameter of $Er^{3+}$ ions and the $^{151}Eu$ isomer shift in oxide glasses.—73-06963
**Tanabe, Y.** See Ohnishi, Kazumasa
**Tanabe, Yasuhiro** See Akatsu, Takashi; Bao, Qin-Li; Kimura, Shiushichi
**Tanabe, Yasuhiro; Tamura, Hideki; Sawaoka, Akira B.**
Center for Ceramics Research, Research Laboratory of Engineering Materials, Tokyo Institute of Technology.—73-03382
**Tanabe, Yasuhiro; Yasuda, Eiichi**
Science and application of new carbon.—73-02088
**Tanabe, Yoshio** See Kume, Michiya
**Tanahashi, Ichiro; Manabe, Yoshio; Mitsuyu, Tsuneo**
Preparation and optical properties of CdS microcrystallites deposited in porous Vycor glass.—73-07064; 73-14468
**Tanahashi, Ichiro; Takeuchi, Yasuhiro; Yoshida, Akihiko; Nishino, A.**
Effect of carbonization atmospheres on yields and tensile strength of phenolic resin-based carbon fibers.—73-02781; 73-12999
**Tanahashi, Masakazu** See Uehara, Miho
**Tanahashi, Masami; Yao, Takeshi; Kokubo, Tadashi; Minoda, Masahiko; Miyamoto, Takeaki; Nakamura, Takashi**
Apatite coating on organic polymers by a biomimetic process.—73-16656
**Tanahashi, Masami; Yao, Takeshi; Kokubo, Tadashi**
Coating of apatite layer on surfaces of organic polymers by a biomimetic process.—73-09043; 73-16676
**Tanahashi, Matsakazu** See Uehara, Miho
**Tanahashi, T.** See Anayama, C.; Kawamoto, S.
**Tanaka, A.** See Okada, Kiyoshi
**Tanaka, Atsushi; Kamehara, Nobuo; Niwa, Koichi**
Process for producing Bi-Pb-Sr-Ca-Cu-O superconducting films.—73-11995
**Tanaka, C.** See Takeshita, S.
**Tanaka, D. K.** See Long, Gabrielle G.
**Tanaka, Gotaro** See Ooe, Masaharu
**Tanaka, H.** See Aspnes, D. E.; Kamiya, Itaru; Kikkawa, T.
**Tanaka, Hidehiko** See Shin, Dong-Woo
**Tanaka, Hidehiko; Iyi, Nobuo**
Simple calculation of SiC polytype contents from powder X-ray diffraction peaks.—73-16303
**Tanaka, Hidenao** See Furuya, Akinori
**Tanaka, Hiroe** See Kubo, Hiroyuki; Sato, Bunryo
**Tanaka, Hiroichi** See Kimura, Keiichi
**Tanaka, Hironao; Takakuwa, Koichi; Nasu, Shoichi; Ohhashi, Kentaro**
Effect of water or organic solvent on $J_c$ or repress-formed superconductors in Bi(Pb) system.—73-15440
**Tanaka, Hiroshi** See Kadono, Kohei; Tanaka, Keisuke; Uematsu, Keizo; Yazawa, Tetsuo; Yazawa, Tetsuya; Yokoo, Kuniyoshi; Yoshimura, Kazuyoshi
**Tanaka, Hiroshi; Sakamoto, Akira; Nagao, Yosihiko; Fukai, Seiki; Zhang, Yao; Uchida, Nozomu**
Effect of moisture content of granules on the properties of green and sintered bodies of alumina ceramics.—73-16733
**Tanaka, I.** See Katayama, Y.
**Tanaka, Ikuo** See Isai, Masaaki
**Tanaka, Isao** See Aomine, Nobutaka; Kleebe, Hans-Joachim; Nakayama, M.; Pezzotti, Giuseppe; Umesaki, N.; Zeng, Jian-Ren
**Tanaka, Isao; Igashira, Kenichiro; Kleebe, Hans-Joachim; Ruhle, Manfred**
High-temperature strength of fluorine-doped silicon nitride.—73-06454
**Tanaka, Isao; Kleebe, Hans-Joachim; Cinibulk, Michael K.; Bruley, John; Clarke, David R.; Ruhle, Manfred**
Calcium concentration dependence of the intergranular film thickness in silicon nitride.—73-09435
**Tanaka, Isao; Niihara, Koichi; Nasu, Saburo; Adachi, Hirohiko**
Calculation of the electronic structure of *sp* elements in ß-$Si_3N_4$ with correlation to solubility and solution effects.—73-02154
**Tanaka, Isao; Pezzotti, Giuseppe; Niihara, Koichi**
Lifetime of HIPed silicon nitrides at elevated temperatures.—73-06468
**Tanaka, Isao; Suzuki, Nobuo; Hitotsuya, Koretoshi**
Fluidity of spherical cement.—73-09966
**Tanaka, Junichi** See Mizuguchi, Hiroyuki
**Tanaka, Junzo** See Izaki, Toru; Shibagaki, Shigeki; Watanabe, Akio
**Tanaka, Katsuhisa** See Hirao, Kazuyuki
**Tanaka, Katsuhisa; Hirao, Kazuyuki; Ishihara, Tsuguo; Soga, Naohiro**
Optical properties and preparation of transparent glass-ceramics containing $Cr^{3+}$ ions.—73-03861
**Tanaka, Katsuhisa; Hirao, Kazuyuki; Soga, Naohiro**
Effect of heat treatment on the magnetic properties of a rapidly quenched $ZnO-Bi_2O_3-Fe_2O_3$ system.—73-15316
**Tanaka, Katsuhisa; Ishihara, Tsuguo; Hirao, Kazuyuki; Soga, Naohiro**
Electron spin resonance and Mossbauer studies on crystallization process of $BaFe_{12}O_{19}$ from barium iron borate glass.—73-13974; Electron spin resonance and Mossbauer studies on crystallization process of $BaFe_{12}O_{19}$ from barium iron borate.—73-03727
**Tanaka, Katsuhisa; Mukai, Takashi; Ishihara, Tsuguo; Hirao, Kazuyuki; Soga, Naohiro; Sogo, Seiji**
Preparation and optical properties of transparent glass-ceramics containing cobalt(II) ions.—73-00532
**Tanaka, Katsumi; Oomori, Yoshihiro; Inoue, Hirashi; Kawano, K.; Nakata, R.; Sumita, M.**
ESR studies of $Mn^{2+}$ centers in $Sr_{1-x}Ba_xF_2$:Mn crystals.—73-05397
**Tanaka, Katsunori** See Takeda, Naoya
**Tanaka, Kazuhide** See Okada, Michiya
**Tanaka, Kazuhiro** See Amano, Masatake; Odagawa, Tetsufumi; Yamamoto, Tsuyoshi
**Tanaka, Kazuyoshi; Kobashi, Masahiro; Mizogami, Shigeyoshi**
Peculiar magnetic property of pyrolytic carbon prepared from adamantane.—73-16561
**Tanaka, Keisuke** See Kawai, Chihiro; Otsuka, Jun
**Tanaka, Keisuke; Matsui, Motoyasu; Shikata, Ryoichi**
X-ray measurement of triaxial residual phase stress in zirconia–alumina composite ceramics.—73-13609
**Tanaka, Keisuke; Suzuki, Kenji; Tanaka, Hiroshi**
Evaluation of critical defect size of ceramics based on *R*-curve method.—73-06407
**Tanaka, Kenji** See Kondoh, Eiichi
**Tanaka, Kenji; Inada, Isamu; Minai, Kiichi**
Development in submicron grinding of $BaTiO_3$ powder by ball milling and its applications.—73-16700
**Tanaka, Kiyoshi** See Kamata, Kiichiro
**Tanaka, Kohichi** See Sato, Kazunori
**Tanaka, Kyoji** See Hashimoto, Noboru
**Tanaka, Kyoji; Oh, Sang-Keun; Kokke, Michio**
Effect of siliceous slurry coating on water tightness of cold joint.—73-09916
**Tanaka, M.** See Yamashita, Kimihiro
**Tanaka, Masahiro; Hoste, Serge; Suzuki, Masayuki; Isobe, Masaaki; Ami, Takaaki**
Construction of a new type of spray dryer and its application to synthesis of YBaCuO-type superconductors.—73-04686
**Tanaka, Masashi** See Hata, Kazuo
**Tanaka, Midori** See Iida, Junji; Nakamura, Shin
**Tanaka, Nobuyuki** See Liao, Wen-Ming; Mizuguchi, Hiroyuki
**Tanaka, Rieko** See Mishima, Tsuneo
**Tanaka, Ritsu** See Yamada, Hirotake
**Tanaka, S.** See Kitagawa, H.; Matsuura, K.; Murakami, Hirohiko; Sera, Masafumi; Sumakeris, J.
**Tanaka, Saburo** See Fujita, Nobuhiko; Itozaki, Hideo; Nagaishi, Tatsuoki
**Tanaka, Saburo; Itozaki, Hideo; Higaki, Kenjiro; Yazu, Shuji; Jodai, Tetsuji**
Process for producing a superconducting thin film at relatively low temperature.—73-01734; Superconducting thin film and wire on a smooth substrate.—73-04879
**Tanaka, Saburo; Itozaki, Hideo; Nagaishi, Tatsuoki**
Properties of $YBa_2Cu_3O_{7-y}$ large washer SQUID.—73-15603
**Tanaka, Saburo; Itozaki, Hideo; Yasu, Shuji**
Method for forming electrode for electrical connections to oxide superconductor.—73-01710; Superconducting device composed of oxide superconductor material.—73-01739
**Tanaka, Saburo; Nakanishi, Hidenori; Itozaki, Hideo; Matsuura, Takashi**
Process for preparing superconducting junction of oxide superconductor.—73-11992
**Tanaka, Saburo; Nakanishi, Hidenori; Itozaki, Hideo**
Process for preparing *a*-axis-oriented superconducting oxide thin films.—73-01730
**Tanaka, Satoshi** See Inoue, Kazuhisa; Ueno, Masayuki
**Tanaka, Satoshi; Kotani, Akio**
Resonant X-ray emission spectroscopy in $La_2CuO_4$ and CuO.—73-01651
**Tanaka, Shigenori; Fukushima, Noburu; Yoshimura, Reiko**
Electronic structure of vanadium oxide clusters in layered perovskite compounds $Sr_{n+1}V_nO_{3n+1}$ ($n$=1, 2, 3).—73-08054
**Tanaka, Shigenori**
Cohesive energy of NiO: a quantum Monte Carlo approach.—73-08823
**Tanaka, Shigeru; Matsushita, Yasuo; Maeda, Kunihiro**
Ferroelectric $Pb(Mg,Nb)O_3$ ceramics with various Mg/Nb ratios.—73-01412
**Tanaka, Shinichi** See Ohara, Taigen
**Tanaka, Shoji** See Adachi, Seiji; Ando, Yoichi; Maeda, Toshihiko; Murakami, Hirohiko; Neumann, Christian; Nishino, Junya; Sakai, Takenobu; Sakurai, Takeshi; Ushida, Takahisa; Wada, Takahiro
**Tanaka, Shuhei** See Tagami, Takashi
**Tanaka, Shukichi; Ueda, Eiji; Sato, Masatoshi**
STM-STS studies of molybdenum oxide conductors.—73-14733
**Tanaka, T.** See Maruo, T.
**Tanaka, Tadashi** See Komorita, Hiroshi; Matsumura, Kazuo
**Tanaka, Takahira** See Kondoh, Isao
**Tanaka, Takahiro** See Ikeyama, Masami; Kondoh, Isao; Tamari, Nobuyuki
**Tanaka, Takaho** See Otani, Shigeki
**Tanaka, Tsuneshichi; Nakayama, Hideaki; Okabe, Nagatoshi; Yamamoto, Shigeru; Fukui, Satoshi**
Creep rupture map of engineering fine ceramics.—73-06360
**Tanaka, Y.** See Nogami, Masayuki
**Tanaka, Yoshiaki; Fukutomi, Masao; Maeda, Hiroshi**
Superconducting ceramics.—73-01673
**Tanaka, Yoshihiro** See Uchida, Masaru
**Tanaka, Yukio** See Sato, Osamu
**Tanaka, Yusuke; Gur, Turgut M.; Kelly, M.; Hagstrom, S. B.; Ikeda, Tsutomu**
Structure and properties of $(Ti_{1-x}Al_x)N$ films prepared by reactive sputtering.—73-05499
**Tanaka, Yuusuke** See Kieda, Nobuo
**Tanamoto, Tetsufumi; Kohno, Hiroshi; Fukuyama, Hidetoshi**
Magnetic properties of extended *t-J* model: I, Static properties.—73-02639; Spin excitations of the extended *t-J* model: neutron scattering.—73-08735
**Tanatarov, L. V.** See Abyzov, A. S.
**Tanda, Satoshi; Ohzeki, Shigaki; Nakayama, Tsuneyoshi**
Bose-glass–vortex-glass phase transition and dynamic scaling for high-$T_c$ $Nd_{2-x}Ce_xCuO_4$ thin films.—73-08815
**Tandon, R. P.** See Basantakumar, Sharma H.
**Tandon, R.; Green, David J.; Cook, Robert F.**
Strength variability in brittle materials with stabilizing and destabilizing resistance fields.—73-06530
**Tandon, Sashi; Agrawal, Ranchhor D.; Kapoor, Madan L.**
Viscosity of molten $Na_2O-B_2O_3$ slags.—73-09008
**Taneda, Naoki; Numata, Kouichi; Mukaiyama, Takashi**
Highly heat-resistant glass fiber and process for its production.—73-00736
**Tanegashima, Osamu** See Kimura, Yutaka; Sugahara, Yoshiyuki
**Tanemoto, Kei** See Kanai, Takao
**Tang, Bao-Sheng** See Zhang, Ji-Ping
**Tang, Cui-Fen** See Wang, Qiang-Ping
**Tang, D.-S.** See Lin, Q.
**Tang, D.-Y.** See Shen, Jin-Xi
**Tang, De-Li; Wang, Da-Feng; Jiang, Xiu-Qin**
Sintered color glass tiles with rough sticking face.—73-10481
**Tang, De-Li**
Production technology for color glass face brick.—73-10588
**Tang, G.-P.** See Lubnow, A.; Zwinge, G.
**Tang, H. T.** See Huang, L. J.
**Tang, H.-Y.** See Kao, Chin-Hai

**Tang, H.; Berger, H.; Schmid, P. E.; Levy, F.; Burri, G.** Photoluminescence in $TiO_2$ anatase single crystals.—73-16565
**Tang, Jiu-Yao; Hua, Cheng** Transmissive effect in $BaTiO_3$ self-pumped phase conjugators.—73-09001
**Tang, Lu-Ping; Nilsson, Lars-Olof** Chloride binding capacity [CBC] and binding isotherms of OPC [ordinary portland cement] pastes and mortars.—73-00037; Quantitative relationship between permeability and pore size distribution of hardened cement paste.—73-10122
**Tang, Ming-Shu** See Bian, Qing-Han; Deng, Min; Liu, Zheng; Shen, Yang; Shi, Cai-Jun
**Tang, Ming-Shu** See Wu, Xue-Quan; Xu, Zhong-Zi; Zheng, Liu
**Tang, Nai-Ling** See Hu, Zhi-Qiang; Tao, Ying
**Tang, Ren-Mei** Batch composition for unfired bricks.—73-09826
**Tang, Ru-Jun** See Meng, Fan-Jur
**Tang, S.-T.** See Cui, C.-G.
**Tang, Shao-Qiu; Lian, Zhong-Jun** Effect of $Cr_2O_3$, $ZrO_2$, $P_2O_5$, and $TiO_2$ nucleators on crystallization of glass-ceramics from antimony-bearing slag.—73-10521
**Tang, Shao-Qiu** Developments in sensors and sensitive ceramic elements.—73-11135
**Tang, Tang** Utilization of dust from Raymond mill.—73-10905
**Tang, Tong-B.; Fung, S.-C.** Hardness anisotropy in $Bi_2Sr_2CaCu_2O_8$.—73-15497
**Tang, Wei-Long** See Zhou, Zhi-Hao
**Tang, X.; Howell, P. R.** Microstructural study of the dislocation and precipitation distributions in an Al-Li-SiC composite during aging at 190°C.—73-06831
**Tang, Xiao-Xia** See Zhang, Yao
**Tang, Xiao-Yong; Sun, Yao-Jun; Wu, Tai-Liu; Wang, L.-P.; Fei, L.; Long, Y.-C.** Crystallization of zeolite ZSM-39 studied by $^{13}C$ and $^{29}Si$ MAS-NMR spectroscopy.—73-12567
**Tang, Y. J.** See Ho, J. C.
**Tang, Y. Q.** See Chen, Z. Y.; Sheng, Zheng-Zhi
**Tang, Y. Q.; Chen, K. Y.; Chan, I. N.; Chen, Z. Y.; Shi, Y. J.; Salamo, G. J.** Superconducting $TlSr_2(Ca,Cr)Cu_2O_7$ thin films with critical current density up to $10^6$ A/cm$^2$.—73-08225
**Tang, Y.** See Rich, D. H.
**Tang, Y.-S.** See Ling, S.-H.
**Tang, You-Qi; Lin, Bing-Xiong** Perovskite-type rare-earth complex oxide combustion catalysts.—73-02054
**Tang, Yuan-Ji** See Cao, Xiao-Wen
**Tange, Masayoshi** See Yamaguchi, Shu
**Tangerini, Ilario** See Guerriero, Renato
**Tango, C. E. S.; Vaidergorin, E. Y. L.** Activation of blast-furnace slag in cement without clinker.—73-06621
**Tanguy, B.** See Khatir, S.; Pierre, A. C.; Rossignol, S.
**Tanguy, C.** See Foing, J.-P.
**Tani, Eiji** See Watanabe, Tadahiko
**Tani, Eiji; Shobu, Kazuhisa; Watanabe, Tadahiko** Carbon fiber-reinforced SiC composites produced by reaction bonding.—73-12930; 73-05698; Method for the preparation of silicon carbide-carbon fiber composite.—73-12490
**Tani, Eiji; Shobu, Kazuhisa; Watanabe, Tadahiko** Si-Ti-C-O fiber-reinforced SiC composites produced by reaction bonding.—73-16982
**Tani, Hiroji** See Kasanami, Tohru
**Tani, Junji** See Gafka, Dariusz
**Tani, Toshihiko; Payne, D. A.** Lead oxide coatings on sol-gel-derived lead lanthanum zirconium titanate thin layers for enhanced crystallization into the perovskite structure.—73-07896
**Tani, Yasuhiro** See Snomoto, Toshiyuki
**Tanigaki, Katsumi; Ebbesen, Thomas; Kuroshima, Sadanori; Mizuki, Junichiro** Superconducting material comprising $Rb_xCs_yC_{60}$.—73-12002
**Tanigaki, T.** See Arlinghaus, H. F.
**Tanigawa, Hideo** See Matsubara, Ichiro
**Tanigawa, Yasuo; Mori, Hiroshi; Imai, Nobuhiro; Watanabe, Kenji** Consistency of high-strength concrete with high fineness granulated blast-furnace slag.—73-09867
**Tanigawa, Yoshinobu** Theoretical approach of optimum design for a plate of functionally gradient materials [FGM's] under thermal loading.—73-03652
**Taniguchi, Hiroshi** See Fujimoto, Manabu
**Taniguchi, Hitofumi; Kuramoto, Nobuyuki** Process for producing aluminum nitride sintered body.—73-02125
**Taniguchi, K.** See Mizuno, H.
**Taniguchi, Masakazu; Taguchi, Yasushi; Sunamoto, Naoki** Green-colored infrared and ultraviolet radiation absorbing glass and method of producing [the] same.—73-14543
**Taniguchi, Masao** See Yokoyama, Masao
**Taniguchi, Masato; Ito, Masaya** Method of forming tappet of the kind having ceramic seat plate.—73-03694
**Taniguchi, S.** See Kishimoto, T.
**Taniguchi, Satoshi; Yamada, Koji** Method for surface treating the inner wall of a furnace, which is lined with ceramic fibers.—73-04034
**Taniguchi, Seiichi** See Maeda, Yasuhiro
**Taniguchi, Sinichiro** See Nagahata, Tsutomu
**Taniguchi, T.** See Akaishi, M.
**Taniguchi, Tadayuki** See Kurihara, Kenro
**Taniguchi, Tomohiko** See Takaki, Yoshito
**Taniguchi, Yoichi** See Hata, Kazuo
**Tanihara, M.; Miyamoto, K.; Takahashi, Y.; Fujita, N.; Kaneda, H.; Miyamoto, Hiroki** Evaluation of fracture strength and fracture toughness of glass by flat punch.—73-14182
**Tanihata, Kimiaki** See Kume, Michiya
**Tanihata, Kimiaki** See Ma, Xiang-Feng
**Tanimura, Junji** See Makita, T.; Takami, Tetsuya
**Tanimura, Makoto** See Sone, Tokuaki
**Tanimura, S.** See Mabuchi, Mamoru
**Tanino, Hiroshi** See Ihara, Hideo
**Tanino, Hiroshi; Fujikake, H.; Maeda, T.; Nakanishi, H.** Determination of the crystal orientation of $CuInSe_2$ by Raman spectroscopy.—73-08598
**Tanino, Hiroshi; Fujikake, H.; Nakanishi, H.** Creation of a new In-based material by laser irradiation of chalcopyrite-type ternary semiconductors.—73-07425
**Tanioka, T.** See Maki, Iwao
**Taniuchi, Tetsuo** See Yamamoto, Kazuhisa
**Taniwatari, T.** See Aoki, Masahiro
**Tanizawa, Yasunori** See Hiroki, Nobuyoshi
**Tank, Klaus; Lloyd, Andrew I.** Cutting insert for a rotary cutting tool.—73-02092; Cutting insert for a rotary cutting tool.—73-12458
**Tank, Klaus; Tomlinson, Peter N.; Martell, Trevor J.** Method of producing a composite diamond abrasive compact.—73-00002
**Tankala, Kanishka** See Venugopalan, Hari
**Tankeev, A. P.** See Bogdanova, Kh. G.
**Tanklevskaya, E. M.** See Kazantsev, A. B.
**Tanner, Cameron W.; Virkar, Anil V.** Electrochemical liquid deposition [ELD] of ceria.—73-16758
**Tanner, D. B.** See Deneuville, A.; Romero, D. B.
**Tanno, Kiyohiko** See Yasutomi, Yoshiyuki
**Tanoue, Ryuji** See Matsubara, Shigeo
**Tansley, T. L.** See Chin, V. W. L.
**Tantsura, N. P.** See Arif, Mokhammad
**Tanuma, H.** See Aida, Toshiyuki
**Tanzil, Gunawan; Yoneyama, Kouichi; Saeki, Tatsuhiko; Takeda, Mitsuaki** Effective tensile Young's modulus of early aged concrete.—73-09929
**Tao, Cai-Li; Wang, Zheng-Ping** Silicon carbide kiln furniture with improved heat shock resistance.—73-10770
**Tao, K.** See Zhu, D.-H.
**Tao, Long-Xiang** See Zheng, Lu-Bin
**Tao, Meng** Growth kinetics and reaction mechanism of silicon chemical vapor deposition from silane.—73-02844
**Tao, N. J.** See DeRose, J. A.
**Tao, R.** See Averback, R. S.
**Tao, Wess H.; Robertson, Richard E.; Thornton, Peter H.** Effects of material properties and crush conditions on the crush energy absorption of fiber composite rods.—73-07018
**Tao, Xin-Xia** See Liang, Zhi-Lin
**Tao, Y. K.** See Bud'ko, S. L.; Hsieh, Peter Y.
**Tao, Y. K.; Wang, Y. Q.; Xue, Y. Y.; Hor, P. H.; Chu, C. W.** Preparation and characterization of interface morphologies of silver-sheathed superconducting Bi-Sr-Ca-Cu-O ribbons.—73-08172
**Tao, Y.; Yelon, A.; Leonelli, R.** Electronic properties of $(NH_4)_2S$-passivated InP(100) surfaces.—73-07497
**Tao, Ying; Wang, Cheng-Yu; Qu, You-Yuan; Tang, Nai-Ling** Effect of wolfram tailing as new flux on melting of soda-lime-silicate glass.—73-14365
**Tapiero, M.** See Ennouri, A.
**Tapinskaya, O. V.** See Zakharov, S. I.
**Tapp, F.** See Kepten, A.
**Tapper, Alexander** See Schimmel, Gunther
**Tapramaz, R.** See Ucun, F.
**Tara, Juan C.** See Basaldella, Elena I.
**Tarabrina, L. A.** See Dolgopolov, V. M.
**Taranov, A. V.** See Ivanov, S. N.
**Tarantul, N. P.** See Gal'perina, M. K.
**Taras, Peter** See Svoboda, Pavel
**Tarascon, Jean-Marie** See Barboux, Philippe; Colson, S.
**Tarascon, Jean-Marie** Safe, economic lithium metal-free rechargeable batteries.—73-14729
**Tarasenko, L. M.** See Kvyatkovskii, S. F.
**Tarasevich, Yu. I.; Polyakov, V. E.; Minchev, Kh. I.; Penchev, V. Z.** Heats of hydrocarbon and water adsorption by high-silicon zeolites of ZSM-5 type.—73-16164
**Tarasevich, Yu. I.** Hydrophilicity-hydrophobicity of the kaolinite surface.—73-05579
**Tarasov, A. A.** See Kimaev, A. E.
**Tarasov, G. G.** See Kriven, S. I.
**Tarasova, N. V.** See Lube, E. L.
**Tarasova, T. N.** See Kuz'micheva, G. M.
**Tarasovskii, V. P.; Lukin, E S.; Belyakov, A. V.** Effect of grain size on the microstructure and properties of ceramics.—73-03136
**Tarbaev, N. I.** See Babentsov, V. N.; Lisitsa, M. P.; Sochinskii, N. V.
**Tarchenko, V. P.** See Ivashchenko, A. I.
**Tardos, Gabriel** See Nicolaescu, Ion V.
**Tare, V. B.** See Parkash, Om; Shamsuddin, M.
**Tari, Isao** See Hayashi, Hidetaka; Takeda, Shinichi
**Tarina, D.** See Diamandescue, L.
**Tarina, V.** See Stoica, A. D.
**Tarnawski, Z.** See Koziol, Z.
**Tarr, N. G.** See Kalnitsky, A.
**Tarrant, D.** See Ermer, J.
**Tarry, C. A.** See Subbarao, E. C.
**Tartakovskii, I. I.** See Maksimov, A. A.
**Tartarini, Giovanni; Bassi, Paolo; Chen, Shu-Fen; Demicheli, M. P.; Ostrowsky, D.** Calculation of hybrid modes in uniaxial planar optical waveguides: application to proton-exchanged $LiNbO_3$ waveguides.—73-11557
**Tarte, P.** See Winand, J.-M.
**Tarumi, Takashi; Elnishi, Toshihiko** Colored glass.—73-00730; Glass composition.—73-14539
**Tarumoto, Hiroyuki** See Imamura, Seichiro
**Taruta, Seiichi; Kawashima, Kazuo; Kitajima, Kunio; Takusagawa, Nobuo; Okada, Kiyoshi; Otsuka, Nozomu** Influence of zirconia addition on the sintering behavior of bimodal size distributed alumina powder mixtures.—73-16844
**Taruta, Seiichi; Kitajima, Kunio; Takusagawa, Nobuo; Okada, K.; Otsuka, Nozomu** Burnout of binder and sintering behavior of powder compacts of bimodally distributed alumina powders with stearic acid and polyethylene glycol.—73-02732
**Taruta, Seiichi; Kitajima, Kunio; Takusagawa, Nobuo; Okada, Kiyoshi; Otsuka, Nozomu** Influence of coarse particle size on packing and sintering behavior of bimodal-size-distributed alumina powder mixtures.—73-05864; 73-09172; 73-16834
**Tarutani, Yoshinobu** See Kabasawa, U.; Nishino, Toshikazu; Saitoh, Shinichiroh
**Tas, A. Cuneyt; Akinc, Mufit** Crystal structures of the high-temperature forms of $Ln_2Si_2O_7$ (Ln=La, Ce, Pr, Nd, Sm) revisited.—73-16099; Phase relations in the system $Ce_2O_3$-$Al_2O_3$ in inert and reducing atmospheres.—73-16256; Phase relations in the system $Ce_2O_3$-$Ce_2Si_2O_7$ in the temperature range 1150° to 1970°C in reducing and inert atmospheres.—73-16257
**Tasco, Abilio** See Lauwers, E.; Snyder, William J.
**Tashima, Shunzo; Hashimoto, Shigeaki; Kuroki, Hidenori** High-speed centrifugal compaction and low-temperature sintering of submicron alumina powder.—73-16819
**Tashiro, Chuichi** See Ikeda, Ko
**Tashiro, Chuichi; Kanaya, Muneki; Ueda, Mituru** Humidity dependence on electrical resistance of cement materials.—73-09985
**Tashiro, Chuiti; Ikeda, Kou; Ueki, Yasutomo** Electrical conductivity of hardened cements for different temperatures.—73-09942
**Tashiro, S.** See Mashimo, Tsutomu
**Tashiro, Shinjiro; Kanda, Atsushi; Igarashi, Hideji** PTCR characteristics of semiconducting (Ba, Ca)$TiO_3$ ceramics fired in reducing-reoxidizing atmospheres.—73-15127
**Tashiro, Yuuji** See Funayama, Osamu
**Tasic, Z. D.** Improving the microstructural and physical properties of alumina electrical porcelain with $Cr_2O_3$, $MnO_2$, and ZnO additives.—73-16833
**Tasker, P. J.** See Ralston, John D.
**Tatami, Junichi** See Yasuda, Kouichi
**Tatarchuk, Bruce J.; Rose, Millard F.; Krishnagopalan, Gopal A.; Zabasajja, John N.; Kohler, David A.** Preparation of mixed fiber composite structures.—73-10338
**Tate, Akiyuki** See Katoh, Yujiro
**Tateishi, Tetsuya; Ito, Atsuo** General aspects of biotechnological ceramics.—73-05169
**Tatematsu, Kazuho** See Nozaki, Shunkichi
**Tateno, M.; Fukuzawa, Yasushi; Nagasawa, S.; Sakuta, H.** Reduction of residual stress on bonding interface for dissimilar materials.—73-03638
**Taterenko, S.** See Hamoudi, A.
**Tateyama, Hiroshi** See Kimura, Kunio; Tsunematsu, Kinue
**Tatsenko, O. M.** See Druzhinin, V. V.
**Tatsumi, Masashi** See Kamiya, Kanichi
**Tatsumi, Toru** See Sakai, Akira; Terashma, Koichi
**Tatsumisago, Masahiro** See Kishida, Kazuo; Kowada, Yoshiyuki; Lee, Sang-Ki; Minami, T.; Umesaki, N.; Yamasaki, Seiji
**Tatsumisago, Masahiro; Hirai, Kouichi; Minami, Tsutomu; Takada, Kazunori; Kondo, Shigeo** Superionic conduction in rapidly quenched $Li_2S$-$SiS_2$-$Li_3PO_4$ glasses.—73-14736
**Tatsumisago, Masahiro; Inoue, S.; Tohge, Noboru; Minami, T.** Dopants in high-$T_c$ superconductors from rapidly quenched $Bi_{1.6}Pb_{0.4}Ca_2Sr_2Cu_3O_w$ glasses.—73-08025
**Tatsumisago, Masahiro; Minami, Tsutomu** Intermediate- and short-range structures of oxide glasses and melts.—73-14017
**Tatsuno, Tsuneo** See Kanamaru, Moriyoshi
**Tatsuoka, H.; Kuwabara, H.; Nakanishi, Y.; Fujiyasu, H.** CdTe(111) growth on sapphire(0001) substrates by hot wall epitaxy.—73-07401
**Tatsuta, T.** See Murawala, P. A.
**Taube, K.** See Weber, A.
**Taulelle, F.** See Gerardin, Cornine M.
**Tautkas, S. A.** See Kraeiva, A. A.
**Tavares, Ana C.** See Thomas, H. M.
**Tavolaro, Adalgisa; Mostowicz, Ryszard; Crea, Fortunato; Nastro, A.; Aiello, R.; Nagy, J. B.** Formation of MFI crystalline zeosilites from fluoride-containing silicate gels.—73-12585
**Tavolazzi, Valentino; Samori, Lorenzo** In search of global quality.—73-14662
**Tavrow, Lee S.** See Flynn, Anita M.
**Tavshunskii, G. A.** See Khabibullaev, P. K.
**Tawada, Y.** See Nevin, W. A.
**Tawarayama, Hiromasa** See Komatsu, Takayuki
**Tawaza, Eiichi; Kawai, Kenji** Effect of mixing water on morphology of $C_3A$ hydrates.—73-09912
**Tawfik, A.; Olofa, S. A.; Abd El-Ati, M. I.** Pyroelectric properties of $Ni_{0.65}Zn_{0.35}Cu_xFe_{2-x}O_4$ ferrites for thermoelectric energy conversion.—73-11609

**Tay, S.-P.** See Lind, D. M.

**Tay, Sing P.; Ellul, Joseph P.**
Method of forming silicon carbide.—73-12492

**Taya, Minoru** See Edagawa, Noboru

**Tayler, Garth V. A.**
Trends in heavy clay technology.—73-10693

**Taylor, A. D.** See Arai, M.

**Taylor, A. H.** See Macphee, D. E.

**Taylor, A.** See Gibbons, G.; Holland, D.

**Taylor, Barry E.** See Nakagawa, Seiichi

**Taylor, C. A., II** See Ballal, A. K.

**Taylor, D. J.; Fabes, B. D.**
Laser processing of sol-gel coatings.—73-10559

**Taylor, Derek** See Zandian, V.

**Taylor, Derek**
Thermal expansion data: XVI, Complex oxides with stuffed derivatives of silica structures and topaz.—73-12891

**Taylor, E. R.** See Morkel, P. R.

**Taylor, G. W.** See Docter, D. P.

**Taylor, H. F. W.** See Gollop, R. S.

**Taylor, H. F. W.**
Sulfate reactions in concrete—microstructural and chemical aspects.—73-10171

**Taylor, Harold A.**
Diatomite.—73-12268

**Taylor, J. Ashley**
Mechanical properties and microstructure of plasma-enhanced chemical vapor deposition silicon nitride thin films.—73-03327

**Taylor, K. A.** See Chambers, D. L.

**Taylor, K. N. R.** See Hartmann, A.

**Taylor, Kenneth W.** See Hayati, Igan

**Taylor, P. C.** See Mytilineou, E.

**Taylor, P. L.** See Einerson, C. J.

**Taylor, P. R.; Pirzada, S. A.; Abdel-Latif, M.; Hou, X.**
Synthesis in a nontransferred arc thermal plasma cyclone reactor.—73-06084

**Taylor, P. R.; Pirzada, S. A.**
Processing of ceramic carbide powders in a nontransferred arc thermal plasma reactor.—73-05998

**Taylor, P.** See Komorowski, P. G.

**Taylor, R. A. J.** See Habib, F. A.

**Taylor, R. P.; Adams, J. A.; Davies, M.; Marshall, P. A.; Barber, R.**
Fabrication of nanostructures with multilevel architecture.—73-11209

**Taylor, R. P.; Main, P. C.; Eaves, L.; Thomas, S.; Beaumont, S. P.; Wilkinson, C. D. W.**
Quantum interference effects as a tool to probe the sidewalls of submicrometer-size $n^+$-GaAs channels.—73-07755

**Taylor, R.** See Turner, S. P.

**Taylor, R.; Brandon, J. R.; Piddock, V.**
Thermal transport in SiC fiber-SiC matrix composites.—73-08993

**Taylor, S. M.** See Johnson, S. M.

**Taylor, T. D.** See Ramsey, W. Gene

**Taylor, Timothy E.; Riley, Clyde; Lacefield, William R., Jr.; Coble, Harold D.; Maybee, George W.**
Preparation of ceramic-metal coatings.—73-13921

**Taylor, William J.; Lessar, Joseph F.; Douglas, Weiss J.; Wilson, Charles N.**
Method for making glass to metal seals.—73-10326

**Taymarov, M. A.** See Zaytsev, V. A.

**Tazaki, Kazue; Tiba, M.; Aratani, M.; Miyachi, M.**
Structural water in volcanic glass.—73-14102

**Tazawa, Eiichi** See Kawai, Kenji

**Tazawa, Eiichi; Miyazawa, Shingo; Sato, Tsuyoshi**
Autogenous shrinkage of cement paste.—73-09823

**Tazima, Itsurou** See Ueda, Fumihiro

**Tcheliebou, F.** See Cheron, J. P.

**Tchernov, V. A.** See Stetsenko, V. Ya.

**Tebuev, N. B.** See Suvorov, S. A.

**Tedder, Laura L.; Crowell, John E.; Logan, Mark A.**
Chemical vapor deposition of $SiO_2$ from tetraethoxysilane: the effect of the surface hydroxyl concentration.—73-02745

**Tedjini, Smail** See Khalil, Diaa

**Teepe, M. R.** See Kordas, G.

**Teixeira, J.** See Salvado, I. M. Miranda

**Teixeira, V.** See Andritschky, M.

**Tejada, J.** See Batlle, Xavier

**Tejedor-Tejedor, M. I.** See Tickanen, L. D.; Zeltner, Walter A.

**Tejima, Yoshihiro** See Kani, Akira

**Tekhada, Kh.** See Sorokin, N. I.

**Tekhanovich, N. P.; Sheleg, A. V.; Aliev, V. A.**
Specific heat of $TlInS_{1.8}Se_{0.2}$ in temperature range of 60–300 K.—73-16309

**Telegenov, A. A.** See Popolitov, V. I.

**Telesh, A. M.** See Vigdorchik, R. I.

**Telieps, W.** See Bauer, E.

**Telle, H. R.** See Koch, C.

**Telle, R.** See Fischer, R.; Franz, E. D.; Tumback, M.

**Tellgren, R.** See Andersson, Magnus

**Tellmann, N.** See Klein, N.

**Temirova, S. S.** See Sinyaev, V. A.

**Tempeloff, K.**
Conditions for light-induced short-time growth of GaAs and InP by chloride epitaxy.—73-04274

**Temple, D.** See Hattangady, S. V.; Kepten, A.

**Templeton, I. M.** See Allard, L. B.; Fallahi, M.

**Templeton, T. L.; Arrott, A. S.; Curzon, A. E.; Gee, M. A.; Li, X.-Z.; Yoshida, Y.**
Magnetic properties of $Co_xFe_{3-x}O_4$ during conversion from normal to inverse spinel particles.—73-04622

**Tena, M. A.** See Cantavella, V.; Carda, J.; Cordoncillo, E.; Monros, G.; Sales, M.

**Tenaglia, A.**
Reuse of wastes from wastewaters of the ceramic industry.—73-13644

**Tench, K.** See Blackburn, J.

**Teneshev, L. N.** See Sveshnikova, E. B.

**Teng, Da** See Zhuang, Wei-Hua

**Teng, S.-P.; Lee, C.-H.**
Numerical analysis of through-diffusion experimental results.—73-03508

**Tennant, D M.; Koch, T. L.; Mulgrew, P. P.; Gnall, R. P.; Ostermeyer, F.; Verdiell, J. M.**
Characterization of near-field holography grating masks for optoelectronics fabricated by electron beam lithography.—73-07408

**Tennant, D. M.** See Jeon, D. Y.; Ren, F.

**Tennant, William E.; Cockrum, C. A.; Gilpin, J. B.; Kinch, M. A.; Reine, M. B.; Ruth, R. P.**
Key issues in HgCdTe-based focal plane arrays: an industry perspective.—73-07627

**Tenne, R.; Nabutovsky, V. M.; Lifshits, E.; Francis, A. F.**
Unusual photoluminescence of porous CdS (CdSe) crystals.—73-11495

**Tennery, Victor J.** See Breder, Kristin

**Tenya, Kenichi; Miyajima, Hideki; Otani, Yoshichika; Ishikawa, Yuuichi; Kohayashi, Shuichi; Yoshizawa, Shuji**
Flux pinning mechanism of high-$T_c$ Y-Ba-Cu-O superconductor containing artificial pinning centers $Y_2BaCuO_5$.—73-08084

**Teo, K.-L.** See Feng, Y.-P.

**Teodorescu, V. S.** See Mihailescu, I. N.

**Teodorescu, V.** See Zaharescu, Maria

**Teoreanu, Ion; Andronescu, Ecaterina; Folea, Antoaneta**
Dielectric ceramic of the $Ba_{1-x}M^{+}_{x}Ti_{1-y}M^{++}_{y}O_3$ type.—73-10931

**Teoreanu, Ion; Andronescu, Ecaterina**
Orthosilicate compositions in CaO-SrO-BaO-$SiO_2$ system and their water reactivity.—73-10075

**Teoreanu, Ion; Angelescu, N.**
Hardening processes for some refractory binding systems—kinetic considerations and mechanisms.—73-14593

**Teoreanu, Ion; Georgescu, M.; Puri, A.**
Mechanisms at the formation of some unitary strontium and barium sulfoaluminates.—73-16212

**Teoreanu, Ion; Puri, A.; Georgescu, M.**
Mechanisms at the mixed sulfoaluminate formation in the CaO-$Al_2O_3$-(Sr,Ba)$SO_4$ systems.—73-13754

**Teowee, G.** See Uhlmann, Donald R.

**Teowee, G.; Boulton, J. M.; Bommersbach, W. M.**
Second harmonic generation from $PbTiO_3$-based ferroelectric thin films.—73-11612

**Teplitskii, V. A.** See Kryukova, I. V.

**Teplov, M. A.** See Egorov, A. V.

**Ter-Nersesyants, V. E.** See Il'khamov, R. A.

**Terabe, Kazuya; Yamaguchi, Shu; Imai, Atsuo; Iguchi, Y.**
Crystallization of β,β″-alumina precursors prepared from metal alkoxides.—73-05378

**Terada, Osamu; Saito, Minoru; Suzuki, Hisashi**
Cause of formation of pores in titanium-carbide-based cermet with the addition of zirconium carbide.—73-13804

**Terada, Osamu; Saito, Minoru; Tsuchiya, Nobujiro; Suzuki, Hisashi**
WC-β *t*-Co cemented carbide containing sheetlike WC phases.—73-06874

**Terada, Osamu**
Recent steelmaking technology in Japan.—73-00850

**Terada, Shoichi** See Yamagata, Shigeru

**Terado, Sadahiro** See Hata, Kazuo

**Terai, Kenji** See Nishida, Akio

**Terai, T.** See Akuzawa, N.

**Teraki, Junichi** See Kawai, Chihiro

**Teramura, Satoshi** See Isu, Norifumi

**Teranishi, Hisahiro** See Sano, Saburo

**Teranishi, Shuji; Kawai, Kenji**
Chemical resistivity of cement replaced with binary pozzolans.—73-09852

**Terao, Yuichiro** See Nishiyama, Akio

**Teraoka, Y.; Nobunaga, T.; Okamoto, K.; Miura, N.; Yamazoe, N.**
Influence of constituent metal cations in substituted $LaCoO_3$ on mixed conductivity and oxygen permeability.—73-04115

**Terasaka, Kunihiro** See Suyama, Yoko

**Terasaki, Fukunaga** See Yamana, Kazuo

**Terasaki, I.** See Hase, M.

**Terasaki, Makoto** See Ichinose, Hiromichi

**Terasaki, Toshihiro** See Kobayashi, Hidehiko

**Terashima, K.; Yoshida, T.**
Nanoscale processing with a scanning tunneling microscope (STM) under atmospheric or reduced pressure.—73-16877

**Terashima, T.** See Iijima, K.; Matsuda, Y.

**Terashima, Taichi; Kojima, Norimichi; Kitagawa, Hiroshi; Okamoto, Hiroshi; Mitani, Tadaoki**
Optical reflectivity spectra of incommensurate layer compounds, $(CeS)_{1.2}NbS_2$ and $(CeS)_{0.6}NbS_2$.—73-08936

**Terashima, Takahito** See Daitoh, Yoshihiro; Takada, Toshio; Yoneda, Yasuhiro

**Terashma, Koichi; Tajima, Michio; Tatsumi, Toru**
Photoluminescence study of $Si_{1-x}Ge_x/Si$ heterostructures grown by molecular beam epitaxy and ultrahigh vacuum chemical vapor deposition.—73-11388

**Terauchi, Hikaru** See Kasatani, Hirofumi; Yoneda, Yasuhiro

**Terauchi, Hikaru; Watanabe, Yukiho; Kasatani, Hirofumi**
Structural study of epitaxial $BaTiO_3$ crystals.—73-08755

**Terauchi, M.** See Nishitani, Mikihiko

**Terekhin, V. A.** See Romanovskii, L. B.

**Terekhov, L. M.** See Zhukov, N. D.

**Terekhov, V. A.; Seleznev, V. N.; Domashevskaya, E. P.**
Influence of an electron beam on the energy distribution of localized states in amorphous $Si_3N_4$.—73-11269

**Terent'ev, A. E.** See Gorbatov, I. N.

**Teresa Blanco, M.** See Giminez-Molina, S.

**Terheijden, J.; Van Hal, Henricus A. M.; Keur, W. C.**
Manufacturing of low-water uv-absorbing quartz glass.—73-14421

**Terlaki, Jozsef** See Orban, Jozsef

**Terman, V. B.** See Pankova, N. A.

**Terneu, Robert; Hannotiau, Michel**
Coated glass and method of manufacturing [the] same.—73-03911

**Terpugov, N.** See Ziling, C.

**Terrance, A. L. E.** See Kuppusami, P.

**Terranova, M. L.; Sessa, V.; Rigato, V.; Caccavale, F.; Braglia, Marco; Cocito, G.**
Time-dependent evolution of the structure and chemical bonds in diamondlike carbon films generated by the hot filament chemical vapor deposition method.—73-16383

**Terry, F. L., Jr.** See Herman, J. S.; Sherwin, M. E.

**Terry, I.; Penney, T.; Von Molnar, S.; Rigotty, J. M.; Becla, P.**
Band tails and insulator-metal transition in the persistent photoconductor $Cd_{1-x}Mn_xTe$:In.—73-01083

**Terry, I.; Penney, T.; Von Molnar, S.**
Low-temperature transport properties of $Cd_{0.91}Mn_{0.09}Te$:In and evidence for a magnetic hard gap in the density of states.—73-09416

**Terry, J.** See Yang, X.

**Terryn, H.** See De Laet, J.

**Terskikh, Victor V.; Mudrakovski, Igor L.; Mastikhin, Vjatcheslav M.**
$^{129}Xe$ NMR studies of the porous structure of silica gels.—73-13465

**Tertykh, V. A.** See Belyakova, L. A.; Varvarin, A. M.

**Tertyshnaya, E. V.** See Gerashchenko, I. I.

**Terui, Giichi** See Yamamoto, Takashi

**Terukov, E. I.** See Babaev, A. A.; Kon'kov, O. I.

**Terunuma, Y.** See Fujiura, K.

**Tervonen, A.** See Wang, W. J.

**Terwilliger, Chrysanthe D.; Chiang, Yet-Ming**
Characterization of chemically and physically derived nanophase titanium dioxide.—73-06194; Excess thermodynamic properties of nanophase titanium dioxide prepared by chemical and physical methods.—73-05398

**Terziev, V. G.** See Lyubutin, I. S.

**Tesanovic, Zlatko; Xing, Lei; Bulaevskii, Lev; Li, Q.; Suenaga, M.**
Critical fluctuations in the thermodynamics of quasi-2-D type II superconductors.—73-08012

**Tesche, Claudia D.** See Eidolloth, Walter

**Teschke, O.; Kleinke, M. U.**
Stability criteria for buckling of thin anodic films on aluminum.—73-03643

**Teschner, A.**
Changes in the physical properties of hydrated β-$CaSO_4$·$H_2O$ by a drastic reduction of the water/plaster ratio.—73-00033

**Teshima, Akitomo** See Kawarada, Motonobu

**Teshima, Takanori** See Mitani, Yoshio

**Teshima, Takuya** See Takebe, Hiromichi

**Teslenko, V. V.** See Petrenko, T. L.

**Tessmer, Alison J.** See Das, Kalyankjumar

**Tessner, T. C.; Davis, P. R.**
Preparation and characterization of crystalline ZrC films.—73-05957

**Testa, A. M.** See Leccabue, F.

**Testardi, Louis R.** See Hascicek, Yusuf S.

**Testelin, C.** See Jouanne, M.

**Tester, M. E.** See Neff, Glenn C., Sr.

**Tetard, D.** See Fabre, A.

**Teterin, Yu. A.; Sosul'nikov, M. I.; Shustov, L. D.**
X-ray electronic investigation of $Hg_2Sb_2O_7$.—73-08792

**Tetot, R.; Nacer, B.; Boureau, G.**
Monte Carlo investigation of the role of coulomb interactions on thermodynamic properties and defect structure of $Mi_{1-x}$ cubic oxides.—73-05438

**Tetsuya, Inui** See Junji, Hirokane

**Teutenberg, J.** See Eggert, A.

**Tewari, H. S.** See Parkash, Om

**Teweldemedhin, Z. S.; Ramanujachary, K. V.; Greenblatt, M.**
Magnetic and electronic transport properties of the monophosphate tungsten bronze $(PO_2)_4(WO_3)_{2m}$, $m$=2.—73-03101; New tungsten pyrophosphate with cubic zirconium pyrophosphate-type structure.—73-02354

**Teyton, B.**
History of chamotes: 1950-1990.—73-12280

**Tezlevan, V. E.** See Kravetskii, I. V.

**Tezlevan, V. E.; Radautsan, S. I.; Ratseyev, S. A.**
Sulfur self-diffusion coefficients in $In_2S_3$, $CdIn_2S_4$, and $AgIn_5S_8$ single crystals.—73-17102

**Tezlovan, V. E.** See Syrbu, N. N.

**Thackeray, M. M.** See Gummow, R. J.; Van Zyl, A.

**Thackeray, M. M.; De Kock, A.; David, W. I.**
Synthesis and structural characterization of defect spinels in the lithium manganese oxide system.—73-07364

**Thakoor, Sarita**
Ambient-temperature sputtering of composite oxide films.—73-12915; Noninvasive optical probe of ferroelectric films.—73-08425

**Thakur, Randhir P. S.** See Mathews, Viju K.; Singh, R.

**Thakur, Randhir P. S.; Ward, Valerie; Martin, Annette**
Comparative study of simultaneous implant activation and borophosphosilicate glass (BPSG) reflow during rapid thermal processing [RTP] and furnace annealing on complex topographies.—73-03824

**Thaler, Barry J.** See Cherukuri, Stayam C.

**Thamm, D.** See Muller, R.

**Thampi, K. Ravindranathan** See Kiwi, John

**Thaulow, Niels** See Jakobsen, Ulla Hjorth; Johansen, Vagn

**Thayer, Robert B.; Yang, J.-M.**
Creep behavior of SiC-fiber-reinforced hot-pressed $Si_3N_4$ composites.—73-03253

**The, Kwat I.; Noteboom, Dirk; Clegg, Robert L.**
Process for producing agglomerates from dusts.—73-12398

**The, Stephens S.** See Keating, Kenneth B.

**Thebault, Jacques** See Filipuzzi, Ludovic; Lacoste, Marc; Lamouroux, Franck

**Theis, W. M.** See Qi, J.

**Theis, W.** See Chasse, T.
**Theisen, Kirsten**
Influence of raw mix burnability on cement clinker.—73-03487
**Themines, D.** See Bisson, G.
**Themines, D.; Poirier, J.**
Thermomechanical behavior of slide gate refractories.—73-14631
**Theocharis, Charles R.** See Kenny, Martyn B.
**Theodore, N. David** See Olowplafe, J. O.
**Theron, C. C.** See Pretorius, R.
**Thery, J.** See Delacarte, V.; Kahn-Harari, A.
**Thevenot, F.** See Descemond, M.
**Thewalt, M. L. W.** See Sturm, J. C.
**Thiagarajan, S.** See Nandi, A. K.
**Thibaudeau, C.; Calile, A.**
Magnetic polaritons of a semiinfinite uniaxial antiferromagnet.—73-15337
**Thibault, Theresa R.; Glavin, Edward L., Jr.**
Platey alumina.—73-12393
**Thiele, E. S.; Wang, L. S.; Mason, Thomas O.; Barnett, S. A.**
Deposition and properties of yttria-stabilized zirconia thin films using reactive direct current magnetron sputtering.—73-02767
**Thiele, Hans-Jurgen**
Trends in automatic electrostatic enamel application.—73-00274
**Thiele, Wolf-Rudiger** See Frisch, Bertram
**Thiell, G.** See Veron, D.
**Thielsch, Roland** See Atanassov, George
**Thieme, T. V.** See Kalinushkin, V. P.
**Thierauf, A.** See Zimmermann, U.
**Thierry, B.; Leriche, A.; Descamps, M.**
Relationship between the internal bias field and the tetragonal structure of PZT ceramics containing low manganese additions.—73-11611
**Thies, Donald J.**
Titanium matrix composites for NASP airframe usage.—73-10290
**Thigpen, L. T.** See Johnson, A. C.; Rudder, R. A.
**Thirioux, Laurence; Baillif, Patrick; Touray, Jean Claude**
Dissolution of a citric acid–hypersoluble silicophosphate glass of agrochemical importance.—73-10363
**Thirstrup, C.; Pang, S. W.; Albrektsen, O.; Hanberg, J.**
Effects of reactive ion etching on optical and electrooptical properties of GaInAs/InP-based strip-loaded waveguides.—73-11174
**Thirstrup, Christen; Robson, Peter N.; Wa, Patrick Li Kam; Pate, M. A.; Button, C. C.; Roberts, J. S.**
Optical nonlinearities on GaAs-GaAlAs multiple-quantum-well hetero-*nipi* waveguides.—73-01264
**Thivet, C.** See Guilloux-Viry, M.
**Tholen, T.** See Newman, J. D.
**Thoma, H.-J.** See Lindner, H. A.
**Thoma, M.**
Wear behavior of titanium coating combinations at elevated temperatures.—73-06875
**Thomas M. J. K.,** See Bratton, Graham J.
**Thomas, Andrew S. W.**
Pyrometry without spurious reflections.—73-15833
**Thomas, C. B.** See Cranton, W. M.; McClean, I. P.
**Thomas, C.** See Harf, C.
**Thomas, David; Lynch, Ann M.**
Maximizing materials utilization—a panel session.—73-13865
**Thomas, Elizabeth S.; Thompson, John G.; Withers, R. L.; Sterns, Meta; Xiao, Yue-Hui; Kirkpatrick, R. James**
Further investigation of the stabilization of ß-cristobalite.—73-05407
**Thomas, Gareth** See Barba, M. F.; Callahan, D. L.; Liu, Kuo-Chung
**Thomas, H. M.; Tavares, Ana C.; Da Silva Pereira, M. I.; Nunes, M. R.; Da Costa, F. M. A.**
Oxygen evolution on $BaSn_{1-x}Sb_xO_3$ ($0 \le x \le 0.15$) perovskite electrode.—73-14722
**Thomas, H.** See Luo, J. K.
**Thomas, H.-P.**
Simplified mathematical model for the heat economy of counterflow lime kilns.—73-10153
**Thomas, H.; Luo, J. K.**
Electrical characterization of ITO/*p*-InP heterostructures.—73-02595
**Thomas, Henry** See Darejeh, Hedi
**Thomas, Howard**
Properties and application of electrofused technical zirconia powders.—73-05179
**Thomas, Ian M.; Payne, Stephen A.; Wilke, Gary D.**
Optical properties and laser demonstration of Nd-doped sol-gel silica glasses.—73-10465
**Thomas, J. K.** See Koshy, J.
**Thomas, J. R., Jr.; Donaldson, Kimberly Y.; Hasselman, D. P. H.**
Thermal conductivity of uniaxial coated fiber-reinforced composite with thermal barriers.—73-16621
**Thomas, Jeffrey J.; Jennings, Hamlin M.; Johnson, D. Lynn**
Microwave nitridation of silicon compacts utilizing a temperature gradient.—73-05921
**Thomas, John Kerry** See Liu, Xin-Sheng; Mao, Yun
**Thomas, John O.** See Edstrom, Kristina
**Thomas, L.** See Stanley, David R.
**Thomas, Lucy M.; Lakdawala, Vishnu K.**
Influence of arsenic vapor pressure during copper diffusion on deep level formation in silicon-doped gallium arsenide.—73-03600
**Thomas, M. F.** See Dann, Sandra E.
**Thomas, M. J. K.** See Dunster, A. M.
**Thomas, M. L.** See Gorbatkin, S. M.
**Thomas, Michael H.**
Method of making a tile.—73-04052
**Thomas, Michael P.; Sturgeon, Andrew J.; Steward, Nigel I.**
Porous inorganic membranes.—73-00292
**Thomas, Noel W.**
Application of a quantitative polyhedral analysis to the design of ceramic oxides.—73-12537
**Thomas, Olivier** See Hudner, J.; Piel, J.-P.; Zalczer, Gilbert
**Thomas, R. L.** See Wu, Z. L.
**Thomas, Ronald J.**
Casting with plaster molds.—73-08325
**Thomas, S.** See Taylor, R. P.
**Thomas, William J.; Bower, Nathan W.; Kantner, John W.**
X-ray fluorescence-pattern recognition analysis of pottery from an early historic Hispanic settlement near Santa Fe, New Mexico.—73-09799
**Thombare, C. H.** See Varadarajan, V.
**Thometzek, Peter; Schlegel, Christian**
Lead-, cadmium-, and barium-free frits for ceramic glazes.—73-03936
**Thometzek, Peter**
High-gloss ceramic frits.—73-03932
**Thompson, D. A.** See Comedi, D.; Hofstra, P. G.; Kovacic, S. J.; Landheer, D.; Qiu, C.
**Thompson, D. P.** See Cheng, Y.; Cheng, Yi-Bing; Evans, R. W.; Hauck, Daniela S. B.; Mandal, H.
**Thompson, D. P.**
New grain-boundary phases for nitrogen ceramics.—73-06264
**Thompson, Fred A.** See Jansen, Heinz A.
**Thompson, G. K.; Evans, B. J.**
Structure-property relationships in M-type hexaferrites: hyperfine interactions and bulk magnetic properties.—73-04657
**Thompson, I.; Krstic, V. D.**
Effect of carbon coating on mechanical strength of SiC whisker-reinforced alumina composites.—73-17281; Mechanical properties of hot-pressed SiC particulate-reinforced $Al_2O_3$ matrix.—73-03333
**Thompson, I.; Witt, M. C.**
Fabrication of continuous fiber ceramic matrix composites via slurry routes.—73-02824
**Thompson, J. D.** See Miljak, M.; Reyes, A. P.
**Thompson, John G.** See Phillips, Brian J.; Thomas, Elizabeth S.; Withers, R. L.
**Thompson, John G.; Withers, R. L.; Kepert, C. J.**
Incommensurately modulated $ZrO_{2-x}F_{2x}$: $0.698 \le x \le 0.714$.—73-02292
**Thompson, L. J.** See Eastman, J. A.
**Thompson, L. R.** See Pihlstrom, B. G.
**Thompson, P. D.; Huang, J.; Smith, R. W.; Keszler, D. A.**
Mixed orthoborate pyroborates $Sr_2Sc_2B_4O_{11}$ and $Ba_2Sc_2B_4O_{11}$: pyroborate geometry.—73-02329
**Thompson, Philip E.; Davis, John L.; Yang, Ming-Jey; Simons, David S.; Chi, P. H.**
Controlled *p*- and *n*-type doping of homo- and heteroepitaxially grown InSb.—73-11120
**Thompson, Philip E.; Twigg, M. E.; Godbey, D. J.; Hobart, K. D.; Simons, David S.**
Low-temperature cleaning processes for Si molecular beam epitaxy.—73-13120
**Thompson, R. Victor** See Fenlon, Paul F.
**Thompson, R. W.** See Morris, M.
**Thompson, Robert W.** See Tsokanis, Efthimios A.
**Thompson, Robert W.**
Comments on the autocatalytic nucleation of (Na,TPA)-ZSM-5.—73-12950; Zeolite crystallization [analyzed] using Avrami transformation methods.—73-12740
**Thompson, Ronald G.**
Practical zeta potential determination using electrophoretic light scattering.—73-15832
**Thompson, Scott E.; Nishida, Toshikazu**
Positive charge generation in $SiO_2$ by electron-impact emission of trapped electrons.—73-13362
**Thompson, Steven R.** See McKimpson, Marvin G.
**Thompson, V. P.** See Rekow, E. D.
**Thoms, S.** See Foad, M. A.
**Thomsen, C.** See Friedl, B.; Jandl, S.; Leach, D. H.; Litvinchuk, A. P.
**Thomsen, C.; Wegerer, R.; Habermeier, H.-U.; Cardona, M.**
Degree of epitaxy in high-$T_c$ thin films [determined] by Raman spectroscopy.—73-01515
**Thomsen, K.; Hundebol, S.**
$NO_x$ reduction by injecting ammonia into cement kiln systems.—73-03506
**Thomson, William J.** See Sobolik, Jeffrey L.
**Thonnard, N.** See Arlinghaus, H. F.
**Thoors, Hakan; Chandrasekaran, H.; Olund, Patrik**
Active wear mechanisms in a titanium-based cermet when machining steels.—73-03560
**Thormann, P.; Schmitz, T.**
Influencing the properties of cement by grinding clinker in twin roll presses.—73-03491
**Thorne, R. E.** See Maher, M. P.
**Thornton, Peter H.** See Tao, Wess H.
**Thorpe, Howard**
New developments in electric furnaces.—73-05125
**Thorpe, M. L.** See Thorpe, R. J.
**Thorpe, Michael D.**
Development of interstitial-free porcelain enameling steel.—73-13819
**Thorpe, R. J.; Thorpe, M. L.**
High-pressure HVOF [high-velocity oxy-fuel]—an update.—73-08341
**Thorton, Robert L.** See Bour, David P.
**Thouless, Michael D.; Olsson, E.; Gupta, A.**
Cracking of brittle films on elastic substrates.—73-17263
**Thouless, Michael D.**
Combined buckling and cracking of films.—73-03245; Cracking and delamination of coatings.—73-03252
**Thouvenot, R.** See Machal, C.
**Thromat, Nathalie** See Gautier, Martine
**Thrush, C. M.** See Heremans, J.
**Thurber, W. R.** See Lowney, Jeremiah R.
**Thurgate, S.** See Chester, M. J.
**Thurk, Jurgen** See Leroux, Roland
**Thuy, Nguen-Phuí** See Hong, Nguen-Minh
**Tian, Bai-Qiang; Tinga, Wayne R.**
New self-oscillating, self-heating microwave active dielectrometer.—73-05074
**Tian, De-Cheng** See Shi, Jing; Tian, Ming-Liang
**Tian, Jin-Sheng; Shi, Guo-Lin; Wu, Yi-Ming**
Selecting aluminosilicate aggregates added to cordierite.—73-07222
**Tian, Ming-Liang** See Shi, Jing
**Tian, Ming-Liang; Tian, De-Cheng; Du, Ying-Lei**
Anomalous behavior of the photoacoustic signal near the phase transition in the Tl blue bronze $Tl_{0.3}MoO_3$.—73-08550
**Tian, Ming-Liang; Tian, De-Cheng; Ruan, Yao-Zhong; Wang, R.-P.**
Thermopower properties of thallium blue molybdenum bronze $Tl_{0.3}MoO_3$.—73-08996
**Tian, Ming-Liang; Tian, De-Cheng; Zhang, Ming-Sheng**
Raman spectroscopic study of $K_{0.3}MoO_3$ in charge density wave (CDW) states.—73-05467
**Tian, Shou-Xin** See Chen, Lu-Bin
**Tian, Shun-Bao** See Lin, Zu-Xiang
**Tian, Y. X.** See Ho, J. C.
**Tian, Yong-Lai** See Ahmad, Iftikhar; Cai, Jie; Saadaldin, Hussamaldin S.
**Tian, Yong-Shu** See Wang, Qiang-Ping
**Tiba, M.** See Tazaki, Kazue
**Tibbs, K.** See Amano, Jun
**Tiburcio-Silver, A.; Joubert, J. C.; Labeau, M.**
Electrical and optical properties of undoped and indium-doped ZnO thin films, prepared by the pyrosol process.—73-08850
**Tichy, Thomas H.**
Mechanical-vibration-cancelling piezoceramic microphone.—73-04581
**Tick, Paul A.; Mitachi, Seiko**
Optical parts and equipment using infrared athermal glasses.—73-10654
**Tickanen, L. D.; Tejedor-Tejedor, M. I.; Anderson, Marc A.**
Fourier transform infrared spectroscopy of hydrous oxide/aqueous solution interfaces.—73-09145
**Tickle, Stephen J.** See Marriott, Peter H.
**Tiedje, T.** See Colbow, K. M.; Johnson, S. R.; Pinnington, T.; Rogers, D.; Zeng, A.
**Tiefel, Thomas H.** See Jin, Sung-Ho
**Tiegs, Terry N.** See Kiggans, J. O.; Nunn, Stephen D.
**Tiegs, Terry N.; Gorey, N. A.; Nunn, Stephen D.;**
**Menchhofer, Paul A.; Barker, Dixie L.; Walls, Claudia A.**
Effects of processing parameters on densification and mechanical properties of gas-pressure-sintered silicon nitride.—73-16754
**Tiegs, Terry N.; Holcombe, Cressie E.; Dykes, Norman L.;**
**Omatete, Ogbemi O.; Young, Albert C.**
Method of nitriding refractory metal articles.—73-10331
**Tiegs, Terry N.; Kiggans, J. O.; Menchhofer, Paul A.**
Microwave sintering of silicon nitride.—73-05925
**Tiegs, Terry N.; Kiggans, J. O.; Ploetz, Kristin L.**
Sintered reaction-bonded silicon nitride [SRBSN] by microwave [MW] heating.—73-06050
**Tiegs, Terry N.; Nunn, Stephen D.; Ploetz, Kristin L.;**
**Menchoffer, Paul A.; Walls, Claudia A.**
Fabrication and properties of $Si_3N_4$ with rare-earth apatite grain-boundary phases.—73-05799
**Tiegs, Terry N.; Ploetz, Kristin L.; Kiggans, J. O.; Yeckley, Russell L.**
Crystallization of grain-boundary phases in silicon nitride with low additive contents by microwave annealing.—73-05724
**Tieh, Thomas** See Mazzullo, Jim
**Tien, T.-Y.** See Sun, W.-Y.
**Tien, Tseng-Ying** See Boskovic, S.; Huang, Zhen-Kun; Lai, K. R.; Liu, Shih-Yu; Wisnudel, Michele
**Tien, Tseng-Ying**
Silicon nitride ceramics—alloy design.—73-06282
**Tierney, J. C.** See Glovan, R. J.
**Tiersten, H. F.** See Zhou, Y. S.
**Tiesler, Hartmut** See Forster, Hansgeorg; Sebastian, K.
**Tietz, F.; Urland, W.**
Lanthanide ion exchange in sodium ß-alumina.—73-05428
**Tietz, Lisa A.** See Hares, George B.
**Tietz, Lisa A.; Carter, C. Barry**
Structure of the $Fe_2O_3$-$Al_2O_3$(0001) interface.—73-06292; Structure of the $Fe_2O_3$-$Al_2O_3$(1102) interface.—73-06293
**Tietz, Raymond F.** See Howard, Edward G., Jr.
**Tighezza, A.; Rehspringer, J. L.; Kappler, J. P.; Drillon, M.**
Evidence of superconductivity at 30 K in $Pr_2CuO_{4-x}F_x$.—73-04717
**Tiginyanu, I. M.** See Radautsan, S. I.
**Tijerina-Ramos, Victor**
Gob forming device having a single rotating blade with a cooling housing.—73-04977
**Tijero, J. M. G.; Ibarra, A.**
Use of luminescence of $Mn^{2+}$ and $Cr^{3+}$ in probing the disordering process in $MgAl_2O_4$ spinels.—73-05683
**Tikare, Veena** See Choi, Sung-R.
**Tikhomirov, A. E.** See Vlasenko, O. A.
**Tikhomirov, V. K.** See Kolobov, A. V.; Lyubin, V. M.
**Tikhomirova, E. L.** See Agulyanskii, A. I.
**Tikhomirova, N. A.** See Vysochanskii, Yu. M.
**Tikhomirova, N. A.; Adomenas, P. V.; Volnyanskii, M. D.;**
**Ginzberg, A. V.; Polomska, M.; Chumakova, S. P.**
Domain structure of weak ferroelectric $Li_2Ge_7O_{15}$.—73-01403
**Tikhonov, K. I.** See Toroshchina, E. I.
**Tikhonov, V. B.; Kalinina, M. V.; Popov, V. P.; Polyakov, V. O.; Glushkova, V. B.; Trusova, E. M.**
Kinetics of oxidation-reduction processes in $YBa_2Cu_3O_y$.—73-15529
**Tikhonova, L. P.** See Kovalenko, A. S.
**Tikhonova, O. M.** See Shcherbak, L. P.
**Tikush, V. L.** See Lavrenko, V. A.

**Tillement, O.; Angenault, J.; Couturier, J. C.; Quarton, M.**
Mixed conductivity of the Nasicon phase $Na_{2+x-y}Zr_{1-y}Fe_y^{II}Fe_{1-x-y}^{III}(PO_4)_3$ [y=0 at 0≤x≤1 or x+y=1 at 0≤y<0.5].—73-00997

**Tillement, O.; Couturier, J. C.; Angenault, J.; Quarton, M.**
Crystal chemistry and electrical study of $Na_xNbTi(PO_4)_3$ [0≤x≤2].—73-02176

**Tiller, Hans-Jurgen** See Grunler, Bernd

**Tiller, W. A.** See Ungar, P. J.

**Tillerot, F.** See Ramesh, Ramamoorthy

**Tilley, Benjamin H.** See Benander, Robert E.

**Tilley, R. J. D.** See Bickley, R. I.; Cooper, J. J.; Harburn, George; Mercurio, D.; Williams, Jonathan M.

**Tillmann, W.** See Lugscheider, E.

**Tilquin, J.-Y.** See Claes, P.

**Timbrell, Peter Y.** See Mar, Leong G.

**Timelini, Giorgio** See Esposito, Leonardo

**Timko, M.** See Kopsansky, P.; Sargankova, I.

**Timmons, M. L.** See Sharps, P. R.; Venkatasubramanian, R.

**Timofeev, V. B.** See Bazhenov, A. V.; Kukushkin, I. V.; Maksimov, A. A.

**Timofeev, V. M.** See Bubelo, V. V.

**Timofeeva, I.** See Shapilova, M.

**Timofeeva, T. V.** See Zemlyanukhin, A. V.

**Timofeeva, V. A.** See Doroshenko, R. A.; Maksimov, B. A.

**Timokhova, M. I.** See Dzerzhinskii, R. V.

**Timokhova, M. I.; Medvedeva, L. I.**
Molding technique for ceramic parts for closure of integrated circuits.—73-01801; Pressing ceramic components for integrated circuit frames.—73-01818

**Timokhova, M. I.; Rachkov, V. S.**
Quasi-isostatic pressing for the production of ceramics.—73-01824

**Timoshechkin, M. I.** See Bazylev, A. G.

**Timoshenko, T. I.** See Barbanyagre, V. D.

**Timoshenko, V. Yu.** See Kashkarov, P. K.

**Timus, Clementina** See Dinescu, Maria

**Timusk, T.** See Homes, C. C.

**Ting, Chen** See Tomosawa, Fuminori

**Ting, Chiu H.**
Process for fabricating sealed semiconductor chip using silicon nitride passivation film.—73-11540

**Ting, D. Z.-Y.; Kirby, S. K.; McGill, T. C.**
Three-dimensional simulations of quantum transport in semiconductor nanostructures.—73-11483

**Ting, D. Z.-Y.; McGill, T. C.**
Effect of Γ-χ mixing on electron tunneling times in GaAs/AlAs double barrier heterostructures.—73-07460

**Ting, Jyh-Ming; Lake, M. L.**
High-strength $MoSi_2$ matrix composites.—73-10236; Vapor-grown carbon-fiber-reinforced carbon/carbon composites.—73-12445

**Ting, Jyh-Ming**
Sintering of silicon carbide/molybdenum disilicide composites using boron oxide as an additive.—73-16997

**Tinga, Wayne R.** See Clark, David E.; Tian, Bai-Qiang

**Tinga, Wayne R.; Sutton, Willard H.**
Key issues in microwave processing, research, and commercialization—an open forum.—73-05886

**Tinga, Wayne R.**
Microwave material interactions and process design modeling.—73-04139

**Tinkler, S.; Dieckmann, Rudiger**
Kinetics of the oxidation of manganosite ($Mn_{1-\alpha}O$) to hausmanite ($\beta$-$Mn_{3-\delta}O_4$) at high temperatures.—73-02312

**Tinoco, T.** See Guerrero, E.

**Tinoco, T.; Rincon, C.; Quintero, M.; Charlebois, A.**
Photoconductivity spectrum, deformation potentials, and effective masses of carriers of the chalcopyrite semiconductor alloy $CuIn_{0.6}Ga_{0.4}Se_2$.—73-15090

**Tintle, William C.; Wright, Douglas W.**
Quick change shear assembly for glassware-forming machine.—73-01878

**Tippmann, H.** See Gonzalez Oliver, C. J. R.

**Tipton, A. W.** See Schulz, R. L.

**Tipton, B.** See Blackburn, J.

**Tirado, J. L.** See Hernan, L.; Mateos, J. M. J.

**Tiribilli, B.** See Daneo, Antonio

**Tirlocq, J.** See Patel, M.

**Tirosh, J.; Altus, E.; Yifrach, Y.**
New method for evaluating fracture toughness of brittle materials.—73-13575

**Tirrell, Matthew** See Argillier, Jean-Francois

**Tiseanu, C.** See Lupei, V.

**Tishchenko, I. M.** See Os'minin, N. I.

**Tishin, Alexander M.** See Kuz'min, Michael D.

**Titkov, A. N.** See Bresler, M. S.

**Titkov, A. N.; Bikkin, Kh. M.**
Electronic properties and carrier spectrum parameters of titanium disulfide intercalated by silver.—73-16488

**Titov, A. P.** See Golubkov, V. V.

**Titov, V. V.** See Malov, V. V.

**Tittlebaum, M. E.** See Akhter, H.

**Titus, S. S. K.** See Prasad, M. V. N.

**Titus, S. S. K.; Asokan, S.; Gopal, E. S. R.**
Compositional dependence of crystallization of As-Te glasses.—73-03826

**Tiwari, R.; Sampath, S.; Herman, H.; Anekawa, Y.**
Cavitation-erosion of [CE] of plasma-sprayed nickel aluminides.—73-06743

**Tiwari, U.** See Sen, Nirupa

**Tiwari, Vidya S.; Pandey, Dhananjai**
Structure and properties of $(Ba,Ca)TiO_3$ ceramics prepared using $(Ba,Ca)CO_3$ precursors: II, Diffuse phase transition [DPT] behavior.—73-11622

**Tiwari, Vidya S.; Singh, Neelam; Pandey, Dhananjai**
Structure and properties of $(Ba,Ca)TiO_3$ ceramics prepared using $(Ba,Ca)CO_3$ precursors: I, Crystallographic and microstructural studies.—73-13287

**Tizhovka, V. V.** See Dyatlova, E. M.

**Tjapkin, N.** See Mioc, U.

**Tjeng, L. H.** See Chen, C. T.; Kuiper, Pieter

**Tkachenko, F. A.** See Atkarskaya, A. B.

**Tkachenko, Olga P.; Shpiro, Efim S.; Wark, Michael; Schulze-Kloff, G.; Jaeger, N. I.**
XPS/XAES study of highly dispersed semiconductor CdS and CdO in zeolites.—73-11511

**Tkachenko, T. V.; Get'man, E. I.; Bamoteref, S. Kh.**
System $LiTaO_3$-$SrZrO_3$.—73-02511

**Tkachenko, V. D.; Pleskach, I. V.; Donets, I. G.**
Electrofused zirconia powders.—73-02010; Producing spherical powders of alumina–magnesia spinel using high-frequency heating in a cold crucible.—73-12058

**Tkachev, A. G.** See Zubekhin, A. P.

**Tkacheva, I. I.** See Borzilova, V. D.

**Tkacheva, I. I.**
Regularities of phase formation and structural evolution during hot-pressing of ultrafine powders.—73-16294

**Tkacova, Klara** See Stevulova, Nadezda

**Tkacova, Klara; Stevulova, Nadezda**
Mechanical activation of solid-state reactions by grinding and its importance for production of high-technology ceramics[—literature review].—73-13130

**Tkalcec, E.; Ivankovic, H.; Kurajica, S.**
Phase composition, microstructure, and nucleation temperature range of zinc aluminosilicate glass-ceramics.—73-14455

**Tkalcic-Ciboci, B.** See Durekovic, A.

**Tkalich, A. K.** See Bublik, V. T.

**Toba, M.** See Maeda, Kazuyuki

**Toba, Tamaki** See Uchino, Kenji

**Tober, Heinrich**
Early use of special glasses in the German electric lamp industry.—73-13615

**Tobin, P. J.** See Hegde, Rama I.

**Tobin, S. P.** See Vernon, S. M.

**Tobin, S. P.; Pultz, G. N.; Krueger, E. E.; Kestigian, M.; Wong, K. K.; Norton, P. W.**
Hall effect characterization of LPE HgCdTe *p/n* heterojunctions.—73-11238; X-ray diffraction characterization of LPE HgCdTe heterojunction photodiode material.—73-11509

**Tobinai, Keishi; Asakura, Etsuro; Fujisawa, Hiroyuki; Kasai, Yoshio**
Characterization of natural zeolites and three kinds of inorganic admixtures for concrete.—73-13691

**Tobioka, Masaaki** See Omori, Naoya; Yamamoto, Susumu

**Tochi, Kunio**
Improvement of sinterability of $Ba(Mg_{1/3}Ta_{2/3})O_3$ [BMT] powder compacts by $BaTa_2O_6$ additions.—73-02860

**Tochigi, K.** See Arato, Toshiaki

**Tochihara, S.** See Yasuoka, Hiroshi

**Tochitani, G.; Shimozuma, M.; Tagashira, H.**
Deposition of silicon oxide films from TEOS by low-frequency plasma chemical vapor deposition.—73-05737

**Tocho, J. O.** See Duchowicz, R.

**Tock, Larry** See Hinkle, Robert

**Toda, F.** See Ogihara, M.

**Toda, Gyozou; Ishihara, Shonsaku; Fujita, Tsuyosi**
Wetting properties of W by molten $SiO_2$-MgO-$Al_2O_3$ ternary eutectic composition.—73-00277

**Toda, H.** See Patrick, Roger

**Toda, Hiroki** See Isogai, Yuji

**Toda, Kohji** See Sawaguchi, Akihiro

**Toda, Yoshitomo** See Hashimoto, Kazuaki

**Todoroki, S.** See Tanabe, S.

**Todoroki, Shinichi** See Hirao, Kazuyuki

**Todoroki, Shinichi; Hirao, Kazuyuki; Soga, Naohiro**
Fluorescence properties of $Eu^{3+}$ ions doped in several oxide glasses.—73-10441; Origin of inhomogeneous linewidth of $Eu^{3+}$ fluorescence in several oxide glasses.—73-10468; Phonon sideband spectra and local structure around $Eu^{3+}$ ions in aluminosilicate glasses.—73-14070

**Todorov, M. T.** See Pikhtin, A. N.

**Todua, P. A.** See Antonenko, V. I.

**Toganidis, Tryfon** See Traverse, Jean-Pierre

**Togano, Kazumasa** See Kumakura, Hiroaki

**Togashi, Funitaka** See Mitsuhashi, Masahiko

**Togashi, Takeyoshi** See Shimizu, Hideki

**Togo, Isao** See Hara, Osamu

**Toguchi, Yutaka** See Kitamura, Naoyuki

**Toguri, J. M.** See Ip, S. W.

**Tohge, Noboru** See Matsuda, Atsunori; Matsuno, Yoshihiro; Tatsumisago, Masahiro; Yamasaki, Seiji

**Tohji, K.** See Kawamoto, Y.

**Tohji, Kazuyuki** See Jeyadevan, Balachandran

**Tohmon, Genji; Sato, Hisanao; Ohya, Jun; Fujita, Toshihiro**
Energy transfer in Tm:Eu-codoped fluorozirconate fiber.—73-02610

**Tohmori, Y.** See Kano, Fumiyoshi

**Toishibaev, N. K.** See Gusev, B. V.

**Tokaji, Keiro** See Ogawa, Takeshi

**Tokarchuk, D.** See Dovidenko, K.

**Toki, Motoyuki** See Miyashita, Satoru

**Tokita, Takashi** See Nakazawa, Tadahisa

**Tokiwa, Kazuyasu** See Hirabayashi, Masayuki; Ihara, Hideo

**Tokseitova, G. A.** See Sinyaev, V. A.

**Tokuda, Hiroshi** See Kawakami, Makoto

**Tokugawa, Yoko** See Kudaka, Katsuya

**Tokumasu, Noboru** See Maeda, Kazuo

**Tokumoto, Madoka** See Hirabayashi, Masayuki

**Tokumoto, Minoru**
Relation between $T_g$ of PEG [polyethylene glycol] protective acrylic polymer and physical properties, crack inhibition property.—73-10134

**Tokunaga, Hiroki** See Takagi, Nobuoki

**Tokunaga, Hiromi** See Fujimaru, Takuya

**Tokunaga, Hiroyuki**
Hybrid substrate.—73-01054

**Tokunaga, Kyoji** See Nishimura, Yukio

**Tokunaga, Masaharu** See Haga, Hisashi

**Tokunoh, Eiji** See Akimoto, Shigeru

**Tokura, Y.; Taguchi, Y.; Okada, Y.; Fujishima, Y.; Arima, T.; Kumagai, K.**
Filling dependence of electronic properties on the verge of metal-Mott-insulator transition in $Sr_{1-x}La_xTiO_3$.—73-16498

**Tokuyama, Akio** See Endo, Koetsu

**Tolbanov, O. P.** See Khludkov, S. S.

**Tolg, T.** See Musil, J.

**Tolk, N. H.** See McKinley, J. T.

**Tolkachev, V. A.** See Syutkin, V. M.

**Tolksdorf, W.** See Gerhardt, R.

**Tolmachev, G. N.** See Mukhortov, V. M.

**Tolochko, S. P.** See Butorin, S. M.

**Tolpygo, K. B.**
High-frequency dielectric constant of barium titanate.—73-16504

**Tolstikhin, V. I.** See Pishchalko, V. D.

**Tolstoi, M. N.** See Baikova, L. G.; Britsis, D. I.

**Toma, Hiroshi**
Ceramic folklore of Iwami-Yaki porcelain wares.—73-06611

**Tomandl, Gerhard** See Buerhop, Claudia

**Tomar, M. S.** See Dayalan, E.

**Tomasevic-Canovic, M.** See Milosevic, O.

**Tomashpol'skii, Yu. Yu.; Sadovskaya, N. V.**
Determination of oxygen deficiency in oxide superconductors.—73-11725

**Tomasi, A.** See Scardi, P.

**Tomasi, A.; Scardi, P.; Branda, F.; Costantini, A.**
Structure and thermal evolution of glasses obtained from porphiric sands, MgO (15%) and $TiO_2$ (0–16%).—73-10408

**Tomaszewski, H.**
Tetragonal-cubic inversion in unstabilized zirconia dispersed in alumina matrix.—73-16365

**Tombolan, N.** See Guglielmi, M.

**Tomellini, M.** See Cellucci, Fabio

**Tomida, Hideya** See Takeda, Yasuo

**Tomii, Yoichi** See Ratkje, Signe Kjelstrup

**Tomikawa, Tadashi** See Kimoto, Tsunenobu

**Tomikawa, Tadashi; Kimoto, Tunenobu; Fujita, Nobuhiko**
Method of forming ohmic contact electrodes for *n*-type semiconductor cubic boron nitride.—73-11531; Ohmic contact electrodes for *n*-type semiconductor cubic boron nitride.—73-11536

**Tomiki, Tetsuhiko; Ganaha, Yoshiiku; Shikenbaru, Tohru; Futemma, Tomoyoshi; Yuri, Masatada; Aiura, Yoshihiro**
Anisotropic optical spectra of α-$Al_2O_3$ single crystals in the vacuum ultraviolet region: I, Spectra of absorption tail and reflectivity.—73-02551; Anisotropic optical spectra of α-$Al_2O_3$ single crystals in the vacuum ultraviolet region: II, Spectra of optical constants.—73-08809; Optical spectra of $Y_3Al_5O_{12}$ (YAG) single crystals in the vacuum ultraviolet region: II.—73-08939

**Tomiki, Tetsuhiko; Kohatsu, Tetsuya; Shimabukuro, Hirofumi**
$Ca^{2+}$ centers in $Y_3Al_5O_{12}$ (YAG) single crystals: II.—73-08558

**Tomiki, Tetsuhiko; Shikenbaru, Tohru; Ganaha, Yoshiiku**
Optical spectra of $Y_2O_3$ single crystals in the vacuum ultraviolet region: II.—73-08938

**Tomil'tsev, E. A.; Kozlovskii, L. V.; Grabezhev, D. V.; Shendrik, A. V.**
Silicon nitride ceramics.—73-16986

**Tomil'tsev, E. A.; Kozlovskii, L. V.; Nikitin, V. R.**
Glass-ferrite coatings on ceramics.—73-00495

**Tomilin, N. G.** See Damaskinskaya, E. E.

**Tominaga, Katsuhiko** See Sato, Katsuaki

**Tominaga, Kouji** See Sakashita, Yukio

**Tominaga, Sumihito** See Kimura, Yukihiro

**Tominaga, Yasunori** See Agui, Akane

**Tomioka, Hiroshi** See Goto, Hitoshi

**Tomioka, T.** See Shinohara, A. H.

**Tomioka, Takeshi; Sasa, Shigenhiko; Fujii, Toshio**
Improved optical properties of low-temperature molecular beam epitaxially grown AlGaAs by In incorporation.—73-11258

**Tomishima, Hiroshi; Nishiyama, Toshikazu; Yamada, Nobuyuki; Kumasaka, Noriyuki; Abe, Mitsuo**
Material for nonmagnetic oxide substrate and magnetic head.—73-12374

**Tomita, Akira** See Kyotani, Takashi

**Tomita, Hideya** See Takeda, Yasuo

**Tomita, Katsutoshi** See Kawano, Motorhanu

**Tomita, Mamoru**
Temperature control of forehearth.—73-14516

**Tomita, Shotaro** See Mutsukura, Nobuki

**Tomiya, S.; Petroff, P. M.; Margolese, D.; Srdanov, V. I.; Stucky, G. D.; Zhang, Y. H.**
Germanium-loaded zeolite Y: preparation and characterization.—73-05410

**Tomiyasu, Hiroshi** See Ikeda, Yasuhisa

**Tomizaki, Marcelo; Shinkai, S.**
Influence of alumina on fast-fired porcelain tiles.—73-07262

**Tomkinson, J.** See Belushin, A. V.

**Tomkova, V.** See Sahu, S.

**Tomlinson, Peter N.** See Tank, Klaus

**Tomlinson, R. D.** See Zegadi, A.

**Tomlinson, W. J.; Jupe, K. N.**
Strength and microstructure of electrodischarge-machined titanium diboride.—73-09675

**Tommasi, R.** See Cingolani, R.

**Tommasi, R.; Lepore, M.; Catalano, I. M.**
Two-photon absorption coefficient spectrum in CdSSe nanocrystals by nonlinear luminescence technique.—73-07848

**Tomobuchi, Masato** See Watanabe, Koichi

**Tomokiyo, Yoshitsugu** See Suyama, Yoko; Suzuki, Hisao

**Tomokiyo, Yoshitsugu**
Measurement of local lattice strain through convergent-beam electron diffraction.—73-05435

**Tomonaga, N.** See Funayama, Masahiro

**Tomono, Kunisaburo** See Kajiyoshi, Koji; Sano, Harunobu
**Tomono, M.** See Sasaki, T.
**Tomosawa, Fuminori; Ting, Chen; Hosoya, Toshio**
Development and evaluation of binders for high-strength concrete.—73-09887
**Tomoshige, Ryuichi; Chiba, Akira; Nishida, Minoru; Imamura, Kihachiro; Fujita, Masaharu**
Explosive compaction of silicon nitride powder without additives using a water pressure medium.—73-02818; 73-13051
**Tomoshige, Ryuichi; Chiba, Akira; Nishida, Minoru; Imamura, Kihachiro; Itoh, Shigeru; Fujita, Masahiro**
Fabrication and some mechanical properties of SiC-whisker-reinforced $Si_3N_4$ composites utilizing underwater shock pressure.—73-05800; 73-16770
**Tomota, Yo** See Ohta, Hiromichi
**Tomozawa, Minoru** See Han, Won-Taek; McGahay, Vincent; Shin, Dong-Wook; Sridharan, S.
**Tomozawa, Minoru; Hyde, J. M.; Cordaro, J. F.; Yoshigawa, M.**
Decay function Kohlrausch exponent for the electrical modulus of mixed alkali glasses.—73-00445
**Tomozawa, Minoru**
Activation energy of ionic transport in mixed alkali glasses.—73-14677
**Tompa, G. S.** See Gurary, A.
**Tompkins, Harland G.** See Saha, Naresh C.
**Tompkins, T. L.** See White, L. R.
**Tomsia, Antoni P.** See Loehman, Ronald E.; Shalz, M. L.
**Tomyn, V.** See Eliseev, J.
**Tonchev, S.** See Ziling, C.
**Tone, Kisato; Kamori, Masanobu; Shibasaki, Yasuo**
Absorbed cations and water film thickness on the kaolinitic clay surface.—73-16651
**Tonejc, A.** See Kosanovic, Cleo
**Tong, Bin-Xiang** See Zhou, Shan-Yuan
**Tong, Hua-Ching; Newman, John J.; Wu, Hon-Sian J.**
Unidirectional field generator.—73-11679
**Tong, M.** See Agrawala, S.; Ballegeer, D. G.
**Tong, Q.-Y.; Gosele, U.**
Fabrication of ultrathin [silicon-on-insulator] SOI by SIMOX wafer bonding (SWB).—73-07525
**Tong, Quinn K.; Maden, Michele A.; Jagota, Anand; Farris, Richard J.**
Vibrational technique for stress measurement in films: II, Extensions and complicating effects.—73-05098
**Tong, S. Y.** See Chambers, S. A.
**Tong, San-Duo**
Special features of cement standards in China.—73-10160
**Tong, Yi-Dong; Huang, Li-Ping; Fu, Xi-Ren**
Effect of different additives on the oxidation behavior of gas-pressure-sintered silicon nitride.—73-06307
**Tong, Yu-Ye; Du, Hong; Fei, Lun**
Comparison between the hydration processes of tricalcium silicate and beta-dicalcium silicate.—73-00046
**Tong, Yuh-Ping** See Chang, Chi-Ching; Yau, Hon-Fai
**Tonge, Lauren M.** See Song, Y.-Q.; Wessels, B. W.
**Tonner, B. P.** See Harp, G. R.
**Tonner, B. P.; Zhang, J.; Chen, X.; Han, Z. L.; Harp, G. R.; Saldin, D. K.**
Photoelectron holography of Si(100)-[2×1] and other surface and thin-film structures.—73-07717
**Tonomura, Akira**
Magnetic lines of force [observed] by electron holography.—73-05063
**Tonshoff, H. K.** See Roth, P.; Wobker, H.-G.
**Tonthat, Thuan**
Recycling of glass wastes.—73-10594
**Tonucci, Ronald J.** See Glesener, J. W.
**Tonucci, Ronald J.; Justus, Brian L.**
Method of making a semiconductor device using a nanochannel glass matrix.—73-11532
**Tootoonchi, Ali A.** See Dullea, John F.
**Topa, V.** See Moya, E.
**Topkar, Anita; Lal, R.**
Effect of electrolyte exposure on silicon dioxide in electrolyte-oxide-semiconductor structures.—73-14694
**Topolov, V. Yu.** See Bondarenko, E. I.
**Topolov, V. Yu.; Balyunis, L. E.; Turik, A. V.; Eremkin, V. V.**
Twin (domain) boundaries of *S*-type in $PbZrO_3$ crystals.—73-15297
**Topolov, V. Yu.; Gagarina, E. S.; Tsikhotskii, E. S.**
Twin structure of perovskite- and tetragonal-tungsten-bronze-type crystals.—73-16387
**Topor, D. C.; Selman, J. R.**
Molten salt electrodeposition of refractory metal carbide: II, Mechanism and nucleation studies.—73-06834
**Toporov, Yu. P.** See Lipson, A. G.
**Toratani, Hisayoshi** See Yanagita, Hiroaki
**Torchinov, K. M. Z.** See Studenikin, S. A.
**Torchinskaya, T. V.; Berdinskikh, T. G.; Smiyan, O. D.**
Nature of the instability of the luminescence emitted by GaP:N structures.—73-07688
**Torchinskaya, T. V.**
Injection-enhanced transformation of luminescence spectra of green GaP:N light-emitting diodes.—73-14993
**Toreki, William; Batich, Christopher D.**
SiC fibers having low oxygen content and methods of preparation.—73-02134; 73-12517
**Torgeson, D. R.** See Borsa, F.; Chou, F. C.
**Torii, Hideo** See Fujii, Eiji; Onodera, Yoshio
**Torii, Kazuo; Iwasaki, Takashi; Onodera, Yoshio; Nishiyama, Y.**
Mesoporous materials produced from novel trioctahedral Ni smectite.—73-05910; 73-13133
**Torii, Kazuyuki** See Kawamura, Mitsunori; Mihara, Morihiro
**Torii, Y.** See Tsuzuki, A.; Watari, Koji
**Torikai, D.** See Iwasaki, H.
**Torikai, Toshio** See Inoue, Keita; Matsuda, Ohsaku; Ohta, Kouhei; Takeshita, Masaaki; Watari, Takanori
**Toritsyn, L. N.**
Features of operation of blast-furnace hot-blast stoves with poured checkerwork.—73-00815; Pressure exerted by the packing in a blast-furnace air heater on the wall and supporting surface.—73-00839; Stressed and strained condition of the checkerwork, lining, and shell of a blast-furnace hot-blast stove with poured checkerwork.—73-00870
**Toriumi, Mitsuhiro**
Rheology of solid earth.—73-15913
**Toriyama, Motohiro** See Nagae, Hajime; Yokogawa, Yoshiyuki
**Toriyama, Motohiro; Kawamoto, Yukari; Suzuki, Takahiro; Yokogawa, Yoshiyuke; Nishizawa, K.; Nagae, Hajime**
β-tricalcium phosphate [β-TCP] coating on titanium.—73-00210; Preparation and evaluation of mullite ceramic carrier for immobilization of enzyme.—73-13173; Synthesis of hydroxyapatite by an oxidative decomposition method of calcium chelate.—73-03047; 73-13304
**Toriyama, Motohiro; Kawamoto, Yukari; Suzuki, Takahiro**
Preparation and evaluation of mullite ceramic carrier for immobilization of enzyme.—73-05617
**Torizuka, Shiro; Harada, Jun; Yamamoto, Hideharu; Nishio, Hiroaki; Chino, Atsushi; Ishibashi, Yoichi**
Effects of SiC addition on the mechanical properties and sinterability of $TiB_2$-(2 mol% $Y_2O_3$-$ZrO_2$) composite.—73-02807; 73-13519; Effects of $ZrO_2$ addition on the mechanical properties of $TiB_2$ HIPed compacts.—73-03278; 73-13521
**Torizuka, Shiro; Sato, Kaoru; Harada, Jun; Yamamoto, Hideharu; Nishio, Hiroaki**
Microstructure and sintering mechanism of $TiB_2$-$ZrO_2$-SiC composite.—73-06254; 73-13427
**Torlopov, A. A.** See Samokhvalov, V. S.
**Tornau, E. A.; Lapinskas, S.; Grigelionis, G.; Rosengren, A.**
Model of oxygen ordering for $Y_2Ba_4Cu_7O_{14+x}$ compound.—73-15558
**Toro, Patricio; Wittke, Oscar**
Rheological behavior of silicon nitride whiskers.—73-06022
**Toron, C.** See Cabeza, O.
**Toropov, A. A.** See Kalinovsky, V. S.
**Toropov, A. I.** See Shegai, O. A.
**Toropov, Yu. S.** See Chusovitina, T. V.; Likhomanova, N. A.
**Toroshchina, E. I.; Ravdel, B. A.; Tikhonov, K. I.**
Phase transitions and phase composition in cathode reduction of 2H niobium diselenide.—73-02392
**Torrance, J. B.** See Lacorre, P.
**Torrance, J. B.; Lacorro, P.; Asavafoengchai, C.; Metzger, R. M.**
Simple and perovskite oxides of transition metals: why some are metallic, while most are insulating—73-02687
**Torrecillas, Ramon; Moya, J. S.; De Aza, Salvador; Gros, H.; Fantozzi, G.**
Microstructure and mechanical properties of mullite-zirconia reaction sintered composites.—73-06492
**Torres, C. M.** See Wang, P. D.
**Torres, L.** See Rincon, J. M.
**Torres, L.; De Francisco, C.; Munoz, J. M.; Zazo, M.; Iniguez, J. I.**
Effect of sintering atmosphere on magnetic aftereffect in polycrystalline yttrium iron garnet samples.—73-04605
**Torres-Martinez L. M.,** See Diaz, C.; Suckut, Claudia
**Torriani, I. L.** See Benvenutti, Edison V.
**Torriani, I. L.** See Knobel, M.
**Torsi, Luisa; Guerrieri, Antonio; Malitests, Cosimino; Rotunno, T.; Zambonin, P. G.; Bicelli, L. P.**
Development and electroanalytical investigation of a novel rectifying semiconductor/polymer interface.—73-07443
**Tortorelli, P. F.; Wijayawardhana, C. A.; Riester, L.; Lowden, Richard A.**
Oxidation effects on Nextel-reinforced SiC.—73-17230
**Torzicky, P.** See Wang, H. F.
**Tosan, Jean-Luc; Durand, Bernard; Roubin, Marc; Chassagneux, F.; Mosoni, L.; Bertin, F.**
pH-metric and Raman investigation of zirconium aqueous solutions and gels submitted to a reflux.—73-08707
**Toschek, P. E.** See Sierks, J.
**Toshikiyo, Yoshikazu** See Nakaguchi, Kunio
**Toshima, Hiroaki** See Morita, Shoji
**Toshioka, Minako** See Kandori, Kazuhiko
**Toshkhodzhaev, Kh. A.** See Belyaev, A. P.
**Toshmiya, Yoshinori** See Fukusho, Takashi
**Tosnerova, B.** See Helebrant, A.
**Tostanovskii, V. I.** See Grishaev, V. V.
**Tot, Ferenc** See Djuric, Mirjana
**Toth, J.** See Khlopkin, M. N.
**Toth, Louis E.** See Hoff, H. A.; Lechter, William L.
**Toth, Louis E.; Spann, J. Richard**
Method for forming aligned superconducting Bi-Sr-Ca-Cu-O.—73-04845
**Totten, Patty L.; Brake, Bobby G.; Vinson, Edward F.**
Retarded acid-soluble well cement compositions and methods.—73-10196
**Tou, Hideki; Matsumura, Masahiro; Yamagata, Hideki**
$^{63}Cu$ nuclear spin-lattice relaxation study for low-temperature structural transition in $(La_{1-x}Ba_x)_2CuO_4$ around $x$=0.06.—73-08595
**Toubin, Yurii K.; Votyakov, E. V.**
Adsorption in pores with heterogeneous surfaces.—73-16405
**Toulemonde, M.** See Studer, F.
**Toulouse, J.** See Doussineau, F.
**Toulouse, J.; DiAntonio, P.; Vugmeister, B. E.; Wang, X. M.; Knauss, L. A.**
Precursor effects and ferroelectric macroregions in $KTa_{1-x}Nb_xO_3$ and $K_{1-x}Li_{1-x}TaO_3$.—73-07910
**Tour, James M.; Pendalwar, Shekar L.; Cooper, Joel P.**
Ceramic materials, method of preparing the same, and hydrogenation and oxidation processes using the same.—73-05202
**Touray, Jean Claude** See Thirioux, Laurence
**Tourillon, G.** See Garg, K. B.
**Tourinho, F. A.** See Matuo, C. Y.
**Tourney, P.; Berke, N.**
Put to the test.—73-00175
**Tournie, Eric; Ploog, Klaus H.; Hohenstein, Matthias**
Surface stoichiometry and interface formation during molecular beam epitaxy of strained $InAs/Al_xGa_{0.48-x}In_{0.52}As$ heterostructures.—73-11469
**Tournie, Eric; Ploog, Klaus H.**
Surfactant-mediated [SM] molecular beam epitaxy of strained layer semiconductor heterostructures.—73-15195
**Tousley, B. C.; Mehta, S. M.; Lobad, A. I.; Rodney, P. J.; Fauchet, P. M.; Cooke, P.**
Femtosecond optical response of low-temperature-grown $In_{0.53}Ga_{0.47}As$.—73-14922
**Toutanji, H. A.; El-Korchi, T.; Katz, R. N.; Leatherman, G. L.**
Behavior of carbon fiber-reinforced cement composites in direct tension.—73-03436
**Tovar, M.** See Rouco, A.; Steren, L. B.; Zysler, R. D.
**Tovar, R.** See Guerrero, E.
**Towers, M. S.** See Gault, M.
**Townsend, J. E.** See Wang, J.
**Townsend, P. D.** See Kakarantzas, G.; Nistor, L. C.; Wood, R. A.
**Townsend, Rodney P.** See Harjula, Risto
**Toya, T.** See Mashimo, Tsutomu
**Toyama, Shigeki** See Tsubaki, Junichiro
**Toyama, Shigeki; Nakamura, M.; Mori, H.; Murase, K.**
Production of functionally fine particles by $CO_2$ laser evaporation and condensation.—73-16958
**Toyoda, Koichi** See Fan, Jia-Fa
**Toyoda, Masaaki** See Ochi, Hideo
**Toyoda, Seiji** See Hayashi, Koichi
**Toyoda, Takeharu** See Yamamura, Takashi
**Toyofuku, Toshihide**
Relationship between strength and water/cement content of mortar with classified fly ash.—73-10136
**Toyoshima, Hideo** See Kashihara, Seiichi
**Toyota, Sachio** See Onishi, Yasushi; Saitoh, Itaru
**Toyoyama, Shinji** See Kataoka, Shoei
**Tozai, Nanboku**
Superconducting receivers in radio astronomy.—73-15636
**Tracey, Dennis M.** See Foley, Michael R.
**Tracey, W. John** See Underwood, William A.
**Tracy, Carl A.; Quinn, George D.**
Fracture toughness by the surface crack in flexure (SCF) method.—73-17332
**Tracy, Henry J.** See Bryson, Nathan
**Traeholt, C.; Wen, J. G.; Svetchnikov, V.; Delsing, A.; Zandbergen, H. W.**
High-resolution electron microscopy on superconducting $YBa_2Cu_3O_7$ thin films.—73-04734
**Trail, S.** See Bularzik, J.
**Tramontin, L.** See Caccavale, F.
**Tran, C. A.; Jouanne, M.; Brebner, J. L.; Masut, R. A.**
Effect of strain on confined optic phonons of highly strained InAs/InP superlattices.—73-11163
**Tran, Danh C.**
Heavy metal oxide glass optical fibers for use in laser medical surgery.—73-03929; 73-10636
**Tran, Huy K.** See Bull, Jeffrey D.
**Tran, S. Q.** See Namboodri, Shannon L.
**Tran, T. T.; Chambers, S. A.**
Interface structure of the 1 monolayer (2×1)-Si/GaAs(001) system by X-ray photoelectron diffraction [XPD].—73-11281
**Tranchand, V.** See Glandus, Jean Claude
**Trankle, G.** See Brunner, K.
**Tranquada, J. M.; Buttery, D. J.; Rice, D. E.**
Phase separation, CDW's, and magnetism in $LaNiO_{4+\delta}$ ($\delta$=0.105).—73-15357
**Trapalis, C.** See Kozhukharov, V.; Samuneva, B.
**Trapeznikova, I. N.** See Kon'kov, O. I.
**Trasatti, S.** See Kodintsev, I. M.
**Traut, D. E.** See Jong, B. W.
**Trautman, P.; Baranowski, J. M.**
Evidence for trigonal symmetry of the metastable state of the EL2 defect in GaAs.—73-09403
**Trautmann, I.; Knofel, Dietbert**
Development of a mortar consisting of slag, gypsum, and portland cement for injection into multiple-leaf masonry: I, Optimizing the cementitious binder.—73-13704
**Traver, Frank J.** See Pawar, Prakash K.
**Traveria, A.** See Martinez, R.
**Traversa, Enrico** See Gusmano, Gualtiero; Polini, Riccardo
**Traverse, Jean-Pierre; Ades, Claude; Toganidis, Tryfon**
Optical properties at high temperature of molten soda-lime-silica glasses containing iron oxide.—73-14243; Spectrophotometric analysis of ferrous, ferric, and total iron content in soda-lime-silica glass.—73-03758
**Traverse, Jean-Pierre; Tsiava, R.; Ades, Claude**
Advanced method for the determination of temperature profiles in semitransparent materials at high temperature.—73-12104
**Travis, Edward O.** See Hegde, Rama I.; Kottke, M.
**Travkov, I. V.** See Gurtov, V. A.
**Travlos, A.** See Nassiopoulos, A. G.
**Travnicek, Zdenek; Klaskova, Jana**
Determination method of fracture crack propagation rate in ceramics.—73-06372
**Travnikov, V. V.** See Rossin, V. V.
**Treacy, M. M. J.** See Newsam, J. M.
**Treadway, P. M.; Berndt, C. C.**
Microstructural index for pores in thermal spray coatings.—73-08418
**Treat, David W.** See Bour, David P.
**Tredway, William K.; Prewo, Karl M.; Isoda, Takeshi; Iwata, Misao**
Performance of a carbon fiber-reinforced mullite [C/mullite] matrix composite.—73-06499

**Trefilov, V. I.; Grigoriev, O. N.; Kushnerenko, S. M.** Inhomogeneity of internal stresses and X-ray elastic constants of ceramic materials.—73-12819

**Trefny, J. U.** See Lee, Y. J.

**Tregilgas, J. H.; Wan, C. F.; Liu, H.-Y.** Growth and characterization of hot-wall epitaxial CdTe on (111)HgCdTe and CdZnTe substrates.—73-11224

**Treglio, James R.** Method and apparatus for direct arc plasma deposition of ceramic coatings.—73-12480

**Treheux, D.** See Fayeulle, S.; Serier, B.

**Treichel, H.; Mitwalski, A.; Sandler, N. P.** Low-pressure CVD of $Ta_2O_5$ films for ULSI devices using tantalum pentaethoxide as precursor.—73-09193

**Treideris, G.** See Lideikos, T.

**Tremblay, S. P.** See Baril, D.

**Tremilliosi-Filko, G.; Jerkiewicz, G.; Conway, B. E.** Characterization and significance of the sequence of stages of oxide film formation at platinum generated by strong anodic polarization.—73-13805

**Trencevski, K.** See Petrusevskia, Vladimir

**Trenikova, M. G.** See Ust'yantsev, V. M.

**Trepk, T.** See Zettler, J.-T.

**Trequattrini, F.** See Cannelli, G.

**Tresouthick, Stewart W.; Dubovey, Val S.; Gadja, John W.** Mortar workability apparatus: a new approach.—73-10059

**Tressler, Richard E.** See Beck, R. B.; Giannuzzi, Lucille A.; Holzl, Robert A.; Jia, Nan-Ying; Kim, Young-Sig; Lewinsohn, Charles A.; Newcomb, Stephen A.; Strait, S. Jared

**Tret'yakov, Yu. D.** See Os'kina, T. E.

**Tretnikova, M. G.** See Chusovitina, T. V.; Likhomanova, N. A.

**Trettin, R.; Oliew, G.; Stadelmann, C.** Very early hydration of dicalcium silicate polymorphs.—73-00205

**Treushnikov, E. N.** Description of electron, X-ray, and neutron Bragg scattering in crystals of superionic conductors.—73-14686

**Trevino, S. F.** See Bao, Wei

**Trevor, P. L.** See Rabinovich, Eliezer M.

**Trezza, M.** See Lavat, A. E.

**Triboulet, R.** See Pelant, I.

**Triboulet, R.; Tromson-Carli, A.; Lorans, D.; Duy, T. N.** Substrate issues for the growth of mercury cadmium telluride.—73-11464

**Tribula, Dana** See Kwon, Kee-Won

**Trifonova, M. M.; Baryshev, N. S.; Mezentseva, M. P.; Akhmedova, F. I.; Averyanov, I. S.** Electrical properties of epitaxial *p*-type manganese mercury telluride films.—73-01148

**Trifu, E.** See Cerchez, M.

**Trigg, Mark B.; Drennan, John; Hay, David G.; Oh, Chull-H.; Dietrich, Rainer** Dense SiC ceramic products.—73-02094

**Triki, E.** See Hachani, Leila

**Trinh, T.** See Munz, W.-D.

**Trinker, A. B.** Cement savings in precast and monolithic concretes and reinforced concretes.—73-13689

**Tripathi, R. B.** See Jain, Kiran; Padam, G. K.

**Tritt, T. M.; Marone, M.; Ehrlich, A. C.; Skove, M. J.; Gillespie, D. J.; Jacobsen, R. L.** Evidence in the elastic properties for a stress-related phase transition in the high-$T_c$ material: $Bi_2Sr_2CaCu_2O_x$.—73-08068

**Trittgoc, J.** See Hilczer, W.

**Tritthart, Josef; Pettersson, Karin; Sorensen, B.** Electrochemical of chloride from hardened cement paste.—73-13719

**Trivedi, Bimal S.; Kulkarni, R. G.** Cluster spin glass ordering in diluted spinel $CoFe_{1.x}Al_{1+x}O_4$.—73-08576; Mossbauer and magnetization study of cobalt ferrite aluminates.—73-04629

**Trnovcova, Viera** See Kozik, Tomas

**Trodahl, H. J.** See Quilty, J.

**Trofimov, N. N.** See Shevelevich, R. S.; Stetsenko, V. Ya.

**Trofimov, N. N.; Izmaylova, L. K.** Orifice method of forming the optical fibers of complex topology.—73-14450

**Trofimov, N.** See Budov, V. V.

**Trofimov, V. T.** See Zasavitskii, I. I.

**Trofimov, V. T.; Abbasov, G. Z.; Springholz, G.; Bauer, Gunther; Zasavitskii, I. I.** Energy diagram of a $Pb_{1-x}Mn_xTe/PbTe$ heterojunction.—73-11194

**Troger, L.** See Zschech, E.

**Troger, L.; Fork, D. K.; Boyce, J. B.** *a*-axis growth of $YBa_2Cu_3O_7$ thin films on $LaAlO_3$ induced by monolayer buffers of $PrO_2$.—73-11680

**Trollo, Louis M.; Damjanovic, Dragan; Newnham, Robert E.** Modified lead calcium titanate ceramics with a relatively large dielectric constant for hydrophone applications.—73-04561

**Trojan, Miroslav** See Solc, Zdenek

**Trojan, Miroslav; Solc, Zdenek; Zetkova, Katerina** Synthesis of zirconium silicate ceramic pigments from zircon mineral: I.—73-14668

**Trojnacki, Andrzej** See Steif, Paul S.

**Troksh, Ya. S.** See Britsis, D. I.

**Trolier-McKinstry, S.; Hu, H.; Krupanidhi, S. B.; Chindaudom, P.; Vedam, K.; Newnham, Robert E.** Spectroscopic ellipsometry studies on ion beam sputter deposited Pb(Zr, Ti)$O_3$ films on sapphire and Pt-coated silicon substrates.—73-09508

**Tromson-Carli, A.** See Triboulet, R.

**Tronc, P.; Reid, B.; Maciejko, R.; Leclercq, J. L.; Lazzari, J. L.** Optical properties and fluctuations of composition in $Ga_{0.77}In_{0.23}As_{0.19}$- $Sb_{0.81}$ alloys.—73-04430

**Trontelj, Marija** See Drazic, G.; Makovec, Darko; Milosevic, O.

**Tropper, A. C.** See Hanna, D. C.; Lauder, R. D.

**Troshenkov, N. A.** See Kostyrya, Yu. F.

**Trost, J.; Frobel, P.; Barner, K.** Hydrogen loading of $[(Li_2O)(B_2O_3)]_2WO_3$ glasses through electrolyte/glass and Pd/glass interfaces.—73-03791

**Trostel, Louis J., Jr.** See Strock, Harold B.

**Trotter, Donald M., Jr.** Photochromic and photosensitive glass.—73-00526

**Trottier, Jean-Francois** See Banthia, Nemkumar

**Troue, Harden H.** See Sue, Jiinjen A.

**Trouillard, S.** See Coupelle, Philippe

**Troung, Charles M.** See Wu, Ming-Cheng

**Trouve, Maurice** See Zagdoun, Georges

**Troxell, J. D.** See Srivatsan, T. S.

**Troyanchuk, I. O.; Derkachenko, V. N.; Korneyeva, S. S.; Novitskii, O. A.** Magnetic properties of perovskite-structure rare-earth orthomanganites.—73-15341

**Troyanchuk, I. O.; Shemyakov, A. A.; Prokopenko, V. K.** High-pressure production and properties of the $CuMnO_3$ ferrimagnet.—73-01465

**Troyanchuk, I. O.** Magnetic properties, NMR and ir spectroscopy of $A_2Mn_2O_7$ pyrochlores (A=Sc, In, Tl, rare-earth ion).—73-15344; Phase transitions in perovskite $La_{1-x}Ca_xMnO_3$.—73-08697

**Troyanov, S. I.** Crystal structure of the chloraluminates of titanium(II), $Ti(AlCl_4)_2$, and refinement of the crystal structure of $AlCl_3$.—73-12563

**Trubelja, Mladen E.; Ramanathan, Sriram; Modest, Michael F.; Stubican, Vladimir S.** Carbon dioxide laser cutting of a carbon-fiber–silicon carbide-matrix composite.—73-05697

**Trubelja, Mladen F.; Stubican, Vladimir S.** Mechanical properties of a laser-cut alumina matrix-silicon carbide whisker composite.—73-09632

**Trubitsyn, M. A.** See Nemets, I. I.

**Trubitsyn, M. P.; Volnyanskii, M. D.; Kudzin, A. Yu.** Critical broadening of EPR lines in $Li_2Ge_7O_{15}$:$Mn^{2+}$ crystals near ferroelectric phase transition.—73-16073

**Trubitsyn, M. P.; Volnyanskii, M. D.; Kudzin, A. Yu.** EPR of $Mn^{2+}$ ions in lithium heptagermanate crystals.—73-02267

**Truedson, John R.** See Karim, R.

**Truedson, John R.; McKinstry, Kevin D.; Kabos, P.; Patton, C. E.** High-field effective linewidth and eddy current losses in moderate conductivity single-crystal M-type barium hexagonal ferrite disks at 10–60 GHz.—73-07938

**Trugman, S. A.** See Mustre de Leon, J.

**Trujillo, Aurelio** See Roy, Donald W.

**Trujillo, Johann T.; Hunt, Charles E.** Fabrication of gated silicon field emission cathodes for vacuum microelectronics and electron-beam applications.—73-11208

**Trukhan, V. M.** See Fedotov, V. G.

**Trukhin, Anatoly N.** Luminescence of a self-trapped exciton in $GeO_2$ crystal.—73-08905

**Trumbauer, Eric R.; Hellmann, John R.; Jones, Linda E.** Oriented microchannel membranes via oxidation of carbon fiber-reinforced glass composites.—73-07158

**Trumbauer, Eric R.; Hellmann, John R.; Shelleman, David L.; Koss, Donald A.** Effect of cleaning and abrasion-induced damage on the Weibull strength distribution of sapphire fiber.—73-17282

**Trumble, K. P.** See Reimanis, Ivar E.

**Trumble, Kevin P.** See Rogers, Kirk A.

**Trundle, C.** See Ainger, F.

**Trunov, V. K.** See Efremov, V. A.; Murashova, E. V.

**Truong, V.-V.** See Benaissa, K.; Benkhelifa, F.

**Trusevich, N. G.** See Krasil'nikov, A. S.

**Truskinovsky, Lev** See Budiansky, Bernard

**Trusov, Y. A.** See Kozakov, A. T.

**Trusova, E. M.** See Tikhonov, V. B.

**Trusova, I. A.; Polyakov, M. E.** Dislocations in an AlGaAs/GaAs superlattice.—73-04283

**Trzebiatowski, K.** See Murawski, L.

**Trzeciak, Z.** See Bulga, Z.

**Tsagaropoulos, G.** See Niu, C.-M.

**Tsai, C. S.** See Vahala, Kerry J.

**Tsai, C.; Li, K.-H.; Campbell, J. C.; Hance, B. K.; White, J. M.** Laser-induced degradation of the photoluminescence intensity of porous silicon.—73-15009

**Tsai, Chung-Hsien; Nelson, John C.; Heberlein, J.; Pfender, Emil; Gerberich, William W.** Diamond-coated products.—73-05299

**Tsai, H.-J.** See Lii, K.-H.

**Tsai, H.-L.** See Tsai, P.-C.

**Tsai, H.-L.; Tsai, P.-C.; Tu, David C.** Characterization of laser-glazed plasma-sprayed yttria-stabilized zirconia coatings.—73-00215; 73-06746

**Tsai, Jing-Fong; Belnap, J. Daniel; Shetty, Dinesh K.** Crack shielding in Ce-TZP/$Al_2O_3$ composites: comparison of fatigue and sustained load crack growth specimens—correction.—73-09555; Crack shielding in Ce-TZP/$Al_2O_3$ composites: comparison of fatigue and sustained load crack growth specimens.—73-06354

**Tsai, M.-S.** See Lee, Y.-H.

**Tsai, M.-T.; Shih, H.-C.** Effects of powder processing on the characterization of magnesia derived from alkoxide precursors: I, Preparation and characterization of powders.—73-09105; Effects of powder processing on the characterization of magnesia derived from alkoxide precursors: II, Compaction and sintering behavior.—73-09106; Modified powder route for the preparation of sol-gel-process-synthesized magnesia and alumina.—73-09215; Sinterability of sol-gel-derived magnesia powders.—73-09322

**Tsai, Men-Ting** See Wang, B.

**Tsai, Men-Ting; Feng, Shou-Hua; Greenblatt, M.; Haushalter, R. C.** Ionic conductivity in layered $Na_3Mo_2P_2O_{11}(OH)\cdot 2H_2O$.—73-04123

**Tsai, Ming-Shan** See Yu, Cheng-Sheng

**Tsai, P.-C.** See Tsai, H.-L.

**Tsai, P.-C.; Tsai, H.-L.; Tu, David C.** Processing variables in laser glazing plasma-sprayed thermal barrier coatings.—73-09282

**Tsai, T.-D.; Hu, C.-T.; Lin, I-Nan** V-shape characteristics of $(Pb_{0.6}Sr_{0.4})TiO_3$ ceramics.—73-11499

**Tsai, W.; Delfino, M.; Fair, J. A.** Temperature dependence of the electrical resistivity of reactively sputtered TiN films.—73-02702

**Tsai, W.; Fair, J. A.; Hodul, D.** Ti/TiN reactive sputtering: plasma emission, X-ray diffraction, and modeling.—73-00271

**Tsai, Yung-Nien** See Yousuf, A.

**Tsakalakos, Thomas** See Jen Wang, I.; Lee, Jong-Won

**Tsanava, Ts. P.** See Mamaladze, R. A.

**Tsang, T.** Coherence length and penetration depth in high-$T_c$ superconductors.—73-04680

**Tsankov, Mincho A.** See Chen, Ming

**Tsantrizos, P. G.** See Shanker, K.

**Tsantrizos, P. G.** Reactive spray forming [REFORM] production of titanium aluminides in the tail flame of a dc plasma torch.—73-06846

**Tsao, In-Lin; Danforth, Stephen C.; Metzner, Arthur B.** Rheological behavior of injection-moldable silicon powder–silicon carbide whisker formulations.—73-02997

**Tsao, In-Lin; Haber, Richard A.** Characterization of cake structure and rheology via pressureless slip casting.—73-09037

**Tsarenkov, B. V.** See Bessolov, V. N.; Gol'dberg, Yu. A.

**Tsarik, A. M.** See Vysotskii, S. A.

**Tsatsul'nikov, A. F.** See Gutkin, A. A.

**Tsaur, S.-S.; Yang, F.-S.; Shueh, Y.; You, R.; Shen, P.** Effect of Fe/Ni/Ti interdiffusion on the microstructure of direct-on enamel on steel.—73-06772

**Tsaur, Shuen-Ching** See Hwang, Chii-Shyang

**Tsay, M.-J.; Liu, C.-S.; Tung, M.-J.; Chen, C.-J.** Influence of process parameters on power loss minimum versus temperature of Mn-Zn ferrites.—73-11657

**Tscherry, J.** See Zgonik, M.

**Tschopel, P.** See Graule, T.

**Tschudi, Theo** See Rauch, Torsten

**Tse, Ming-Kai** See Matsuoka, Kaoru; Forrest, David

**Tse, W.-S.** See Chen, Jiann-Ruey; Hu, L. J.

**Tseiger, E. N.** See Lyn'kov, L. M.

**Tseitlin, P. A.** See Boiko, R. M.

**Tseitlin, S. Yu.; Yarovskii, D. I.** Strength of concrete at the compression on very small flats.—73-13782

**Tsekhomskaya, T. S.; Anfimova, I. N.** Effect of the temperature of acidic leaching on volume change in porous glass.—73-13969

**Tsekhomskii, V. A.** See Ashtakhova, V. V.; Bershtein, V. A.; Panysheva, E. I.

**Tsekhosh, V. I.** See Bagulya, A. V.

**Tselebrovskaya, E. G.; Dzhurinskii, B. F.; Lysanova, G. V.** Intermediate and metastable phases on synthesis of some lanthanide phosphates.—73-02303

**Tselebrovskii, A. N.** See Danchevskaya, M. N.

**Tselishchev, S. L.** See Davydov, I. A.

**Tseng, B.** See Pearton, S. J.

**Tseng, M. W.** See Soni, K. K.; Williams, D. B.

**Tseng, Tseung-Yuen** See Bai, Shr-Nan; Chang, De-An; Haung, C.-J.; Koo, Horng-Show; Lai, Chun-Hung; Lu, Yuh-Yih; Yen, Ann-Jeng

**Tseng, W.** See Dagata, J. A.; Steiner, Bruce

**Tsenter, M. Ya.** See Dymshits, O. S.

**Tsepeleva, V. L.** See Valishev, R. Sh.

**Tsereteli, G. I.** See Belopol'skaya, T. V.

**Tsetskhladze, D. L.** See Lukin, E. S.

**Tseung, A. C. C.** See Shen, Pei-Kang

**Tshavelev, O. S.** See Glebov, L. B.

**Tsiava, R.** See Traverse, Jean-Pierre

**Tsidil'kovskii, E. I.** See Andrukhiv, A. M.

**Tsidil'kovskii, I. M.; Lerinman, N. K.; Sabirzyanova, L. D.; Parenchich, S. Y.; Parenchich, Y. S.** Resonant states formed by Co and Ni impurities in HgSe.—73-07774

**Tsikhotskii, E. S.** See Topolov, V. Yu.

**Tsimas, S.** See Tsivilis, S.

**Tsimperidis, I.** See Gregorkiewicz, T.

**Tsiok, O. B.** See Sidorov, V. A.

**Tsiporina, S. Z.** See Borisovskii, E. S.

**Tsirel'son, V. G.** See Belokoneva, E. L.; Borovskaya, T. N.; Bikyashev, E. A.

**Tsitsiliano, A. D.** See Maslov, V. P.

**Tsivilis, S.** See Kakali, G.

**Tsivilis, S.; Tsimas, S.** Estimation of the specific surface of cement industry materials according to their particle size distribution.—73-09947

**Tsoga, Anna; Nikolopoulos, Panagio** Groove angles and surface mass transport in polycrystalline alumina.—73-09409

**Tsoi, Tong-Bin** See Pronkin, A. A.

**Tsokanis, Efthimios A.; Thompson, Robert W.** Further investigations of nucleation by initial breeding in the Al-free $NH_4$-ZSM-5 system.—73-05821

**Tsou, Y.; Ichii, A.; Garmire, Elsa M.** Improving InAs double heterostructure lasers with better confinement.—73-01195

**Tsoukala, V. G.; Hall, D. B.; Schroeder, John** Fluoride glasses with dysprosium and europium dopants: their low-temperature and magnetic field dependence of Rayleigh and Brillouin scattering.—73-03789

**Tsubaki, Junichiro** See Hayakawa, Osamu; Iwamoto, Yuji; Kamiya, Hidehiro; Sugiura, Isao; Yanagisawa, Masaaki
**Tsubaki, Junichiro; Hotta, Tadashi; Shikano, Tomoyuki; Toyama, Shigeki; Mizuno, Mitsukuni**
Empirical density estimation of green body formed by uniaxial press.—73-02814; 73-13045; 73-13046
**Tsubaki, Junichiro**
Current technologies of particle size analysis.—73-12124
**Tsubakino, H.** See Masafumi, Kobune
**Tsubakino, Harushige** See Kobune, Masafumi
**Tsubakino, Harushige; Hamamoto, Mitsuharu; Sonoda, Kazunori**
Effect of alumina addition on bending fracture behavior in Y-PSZ.—73-13506
**Tsubakino, Harushige; Sonoda, Kazunori; Nozato, R.**
Martensite transformation behavior during isothermal aging in partially stabilized zirconia with and without alumina addition.—73-03161
**Tsuboi, Takashi** See Mitamura, Hisayoshi
**Tsubokawa, Masaya** See Ito, Toshimichi
**Tsubone, Daisuke; Hashimoto, Toshikuni; `garashi, Kaoru; Shimizu, Tadao**
Electrical characterization of phase changes in lithium titanate.—73-16474
**Tsubone, Daisuke; Iwamoto, Masaaki; Shimizu, Tadao**
Phase changes in $Li_2Ti_3O_7$.—73-02372; 73-12649
**Tsubone, Daisuke; Shimizu, Tadao**
Effect of $Nb_2O_5$ addition on the phase change in $Li_2Ti_3O_7$.—73-16119
**Tsuchida, Shinji** See Machida, Nobuya
**Tsuchimoto, Shuhei** See Kataoka, Shoei
**Tsuchinari, Akihiro; Hokii, Toshiyuki; Shimobayashi, Osamu; Kanaoka, C.**
Effects of $Al_2O_3$-$TiO_2$ contents on the structure and permeability of porous magnesia ceramic—fractal characteristics of pores.—73-05776
**Tsuchinari, Akihiro; Hokii, Toshiyuki; Shimobayashi, Osamu; Kanaoka, C.**
Influence of grain size and firing temperature on the strucure of porous magnesia ceramic.—73-13096; Solid reaction in the MgO excess regions of the system MgO-$TiO_2$-$Al_2O_3$.—73-13368; Solid-state reaction in the MgO excess region of the system MgO-$TiO_2$-$Al_2O_3$.—73-00866
**Tsuchinari, Akihiro; Hokii, Toshiyuki; Shimobayashi, Osamu**
Influence of grain size and firing temperature on the structure of porous magnesia ceramic.—73-05867
**Tsuchitani, Kazuo** See Shiraishi, Eiichi
**Tsuchiya, Fumiaki** See Ota, Rikuo; Watari, Koji
**Tsuchiya, Ichiro** See Danzuka, Toshio; Ishi, Hiroaki; Ishikawa, Shinji; Ohga, Yuichi
**Tsuchiya, Kazuhiko** See Fukuda, Masahide
**Tsuchiya, Kazuyoshi** See Soeda, Koichi
**Tsuchiya, Kazuyoshi; Hayashi, Hiroshi; Soeda, Koichi**
Prevention of cracking in self-leveling flooring material (SL) by adding silicone.—73-13765
**Tsuchiya, Motohiko** See Nakagawa, Seiichi
**Tsuchiya, Nobujiro** See Fukuda, Masahide; Terada, Osamu
**Tsuchiya, Tomonobu** See Uomi, Kazuhisa
**Tsuchiya, Toshio** See Kikuchi, Naoto; Kinoshita, Hiroaki; Sei, Tadanori
**Tsuchiya, Toshio; Sei, Tadanori; Kanda, H.**
Sol-gel preparation of YIG ($Y_3Fe_5O_{12}$) thin film showing optomagnetic effect.—73-11673
**Tsuchiya, Yoshimi; Saitoh, Hiroyuki**
Semiconductor-metal transition induced by the structural transition in liquid $Ge_{15}Te_{85}$.—73-07794
**Tsuda, Hiroshi; Enoki, Manabu; Kishi, Teruo**
Effect of interfacial properties on fracture toughness in fiber-reinforced ceramic composites.—73-03267; 73-13508; Interfacial mechanical properties of fiber-reinforced ceramic composites.—73-06464; 73-13555
**Tsuda, Koichi** See Mukae, Kazuo
**Tsuda, Koichi; Mukae, Kazuo**
Characterization of interface states in ZnO varistors using isothermal capacitance transient spectroscopy [ICTS].—73-01101; 73-11103
**Tsuda, Koji** See Tamamaki, Masahiro
**Tsuda, Nobuo** See Ohuchi, Masahiko
**Tsuda, Toshinobu; Ohno, Takashi; Yasuoka, Hiroshi**
Spin-lattice relaxation of $^{63}Cu$ in high-$T_c$ related antiferromagnetic Cu oxides.—73-04806
**Tsuei, Chang-C.** See Chaudhari, Praveen; Maletta, H.
**Tsuei, Chang-C.; Chi, C. C.; Newns, D. M.; Pattnaik, P. C.; Daumling, M.**
Thermodynamic evidence for a density-of-states peak near the Fermi level in $YBa_2Cu_3O_{7-y}$.—73-08255
**Tsuge, Akihiko** See Fukasawa, Takayuki; Kasori, Mitsuo; Mizutani, Toshiaki
**Tsuge, Akihiko**
Application of advanced ceramics for industrial machines and its problem.—73-02002
**Tsuge, Akira** See Hirao, Kiyoshi
**Tsuge, Akira; Uwamino, Yoshinori; Ishizuka, Toshio; Watari, Koji**
Determination of oxygen in oxide ceramics by inert gas fusion analysis—effect of bath metals.—73-16108
**Tsugeki, Keiichi; Kato, Takafumi; Koyanagi, Yoshihiro; Kusakabe, Katsuki; Morooka, Shigeharu**
Electroconductivity of sintered bodies of α-$Al_2O_3$-TiN composite prepared by CVD reaction in a fluidized bed.—73-08859
**Tsugeki, Keiichi; Yoshikawa, Tomohisa; Maeda, Hideaki; Kusakabe, Katsuki; Morooka, Shigeharu**
Tin(IV) oxide coating of aluminum borate whiskers and alumina particles by chemical vapor deposition.—73-03062
**Tsuji, Kazuhiro** See Izaki, Toru; Wang, De-Ping
**Tsuji, Kazuo** See Yoshida, Katsuhito
**Tsuji, Kazuwo; Nakashima, Takeru**
Method of synthesizing single diamond crystals of high thermal conductivity.—73-16006
**Tsuji, M.** See Nishizawa, Kenichi
**Tsuji, Masaharu** See Nishimura, Yukio
**Tsuji, Masamichi; Tabata, Masahiro; Tamaura, Y.**
$CO_2$ decomposition by oxide ceramics intercalated in layered compound.—73-05371
**Tsuji, O.** See Murawala, P. A.
**Tsuji, Toshihide** See Kitaoka, Satoshi
**Tsuji, Yukikazu; Urano, Shinji; Ikeda, Masashi**
Effects of double mixing of high-quality grout for prestressed concrete.—73-09934
**Tsujimoto, M.** See Nogi, K.
**Tsujimoto, Shinji** See Hayashi, Kunio
**Tsujino, Hiroyuki; Kohn, Kay**
Magnetoelectric effect of $GdMn_2O_5$ single crystal.—73-08910
**Tsukada, T.** See Tsuzuki, K.
**Tsukada, Toshihisa**
Development of aluminum gate thin-film transistors [TFT's] based on aluminum oxide insulators.—73-04073
**Tsukagoshi, K.** See Takaoka, S.
**Tsukaguchi, Hirokazu** See Moriga, Toshihiro
**Tsukahara, S.** See Chida, Nakaya
**Tsukamoto, A.** See Kabasawa, U.
**Tsukamoto, H.** See Sueda, M.
**Tsukamoto, Keizou** See Ishii, Mamoru; Yamagishi, Chitake
**Tsukamoto, Keizou; Shimojima, Hiromasa; Ishii, Mamoru; Yamagishi, Chitake**
Influence of annealing on the properties of Ca-rich Bi-Pb-Sr-Ca-Cu-O superconducting thin films.—73-01574; Sensibility of the Bi-Pb-Sr-Ca-Cu-O superconductive films in weak magnetic field.—73-01657
**Tsukamoto, Noboru** See Asano, Sadame; Ichikawa, Kenji
**Tsukamoto, S.** See Nagamune, Y.; Sugano, Mikio
**Tsukamoto, Takeyo** See Yoshimura, Kuniaki
**Tsukamoto, Yuji** See Sato, Akinobu
**Tsukamoto, Yuji; Kuroda, H.; Sato, Akinobu; Yamaguchi, H.**
Microindentation adhesion tester and its application to thin films.—73-08416
**Tsukerman, V. G.** See Burlak, A. V.
**Tsukida, Tatuyuki** See Ohta, Hiromichi
**Tsukinaga, Yoichi** See Shoya, Masami
**Tsukioka, Masayuki** See Kojima, Seiji; Takashige, Masaaki
**Tsukuda, Akira** See Kondo, Yoshihito
**Tsukuda, Yasuo** See Nakamura, Ryouhei
**Tsumura, Tomoki; Shimizu, Akira; Inagaki, Michio**
Synthesis of $LiMn_2O_4$ spinel via tartrates.—73-09359
**Tsunashima, Atsunu** See Kosuge, Katsunori
**Tsunatori, Hideo** See Shiga, Hiroshi
**Tsuneizumi, Michitaka** See Oda, Masaaki
**Tsunekawa, Tetsuya** See Yoshida, Takeshi
**Tsunematsu, Kinue; Tateyama, Hiroshi; Nishimura, Satoshi; Jinnai, K.**
Delamination of kaolinite by intercalation of urea.—73-04908; 73-12970
**Tsunetsugu, Kunio; Aratani, Kohryu; Oguchi, Yukio; Kawakami, Tatsuo**
Determination of impurities in graphite by ICP–AES.—73-00798
**Tsunetsugu, Kunio; Miyagawa, Saburoh; Aratani, Kohryu; Oguchi, Yukio**
Determination of $B_4C$ in refractories containing graphite.—73-00797
**Tsuno, Toshio** See Matsuda, Atsunori
**Tsunooka, Tsutomu; Higashida, Yutaka**
New trends of microwave processing of ceramic materials.—73-02906
**Tsunooka, Tsutomu; Sugiura, Hirotsugu; Higashida, Yutaka; Fukui, Takehisa; Okawa, Hajime; Iwata, Yoshiyuki**
Low-permittivity ceramic dielectrics.—73-10967
**Tsurekawa, S.; Yoshinaga, H.**
Grain-boundary structure and high-temperature strength of nonoxide ceramics.—73-03306
**Tsurgan, L. S.** See Kirik, S. D.
**Tsuri, Hisashi** See Mohri, Fumihiko
**Tsuru, Yasuhiko** See Yasuda, Kouichi
**Tsuru, Yasuhiko; Yasuda, Kouichi; Matsuo, Yohtaro; Kimura, Shiushichi; Yasuda, Eiichi**
Influence of grain size and secondary phase on the fracture toughness of sintered MgO bodies: II, Addition of $Fe_2O_3$.—73-06460; 73-17357
**Tsuruda, Takashi**
Processing systems for inorganic and toxic chemical wastes.—73-13637
**Tsurumi, Takaaki** See Daimon, Masaki; Ishida, Hideaki; Kato, Hideo; Kim, Sang-Kyu
**Tsurumi, Takaaki; Kato, Hideo; Hirano, Yoshinobu; Daimon, Masaki**
Crystal structure and hydration of belite.—73-09876; Crystal structure and hydration reactivity of ß-$Ca_2SiO_4$ solid solutions.—73-09877
**Tsurumi, Takaaki; Unno, Hiroshi; Diamon, Masaki; Hirano, Yoshinobu**
Separation of the aluminate and ferrite phases from cement clinker by selective dissolution and their crystal structure refinement.—73-10149
**Tsurumoto, Shinichiro** See Nagasoe, Atsumi
**Tsurusawa, Munefumi** See Horita, Masayoshi
**Tsuruta, Hideyoshi; Furuse, Yutaka**
*R*-curve behavior and its effect on strength for advanced ceramics.—73-06505
**Tsuruta, Hideyoshi; Yamada, Naohito; Nakasuji, Yoshizumi; Masuda, M.; Matsui, M.**
Fracture behavior of sintered silicon nitride under multiaxial stress states: II.—73-06434
**Tsuruta,, H.** See Nakasuji, Yoshizumi
**Tsurutani, Shoji** See Matsumura, Kazuo
**Tsutomu, Harada** See Shikano, Hiroshi
**Tsutsui, Kazuhisa** See Soumura, Tetsuo
**Tsutsui, Yasushi** See Asano, Keisuke
**Tsutsumi, C.; Okano, K.; Suto, T.**
High-quality machining of ceramics.—73-16817
**Tsutsumi, Masayuki** See Lee, Soo-Young
**Tsutsumi, Yasuyuki** See Yoshida, Shuji
**Tsuya, H.** See Zhong, L.
**Tsuyuki, Naomitsu** See Hibino, Takeshi
**Tsuyuki, Naomitsu; Kondo, Yoshihiro; Yoshizawa, Chiaki**
Production and the properties of low-heat cement using dephosphorized slag.—73-10101
**Tsuyuki, Naomitsu; Suzuki, Satoshi; Kasai, Junichi**
Behavior of monosulfate in seawater and effects of adding amino acid.—73-09829
**Tsuzuki, A.** See Watari, Koji
**Tsuzuki, A.; Kani, Keiko; Watari, Koji; Torii, Y.**
Properties of the glasses prepared by rapid quenching in the $V_2O_5$-MO (M=Mg, Ca, and Ba) system.—73-06958
**Tsuzuki, A.; Kani, Keiko; Watari, Koji**
Preparation of *c*-plane-oriented $Pb_5Ge_3O_{11}$ film by the sol-gel method.—73-05965
**Tsuzuki, K.; Tabuchi, S.; Banno, T.; Kinbara, A.; Nakagawa, Y.; Tsukada, T.**
Influence of magnetic field on the self-bias potential on a radio-frequency-powered electrode in radio-frequency plasma.—73-09174
**Tsuzuku, Koichiro; Fujimoto, Masayuki**
Temperature-stable lead-relaxor-based ceramic dielectrics with chemical inhomogeneity.—73-10995
**Tsveshko, O. N.** See Lifanov, F. A.
**Tsvetkov, V. F.** See Safaraliev, G. K.
**Tsvetkova, E. V.** See Klimakova, N. N
**Tsvigunov, A. N.** See Petropavlov, M. V.
**Tsybulya, S. V.** See Solov'eva, L. P.
**Tsybulya, T. M.** See Sokolinskaya, M. A.
**Tsyganenko, V. S.** See Podchernyaeva, I. A.
**Tsygankov, V. N.; Frolov, A. V.; Yakimova, E. E.**
Decomposition of the spinel $CuAl_2O_4$.—73-16102
**Tsygankov, V. N.; Frolov, A. V.**
Effect of heterovalent additions of oxides on formation of the solid solution $SnO_2$-$TiO_2$.—73-02244
**Tsymbal, L. T.; Cherkasov, A. N.**
Diamagnetic susceptibility and magnetic flux creep in $YBa_2Cu_3O_x$.—73-08019
**Tsymbal, L. T.; Izotov, A. I.**
Features in the acoustic properties of $ErFeO_3$ in second-order phase transitions.—73-07935
**Tsypina, S. I.** See Bagratashvili, V. N.
**Tsypishka, D. I.** See Ivanov-Omskii, V. I.
**Tsypishka, D. I.; Ivanov-Omskii, V. I.; Georgitse, E. I.; Gutsulyak, L. M.; Mironov, K. E.**
Photoexcitation of shallow acceptors in $Cd_xHg_{1-x}Te$.—73-15094
**Tsyrempilov, A. D.** See Merkin, A. P.
**Tsyrenova, G. D.** See Bazarova, Zh. G.; Mokhosoev, M. V.
**Tsyrina, V. V.** See Chertov, V. M.
**Tsytsenko, A. K.; Frank-Kamenetskaya, O. V.; Fundamenskii, V. S.**
Crystal structure of $Ca_{1-x}Nd_xF_{2+x}$ ($x$=0.1, 0.2) from precision X-ray diffraction data.—73-02191
**Tsyutsyura, D. I.; Shkumbatyuk, P. S.**
Fabrication of *p-n* junctions from CdTe:In by laser annealing.—73-14906
**Tu, C. W.** See Hou, H. Q.
**Tu, Chao-Yang** See Huang, Yi-Dong
**Tu, David C.** See Tsai, H.-L.; Tsai, P.-C.
**Tu, George C.** See Koo, Horng-Show
**Tu, Jay** See Verma, Ashish K.
**Tu, S. L.** See Yeh, T. S.
**Tu, Shu-Jing** See Zhang, Ning
**Tu, W. C.; Lange, Fred F.**
Method for fabrication of continuous-fiber-reinforced ceramic matrix composites.—73-16866
**Tuan, L.** See Ber, B. Ya.
**Tuan, L.; Novikov, S. V.; Savel'ev, I. G.; Shelkovnikov, D. N.; Shmartsev, Y. V.**
Doping of epitaxial GaAs films by Zn acceptor impurity during LPE from Ga-Bi molten solutions.—73-14842
**Tuan, Vu-Anh** See Kosslick, Hendrik
**Tuan, W.-H.** See Chou, W.-B.; Lai, Mi-Cheng
**Tuan, W.-H.; Wu, J.-M.**
Effect of microstructure on the hardness and fracture toughness of $YBa_2Cu_3O_{7-\delta}$/Ag composites.—73-03270
**Tucci, A.** See Carani, G.; Esposito, Leonardo; Nicoletto, G.
**Tucek, A.; Bartak, J.**
Mathematical modeling of the dynamics of the concrete mix.—73-00132
**Tuchiya, Toshio** See Sakai, Hideki
**Tuchman, Judah A.; Sui, Zhi-Feng; Kim, Sang-Sig; Herman, Irving P.**
Photoluminescence of ZnSe/ZnMnSe superlattices under hydrostatic pressure.—73-07729
**Tucker, David**
Lehr stackers: taken seriously at last.—73-10560
**Tucker, Dennis S.; Smith, Guy A.**
Airborne laboratory apparatus draws glass fibers.—73-14315
**Tucker, William T.** See Cuccio, John; Johnson, Curtis A.
**Tucker, William T.; Johnson, Curtis A.**
Multiaxial equivalent of stressed volume.—73-17404
**Tudanca, M.** See Gonzalvez, J. M.
**Tuel, A.; Ben Taarit, Y.**
Synthesis, characterization, and catalytic properties of titanium silicates prepared using phosphonium ions.—73-08769
**Tufano, Frank J.** See Gavigan, William J.
**Tuffe, S. C.** See Wilkinson, David C.
**Tuffe, S.; Ham-Su, R.; Bloyce, D. M.; Plucknett, Kevin P.; Wilkinson, David S.**
Tape casting of platelet-reinforced ceramics.—73-09369
**Tuffias, Robert H.** See Kaplan, Richard B.
**Tuilier, M. H.** See Kafader, U.
**Tujikawa, Tetuya** See Horita, Susumu
**Tukha, Kh.** See Orkina, T. N.
**Tulchinsky, D. A.** See Smyth, J. A.

**Tulenin, Y. P.** See Bobrov, A. V.
**Tuller, H. L.** See Weber, W. J.
**Tuller, H. L.; Baek, K.-K.**
Electrical activity at individual grain boundaries and interfaces in semiconducting oxides.—73-11176
**Tuller, Harry L.** See Opila, Elizabeth J.
**Tullock, D. L.** See Reimanis, Ivar E.
**Tului, Mario** See Marini, Paolo
**Tulyaganov, D. U.; Khodakovskaya, R. Ya.**
Glass-ceramic biomaterials based on the fluorapatite-anorthite and fluorapatite-diopside systems.—73-02013
**Tumback, M.** See Franz, E. D.
**Tumback, M.; Franz, E. D.; Telle, R.**
Sintering behavior and mechanical properties of reaction-sintered $TiO_2$-$ZrO_2$ composite ceramics.—73-06053
**Tummala, Rao R.** See Casey, Jon A.; Perfecto, Eric
**Tummala, Rao R.; Haley, Michael R.; Czornyj, George**
Materials in microelectronics.—73-07339
**Tummala, Rao R.**
Multichip packaging in IBM—past, present, and future.—73-06580
**Tun, Z.** See Gaulin, B. D.
**Tunaboylu, Bahadir; McKittrick, Joanna; Nellis, W. J.; Nutt, Steven R.**
Dynamic compaction of $Al_2O_3$-$ZrO_2$ compositions.—73-12993
**Tunesi, Simonetta; Anderson, Marc A.**
Surface effects in photochemistry: an in situ cylindrical internal reflection-Fourier transform infrared investigation of the effect of ring substituents on chemisorption onto $TiO_2$ ceramic membranes.—73-16346
**Tung, M.-J.** See Tsay, M.-J.
**Tung, R. T.**
Schottky barrier height—do we really understand what we measure.—73-11436
**Tunimanova, I. V.** See Ashtakhova, V. V.; Kuchinsky, S. A.; Panysheva, E. I.
**Tunnermann, A.** See Freitag, I.
**Tuomi, Turkka O.** See Huelt, Kari T.
**Tuovinen, Hemmo** See Kamshilin, Alexei A.
**Turban, G.** See Campo, A.; Charles, C.; Goullet, A.
**Turbin, V. S.; Lavrukhin, V. P.**
Production of activated mineral filler from ash and slag wastes of thermal power plants for the preparation of asphalt concretes.—73-05146
**Turecki, A. M.** See Egorov, G. B.
**Turek, Andrzej M.** See Deo, Goutam
**Turevskaya, E. P.** See Yanovskaya, M. I.
**Turi Nagy, Ladislav** See Vrbjarova, Eva
**Turi Nagy, Ladislav; Liska, Marek**
Solvent dependence of tetramethoxysilane hydrolytic products on electron structure and reactivity.—73-06065
**Turik, A. V.** See Bondarenko, E. I.; Topolov, V. Yu.
**Turilli, Giuseppe; Paoluzi, Antonio**
Magneto- and magnetooptical recording materials.—73-07963
**Turkina, E. Yu.** See Dmitrikova, E. Yu.; Gutenev, M. S.
**Turkina, I. A.** See Amkhanitskii, G. Ya.
**Turkina, T. M.** See Sorokin, N. I.
**Turlej, Bohuslaw** See Rudzinski, Lech
**Turner, Arthur M.**
HgTe contacts to *p*-HgCdTe.—73-07558
**Turner, G. W.; Eglash, S. J.; Strauss, A. J.**
Molecular beam epitaxial growth of high-mobility *n*-GaSb.—73-11329
**Turner, G. W.; Isles, A. J.**
Measurement of reflection high-energy electron diffraction oscillations during molecular beam epitaxial growth of GaAs on a rotating substrate.—73-07663
**Turner, K. F.** See Bergman, L.
**Turner, L. G.** See Mogro-Campero, A.
**Turner, P. S.** See Zhao, Ru-Peng
**Turner, S. P.; Taylor, R.; Gordon, F. H.; Clyne, T. W.**
Thermal conductivities of Ti-SiC and Ti-$TiB_2$ particulate composites.—73-06864
**Turner, Warren** See Gibbs, W. B.
**Turnovszky, Stephan** See Mevec, Gernot
**Turov, E. A.**
Acoustics of magnetoelectric antiferromagnetics: rhombohedral crystals.—73-11645
**Turova, N. Ya.** See Yanovskaya, M. I.
**Turrillas, Xavier** See Rashid, S.; Steiner, Hermann J.
**Turrillas, Xavier; Barnes, Paul; Dent, Andrew J.; Jones, S. L.; Norman, C. J.**
Hydroxide precursor to zirconia: extended X-ray absorption fine structure study.—73-05416
**Turunen, Aimo; Nappa, Pauli**
Ceramic duplex filter.—73-01045
**Tuson, G. B.** See Kobayashi, H.
**Tuson, G. B.; Higdon, Ray; Moore, Doug**
How 100% oxygen firing impacts regenerative melters.—73-12224
**Tuson, G. B.; Kobayashi, H.; Lauwers, E.**
Industrial experience with oxyfuel-fired glass melters.—73-15880
**Tussen, M. B.** See Krylov, V. N.
**Tutov, A. G.; Plakhtii, V. P.; Usov, O. A.**
Neutron diffraction refinement of structure of nonlinear optical crystal of $Cs_2UO_2Cl_4$.—73-01755
**Tuttle, B. A.** See Pan, Wu-Yi
**Tuttle, Bruce A.** See Seager, C. H.; Warren, W. L.
**Tuttle, J. R.** See Nelson, Arthur J.
**Tuttle, John R.** See Shapiro, Findley R.
**Tuttle, Mark E.**
Electroplating process for enhancing the conformality of titanium and titanium nitride films in the manufacture of integrated circuits and structures produced thereby.—73-12077
**Tuzemen, S.; Brozel, M. R.; Breivik, L.**
Relationship between near-band-edge absorption and photoluminescence efficiency in semiinsulating GaAs.—73-15144
**Tuzhikov, A. A.**
Rational use of propellor mixers.—73-01828
**Tuzzolo, M. R.** See Shelby, J. E.
**Tvardovskii, I. A.** See Prokopovich, I. E.
**Tvardovsky, V. V.** See Glushko, V. I.
**Tverskaya, K. B.** See Gladush, V. M.
**Twait, Douglas J.** See Stillwagon, Thomas L.
**Twanciw, Janusz** See Gustaw, Krystyna
**Twardowski, A.** See Krevet, R.; Mac, W.; Vu, T. Q.
**Twardowski, A.; Heiman, D.; Shapira, Y.; Vu, T. Q.; Demianiuk, M.**
Raman spectroscopy in $Cd_{1-x}Fe_xS$—iron energy levels and spin-flip Raman scattering.—73-08718
**Tweed, B.** See Bulat, E. S.
**Tweed, J. D.; McDowell, J. C.; Brown, N. M.**
Synthesis of bismuth-based superconductors using poly(acrylic acid).—73-08237
**Tweedy, J.** See Baird, Thomas
**Twigg, M. E.** See Giodana, A.; Kyono, C. S.; Thompson, Philip E.; Zvanut, M. E.
**Twigg, Peter C.; Page, Trevor F.**
Temperature-variant hardness response of duplex TBC's [thermal barrier coatings].—73-12886
**Tyagulski, I. P.** See Gomeniuk, Yu. V.
**Tyan, Y. L.; Schimert, T. R.; Claiborne, Lewis T.**
Excess carrier lifetime in *p*-type HgCdTe [analyzed] using a three-level Shockley-Read model.—73-07514
**Tyc, Stephane**
Technological state of the art of SiC.—73-15974
**Tye, R. P.**
Methods for reliable measurements of thermal transport properties of ceramic matrix composites.—73-08413
**Tyliszczak, T.** See Aebi, P.; Denes, G.
**Tylyaganov, D.; Aripova, M.**
Bioactive glass-ceramic containing anothite and diopside crystals.—73-13929
**Tyminski, J. K.** See Scripsick, M. P.
**Tyree, Charles B., Jr.** See Rose, Malcolm F., Jr.
**Tyrer, E.**
Oxygen activity measurements in different production glasses.—73-00676
**Tyschenko, I. V.** See Kachurin, G. A.
**Tyshetskaya, A. V.** See Gubarevich, T. M.
**Tysoe, W. T.** See Soto, C.
**Tyszblat, Michele**
Process for the preparation of a dental prosthesis and the prosthesis produced by said process.—73-03962
**Tyurin, A. V.** See Burlak, A. V.
**Tyuterev, V. G.** See Davarashvili, O. I.
**Tyutikov, A. M.** See Shakhmin, A. L.
**Tyutikov, A. M.; Shakhmin, A. L.**
Secondary electron emission from lead silicate glasses from the point of plasmon theory of emission.—73-14080
**Tyzhikov, A. A.**
Rational use of propeller mixers.—73-01827
**Tzang, W.-L.** See Kuo, P.-C.
**Tzeng, Chin-Ching** See Lue, Juh-Tzeng
**Tzeng, J.-M.; Duh, J.-G.; Chung, K.-H.; Chan, C.-C.**
$Al_2O_3$- and $ZrO_2$-modified dental glass-ceramics.—73-14316
**Tzirlina, T. M.** See Kozyukhin, S. A.
**Ubilla, M.** See Urrutia, C.
**Uchida, H.** See Yajima, T.
**Uchida, K.** See Hiraga, H.
**Uchida, Kiyohiko** See Kuninishi, Kenji; Nukui, Hideki
**Uchida, Kiyohiko; Fukubayashi, Yukio; Yamashita, Suminari**
Properties of special cement [with] adjusted particle size distribution.—73-06706
**Uchida, Kunio** See Ohtake, Takeshi
**Uchida, Masaru; Tanaka, Yoshihiro; Takada, Tomonori**
Method of calibration test for measuring density by RI gage.—73-12165
**Uchida, Masashi** See Yoshinari, Takeshi
**Uchida, N.** See Kanbara, Kunihiko; Miyashita, Masayori
**Uchida, Nozomu** See Kim, Jin-Young; Tanaka, Hiroshi; Uematsu, Keizo; Zhang, Yao
**Uchida, S.** See Nanbu, K.
**Uchida, Shinichi** See Ito, T.; Tamasaku, K.
**Uchida, Shinichi**
Recent progress in high-$T_c$ superconductor research: unique and novel metallic state in doped $CuO_2$ plane.—73-15609
**Uchida, Shunichiro** See Shirasaka, Tokuhiko
**Uchida, Shunichiro; Hanehara, Shunsuke; Sawaki, Daisuke; Shirasaka, Tokuhiko; Arai, Yasuo**
Characteristics of hydrated alite in hardened cement body.—73-00034; 73-09847
**Uchida, Susumu** See Koyama, Takashi
**Uchida, T.** See Inaguma, Yoshiyuki
**Uchida, Takashi; Miyamoto, Tomoyuki; Yokouchi, Noriyuki; Inaba, Y.; Koyama, F.; Iga, K.**
CBE-grown 1.5-μm GaInAsP-InP surface-emitting lasers.—73-14793
**Uchida, Y.** See Kanke, Y.
**Uchida, Yasutaka** See Ishihara, Ryoichi
**Uchijima, T.** See Imai, F.
**Uchikawa, Fumihiro** See Sekiba, Toru
**Uchikawa, Fusaoki** See Kobayashi, Toshio; Umemura, Toshio
**Uchikawa, Hiroshi** See Gartner, E. M.; Hanehara, Shunsuke
**Uchikawa, Hiroshi; Hanehara, Shunsuke; Shirasaka, Tokuhiko; Hashimoto, Seiichi**
Influence of burning atmosphere on distribution of minor and trace element in clinker and formation of brown color clinker.—73-10005
**Uchikawa, Hiroshi; Hanehara, Shunsuke; Shirasaka, Tokuhiko; Sawaki, Daisuke**
Effect of admixture on hydration of cement, adsorptive behavior of admixture, and fluidity and setting of fresh cement paste.—73-09897
**Uchikawa, Hiroshi; Hanehara, Shunsuke; Shirasaka, Tokuhiko**
Relationship between zonal structure in alite, lamellar texture in belite, and their production process, composition, and crystal structure.—73-10137
**Uchikawa, Hiroshi**
Characterization and material design of high-strength concrete with superior workability.—73-09848; Present problems in cement manufacturing.—73-10093
**Uchikoba, Fumio; Sawamura, Kentaro**
Domain structure in excess-$WO_3$ lead complex perovskite.—73-07301
**Uchimura, Hiroshi** See Kokaji, Akira; Ono, Takashi
**Uchimura, Hiroshi; Kokaji, Akira; Kaji, Masaki**
Evaluation and simulation of thermal shock behavior by liquid solder quenching.—73-05560
**Uchimura, Hiroshi**
Evaluation of Weibull modulus by Weibull plane.—73-17312
**Uchino, Kenji** See Oh, Ki-Young; Suzuki, Yoji; Takahashi, Sadayuki
**Uchino, Kenji; Lee, Nam-Yang; Toba, Tamaki; Usuki, Narikazu; Aburatani, Hideaki; Ito, Yukio**
Changes in the crystal structure of rf magnetron-sputtered $BaTiO_3$ thin films.—73-02158; 73-12546
**Uchino, Kenji; Suzuki, Shuichiro**
Speakers utilizing semiconductive piezoelectric monomorph devices.—73-01431; 73-11616
**Uchino, Kenji**
Applications of piezoelectrics in smart actuators.—73-04538; Relaxor ferroelectrics.—73-01430
**Uchinokura, K.** See Hase, M.
**Uchiyama, Yasuo** See Kobayashi, Kazuo
**Uchiyama, Yasuo; Sahara, Kyozo; Cheng, Hui-Ming; Kobayashi, Kazuo; Wada, Shigetaka; Makino, Hiroaki**
Microstructure of silicon nitride ceramics and morphology of surface damage induced by round indenter.—73-17172
**Ucun, F.; Koksal, F.; Tapramaz, R.**
ESR linewidths of hydrated $Cu^{2+}$ in zeolites.—73-05396
**Uda, Masahiro** See Atarashiya, Koji
**Udachkin, J. B.**
Blended cements.—73-09833
**Udagawa, Masayuki** See Ogita, Norio
**Udagawa, Masayuki; Nagaoka, Yoshinori; Ogita, Norio; Ohbayashi, K.; Jonkou, T.**
Phonon Raman scattering study of $Nd_{2-x}Ce_xCuO_4$.—73-05457
**Udal'tsova, T. I.** See Mozhaev, A. P.
**Udayakumar, K. R.** See Kushida, Keiko
**Udovenko, A. A.** See Eiberman, M. F.
**Udovenko, A. A.; Eiberman, M. F.; Davidovich, R. L.**
X-ray structural study of consecutive phase transitions in potassium pentafluoroantimonate(III) in the 323–98 K range: II, Crystal structure.—73-16398
**Udovenko, A. A.; Eiberman, M. F.; Ivanov, S. B.; Levin, A. N.; Sergienko, S. S.**
X-ray structural study of consecutive phase transitions in potassium pentafluoroantimonate(III) in the 323–98 K range: I, Dynamics, symmetry, and lattice parameters.—73-16397
**Uebbing, B.** See Frohlich, D.
**Uechi, Yasushi** See Honda, Kinya
**Ueda, A.** See McKinley, J. T.
**Ueda, Eiji** See Tanaka, Shukichi
**Ueda, Fumihiro; Tazima, Itsurou; Yageta, Masayuki**
Cubic boron nitride-base sintered ceramics for cutting tool.—73-15988
**Ueda, Fumito** See Yamaguchi, Toshinao
**Ueda, Hiroshi** See Katsuyama, Shigeru; Suzuki, Kazuo
**Ueda, Hisao** See Matsuki, Ryuichi; Niihara, Koichi
**Ueda, Kazushige** See Kim, Bok-Hee; Omata, T.
**Ueda, Kunihiro; Ikebe, Masaru; Sasaki, Morimasa**
Protective film on sliding members and method of forming [the] same.—73-10344
**Ueda, M.** See Hasegawa, Akihiro
**Ueda, Masahiko** See Nagata, Norifumi
**Ueda, Masami** See Inoue, Takanori
**Ueda, Midori; Shimada, Shiro; Inagaki, Michio**
Synthesis of crystalline zinc ferrite near room temperature.—73-17037
**Ueda, Mitsuru; Iida, Takamichi; Asada, Hiroki**
Permeability of molten Cu or Ni into the calcium oxide refractory.—73-10753
**Ueda, Mituru** See Tashiro, Chuichi
**Ueda, N.** See Omata, T.
**Ueda, S.** See De Man, A. J. M.; Wakamatsu, Yoshio
**Ueda, Shinjiro** See Takahashi, Kazue
**Ueda, Takashi** See Sugita, Takaaki
**Ueda, Yoshinobu** See Shimokawa, Katsuyoshi
**Uehara, Kaneo** See Sasaki, Yasuhiro
**Uehara, Kaneo; Inoue, Takeshi; Iwamoto, Akio; Ohnishi, Osamu; Sasaki, Yasuhiro**
Piezoelectric ceramic transformer.—73-11637
**Uehara, Masashi** See Shibaoka, Kazuo
**Uehara, Miho; Tanahashi, Masakazu**
Distribution of electric resistance of dielectric semiconductive ceramics.—73-01130; Characterization of insulating boundary layers of BL capacitors.—73-07287; 73-14682
**Uekawa, N.** See Kanezo, Katsumi
**Uekawa, N.; Suzuki, T.; Ozeki, S.; Kaneko, K.**
Rectification effect by a *p-n* junctioned oxide film.—73-16584
**Ueki, Masanori** See Asada, S.; Mishima, Masaaki; Ono, Toru; Sato, Yutaka; Shimpo, Akihiro; Walls, P. A.
**Ueki, Mitsuo** See Kinoshita, Satoshi
**Ueki, Mitsuo**
Relation between microstructures and cutting performance of titanium-carbide-based cermet containing nitrogen.—73-06850
**Ueki, Yasutomo** See Tashiro, Chuiti; Goto, Seishi
**Uekusa, Shinichiro** See Higuchi, Masatoshi; Majima, A.
**Uekusa, Shinichiro; Majima, A.; Katsumata, H.; Noyori, Y.; Kumagai, Masao**
Optical activity of $Yb^{3+}$ in MeV ion-implanted InP.—73-04425

**Uematsu, Keizo** See Kanbara, Kunihiko; Kato, Zenji; Kim, Jin-Young; Miyahara, Nobuyuki; Miyashita, Masayori; Yabuta, Kazuya; Zhang, Yao

**Uematsu, Keizo; Tanaka, Hiroshi; Zhang, Yao; Uchida, Nozomu**
Liquid immersion-polarized light microscopy as a powerful tool in the research of ceramic processing.—73-15812

**Uematsu, T.** See Suzuki, K.

**Uematsu, T.; Suzuki, K.; Wu, M. H.; Suzuki, K.; Imanaka, O.**
Efficient mechanochemical polishing for silicon nitride ceramics.—73-04913

**Uemoto, Tsutomu; Kamata, Atsushi; Fujimoto, Hidetoshi; Mitsuhashi, Hiroshi**
Optical semiconductor device.—73-11537

**Uemura, Hiroshi**
Surface processing of glass substrates for flat displays.—73-03892

**Uemura, Ryuzo; Nishide, Toshikazu; Nakamura, Ichiro**
Method of forming water-repellent metal oxide film coated on glass substrate.—73-05230

**Ueno, Akira** See Hayashi, Shigeo; Kishimoto, Hidehiro

**Ueno, Akira; Kishimoto, Hidehiro; Kawamoto, Hiroshi**
Effects of crack size on crack propagation behavior and experimental verification of cyclic fatigue mechanism of sintered silicon nitride.—73-06392; 73-13498

**Ueno, Fumio** See Kasori, Mitsuo

**Ueno, Iwao; Wakahata, Yasuo; Kobayashi, Kimio; Okamoto, Kaori; Takami, Akihiro**
Ceramic capacitor with a grain-boundary-insulated structure.—73-04189

**Ueno, Kazuo** See Nowak, P.

**Ueno, Kazuo; Kose, S.; Kinoshita, M.**
Toughness enhancement by polycarbosilane coating on SiC whiskers incorporated in $Si_3N_4$ matrix composite.—73-17450

**Ueno, Kazuo; Sodeoka, Satoshi; Hirooka, Jun**
Influence of sintering conditions on the mechanical properties of SiC whisker/$Si_3N_4$ ceramic composite.—73-05873; 73-13101

**Ueno, Masayuki; Tanaka, Satoshi; Shimoyama, Yoshihide**
Adiabatic temperature rise of low-heat cement using ground granulated blast-furnace slag and fly ash.—73-09806

**Ueno, Yasushi; Nakayama, Akinori; Nakamura, Kazutaka; Yoneda, Yasunobu; Sakabe, Yukio; Ushiro, Tomoaki**
Chip type varistor.—73-15235

**Ueno, Yoshiyasu; Fujii, Hiroyuki; Sawano, H.; Kobayashi, Kenichi; Hara, K.; Gomyo, A.**
30-mW 690-nm high-power strained quantum well AlGaInP laser.—73-15208

**Uesugi, Shinpei; Ohtsu, Masayasu**
Damage evaluation of concrete in freezing and thawing process via spectral response of transverse elastic wave.—73-09879

**Ueta, Yoshihiro; Wada, Naoki; Sakai, Shiro; Shintani, Y.**
Growth mechanisms of AlGaAs on terraced substrates by low-pressure MOVPE.—73-14949

**Ueyama, Tamotsu** See Yamamoto, Takashi; Yamanaka, Seiji

**Ugliengo, P.** See Bolis, Vera; Fubini, Bice

**Ugrin, Yu. O.** See Sheregii, E. M.

**Uguina, M. Angeles** See De Lucas, Antonio

**Uguina, M. Angeles; Sotelo, J. L.; Serrano, D. P.**
Toluene disproportionation over ZSM-5 zeolite: effects of crystal size, silicon-to-aluminum ratio, activation method, and pelletization.—73-03065

**Uher, C.** See Richardson, R. A.

**Uhlherr, Alfred; MacFarlane, Douglas R.**
Systematic survey of experimental and simulated glass formation for the $ZrF_4$-$BaF_2$-NaF system.—73-06977

**Uhlig, D.; Goell, Gert; Harzt, Torsten**
Dry preparation of substandard raw materials.—73-03998

**Uhlig, S.**
Advances of boron analysis in glass and ceramics.—73-00303

**Uhlmann, Donald R.** See Aruchamy, A.; Denesuk, M.; Kim, Seong-Jin

**Uhlmann, Donald R.; Teowee, G.; Boulton, J. M.**
Electrical and optical properties of chemically derived ferroelectric films.—73-11571

**Uhrig, Jurgen**
Corrosion protection and lubrication during forming of sheet steel.—73-10211

**Uhrmacher, M.** See Wiarda, D.

**Uimin, G.**
Why the chain fragments in ortho-II and ortho-III phases of YBCO might be confined.—73-15668

**Uji, S.** See Matsushita, A.

**Ujihara, Kikuo** See Okamoto, Keiichi

**Ukhanov, Yu. I.** See Zaretskii, Yu. G.

**Ukolov, A. T.** See Gorev, N. B.

**Ukraintsev, V. A.** See Bakhirkin, Yu. A.

**Ukyo, Yoshio** See Suda, Akihiko; Sugiyama, Naohiro

**Ukyo, Yoshio; Kandori, Toshio; Wada, Shigetaka**
$Si_3N_4$-SiC composite consolidated by post-HIPing process.—73-16981

**Ukyo, Yoshio; Wada, Shigetaka**
α′/β′ SiAlON composites.—73-02144

**Ul'yanov, A. N.** See Bykov, A. M.

**Ul'yanov, V. L.; Chernov, I. P.; Botaki, A. A.**
Acoustic emission investigations of structural changes in tungsten carbide metal-ceramics during thermal and radiation treatment and hydrogenation.—73-06735

**Ul'yashin, A. G.** See Bumai, Yu. A.

**Ulanov, V. A.** See Ibragimov, I. R.

**Ulbrich, R. G.** See Wenderoth, M.

**Ulion, Nicholas E.; Anderson, Neal P.**
Advanced thermal barrier coated superalloy components.—73-03669

**Ulitina, Y. I.** See Roginskaya, Yu. E.

**Ulitzka, S.; Harich, H.**
Nondestructive testing of refractories in the glass industry.—73-01922

**Ullmaier, H.** See Crucenau, E.

**Ullmann, J.; Falke, U.; Scharff, W.; Schroer, A.; Wolf, G. K.**
Noble gas ion-assisted evaporation of carbon.—73-16882

**Ullmann, J.; Schmidt, G.; Scharff, W.**
Diamondlike amorphous carbon films prepared by rf sputtering in argon.—73-09071

**Ullmann, J.; Schulze, S.; Erben, J.; Grunewald, W.; Heger, D.; Muhling, I.**
Diamondlike amorphous carbon films prepared by rf sputtering in argon: electron-assisted investigations.—73-12987

**Ulliner, Kh.** See Baikova, L. G.

**Ullrich, Bernd** See Valtin, H. J.

**Ullrich, Bernd; Gensel, Karin**
Influence of material composition on rheological properties of clay/water suspensions.—73-02870

**Ullrich, Bernd**
Mineralogical investigation of raw materials from the Tan Mai pyrophyllite deposit in Vietnam.—73-01987

**Ullrich, Bruno; Kulac, Ibrahim; Pint, Harald**
Photoelectronic properties of $YBa_2Cu_3O_6$.—73-15581

**Ulmanis, U.** See Mironova, N.

**Ulmer, G. C.** See Burkhard, D. J. M.

**Ulrich, R. K.** See Ang, S. S.

**Ulrich, Richard K.; Zhao, Gang-Kai**
New apparatus for measuring the ultimate strain of thin films.—73-05071

**Ulukhanov, I. T.** See Knab, G. G.; Konstantinova, A. F.; Krivandina, E. A.

**Ulyanov, A. N.** See Grishin, A. M.

**Um, Woo-Sik; Kim, Duk-Hee; Kim, Ho-Gi**
Influence of oxygen deficiency on electrical properties in the superconductor (Bi, Pb)$_2$Sr$_2$Ca$_2$Cu$_3$O$_x$ phase.—73-15514

**Uma, Seetharaman; Raju, A. R.; Gopalakrishnan, J.**
Bridging the Ruddlesden-Popper and the Dion-Jacobson series of layered perovskites: synthesis of layered oxides, $A_{2-x}La_2Ti_{3-x}Nb_xO_{10}$ (A=K, Rb), exhibiting ion exchange.—73-08557

**Uma, Seetharaman; Sarkar, T.; Seshasayee, M.; Rangarajan, G.; Rao, C. R. V.; Subramanian, C.**
Structural and crystal field studies on a single crystal of $PrBa_2Cu_3O_{7-\delta}$.—73-15631

**Umarji, A. M.** See Senbhagaraman, S.

**Umarov, A. V.** See Magrupov, M. A.

**Umarov, A. V.; Magrupov, M. A.; Makhmudov, R. Kh.**
Frequency dependence of conductivity of glass- and ruthenium-oxide-based resistive composition.—73-14192

**Umbach, C. C.; Keeffe, M. E.; Blakely, J. M.**
Scanning tunneling microscopy of one-dimensional periodic corrugated silicon surfaces.—73-03191

**Umebayashi, Seiki** See Kishi, Kazushi

**Umeda, M.** See Yamasaki, H.

**Umegaki, Takao** See Matsuda, Motohide; Wada, Norio; Yamashita, Kimihiro

**Umegaki, Takao; Asakai, Kenichi; Nagasaki, Takashi**
Crystal growth of apatite on seeds of calcium salts.—73-12559

**Umegaki, Takeo** See Yamashita, Kimihiro

**Umegaki, Takeo; Kakuta, T.; Yamashita, Kimihiro**
Development of $Na^+$ superionic conductors using new rare-earth silicophosphate materials by means of glass-ceramic processing.—73-14689

**Umekawa, Sokichi** See Nishiyama, Katsuhiro

**Umeki, Takashi** See Kasatani, Hirofumi

**Umekuni, Akira** See Ishigami, Shinobu

**Umemoto, Koichi** See Ushikoshi, Ryusuke

**Umemura, Toshio; Matsuno, Shigeru; Kinouchi, Shinichi; Egawa, Kunihiko; Miyashita, Shoji; Uchikawa, Fusaoki**
$YBa_2Cu_3O_7$ growth on metal substrates with $SrTiO_3$ buffer layer by metallorganic chemical vapor deposition.—73-11944

**Umeno, Masayoshi** See Wu, Albert T.

**Umesaki, N.; Takahashi, M.; Tatsumisago, Masahiro; Minami, T.**
Structure of rapidly quenched glasses in the system $Li_2O$-$SiO_2$.—73-06975

**Umesaki, N.; Tanaka, Isao; Hirosaki, Naoto; Hirao, Kazuyuki**
Structure of amorphous silicon nitride.—73-16334

**Umetani, Makoto** See Monji, Hideto

**Umetani, Yukihiro** See Kawamoto, Y.

**Umeya, Kaoru**
Rheological studies on slurry materials—on the hardening and softening properties of suspending materials.—73-16975

**Umeya, Kazumasa** See Wang, Da-Yu

**Umlauf, E.** See Buhler, M.

**Umlor, M. T.; Keeble, D. J.; Cook, P. W.; Asoka-Kumar, P.; Lynn, K. G.**
Variable energy positron beam characterization of defects in as-grown and annealed low-temperature-grown GaAs.—73-15224

**Umyskov, A. F.** See Breguet, J.

**Unal, Ozer** See Cawley, James D.

**Unal, Ozer; Cawley, James D.; Lagerlof, K. Peter D.; Prybyla, S.**
Intermittent carbon coatings for application in ceramic matrix composites.—73-08533

**Unal, Ozer; Lagerlof, K. Peter D.**
Hot-grip tensile method for alumina-fiber testing.—73-01903; Tensile properties of alumina fibers using hot-grips.—73-17443

**Unal, Ozer; Mitchell, Terence E.; Heuer, Arthur H.**
Microstructures of $Y_2O_3$-stabilized $ZrO_2$ electron beam–physical vapor deposition coatings on Ni-base superalloys.—73-09491

**Underhill, Douglas E.**
Turnkey ceramic plants for developing countries.—73-04051

**Underwood, William A.; Tracey, W. John**
How encapsulation controls drilling in tank bottoms.—73-10736

**Undusk, E. P.** See Pankratova, O. Yu.

**Ungan, Aydin; Payli, Resat U.; Balkanli, Batu**
Numerical model of polydispersed silica grain dissolution in glass-melting furnaces.—73-10570

**Ungar, P. J.; Takai, T.; Halicioglu, T.; Tiller, W. A.**
Point defect structures and energetics in Si using an empirical potential.—73-06172

**Unger, Brita; Popp, Peter; Schade, U.; Hahnert, M.**
Reaction kinetics of $SiO_2$ and ZnO-$SiO_2$ sol-gel solutions.—73-07168; Zinc solid sources for $A^{III}B^{V}$ semiconductors via the sol-gel route.—73-15234

**Unger, K. K.** See Grebner, M. D.

**Unger, Peter; Bona, Gian-Luca; Germann, Ronald; Roentgen, P.; Webb, D. J.**
Low-threshold-strained GaInP quantum well ridge lasers with AlGaAs cladding layers.—73-11301

**Ungier, L.** See Mokler, S. M.

**Unikovsky, A.** See Nemirovsky, Y.

**Unno, Hiroshi** See Tsurumi, Takaaki

**Uno, Naoki** See Shiga, Shoji

**Uno, Takashi**
Glass-melting furnace with flexible melting capacity.—73-01955

**Uno, Takehiko** See Shintaku, Toshihiro

**Uno, Tomoko; Kasuga, Tomoko; Nakayama, Shin; Ikushima, A. J.**
Nanocomposite machinable glass-ceramics.—73-14434

**Uno, Tomoko; Kasuga, Toshihiro; Nakayama, Shin**
Mechanical properties of barium-mica-containing glass-ceramics.—73-00513; 73-10453; Preparation of high-strength calcium-mica-containing machinable glass-ceramics.—73-00684; 73-10582

**Unruh, K. M.** See Waite, M. M.

**Unruh, W. P.** See Vogt, G. J.

**Unuma, Hidero; Maekawa, Hideki; Kiyono, Hajime; Kawamura, K.; Maekawa, T.; Yokokawa, T.**
$^{29}$Si MAS NMR of Na-Si-O-N oxynitride glasses.—73-03756; 73-10399

**Unwin, G.** See Gelder, D.

**Uo, Motohiro; Makishima, Akio**
Preparation and application of porous glass.—73-10573

**Uo, Motohiro; Numata, Masahiko; Suzuki, Masayasu; Tamiya, E.; Karube, I.; Makishima, A.**
Preparation and properties of immobilized mercuric reductase in porous glass carriers.—73-10393; 73-03866

**Uo, Motohiro; Yamashika, Yujiro; Morita, Kazuki; Karube, I.; Makishima, Akio**
Phase separation of halogen-containing sodium borosilicate glasses.—73-00388; 73-10392

**Uo, Motohiro; Yamashita, Kyoko; Suzuki, Masayasu; Tamiya, E.; Karube, I.; Makishima, Akio**
Immobilization of yeast cells in porous silica carrier with sol-gel process.—73-05852; 73-10551

**Uomi, Kazuhisa; Aoki, Masahiro; Tsuchiya, Tomonobu; Takai, A.**
Dependence of high-speed properties on the number of quantum wells in 1.5-μm InGaAs-InGaAsP MQW L14-shifted lasers.—73-14828

**Uomoto, Taketo** See Furusawa, Yasuhiko

**Uozumi, T.** See Beaurepaire, E.

**Upadhyay, P. L.; Rao, S. V. M.; Nagpal, K. C.**
Microstructures and the role of Pb in doped Bi-Sr-Ca-Cu-O superconductor.—73-04773

**Upadhyay, R. V.** See Patil, H. D.

**Upadhyaya, D. D.; Dalvi, P. Y.; Dey, G. K.**
Processing and properties of Y-TZP/$Al_2O_3$ composites.—73-16951

**Upadhyaya, G. S.** See Bhaumik, S. K.

**Ura, Akira** See Kani, Akira

**Urabe, K.** See Kitao, M.

**Urabe, Kazuyori** See Horikawa, Takeshi; Nishida, Toshihiko

**Urabe, S.** See Watanabe, W.

**Uraltsev, I. N.** See Pozina, G. R.

**Uramoto, J.** See Takahashi, Y.

**Urano, Shinji** See Tsuji, Yukikazu

**Urashima, Kazuhiro** See Niwa, Tomonori

**Urashima, Kazuhiro; Tajima, Yo; Watanabe, Masakazu**
*R*-curve and fatigue behavior of gas-pressure-sintered silicon nitride.—73-06504

**Urazbaeva, K. T.** See Alekseeva, G. T.

**Urban, F. K., III; Tabet, M. F.**
Virtual interface method for in situ ellipsometry of films grown on unknown substrates.—73-09385

**Urban, I.** See Beck, Uwe

**Urban, K.** See Ebert, P.; Klein, N.

**Urbaniak, W.** See Foltynowicz, Z. A.

**Urbonavichyus, V.** See Mizeris, R.

**Uren, M. J.** See Cobden, D. H.

**Urisu, T.** See Akazawa, H.; Takahashi, Junichi

**Urland, W.** See Tietz, F.

**Urmanov, N. A.; Gafurova, M. V.**
Anomalous doublet peaks in the current spectra of a *p-n* structure, which are linked with one type of deep states.—73-11070

**Urmanov, N. A.; Stepanova, M. N.**
Isothermal and thermally stimulated relaxation of the current and capacitance in a weakly asymmetric *p-n* junction with an inhomogeneous doping profile in the *n*- and *p*-type regions.—73-11288

**Urmanov, N. A.**
Nonmonotonic isothermal relaxation of the current in an *n-π-p* structure associated with a reversal of the electric field.—73-01261; Temperature dependence of the impedance of a diode with an inhomogeneous base made of an overcompensated semiconductor.—73-01344

**Urquhart, Andrew W.** See Kennedy, Christopher R.; Lesher, H. D.; Luszcz, Stanley J.; Newkirk, Marc S.

**Urrutia, C.; Ubilla, M.; Bobadilla, M.**
Activity and properties of pozzolan used in blended cements.—73-06622

**Ursaki, V. V.** See Radautsan, S. I.

**Ursic, Thomas A.**
High-pressure fluid jet orifice made of oxygen-enhanced sapphire and process for making [the] same.—73-12470
**Ursu, I.** See Mihailescu, I. N.
**Urusov, V. S.** See Dudnikova, V. B.
**Urusovskaya, I. B.** See Stepanov, S. A.
**Urusovskaya, I. B.; Smirnova, E. V.; Stepanov, S. A.**
Effect of rubidium and cesium fluorides on the structure and properties of phosphate glasses.—73-00462
**Urusovskaya, L. N.** See Plutalov, N. Yu.
**Usacheva, T. A.** See Malkovich, R. Sh.
**Usacheva, V. P.** See Gafarov, S. F.
**Usami, Hatsuhiko** See Mizuno, Mineo
**Usami, Kouichi** See Kobayashi, Tadayuki
**Usami, N.** See Fukatsu, Sumusu
**Usatikov, I. F.** See Gal'chenko, T. G.
**Ushakov, S. N.** See Voronko, Yu. K.
**Ushakov, V. M.** See Borisova, N. V.
**Ushakov, V. M.; Borisova, N. V.; Shul'ts, M. M.**
Connection between the thermal capacity and the structure of alkali borate systems in the glassy, crystalline, and liquid states.—73-00442; Interrelation of change of heat content and structure of alkali borate systems in vitreous, crystalline, and liquid states.—73-02307
**Ushakov, V. V.** See Gukasyan, A. M.
**Ushakova, T. G; Usvyatsova, A. G.; Safonova, A. A.**
Chemical analysis of strontium lanthanum manganite.—73-05027
**Ushanev, A. T.** See Zlenko, V. Ya.
**Usher, Sarah** See Gregory, A.
**Ushida, Takahisa; Higashiyama, Kazutoshi; Hirabayashi, Izumi; Tanaka, Shoji**
Laser-assisted CVD process forming oxide superconducting films.—73-11959
**Ushikoshi, Ryusuke; Nobori, Kazuhiro; Niori, Yusuke; Umemoto, Koichi; Kobayashi, Hiromichi; Honda, Toshihiko**
Corrosion-resistant member for chemical apparatus using halogen series corrosive gas.—73-12359
**Ushio, Hideki; Kamimura, Hiroshi**
Superconducting properties of $La_{2-x}Sr_xCuO_4$ within the framework of the phonon-mediated pairing mechanism.—73-08220
**Ushio, M.**
In situ observation of crystallization from a superconductor melt of composition $Bi_{1.5}Sb_{0.1}Sr_2Ca_2Cu_3O_8$.—73-08102
**Ushio, Yoshijiro; Miyayama, Masaru; Yanagida, Hiroaki**
Gas detection utilizing the interface of a CuO/ZnO thin film.—73-01174
**Ushiro, Tomoaki** See Ueno, Yasushi
**Uskokovic, D.** See Milosavljevic, Z.; Milosevic, O.
**Usmanov, T.** See Ametov, S. A.
**Usol'tseva, T. I.** See Kabun, V. Ya.; Lukiyanchuk, G. D.; Merkulov, E. B.
**Usov, O. A.** See Tutov, A. G.
**Ust'yantsev, V. M.; Trenikova, M. G.; Gaikin, Yu. M.**
Phase formation during heating of brucite.—73-16253
**Ustichenko, V. A.; Pitak, N. V.**
Refractories based on fused materials of mullite composition.—73-04015
**Ustichenko, V. A.; Primachenko, V. V.; Zadorozhnaya, T. A.**
Fireclay refractories for service in reducing conditions.—73-00816
**Ustinov, V. M.** See Mintairov, A. M.
**Ustundag, E.** See Subramanian, Ramesh
**Ustundag, E.; Subramanian, Ramesh; Vaia, R.; Dieckmann, Rudiger; Sass, S. L.**
In situ formation of metal-ceramic microstructures, including metal-ceramic composites, using reduction reactions.—73-03599
**Usui, Akira** See Nishi, Kenichi
**Usui, Hirosi** See Manabe, Tsuneo
**Usui, Kazushi** See Fujikawa, Takashi
**Usuki, H.** See Narutaki, N.
**Usuki, Narikazu** See Uchino, Kenji
**Usuki, Tatsuro** See Iyori, Masahiro; Kamino, Maruo
**Usui, Toshio** See Kamei, Masayuki
**Usvyatsova, A. G.** See Ushakova, T. G
**Utaka, Katsuyuki** See Horita, Masayoshi
**Utenko, V.** See Iodkazis, S.
**Utenkov, A. F.; Kornienko, A. B.; Letov, A. N.**
Small high-temperature tunnel kiln with an injector system of firing.—73-01970
**Utigard, T. A.** See Makyta, M.
**Utsumi, Kazuaki** See Mori, Toru
**Utsumi, W.** See Yagi, T.
**Utsumi, Yuichi** See Akazawa, H.; Takahashi, Junichi
**Utsuno, Futoshi** See Yasui, Itaru
**Utsuno, Futoshi**
Utilization of Ceramic Abstracts CD-ROM version.—73-09758
**Uusimaki, Antti** See Zhang, Hong-Xue
**Uvarova, S. Kh.** See D'yachenko, S. S.
**Uwai, Kunihiko**
Sequential self-limiting growth of CuO on MgO(100) by chemical vapor deposition.—73-03001
**Uwamino, Yoshinori** See Tsuge, Akira
**Uwasawa, K.; Ishihara, F.; Matsumoto, S.**
ArF excimer laser chemical vapor deposition a-Si:H/a-$Al_2O_{1-x}$ superlattices.—73-12922
**Uwe, Hiromoto** See Iwamatsu, Takayuki; Kim, Hyun-Tak
**Uwins, Philippa J. R.** See Mackinnon, Ian D. R.
**Uyama, Haruo** See Aoyama, Kazuhiro
**Uzaki, Nobuyuki; Ishii, Hiroaki; Aratani, Kohryu; Oguchi, Yukio; Kawakami, Tatsuo**
High corrosion-resistant magnesite chrome refractories for RH degassing lower vessel.—73-00818
**Uzberg, L. V.; Gimpel'man, E. Ya.; Myakisheva, N. A.; Kurilova, L. Ya.; Vydrina, Zh. A.; Visloguzova, E. A.**
Gas-permeable forsterite refractories.—73-00817
**Uzumaki, Takuya** See Yokoyama, Hiromitsu
**Vabre, P.** See Montgomery, P. C.
**Vaca, Humberto**
Why a preventive/corrective furnace maintenance program is important.—73-15761
**Vacek, Milan; Cesakova, Emilie**
Influence of forming and surface treatment of products of lead crystal glass on lead leaching.—73-14207
**Vadyalal, V.** See Rajasree, K.
**Vagaggini, E.** See Evans, Anthony G.
**Vagnon, M.** See Frunza, Ligia
**Vagin, S. V.; Jerman, R.; Hodoszek, M.**
Low-temperature [20-K] ir reflection spectra of $Bi_{12}SiO_{20}$ crystals.—73-16201
**Vaglio, Ruggero**
Applications of ceramic superconductors in electronics.—73-07991
**Vahala, Kerry J.; Saunders, Winston A.; Tsai, C. S.; Sercel, P. C.; Kuech, T. F.; Atwater, H. A.**
Lower-dimensional quantum structures by selective growth and gas-phase nucleation.—73-11302
**Vain, R.** See Ustundag, E.
**Vaidergorin, E. Y. L.** See Tango, C. E. S.
**Vaidya, Kauskik** See Golden, Steve J.
**Vaidya, Uday K.** See Mahfuz, Hassan
**Vaidya, Uday K.; Mahfuz, Hassan; Jeelani, Shaik**
NDE of structural and functional carbon-carbon composites after first carbonization.—73-17405
**Vaidya, Uday K.; Raju, P. K.; Kowbel, W.**
Material damping studies on carbon-carbon composites.—73-09474
**Vaidyanathan, K. Ranji** See Neogi, Jayant; Sankar, Jagannathan
**Vaidyanathan, K. Ranji; Sankar, Jagannathan; Kelkar, Ajit D.; Narayan, J.**
Mechanical properties of chemically vapor infiltrated ceramic matrix composites.—73-17383
**Vaidyanathan, K. Ranji; Sankar, Jagannathan; Kelkar, Ajit D.; Weaver, Bill L.**
Mechanical properties of Nextel 312 fiber-reinforced SiC matrix composites in tension.—73-17387
**Vaidyanathan, P. N.**
Critical issues in technology transfer.—73-03387
**Vaidyanathan, Sridhar** See Ghosh, Asish
**Vail, Neal K.** See Barlow, Joel W.
**Vaills, Yahn; Luspin, Yves; Hauret, Georges; Cote, Bertrand**
Elastic properties of sodium magnesium siiica and sodium calcium silica glasses by Brillouin scattering.—73-14169
**Vaills, Yann** See Luspin, Yves
**Vaills, Yann; Luspin, Yves; Hauret, Georges; Gervais, Francois**
Singular influence of calcium on elastic properties in sodium-calcium-silica glasses.—73-14277
**Vainshtein, D. I.** See Akkerman, V. A.
**Vainshtein, M. Z.**
Keramzit concrete on keramzit gravel impregnated by solution of SDO.—73-13745
**Vaipolin, A. A.; Pulyaevskii, D. V.**
Model and principles of formation of the structure of the (Ga,In)As solid solution structure.—73-15042
**Vaisberg, B. S.** See Kaplan, I. G.
**Vaisburd, D. I.** See Bardenshtein, A. L.
**Vaisman, A. F.** See Abramson, I. G.
**Vaitekunas, P. P.** See Abraitis, R. I.
**Vaitkus, Yu. Yu.; Otazhonov, S. M.**
Relations between structure and photoelectric properties of CdTe films with anomalous impurity photovoltage.—73-16585
**Vakhidov, Sh. A.; Ibragimov, Zh. D.; Khushvakov, O. B.**
Nonimpact generation of defects in quartz crystals.—73-06169
**Vakhula, Ya. I.** See Yashchishin, I. N.
**Vaksman, Yu. F.** See Krasnov, A. N.
**Val'be, N. A.** See Ignatova, R. M.
**Val'kovskii, M. D.** See Barabanenkov, Yu. A.; Kopelev, N. S.
**Val'tsev, V. K.** See Gostishchev, V. V.
**Val'yano, G. E.** See Akopov, F. A.; Borovkova, L. B.
**Val, C.** See Marillet, J.
**Valadares, E. C.** See Harrison, P. A.
**Valakh, M. Ya.** See Artamonov, V. V.
**Valcheva, E.** See Russev, S.
**Valco, G. J.** See Warner, Joseph D.
**Valeiko, M. V.; Geiman, K. I.; Zasavitskii, I. I.**
Deformation potentials of PbTe.—73-01120
**Valente, Isabelle; Faure, Sylvain P.; Gaucher, Philippe; Livage, Jacques**
Process for depositing a thin layer of a ceramic composition and a product obtained thereby.—73-01874
**Valente, M. A.; Mendiratta, Sushil Kumar**
Magnetic susceptibility and aspects of magnetic interaction in Gd, Fe, and mixed Gd-Fe lead borate glasses.—73-03798
**Valenti, G. L.** See Beretka, Julius
**Valentini, Antonio** See Quaranta, Fabio
**Valentini, Antonio; Quaranta, Fabio; Penza, Michele; Rizzi, Federica R.**
Stability of zinc oxide electrodes fabricated by dual ion beam sputtering.—73-01026
**Valentini, R.; Solina, A.; Paganini, L.**
Model of hydrogen behavior in enameling-grade steels: I, Theory.—73-03623; Model of hydrogen behavior in enameling-grade steels: II, Application.—73-03624
**Valenza, M.** See Rolland, M.
**Valero, C. R.** See Bueno, I.; Campa, J. A.
**Valetov, R. R.** See Aliev, A. E.
**Valiev, E. Z.; Bogdanov, S. G.; Pirogov, A. N.; Sharygin, L. M.; Barybin, V. I.**
Correlation function and statistical properties of xerogel $(Sn,Ti,Zr)O_2$.—73-16433
**Valiev, U. V.; Klochkov, A. A.; Moskvin, A. S.**
Magnetooptics of *4f-4f* transitions in rare-earth paramagnetic glasses.—73-14221
**Valin, F.** See Alexandre, N.; Lointier, P.
**Valishev, R. Sh.; Tsepeleva, V. L.; Raivich, R. M.**
Low-temperature rapid burning of bricks.—73-00771
**Valkenberg, T.; Wallraven, R.**
Method for flexible continuous production.—73-01797
**Valko, Marian** See Hulinova, Hana; Mazur, Milan
**Valko, Pavol; Gruskova, Anna; Michalikova, Marianna**
Composite superconductor-polymer material preparation for low-magnetic-field shielding.—73-04683
**Valkonen, J.** See Leppa-Aho, J.
**Valkov, V.** See Furrer, A.; Roessli, B.
**Vallabhan, C. P. G.** See Rajasree, K.
**Valladares, J. P. L.** See Merlin, R.
**Vallade, M.** See Dolino, Gerard
**Vallade, M.; Berge, B.; Dolino, Gerard**
Origin of the incommensurate phase of quartz: II, Interpretation of inelastic neutron scattering data.—73-08685
**Vallana, Franco; Pasquino, Enrico; Rinaldi, Stefano; Galloni, Marco; Gatti, Antonietta Maria; Modica, Fabio**
Carbofilm: present and future applications in biomedical devices.—73-08526
**Vallet-Regi, M.** See Caneiro, A.; Gonzalez-Calbet, J. M.
**Vallier, L.; Joubert, O.; Burke, R.; Ferrieu, F.; Devine, R. A. B.**
Influence of ion energy in plasma deposition of a-$SiO_2$ films.—73-03851
**Vallino, M.** See Delmastro, Alessandro
**Valls, Oriol T.** See Chandrasekhar, N.
**Valov, P. M.** See Yanush, O. V.
**Valtchev, V.** See Mintova, S.
**Valtin, H. J.** See Pluschke, Reinhard
**Valtin, H. J.; Ullrich, Bernd**
Proposed material-genesis classification of specialty clays.—73-01994
**Valvoda, Vaclav** See Perry, Anthony J.
**Valyukhov, D. P.** See Zlenko, V. Ya.
**Van Ackeren, James** See Liu, Felix
**Van Alboom, A.; De Grave, F.; Vandenberghe, R. E.**
Mossbauer study of the hematite phase formed during synthesis of ferri-diopsides.—73-02335
**Van Beck, Sara L.** See Rice, Prudence M.
**Van Bekkum, Herman** See Arafat, A.; De Vos Burchart, Erik; Geus, Edward R.
**Van Berlo, W. H.; Ghaffari, M.; Landgren, G.**
Role of outdiffusion in the activation of high-dose Mg implantations in InP.—73-15152
**Van Camp, P. E.; Van Doren, V. E.; Devreese, J. T.**
High-pressure structural phase transformation in GaN.—73-02282
**Van Corbach, H. D.** See Haanappel, V. A. C.
**Van Daele, P.** See Vermaerke, F.
**Van Dam, H. B. B.** See Bruisten, P. M.
**Van de Merwe, Ronald H.** See Rue, Charles V.
**Van de Mosselaer, L.** See Beddoes, J.
**Van de Voort, F. R.** See Kudra, T.
**Van Delden, M. H. W. M.** See Van der Zaag, P. J.
**Van den Berg, A. J.** See Van Hoek, J. A. M.
**Van Den Berg, P. H. J.; De With, G.; Dortmans, Leonardus J.; Kokmeijer, E.; Cao, G. Z.**
Wear and friction of Y-TZP spheres reciprocating against various SiAlON plates.—73-09691
**Van Den Berg, P. H. J.; Willems, H. X.; De With, G.**
Y-TZP sliding reciprocatively against various AlON ceramics.—73-13611
**Van den Bergh, V.** See Smeets, J.
**Van den Burg, M.; De Hosson, J. T. M.**
Interfaces in a system of chromium oxide–duplex steel.—73-03608
**Van den Hoven, G. N.** See Alves, E.; Custer, J. S.; Snoeks, E.
**Van den Meerakker, J. E. A. M.; Meulankamp, E. A.; Scholten, M.**
Photoelectrochemical characterization of tin-doped indium oxide.—73-07716
**Van der Bilt, D.** See Liu, Feng
**Van der Gaag, B. P.** See Kash, K.
**Van der Giessen, E.** See Stam, G. T. M.
**Van der Graaf, Bastiaan** See De Vos Burchart, Erik
**Van der Heijden, T. C. M.** See Beerkens, Rudd G. C.; Muysenberg, Hendrikus P. H.
**Van der Hulst, Victor A.** See Rutjes, Peter C. S.
**Van der Lee, A.; Wiegers, G. A.**
Disorder and thermal motion of Ag in $Ag_{0.6}NbS_2$.—73-00949
**Van der Marel, D.** See Rietvield, G.
**Van der Meulen, W.** See Hendrix, W.
**Van der Sande, J. W.** See Stoner, B. R.
**Van der Sluis, P.** See Petruzzello, J.
**Van Der Spiegel, J.** See Kaatz, F. W.
**Van der Veen, Adriaan M. H.** See Hazenkamp, Menne F.
**Van der Weide, J.; Nemanich, R. J.**
Schottky barrier height and negative electron affinity of titanium on (111)diamond.—73-07787
**Van der Zaag, P. J.; Ruigrok, J. J. M.; Noordermeer, A.;**
**Van Delden, M. H. W. M.; Por, P. T.; Rekveldt, M. T.**
Initial permeability of polycrystalline MnZn ferrites: the influence of domain and microstructure.—73-07943
**Van Deventer, H. C.** See Van Duuren, A. E.
**Van Dijen, Franciscus** See Hofmann, Heinrich
**Van Dijen, Franciscus**
Method for the preparation of alpha-aluminum oxide powder.—73-12384; Process for the production of sintered material based on alpha-aluminum oxide, especially for abrasives.—73-00004
**Van Dongen, Anne-Marie A.** See Oomen, Emmanuel W. J. L.
**Van Dordrecht A.,** See Foden, C. L.
**Van Doren, V. E.** See Van Camp, P. E.
**Van Duuren, A. E.; Van Deventer, H. C.**
Tunnel kiln simulation model Q-KILN.—73-05133
**Van Eenbergen, A. F. P.**
Trace element determination by X-ray fluorescence in a cement plant.—73-00201

**Van Eenige, E. N.; Griessen, R.; Heeck, K.; Schnack, H. G.; Wijngaarden, R. J.; Genoud, J.-Y.**
Proximity-coupled $CuO_2$ planes in high-$T_c$ superconductors: evidence from pressure experiments up to 34 GPa on $Y_2Ba_4Cu_7O_{15.32}$.—73-08181

**Van Exter, M. P.; Zeijlmans, B. R. P.; Woerdman, J. P.**
Relaxation oscillation in an AlGaAs laser.—73-01304

**Van Grunderbeek, J.** See Hendrix, W.

**Van Hal, Henricus A. M.** See Terheijden, J.

**Van Hal, Henricus A. M.; Aerts, Renatus; Papanikolau, Emmanuel**
Body of cerium-doped quartz glass.—73-00726

**Van Hal, P. F.** See Willems, H. X.

**Van Hall, P. J.** See Blom, P. W. M.

**Van Harlingen, D. J.** See Wollman, D. A.

**Van Hassel, B. A.; Boukamp, B. A.; Burggraaf, Anthonie J.**
Electrode polarization at the Au, $O_2(g)$/yttria-stabilized zirconia interface: I, Theoretical considerations of reaction model.—73-04093; Electrode polarization at the Au, $O2(g)$/yttria-stabilized zirconia interface: II, Electrochemical measurements and analysis.—73-00962

**Van Heek, M. M. E.** See Meijerink, A.

**Van Hellemont, J.** See De Lact, J.

**Van Herten, R.** See Boelens, S.

**Van Herten, R.**
Refractory material application in glass furnace regenerators, Philips' experience in relation to corrosion phenomena.—73-14617

**Van Hoek, J. A. M.; Van Loo, F. J. J.; Metselaar, R.; Dehaan, J. W.; Van den Berg, A. J.**
Formation of $CaO{\cdot}10Al_2O_3$ with the ß-alumina-type structure by means of ion exchange.—73-02277

**Van Hove, J. M.** See Krishnankutty, S.

**Van Hove, J. M.; Kuznia, J. N.; Olson, D. T.; Kahn, Muhammad A.; Blasingame, Margaret C.**
High-responsivity ultraviolet gallium nitride detector.—73-11524

**Van Hove, M. A.** See Weiss, Werner

**Van Hove, M.; Zou, G.; Deraedt, W.; Jansen, P.; Jonckheere, R.; Van Rossum, M.**
Scaling behavior of delta-doped AlGaAs/InGaAs high electron mobility transistors [HEMT's] with gate lengths down to 60 nm and source-drain gaps down to 230 nm.—73-11429

**Van Hoven, Chris**
Video gives the competitive advantage.—73-17513

**Van Huong, C. Nguyen; Nicolas, M.; Dubon, A.; Hinnen, C.**
Superconducting properties of $YBa_2Cu_3O_7$-Au composites.—73-15635

**Van Kalsbeek, Bauke** See Moilanan, George L.

**Van Landuyt, J.** See Kuypers, S.; Nistor, L. C.

**Van Leeuwen, Herman P.** See Kijlstra, Johan

**Van Lierop, J. G.** See Groen, W. A.

**Van Lohneysen, H.** See Akimenko, A. I.

**Van Loo, F. J. J.** See Kodentsov, A. A.; Van Hoek, J. A. M.

**Van Loon, Roxanne** See Winkler, Michael

**Van Marcke de Lummen, Guy** See Mottet, Leon-Philippe

**Van Mier, J. G.** See Ross, P.

**Van Moer, Andre** See Diko, Pave

**Van Nieuwenburg, D.** See De Ceukelaire, L.

**Van Nijnatten, P. A.; Simonis, F.**
Determination of angular optical properties of glazing.—73-14152; Measurement of angular emissivity of coated flat glass: extension of the angular range up to 85°.—73-14223

**Van Noort, R.** See Shareef, M. Y.

**Van Olfen, U.; Hesse, H.; Jakel, G.; Kratzig, E.; Odoulov, S. G.**
Anisotropic grating recording in photorefractive $KNbO_3$:Fe.—73-08807

**Van Ommen, J. G.** See Mercera, P. D. L.

**Van Oss, Carel J.** See Li, Zhao-Hui

**Van Rheenen, Arthur D.** See Lin, Ya-Yun

**Van Rijawijk, Fritz**
Bottle coating first for Europe.—73-08322

**Van Roey, T.** See Gijs, M. A. M.

**Van Rossum, M.** See Van Hove, M.

**Van Santen, R. A.** See De Man, A. J. M.; Jacobs, W. P. J. H.; Wijnen, Peter W. J. G.

**Van Schaik, W.; Lizzo, S.; Smit, W.; Blasse, G.**
Influence of impurities on the luminescence quantum efficiency of $Ln_3$, Ce, Tb)$PO_4$.—73-04118

**Van Schilfgaarde, M.** See Berding, M. A.; Chen, A-B.; Jager, N. D.; Klepeis, J. E.; Methfessel, M.

**Van Selet, R.** See Bijen, J. M. J. M.

**Van Smaalen, S.**
Superspace description of incommensurate intergrowth compounds and the application to inorganic misfit layer compounds.—73-05505

**Van Stappen, M.** See De Bruyn, K.

**Van Tendeloo, G.** See Milat, O.

**Van Tendeloo, G.; Amelinckx, S.**
Modulated structures in high-$T_c$ superconductors: an electron microscopy study.—73-04775

**Van Vechten, J. A.** See Graupner, R. K.

**Van Vlaanderen, P.** See Cordfunke, E. H. P.

**Van Weeren, Remco; Danforth, Stephen C.**
Effect of the thermomechanical properties of the grain-boundary phase on the fracture toughness of laser-derived silicon nitride.—73-17294

**Van Weeren, Remco; Leone, Edgar A.; Curran, Sean; Klein, L. C.; Danforth, Stephen C.**
Synthesis and characterization of amorphous $Si_2N_2O$.—73-17019

**Van Wijck, J. H.; Heitink, G. H.**
Soft mud method of brickmaking—an overview of the essential aspects of the process.—73-03985

**Van Wijk, R. J.; Arts, A. F. M.; De Wijn, H. W.**
Brillouin scattering by localized acoustic modes in silicon oxynitride–fused silica optical waveguides.—73-08816

**Van Wolput, J. H. M. C.** See Jacobs, W. P. J. H.

**Van Zyl, A.; Thackeray, M. M.; Duncan, G. K.; Kingon, A. I.; Heckroodt, R. O.**
Synthesis of beta-alumina from aluminum hydroxide and oxyhydroxide precursors.—73-03043

**Van, V. N.** See Rivory, J.; Vuye, G.

**Vanagas, E.**
Transmission of the bipolar electromagnetic field through thin semiconductor film with a superlattice.—73-15215

**Vanaschen, Luc** See Kuster, Hans-Werner

**Vancauwenberghe, N.; Herbots, Nicole; Manoharan, H.; Ahrens, M.**
Ion beam oxidation of GaAs: the role of ion energy.—73-01223

**Vancauwenberghe, Olivier P. J.** See Herbots, Nicole

**Vance, Eric R.** See Begg, B. D.; Mitamura, Hisayoshi

**Vance, Eric R.; Angel, Paul J.; Cassidy, David J.; Stewart, Martin W. A.; Blackford, Mark G.; McGlinn, Peter A.**
Freudenbergite: a possible Synroc phase for sodium-bearing high-level waste.—73-12009

**Vanchikova, E. V.; Rychkova, L. V.; Belykh, L. I.**
Determination of Cu(II) and Bi(III) in oxide systems based on Bi, Cu, Ca, and Sr by photometric titration by EDTA with pyrocatechol violet.—73-11724

**Vancolle, E.** See Celis, J. P.

**Vancolle, E.; Celis, J. P.; Roos, J. R.**
Dry sliding wear of TiN-based ternary PVD coatings.—73-09571; Tribological and structural characterization of a physical-vapor-deposited TiC/Ti(C,N)/TiN multilayer.—73-17453

**Vancso, G. Julius** See Snetivy, Daniel

**Vandenberghe, R. E.** See Van Alboom, A.

**Vandenbulcke, Lionel** See Cholet, Vincent

**Vandentop, G. J.; Kawasaki, M.; Kobayashi, K.; Somarjai, G. A.**
Effect of ion energy flux on the properties of hydrogenated amorphous carbon films.—73-02788

**Vanderah, T. A.** See Lowe-Ma, C. K.

**Vandersande, Jan W.; Zoltan, Leslie D.**
Electrical conductivity of diamond up to 1200°C.—73-07314

**Vandeven, T. G. M.** See Alince, B.

**Vandiver, Pamela B.**
European protoporcelain: the social context of the history of a sixteenth century ceramic technology known as Saint-Porchaire.—73-00007

**Vandorpe, M.** See Lasjaunias, J. C.

**Vanek, Vaciav** See Stejskalova, Eva

**Vanheusden, K.** See Stesmans, A.

**Vanheusden, K.; Stesmans, A.**
Characterization and depth profiling of $E'$ defects in buried $SiO_2$.—73-09391; Localization and electric-field-modulated electron spin resonance of a shallow donor in SIMOX.—73-04127

**Vanicheva, L. L.** See Rabinovich, A. S.

**Vanis, M.; Komlos, K.; Ayadi, A.; Allouane, T.**
Accelerated aging process of AR fibers in the cmeent matrix.—73-13922

**Vanmaekelbergh, D.** See Oskam, G.

**Vannes, A. B.** See Lemoine, F.

**Vannucci, Riccardo** See Ottolini, Luisa

**Vansant, E. F.** See Gillis-D'Hamers, Iwan

**Vaquez-Lopez, C.** See Alejo-Armenta, C. A.

**Varacalle, D. J., Jr.** See Lynn, M.; Steeper, T. J.

**Varacalle, D. J., Jr.; Herman, H.; Burchell, Timothy D.**
Method of fabricating silicon carbide coatings on graphite surfaces.—73-16005

**Varadan, V. K.** See Arunajatesan, S.; Herner, S. B.

**Varadan, V. V.** See Herner, S. B.

**Varadarajan, T. K.** See Raman, N. S.

**Varadarajan, V.; Thombare, C. H.; Borka, S. A.**
Experiences in use of industrial byproduct sludge for cement manufacture by sol-gel technology.—73-09957

**Varaksin, A. N.; Kolmogorov, Yu. N.**
Determination of vacancy migration volume in ionic crystals from data on electrical conductivity of mixed crystals.—73-17076

**Varaljay, N. C.** See Warner, Joseph D.

**Varanasi, C.; McGinn, P. J.**
$Y_2BaCuO_5$ [211] particle coarsening during melt processing of $YBa_2Cu_3O_{7-x}$ [123].—73-11943

**Varanavicius, A.** See Danielius, R.

**Varandan†, D.** See Sen, Nirupa

**Varatharajah, P.** See Kriegsmann, G. A.

**Vardanyan, G. A.; Bagdasaryan, R. I.; Petrosyan, P. G.; Grigoryan, L. N.**
Formation of thin CdS films by laser sputtering.—73-01168

**Vardapetyan, R. P.; Kuznetsov, V. D.; Kul'bachinskii, V. A.; Reiman, S. I.; Sristunov, I. V.; Chudinov, S. M.**
Magnetic susceptibility and Mossbauer effect in Fe-doped CdS.—73-16208

**Vardavoulias, M.** See Provot, X.

**Vardavoulias, M.; Jouanny-Tresy, C.; Jeandin, M.**
Sliding-wear behavior of ceramic particle-reinforced high-speed steel obtained by powder metallurgy.—73-06855

**Vardelle, A.** See Fantassi, S.

**Vardelle, M.** See Coudert, J. F.; Fantassi, S.; Planche, M. P.

**Vardeny, Z. V.** See Wei, X.

**Vardiman, R. G.** See Snail, K. A.

**Vareka, W. A.** See Xiang, X.-D.

**Varez, A.** See Senaris-Rodriguez, M. A.

**Varga, I. K.** See Folkard, M. A.; Hartley, R. H.

**Varga, Miklos**
Surface conductivity of silicate glasses.—73-00552

**Vargas-Aburto, Carlos** See Hakimzadeh, Roshanak

**Varhue, W. J.** See Pastel, P. W.; Rogers, Jim L.; Watts, A. J.

**Varhue, W. J.; Manglore, R. B.; Pandelisev, K. A.; Pastel, P. W.**
Electron trapping and chemical composition in radio frequency glow discharge a-SiN:H.—73-02813

**Varhue, W. J.; Massimo, M.; Carulli, J. M.; Baranauskas, V.; Adams, Edward; Broitman, E.**
Deposition of $Y_2O_3$ by plasma-enhanced organometallic chemical vapor deposition using an electron cyclotron resonance source.—73-09065

**Varinot, Christelle** See Carre, Alain

**Varkey, A. J.; Fort, A. F.**
Solution growth technique for deposition of nickel oxide thin films.—73-13284

**Varlamov, A. G.** See Andrienko, P. I.; Orlov, A. V.

**Varlamov, S. V.** See Eremin, M. V.

**Varlamova, T. V.** See Morozova, O. V.

**Varma, A.** See Pigeon, R. G.

**Varma, Chandra M.** See DiGiovanni, David J.; Sudbo, A.

**Varma, Chandra M.; Krol, Denise M.**
Optically induced organization in glasses—second harmonic generation.—73-07062

**Varma, Hari Krishna** See Perumal, P.

**Varma, Hari Krishna; Ananthakumar, S.; Perumal, P.; Rao, Prabhakar P.; Warrier, K. G. K.; Damodaran, Alathoor D.**
Microwave processing of rare-earth-oxide-doped ZnO varistors.—73-04406

**Varma, Hari Krishna; Mani, T. V.; Damodaran, Alathoor D.; Warrier, K. G. K.; Balachandran, Uthamalingam**
Characteristics of alumina powders prepared by spray drying of boehmite sol.—73-12937

**Varma, Hari Krishna; Pillai, P. Krishna; Veettil Mani, Themanam; Kumara Warrier, Krishna Gopa; Damodaran, Alathoor D.**
Spray drying of metal alkoxide sol for strontium titanate ceramics.—73-06067

**Varma, S.** See Ahmad, A.

**Varma, S.; Prasad, S. E.; Ahmad, A; Wheat, T. A.**
Microgravity processing of fluorozirconate glasses to reduce devitrification during fiber drawing.—73-07150

**Varniere, F.** See Agius, B.

**Varriano, J. A.** See Shank, S. M.

**Varshal, B. G.** See Popov, O. N.; Raevskaya, E. I.

**Varshal, B. G.; Fedorova, L. V.; Mirskikh, L. L.**
Effects of oxide of aluminum and phosphorus on liquation in sodium calcium silicate glasses.—73-13971

**Varshal, B. G.**
Structure and phase transitions in aluminosilicate glasses and melts.—73-00415

**Varshney, U.**
Lead zirconate titanate ferroelectric thin films by laser ablation deposition.—73-04558

**Varshneya, Arun K.; Bickford, Dennis F.; Bihuniak, Peter P.**
Ceramic Transactions, Volume 29: Advances in Fusion and Processing of Glass.—73-06602

**Varshneya, Arun K.; Frederes, K. P.**
How much lead leaches from crystal glassware.—73-03735

**Varshneya, Arun K.; Jain, Vijay; Bihuniak, Peter P.**
Transient ionic conductivity in fused silica.—73-00568

**Varshneya, Arun K.; Sreeram, A. N.; Swiler, D. R.**
Assessment of the average coordination number concept in multicomponent, isostructural chalcogenide glasses.—73-13928

**Varshneya, Arun K.**
Fundamentals of Inorganic Glasses.—73-17527

**Varsos, Dimitrios; Sikalidis, K.**
Preparation of ceramic raw materials through the dry process.—73-08358

**Varvarin, A. M.** See Belyakova, L. A.

**Varvarin, A. M.; Belyakova, L. A.; Sidorchuk, V. V.; Tertykh, V. A.**
Etherification of silanol groups of silica surface under interaction with tert-butanol.—73-16142

**Varyukhin, V. N.; Gomenyuk, Yu. V.; Lozovskii, V. Z.**
Superconductivity enhancement at the surface of $Y_{1-x}Pr_xBa_2CuO_{7-\delta}$ in strong electric fields.—73-08227

**Vas Serra, A.** See Serrano, A.

**Vas'ko, F. T.; Soldatenko, Yu. N.**
Current-induced corrections to the effective dielectric constant of inhomogeneous semiconductor alloys.—73-14821

**Vasanelli, L.** See Lomascolo, M.; Pasimeni, L.

**Vasant Kumar, C. V. R.** See Sayer, M.

**Vashishta, P.** See Jin, Wei; Nakano, Aichiro

**Vasi, J.** See Mallik, A.

**Vasil'ev, A. D.** See Kruglik, A. I.; Makarova, I. P.

**Vasil'ev, A. E.** See Il'in, N. P.

**Vasil'ev, A. L.; Krasnosvobodtsev, S. I.; Martovitskii, V. P.; Pechen, E. V.; Rodin, V. V.**
Structure of $YBa_2Cu_3O_{7-\delta}$ epitaxial films.—73-01672

**Vasil'ev, A. V.; Kaplan, M. D.; Kazel, Z. A.**
Low-temperature magnetoelastic properties of dilute Jahn-Teller $D_xY_{1-x}VO_4$ crystals.—73-08904

**Vasil'ev, A. V.; Zinger, G. M.; Rozenfel'd, Yu. B.; Ryskin, A. I.**
Photoionization of an $Fe^{2+}$ ion in ZnS: lattice relaxation.—73-11380

**Vasil'ev, M. I.; Grigor'eva, N. A.; Kulinkin, B. S.**
Effect of hydrostatic pressure on exciton absorption spectrum of microcrystals of CuI and CuBr in heterogeneous glass.—73-00456

**Vasil'ev, V. G.** See Gusev, B. V.

**Vasil'ev, V. I.; Gnedina, I. A.; Yashina, N. A.**
Service of refractory materials in shaft furnaces with melting of ferroalloys by the thermal reduction method.—73-00861

**Vasil'ev, V. N.; Matveiko, E. N.; Kruglik, A. I.; Pankrats, A. I.; Petrakovskii, G. A.; Sablina, K.**
Resonance absorptions in $KFe_{11}O_{17}$.—73-16295

**Vasil'eva, I. G.; Vlasov, A. A.; Gibner, Ya. I.**
Analysis of Y-Ba-Cu-O films by differential dissolution.—73-04668

**Vasil'eva, N. M.; Kalinovskaya, I. N.; Gavrish, A. M.**
Structure development in polycrystalline zirconium dioxide fibers.—73-02461

**Vasil'eva, O. I.** See Min'ko, N. I.

**Vasilescu, A.** See Zaharescu, Maria

**Vasilevskaya, T. N.** See Zaharchenya, R. J.

**Vasilevskii, K. V.**
Calculation of the dynamic characteristics of an SiC impact diode.—73-07396

**Vasiliu-Dolog, L.; Apostol, M.**
Superconductivity of doped $La_2CuO_4$.—73-04814
**Vasilyeva, I. G.** See Koselov, B. A.
**Vasovic, D.** See Milosavljevic, Z.
**Vasovic, Dusanka D.; Stojakovic, Djordje**
Use of boron phosphate in the solid-state preparation of crystalline iron(III) phosphate and manganese(II) diphosphate.—73-08788
**Vasquez, Peter** See Buck, Gregory M.
**Vasquez, Richard P.; Foote, Marc C.; Hunt, Brian D.; Bajuk, Louis J.**
Chemical nature of the barrier in $Pb/YBa_2Cu_3O_{7-x}$ tunneling structures.—73-01506
**Vasquez, Richard P.; Hunt, Brian D.; Foote, Marc C.**
Epitaxial heterojunctions of oxide semiconductors and metals on high-temperature superconductors.—73-11522; SNS heterojunctions with new combinations of materials.—73-11899
**Vassallo, M. B.** See Baran, E. J.
**Vassanyi, Istvan** See Kristof, Eva
**Vassel, N. P.** See Mardirosova, I. V.
**Vasseli, William C.** See Tamor, Michael A.
**Vassen, R.; Stover, D.**
Compaction mechanisms of ultrafine SiC powders.—73-02751
**Vassilev, V. S.** See Ivanova, Y.; Ivanova, Z. G.
**Vassilevski, K. V.; Dmitriev, V. A.; Zorenko, A. V.**
Silicon carbide diode operating at avalanche breakdown current density of 60 $kA/cm^2$.—73-12878
**Vassiliou, John K.; Mehrotra, Vivek; Russell, Michael W.**
Magnetic and optical properties of $\gamma$-$Fe_2O_3$ nanocrystals.—73-02635
**Vastra-Bobin, I.** See Lemoine, F.
**Vaterlaus, A.; Feenstra, R. M.; Kirchner, P. D.; Woodall, J. M.; Pettit, G. D.**
Cross-sectional scanning tunneling microscopy of epitaxial GaAs structures.—73-11126
**Vaucamps, C.** See Manley, M. E.
**Vaudin, Mark D.** See Brody, P. S.; White, Grady S.
**Vaudo, R. P.; Enson, D. B.; Bowers, K. A.; Gossett, K. J.; Cook, J. W.; Schetzina, J. F.**
Ultraviolet quantum well structures based on $ZnS/ZnS_{1-x}Se_x$ and $ZnS/Zn_{1-x}Cd_xS$ multilayers grown by molecular beam epitaxy.—73-11494
**Vaughan, David E. W.; Strohmeier, Karl G.**
Process for preparing LTL nanocrystalline zeolite compositions.—73-15954
**Vaughan, M. R.** See Chin, V. W. L.
**Vaughan, Sarah** See Di Caprio, Ninina Cuomo
**Vaughn, Wallace L.; Petty, John T.**
Carborane-based inhibitors for carbon-carbon composites.—73-12418
**Vavrick, Daniel J.**
FEM analysis of SACC-II truss and component parts.—73-12431
**Vazhenin, V. A.; Starichenko, K. M.**
Cross relaxation averaging EPRS spectra in $Pb_5Ge_3O_{11}:Gd^{3+}$.—73-15253
**Vazquez de Parga, A. L.** See Alvarez, J.
**Vazquez, A. J.** See De Damborenea, J.
**Vazquez, J.** See Ligero, R. A.
**Vazquez, L.** See Ferrer, A.
**Vdovin, V. I.; Krasil'nikov, V. S.; Yugova, T. G.**
Effect of nature and composition of quaternary $A^{III}B^{V}$ solid solutions on formation of dislocation structure in epitaxial heterostructures.—73-01136
**Vdovin, V. I.; Lyutovich, K. L.; Mil'vidskii, M. G.; Saidov, S. M.; Yugova, T. G.**
Effect of solid-solution composition on defect formation in $Ge_xSi_{1-x}$/Si heterostructures obtained by MBE.—73-17077
**Vdovin, V. I.; Mil'vidskii, M. G.; Yugova, T. G.**
Antiphase boundaries in GaAs layers.—73-01079
**Veblen, D. R.** See Kingma, Kathleen J.
**Vecherkina, T. D.** See Sinyaev, V. A.
**Ved, V. E.; Ivanov, V. A.; Lushpenko, S. F.**
Apparatus for determining the thermal conductivity of ceramic materials.—73-15776
**Vedam, K.** See An, Il-Sin; Chindaudom, P.; Cong, Yue; Heyd, A. R.; Trolier-McKinstry, S.; Witham, H. S.
**Vedeneev, S. I.** See Samuely, P.
**Vedishcheva, Natalia M.; Shakhmatkin, Boris A.; Wright, Adrian C.; Sinclair, Roger N.; Grimley, David I.**
Combined thermodynamic and neutron scattering investigation of glasses in the system $PbO\text{-}B_2O_3$.—73-13945
**Veenvliet, Hendrik** See Oomen, Emmanuel W. J. L.
**Veettil Mani, Themanam** See Varma, Hari Krishna
**Vega, F.** See Ortiz, C.
**Vehmas, Jukka H.** See Laakso, Tapio
**Vehmas, Jukka H.**
Cooling station in a tempering plant for glass sheets.—73-04968; Method and apparatus for heat-strengthening glass sheets.—73-00739
**Veiga, M. L.** See Ramos, E.
**Veira, J. A.** See Cabeza, O.
**Veis, A. N.; Rydanov, A. Yu.; Suvorova, N. A.**
Energy spectrum of PbTe:Zn* deduced from optical absorption data.—73-14889
**Vels, A. N.**
Energy spectrum of chalcogen vacancies in ion-implanted PbS.—73-11195
**Veitch, Lisa C.** See Philipp, Warren H.
**Veitch, Lisa C.**
Processing effects on chemically vapor deposited SiC coatings on silicon carbide fibers.—73-13218
**Veith, H.** See Staufer, T.
**Vel, L.** See Gonnet, V.
**Velamakanni, Bhaskar V.; Lange, Fred F.; Zok, Frank W.; Pearson, Dale S.**
Influence of interparticle forces on the rheological behavior of pressure-consolidated alumina particle slurries.—73-05868
**Velichkina, T. S.** See Aleksandrov, V. V.
**Velichko, V. Y.** See Belousov, M. V.
**Velikanova, F. I.** See Sirazhiddinov, N. A.
**Velikanova, T. Ya.** See Yeremenko, V. N.
**Velikodnyi, Yu. A.** See Murashova, E. V.; Surat, L. L.; Zhuravlev, V. D.
**Velikodnyi, Yu. A.; Murashova, E. B.**
Crystal structure of $SrCuV_2O_7$ and structural family $SrMV_2O_7$ (M=Cu, Zn, Mg, Sr).—73-16095
**Velikokhatnyi, O. I.** See Naumov, I. I.
**Vellaikal, M.** See Singh, Jogender
**Vellanki, Jayadev** See Martin, Jaime M.
**Vellanki, Jayadev; Nadella, R. K.; Rao, M. V.; Dietrich, H. B.; Simons, David S.; Chi, P. H.**
MeV energy sulfur implantation in GaAs and InP.—73-04404
**Velle, Ole Jacob; Norby, Truls; Kofstad, Per**
Electrode system $O_2$/Pt‖$ZrO_2$:$8Y_2O_3$ investigated by impedance spectroscopy.—73-04094
**Vellenga, D.** See Sune, C. T.
**Vendange, V.** See Colomban, P.
**Vendange, V.; Colomban, P.**
Elaboration and thermal stability of (alumina, aluminosilicate/iron, cobalt, nickel) magnetic nanocomposites prepared through a sol-gel route.—73-11653
**Vender, David; Oehrlein, Gottlieb S.; Schwartz, Geraldine C.**
Selective reactive ion etching [RIE] of phosphorus-doped oxide over undoped $SiO_2$.—73-06031
**Vendik, O. G.; Kozyrev, A. B.; Karmanenko, S. F.; Klimenko, V. L.; Njakshev, K. F.; Soldatenkov, O. I.**
Influence of magnetic field from microwave surface resistance of two-layer $YBa_2Cu_3O_{7-x}$ films.—73-01577
**Venedeev, S. I.** See Samuely, P.
**Vengelis, B.; Gigenaite, G.; Franukevichius, D.**
Thick $YBa_2Cu_3O_7$ film formation on $Y_2BaCuO_3$ ceramic substrates.—73-15658
**Venger, E. F.; Goncharenko, A. V.; Dmitruk, N. L.; Prokof'ev, A. Y.; Fidrya, N. A.**
Influence of implantation of compensating impurity ions on the optical properties of $n^+$-type GaAs.—73-07594
**Venigalla, S.** See Adair, James H.
**Venigalla, S.; Opalko, J. F.; Adair, James H.**
Determination of moisture content in fine ceramic powders using the Karl Fischer (aquametry) method.—73-08389
**Venkataraman, K. S.; Martin, L. D.; Weirauch, D. A., Jr.**
Cofire technology: quantifying glass infiltration in the ceramic-metal interfacial region.—73-13382
**Venkataramani, Subramaniam** See Klug, Frederic J.
**Venkatasubramanian, R.; Timmons, M. L.; Colpitts, T. S.; Asher, S. E.**
Properties and use of cycled grown OMVPE GaAs:Zn, GaAs:Se, and GaAs:Si layers for high-conductance GaAs tunnel junctions.—73-11405
**Venkatesan, T.** See Li, Qi; Peters, C. H.; Wu, Dong-Ho; Xi, X.-X.
**Venkatesan, T.; Bhattacharya, S.; Doughty, C.; Findikoglu, A.; Kwon, C.; Li, Qi**
Pulsed-laser-deposited metal-oxide-based superconductor, semiconductor, and dielectric heterostructures and superlattices.—73-04796
**Venkatesan, T.**
Epitaxial metal oxide films, a leading candidate for 21st century thin-film technology.—73-11749
**Venkatesan, Vasudev** See Das, Kalyankjumar; Von Windheim, J. A.
**Venkatesan, Vasudev; Malta, D. M.; Das, Kalyankumar; Belu, A. M.**
Evaluation of ohmic contacts formed by $B^+$ implantation and Ti-Au metallization on diamond.—73-06786
**Venkatesh, R.** See Chawla, K. K.
**Venkateswara Rao, C. R.** See Murugakoothan, P.
**Venkateswaran, A.** See Hasselman, D. P. H.
**Venkateswarlu, Putcha** See Jagannath, H.; Kukhtarev, N.
**Venkatramani, N.** See Ananthapadmanabhan, P. V.
**Vennik, J.** See Poellmann, H.
**Venter, A.; Auret, F. D.; Ball, C. A. B.**
Electrical characterization of Cu-diffused *n*-GaAs epitaxial layers using optical deep transient spectroscopy.—73-11178
**Ventsel, V. A.; Ivanov, L. A.; Petrova, A. E.**
$J_c$ in ceramic HTS.—73-08118
**Ventura, Laurent; Hartiti, Bouchaib; Slaoui, Abdelilah; Muller, Jean-Claude; Siffert, Paul**
Rapid thermal annealing [RTA] of spin-on-glass [SOG] films.—73-03881
**Venturini, E. L.** See Martens, J. S.
**Venugopal, R.** See Lakshmi, R. P. V.; Rani, V. K. M.
**Venugopalan, Hari; Tankala, Kanishka; DebRoy, Tarasankar**
Electrical conductivity of alumina/aluminum composites synthesized by directed metal oxidation.—73-13830
**Venus, G. B.** See Kompan, M. E.
**Venzel, B. I.** See Svatovskaya, L. G.
**Venzel, B. I.; Svatovsk.aya, L. G.; Zhdanov, S. P.**
Effect of the two-stage thermal treatment of two-phase sodium borosilicate glasses on the structure of the porous glass obtained thereby.—73-00334
**Verbaere, A.** See Guyomard, D.
**Verbelyi, Darren** See Hsi, Chi-Shiung
**Verbetskii, V. N.** See Yartys, V. A.
**Verbin, S. Yu.** See Abramov, A. P.
**Verciani, A.** See Righini, Giancarlo C.
**Verdiell, J. M.** See Tennant, D M.
**Verdier, P.** See Reau, J. M.
**Verduijn, Johannes P.** See Lievens, Jan L.
**Verduijn, Johannes P.**
Zeolite L.—73-02076; Zeolite ZK-5 catalyst.—73-02078
**Vereecken, J.** See De Laet, J.
**Vereist, M.** See Laurent, C.
**Verenchikova, R. G.; Vodakov, Yu. A.; Litvin, D. P.; Mokhov, E. N.; Roenkov, A. D.; Sankin, V. I.**
SiC uv photodetectors.—73-04480
**Vereshchagin, V. I.** See Alekseev, Yu. I.; Shatalov, P. I.
**Vereshchagina, L. N.** See Belokon, S. A.
**Vereshkov, G. M.** See Makarov, V. I.
**Veresov, L. P.** See Meleta, E. A.
**Veretnik, D.** See Reich, S.
**Veretnik, D.; Reich, S.**
Nonrandom gold-$YBa_2Cu_3O_{7-x}$ composites.—73-08150
**Vergara, I.; Camarillo, E.; Sanz-Garcia, J. A.; Sole, J. G.; Jaque, F.; Monteil, A.**
Radiative energy transfer from $Cr^{3+}$ to $Nd^{3+}$ in $LiNbO_3$:Nd,Cr.—73-11610
**Vergeles, M. V.; Merkulov, I. A.**
Theory of the capture of holes by a quantum well in GaAs-type semiconductors.—73-07835
**Verghese, S.; Richards, P. L.; Sachtjen, S. A.; Char, K.**
Sensitive bolometers using high-$T_c$ superconducting thermometers for wavelengths 20–300 μm.—73-08196
**Verhappen, P. J. M.** See Morelissen, H. W.
**Verin, I. A.** See Dvorkin, A. A.; Otroshchenko, L. P.; Vigdorchik, A. G.
**Verinaud, F.** See Baraton, Marie-Isabelle
**Veringa, H. J.**
Statistical treatment of the sintering defect model and ceramic morphology development.—73-09341
**Verita, M.** See Barbon, F.; Daneo, Antonio; Marabelli, M.
**Verita, M.; Geotti-Bianchini, F.; Hreglich, S.; Pantano, Carlo G.; Bojan, V.**
EPMA, RBS, and SIMS analyses of tin profiles in commercial float glass.—73-14375
**Verita, M.**
Ancient Venetian glass: an analytical confirmation of historical sources.—73-13661
**Verma, Ashish K.** See Fujioka, Hiroshi; Jager, N. D.
**Verma, Ashish K.; Tu, Jay; Smith, J. S.; Fujioka, Hiroshi; Weber, E. R.**
Electrical characteristics of low-temperature $Al_{0.3}Ga_{0.7}As$.—73-14867
**Verma, S. K.** See Walker, W. J., Jr.
**Verma, S. K.; Walker, P. L.**
Preparation of carbon molecular sieves by propylene pyrolysis over microporous carbons.—73-08537
**Vermaerke, F.; Moerman, I.; Vermeire, G.; Buydens, L.; Van Daele, P.; Demeester, P.**
Simple reliable processing technique for low-threshold high-power strained InGaAs-AlGaAs GRINSCH SQW laser diodes.—73-15162
**Vermeire, G.** See Vermaerke, F.
**Vermes, Sheldon A.; Botts, David M.**
Ceramic filter.—73-05199
**Verner, P.** See Barabanenkov, Yu. A.
**Vernet, C.; Noworyta, G.**
Reactivity test for fine silicas and pozzolanic mineral additives.—73-08438
**Verney, Serge; Bord, Claude; Geslot, Robert**
Possibilities of utilization of ceramic techniques in mechanical industries.—73-05177
**Vernier, N.; Bellessa, G.**
Nonlinear magnetic susceptibility in a Kramers ion-doped glass.—73-10978
**Vernon, S. M.; Tobin, S. P.; Sanfacon, M. M.; Mastrovito, A. L.; Karam, N. H.; Al-Jassim, M. M.**
Growth and characterization of $Al_xGa_{1-x}As$ Bragg reflectors by LP-MOCVD.—73-14944
**Vernon, S. M.**
Epitaxial compositions.—73-04513
**Veron, D.; Thiell, G.; Gouedard, C.**
Optical smoothing of the high-power PHEBUS Nd-glass laser using the multimode optical fiber technique.—73-07061
**Verstak, A.** See Vityaz, P.
**Versteeg, Vera A.; Kohlstedt, David L.**
Internal friction in lithium aluminosilicate glass-ceramics.—73-07040
**Vertii, A. A.; Gorbatyuk, I. N.; Ivanchenko, I. V.; Popenko, N. A.; Pustyfnik, O. D.; Rarenko, I. M.**
Bulk and surface transport properties of *n*-type $Hg_{1-x}Cd_xTe$ crystals in the temperature range $0.5<T<50$ K.—73-07395
**Verwey, J. W. M.; Blasse, G.**
Luminescence of divalent and trivalent rare-earth ions in SYAM-fluoride glass.—73-10450
**Verwey, J. W. M.; Coronado, J. M.; Klasse, G.**
Luminescence of Cu(I) in strontium tetraborate.—73-02631
**Veselovsky, F.** See Hybler, J.
**Vesely, Jaroslav** See Pospisilova, M.
**Vesely, Jaroslav**
Conditions in the glass, ceramics, and porcelain sector from the year 1993 to its privatization.—73-06563
**Veshchunov, M. S.**
Transition of fluorite-type crystals to superionic conductor state.—73-02531
**Vesilkova, R. M.; Gropyanov, V. M.**
Phase composition of sintered lime refractories with $TiO_2$ addition.—73-14610
**Vessal, Behnam** See Hannon, A. C.; Wright, Adrian C.
**Vessal, Behnam; Amini, M.; Catlow, C. Richard A.**
Computer simulation of the structure of silica glass.—73-06893
**Vessal, Behnam; Catlow, C. Richard A.**
Atomistic models for silicate glasses.—73-05156
**Vesteghem, H.; Lecomte, A.; Dauger, A.**
Film formation and sintering of colloidal monoclinic zirconia.—73-13060
**Veszelei, Eugen** See Veszelei, Monica
**Veszelei, Monica; Veszelei, Eugen**
Optical properties and equilibrium temperatures of titanium-nitride- and graphite-coated Langmuir probes for space application.—73-10259

**Vetrano, J. S.; Kleebe, Hans-Joachim; Hampp, E.; Hoffmann, M. J.; Ruhle, Manfred; Cannon, Rowland M. Jr.,** $Yb_2O_3$-fluxed sintered silicon nitride: I, Microstructure characterization.—73-09522
**Vetrone, Jim; Chung, Yip-Wah; Cavicchi, R. E.; Semancik, S.**
Role of initial conductance and gas pressure on the conductance response of single-crystal $SnO_2$ thin films to $H_2$, $O_2$, and CO.—73-07778
**Vetrone, Jim; Chung, Yip-Wah**
Organometallic chemical vapor deposition of $SnO_2$ single-crystal and polycrystalline films.—73-02914
**Vetrov, V. N.** See Afanas'ev, I. I.
**Vetter, G.** See Nicolas, M.
**Veuillen, J. Y.; Tan, T. A. N.; Lollman, D. B. B.; Guerfi, N.; Cinti, R.**
Electronic properties of epitaxial erbium silicide.—73-02607
**Vezikova, R. M.; Kuznetsov, G. I.; Gropyanov, V. M.**
Role of sintering additives in the production of lime refractories.—73-04020
**Vezzalini, Giovanna; Quartieri, Simona; Alberti, Alberto**
Structural modifications induced by dehydration in the zeolite gismondine.—73-08752
**Vezzoli, G. C.; Chen, M. F.**
Nanocomposite dielectric material: Au/$SiO_2$ gel.—73-04143
**Vianello, L.** See Gandini, P.
**Vianey, I.** See Hanbucken, M.
**Viatella, John** See Singh, Rajiv K.
**Vicat, J.** See Fanchon, E.
**Vicens, J.** See Sebire-Lhermitte, I.
**Vicente, E. E.** See Barreiro, M. M.
**Vichi, E. J. S.** See Nakamura, O.
**Vichr, Roman; Karasek, Miroslav; Choc, Zdenek**
Transmission characteristics of single-mode fibers.—73-10491
**Videau, J. J.** See Ducel, J. F.; Rossignol, S.
**Videau, J. J.; Etourneau, J.; Garnier, C.**
Structural influence of nitrogen in alkaline-earth aluminosilicate glasses: ir absorption spectroscopy.—73-10404
**Videnska, Magdalena; Ruzek, Jozef**
Baddeleyitic-corundum ramming refractories made from waste raw materials.—73-10702
**Vidgeon, E. A.** See Bratton, Graham J.
**Vidyullatha, M.; Sunandana, C. S.**
Electrical and dielectric studies on AgBr-$ZrO_2$ composites.—73-16471
**Viehland, Dwight** See Dai, Xun-Hu; Xu, Z.
**Viehland, Dwight; Li, Jie-Fang**
Compositional instability and the resultant charge variations in mixed B-site cation relaxor ferroelectrics.—73-07928
**Viehland, Dwight; Xu, Z.; Payne, D. A.**
Origin of *F* spots and stress sensitivity in lanthanum lead zirconate titanate.—73-11593
**Vieira, J. M.** See Silva, R. F.
**Vieira, M. T.** See Cavaleiro, A.
**Viel, Charles Henry; Stanley, G. M.**
Application of a mass heat extractor to increase the pull of a forehearth.—73-07107
**Viera, Nilson Dias, Jr.** See Maldonado, Edison Puig
**Vieux, V.** See Wolffer, N.
**Viewegh, J.** See Lisy, Antonin
**Vigasina, M. F.; Ivanov, A. A.; Orlov, R. Yu.**
Structural distortions in diamond from coherent anti-Stokes Raman spectroscopy data.—73-16322
**Vigdorchik, A. G.; Malinovskii, Yu. A.; Dryuchko, A. G.; Kalinin, V. B.; Verin, I. A.; Stefanovich, S. Yu.**
Synthesis and X-ray diffractometry study of rubidium rare-earth nitrates, $Rb_2[Ln(NO_3)_5(H_2O)_2]\cdot 2H_2O$, where Ln=La, Ce.—73-16354
**Vigdorchik, A. G.; Malinovskii, Yu. A.; Dryuchko, A. G.; Verin, I. A.**
Low-temperature X-ray diffraction study of potassium-neodymium nitrates, $K_3[Nd_2(NO_3)_9]$ and $K_2[Nd(NO_3)_5(H_2O)_2]$.—73-16203; Synthesis and X-ray diffraction study of lithium rare-earth nitrates $Li_3[Ln_2(NO_3)_9]\cdot 3H_2O$, where Ln=La, Nd.—73-02497
**Vigdorchik, A. G.; Malinovskii, Yu. A.**
Structural changes in isostoichiometric family of $Cs_2[Ln(NO_3)_5(H_2O)_2]$ [Ln=La, Ce, Nd].—73-02447; Structure characteristics of neodymium alkali nitrates.—73-16333
**Vigdorchik, R. I.; Telesh, A. M.**
Trends in cellular concrete application for construction.—73-13791
**Vigil, J. A.** See Hamilton, W. J.; Johnson, S. M.
**Vigliante, A.** See Wang, W. C.
**Vignaud, D.; Musil, C. R.; Etchin, S.; Antoniadis, D. A.; Melngailis, J.**
Lateral straggle of Si and Be focused ion beam implanted in GaAs.—73-11292
**Vignesoult, S.** See Germond, D.; Hyde, A. R.
**Vignesoult, S.; Partridge, G.; Hyde, A.**
Whisker and particulate reinforcement of glass and glass-ceramics.—73-14530
**Viguier, Claude** See Benaissa, Abdelatif
**Viguier, M.** See Cros, B.
**Viinikainen, Kari**
Not too hot to handle.—73-12050
**Vijaraghavan, R.** See Jhans, H
**Vijayakumar, M.** See Subrahmanyam, J.
**Vijayaraghavan, R.; Gopalakrishnan, J.; Rao, C. N. R.**
Structure and superconducting properties of the $Tl_{1-\delta}CaBa_2Cu_2O_7$ and $Tl_{1-\delta}Y_{1-x}Ca_xBa_2Cu_2O_7$ series.—73-11908
**Vijayaraghavan, R.; Rao, C. N. R.**
Superconducting properties of $Tl_{1-x}Pb_xCaSr_2Cu_2O_7$: role of Pb and oxygen stoichiometry.—73-08221
**Vikhrov, M. N.; Smirnova, Yu. V.**
Effect of external action on the optical loss from fiber light guides made of chalcogenide glass.—73-00455
**Viktorov, L. V.** See Startsev, V. S.
**Vikulin, V. V.; Kurskaya, I. N.**
Bonding of ceramic components made of reaction-bonded silicon nitride.—73-12413
**Vilato, Pablo** See Jousse, Didier
**Villalobos, Guillermo R.; Speyer, Robert F.**
Glass-ceramic sol-gel coating of ceramic fibers.—73-16803
**Villares, P.** See Ramirez-Malo, J.
**Villars, Pierre** See Rodgers, John R.
**Villaverde, A. B.** See Zhang, X. X.
**Villegas, Ignacio; Stickney, John L.**
GaAs deposition on the (100) and (110) planes of gold by electrochemical atomic layer epitaxy: a low-energy electron diffraction, Auger electron spectroscopy, and scanning tunneling microscopy study.—73-07542
**Villegas, Maria Angeles** See Fernandez Navarro, J. M.
**Villegas, Maria Angeles; Moure, C.; Jurado, J. R.; Duran, P.**
Influence of the calcining temperature on the sintering and properties of PZT ceramics.—73-09180
**Villegas, Maria Angeles; Pascual, Luis; Fernandez Navarro, J. M.**
Nitridation of $Li_2O$-$(B_2O_3,P_2O_5)$-$SiO_2$ glasses prepared by sol-gel.—73-14441; Nitridation of silicate and borosilicate glasses prepared by sol-gel process.—73-06943
**Villegier, J. C.; Moriceau, H.; Boucher, H.**
Y-Ba-Cu-O-based multilayers for optoelectronic devices.—73-01705
**Villemain, E.** See Rolland, M.
**Villeneuve, D.; Girard, R.; Giroux, M.; Goyette, J.; Kendall, J.; St. Arnaud, J.-M.**
Microwave characterization of a ceramic green body for an industrial drying process.—73-13137
**Villeneuve, G.** See Pizarro, J. L.
**Villeneuve, J. F.; Mocaer, D.; Pailler, R.; Naslain, R.; Olry, P.**
Tensile testing at high temperatures of ex-PCS Si-C-O and ex-PCSZ Si-C-N single filaments.—73-03364
**Villeneuve, R.** See Scherban, T.
**Villeret, Murielle** See Kartheuser, E.
**Villette, Bruno** See Gautier, Martine
**Vilminot, S.** See Granier, W.; Werckmann, J.
**Vilotijevic, M.; Dimitrijevic, S. T.; Randjelovic, I.**
Deposition of polycrystalline diamonds in a dc plasma jet of $Ar/H_2/CH_4$.—73-09064
**Vina, L.; Calle, F.; Calleja, J. M.; Chang, L. L.; Yoshino, J.**
Resonance Raman scattering in Cd/Te/CdMnTe superlattice under magnetic field.—73-04470
**Vinattieri, A.; Shah, Jagdeep; Damen, T. C.; Kim, D. S.; Pfeiffer, L. N.; Sham, L. J.**
Picosecond dynamics of resonantly excited excitons in GaAs quantum wells.—73-15102
**Vincent, A. B.** See Galindo, H.
**Vincent, H.** See Nicolopoulos, S.
**Vincent, H.; Perrier, C.; L'Heritier, P.; Labeyrie, M.**
Crystallographic study by Rietveld's method of barium-magnesium-tantalum-oxide-based ceramics for use as dielectric resonator. X-ray dilatometry at low temperature.—73-08593
**Vincenzini, P.** See Appiano, S.
**Vincenzini, P.**
Advances in Science and Technology, 2: Innovative Materials, Prospects and Problems in a Competitive Industrial Context (Proceedings of the International Conference on "Innovative Materials—Prospects and Problems in a Competitive Industrial Context," June 4-6, 1992, Modena, Italy)—73-17515
**Vinchant, J.-F.; Renaud, M.; Erman, M.; Peyre, J.-L.; Jarry, P.; Pagnod-Rossiaux, P.**
InP digital optical switch: key element for guided-wave photonic switching.—73-14994
**Vine, W. J.; Steeds, J. W.**
Microstructure of silicon carbide fiber-reinforced silicon carbide ceramic matrix composites heat-treated in vacuo and in pure oxygen.—73-03174
**Vingelis, L.** See Asmonte, S.
**Vinh, L.** See Chevrier, J.
**Vinnik, E. V.; Glinchuk, K. D.; Guroshev, V. I.; Prokhorovich, A. V.**
Factors responsible for the difference in the dose dependence of the intensities of different luminescence bands of III-V semiconductor compounds bombarded with fast particles.—73-14916; Luminescence centers induced in *p*-type GaAs:Zn by radiation and heat treatment.—73-15027; Mechanism for radiation-stimulated changes of the position of the maximum of an "impurity" luminescence band of GaAs and InP.—73-11311
**Vinogradov, A. S.; Nekipelov, S. V.; Pavlychev, A. A.**
Shape resonance in the X-ray absorption spectra of hexagonal boron nitride crystal.—73-02428
**Vinogradov, E. E.** See Krot, V. V.
**Vinogradov, V. S.**
Structure of deep impurity states of II, III, IV group elements in IV-VI semiconductors.—73-01326
**Vinokur, V. M.** See Krusin-Elbaum, L.; Kwok, W. K.; Seidler, G. T.
**Vinokurov, A. A.** See Akkerman, V. A.; Ganin, V. V.
**Vinokurova, L. I.; Vlasov, A. V.; Engalychev, A. E.; Zaitsev, V. K.; Ivanov, V. Yu.**
Features of magnetic ordering in highest manganese silicide single crystals $[MnSi_{1.71-1.75}]$ with incommensurate structure.—73-16149
**Vinson, Edward F.** See Totten, Patty L.
**Vinzelberg, H.** See Bruckner, W.; Heinrich, A.
**Violina, G. N.** See Kon'kov, O. I.
**Vipulanandan, C.; Krishnan, S.**
XRD analysis and leachability of solidified phenol-cement mixtures.—73-06733
**Vir Yakhmi, Jatinder** See Rajagopal, H.
**Virkar, Anil V.** See Fung, Kuan-Zong; Log, T.; Tanner, Cameron W.
**Virosztek, A.** See Rieck, C. T.
**Virshup, G.** See Eckstein, J. N.
**Virt, I. S.** See Andrukhiv, M. G.
**Virt, I. S.; Belotelov, S. V.**
Properties of $n^+p$ junctions made of $Cd_xHg_{1-x}Te$ subjected to local deformation.—73-04454
**Virt, I. S.; Kuz'ma, M. S.; Sheregii, E. M.; Shkumbatyuk, P. S.**
Solid-phase laser doping of $Cd_xHg_{1-x}Te$ single crystals.—73-04484
**Viscaino, S.** See Cros, Y.
**Viscaino, S.; Cros, Y.; Ruf, B.**
Silicon and nitrogen dangling bond point defects in PECVD silicon oxynitride thin layers.—73-06175
**Vishnevskii, A. A.** See Kopylova, M. G.
**Vishnyakova, G. A.** See Borovinskaya, I. P.
**Vishwamittar,** See Sharma, Meenu
**Viskanta, Raymond** See Field, Robert E.; Younis, L. B.
**Visloguzova, E. A.** See Uzberg, L. V.
**Vistin, L. L.** See Sorokin, N. I.
**Viswanath, Amarnath**
Color development of glossy glazes for rapid and single fire processes.—73-00901; Color development using triaxial colors for rapid once-fired systems.—73-07239
**Viswanathan, A.; Suthanthiraraj, S. Austin**
Frequency response analysis of the fast ion-conducting system cuprous iodide–silver chromate.—73-07326
**Viswanathan, B.** See Raju, K. C. James; Raman, N. S.
**Viswanathan, C. R.** See Bubulac, L. O.
**Viswanathan, K. S.** See Subramanyan, B.
**Viswanathan, K.; Reddy, C. S.**
Mathematical modeling of the effect of air ventilation on solids recycle rate and ball mill performance.—73-04930
**Viswanathan, R.** See Ogale, S. B.
**Viswanathan, R.; Gehl, S. M.**
Life-assessment technology for power-plant components.—73-13559
**Vitaliani, Renato V.** See Saetta, Anna V.
**Vitkavage, D. J.** See McNevin, S. C.
**Vitlina, R.** See Basmaji, Pierre
**Vitomirov, I. M.** See Chang, S.; Raisanen, A.
**Vitomirov, I. M.; Chang, S.; Brillson, L. J.; Rioux, D. F.; Sivananthan, S.; Faurie, J. P.**
Au interfaces with epitaxially grown CdTe(111): chemistry and barrier heights.—73-01080
**Vitomirov, I. M.; Raisanen, A.; Brillson, L. J.; Kirchner, P. D.; Pettit, G. D.; Woodall, J. M.**
Impact of surface processing on Al/GaAs(100) interface states.—73-04361; Processing and reconstruction effects on Al-GaAs(100) barrier heights.—73-04453
**Vitomirov, I. M.; Raisanen, A.; Finnefrock, A. C.; Viturro, R. E.; Brillson, L. J.; Kirchner, P. D.**
Temperature-dependent chemical and electronic structure of reconstructed GaAs(100) surfaces.—73-07831
**Vitorge, P.** See Atabek, R.
**Vitruk, L. E.** See Malovichko, G. I.
**Vitta, Satish; Stan, M. A.; Warner, Joseph D.; Alterovitz, Samuel A.**
Magnetic flux relaxation in $YBa_2Cu_3O_{7-x}$ thin film: thermal or athermal.—73-15544
**Vitta, Satish**
Conduction mechanism in crystalline $InSe$-$In_6Se_7$ composite.—73-01109
**Vitte, V.** See Pfeiffer, T.
**Vittoria, Carmine** See Dorsey, P. C.; How, Hoton; Jiang, H.; Kwan, P.
**Vittoria, Carmine**
Fabrication of ferrite films using laser deposition.—73-15377
**Vitunac, Edward A.; Zawadzki, Edward A.**
Apparatus for recycling glass.—73-01845
**Viturro, R. E.** See Johnson, F. G.; Vitomirov, I. M.
**Vityaz, P.; Verstak, A.; Talako, T.; Sobolevskii, S.; Lugscheider, E.; Jokiel, P.**
Processing and investigation of tauboride-containing NiCrBTi-TiC plasma coatings.—73-10266
**Vivian, B.** See Hovis, F. E.
**Vivien, D.** See Gourier, D.
**Vlach, Thomas J.** See Muralidhar, S. K.
**Vladimirov, I. V.** See Doroshenko, R. A.
**Vladimirov, V. V.; Gorshkov, V. N.; Malyutenko, V. K.**
Chaotic spontaneous oscillations in variable-gap semiconductor structures.—73-01094
**Vladimirova, V. A.** See Pankratova, O. Yu.
**Vladimirtsev, Yu. V.; Golenishchev-Kutuzov, V. A.; Khasanova, I. A.**
Spectral dependence of the photorefractive effect in lithium niobate at 77 K.—73-01432
**Vlakhov, E.** See Dimitriev, Y.
**Vlasenko, A. I.** See Artamonov, V. V.; Baidullaeva, A.
**Vlasenko, A. P.** See Gerasimovich, L. S.
**Vlasenko, M. P.** See Kon'kov, O. I.
**Vlasenko, O. A.; Sychugov, V. A.; Tikhomirov, A. E.**
Efficiency method of excitation of a semiconductor waveguide with a single-mode optical fiber.—73-04297
**Vlasenko, V. M.** See Solov'ev, S. A.
**Vlasov, A. A.** See Vasil'eva, I. G.
**Vlasov, A. N.; Butorina, O. O.**
Electrical resistivity of lanthanum–manganite-based complex oxides.—73-16481; Metallike electrical resistivity and excess electrical resistivity of rare-earth cobaltites.—73-16541
**Vlasov, A. S.** See Binchkauskas, V. Sh.
**Vlasov, A. S.; Dudin, V. V.; Struchkov, I. S.**
Influence of soluble chlorides on the rheological properties of suspensions of transition-metal oxides.—73-02872
**Vlasov, A. S.; Kurbanov, A. M.; Loginov, V. M.**
Improving the technology for Gzhel porcelain decorated with underglaze cobalt pigments.—73-00913
**Vlasov, A. V.** See Vinokurova, L. I.
**Vlasov, V. G.** See Bolotov, A. M.

**Vlasov, V. V.; Blaev, B. Kh.; Shevkoplyas, A. G.**
Building material based on the wastes of tungsten and molybdenum integrated works.—73-03976

**Vlasov, Yu. A.** See Astratov, V. N.

**Vlasov, Yu. G.** See Seleznev, B. L.

**Vlasov, Yu. G.; Bychkov, E. A.; Seleznev, B. L.; Zhilinskaya, E. A.; Licholit, I. L.**
Ni-implanted vitreous electrolyte $AgAsS_2$: ESR, ionic, and electronic conductivity.—73-01001

**Vlasova, E. V.** See Sokolova, M. N.

**Vlasova, Marina V.** See Zadiraka, Yu. V.

**Vlcek, Brian L.** See Lauer, James L.

**Vlcek, J.** See Musil, J.

**Vlcek, M.; Horak, J.**
Thermopower of $YBa_2Cu_3O_{7-\delta}$ and its changes during heat treatment.—73-08257

**Vlokh, O. G.** See Kityk, A. V.

**Vlokh, O. G.; Grabovskii, V. A.; Nekrasova, I. M.**
Effect of axial compression on optical activity of silver thiogallate.—73-16453

**Vlokh, R. O.; Pyatak, Yu. A.; Skab, I. P.**
Piezogyration in quartz enantiomorphic crystals.—73-01426; Refractive and hydrotropic properties of $LiNbO_3$ crystal upon twisting.—73-02680

**Vlokh, R. O.; Skab, I. P.**
Light diffraction on domain structure in $Ba_2NaNb_5O_{15}$ and $Gd_2(MoO_4)_3$ crystals.—73-15270

**Vocht-Mields, R.**
1992—a year of improvements for the ceramic industry.—73-13632; Forty years of ceramic technology and development.—73-13622

**Vodakov, Yu. A.** See Garshin, A. P.; Verenchikova, R. G.

**Vodakov, Yu. A.; Girka, A. I.; Konstantinov, A. O.; Mokhov, E. N.; Roenkov, A. D.; Svirida, S. V.**
Light-emitting diodes made from SiC bombarded with fast electrons.—73-07637

**Vodakov, Yu. A.; Vol'fson, A. A.; Zaritskii, A. A.; Mokhov, E. N.; Ostroumov, A. G.; Roenkov, A. D.**
Efficient green-emitting SiC diodes.—73-07477

**Vodolaszkaya, I. V.** See Aleksandrov, V. V.

**Vodop'yanov, K. L.; Lukashev, A. V.; Phillips, C. C.**
Nano- and picosecond 3-μm Er:YSGG lasers using InAs as passive *Q* switchers and mode lockers.—73-07685

**Vodop'yanov, L. K.** See Kislov, B. I.; Kozyrev, S. P.

**Voecks, Gerald E.; Sharma, Pramod K.**
Hot gas, regenerative, supported $H_2S$ sorbents.—73-05219

**Voelker, Werner** See Dorbath, Bernd

**Vogel, Eva M.** See Snitzer, Elias

**Vogel, J.** See Wange, P.

**Vogel, John C.** See Bollong, Charles A.

**Vogel, W.** See Holand, Wolfram; Wange, P.

**Vogel, Werner** See Jana, Carsten

**Vogelsang, H.** See Permogorov, S.

**Vogl, P.** See Wirner, C.

**Vogt, E. T. C.** See De Vos Burchart, Erik

**Vogt, G. J.; Unruh, W. P.**
Microwave hybrid heating of alumina filaments.—73-05918

**Vogt, T.; Schmahl, W. W.**
High-temperature phase transition in perovskite.—73-16168

**Vogt, U.** See Hofmann, Heinrich

**Vohra, Anil** See Lal, Manohar

**Vohra, Yogesh K.** See Liu, Jun

**Voigt, Ingolf; Mager, Beate; Reisch, Renate**
Use of rasorite as a source of boron in borosilicate glasses.—73-00717

**Voigt, Manfred; Herrmann, J.; Bober, Reinhard; Wand, B.; Witschel, H.; Seege, A.**
Practical experience with a plant for fluidized bed granulate drying for pressed ceramic bodies.—73-01816

**Voiles, E. T.** See Han, Y.

**Voillot, F.** See Goiran, M.

**Voillot, F.; Goiran, M.; Guasch, C.; Peyrade, J. P.; Dinh, L.; Rocher, A.**
Dislocation slipping, a new technique to produce steplike surfaces compatible with quantum confinement sizes.—73-07450

**Voillot, F.; Goiran, M.; Guasch, C.; Peyrade, J. P.; Dinh, L.; Rocher, A.**
Dislocation slipping, a new technique to produce steplike surfaces compatible with quantum confinement sizes.—73-14839

**Voisin, P.** See Lugagne-Delpon, Emanuel; Roth, A.

**Voit, E.** See Zgonik, M.

**Voitovich, A. I.** See Borovskii, E. S.

**Voitovich, A. P.** See Bazylev, A. G.

**Voitovich, R. F.** See Golovko, E. I.

**Vojtech, Ales** See Novotny, Vladimir

**Vojtsenya, S. V.** See Belyaeva, A. I.

**Vol'fovskii, G. M.** See Bulakh, V. L.

**Vol'fson, A. A.** See Vodakov, Yu. A.

**Vol'khin, V. V.** See Onorin, S. A.

**Vola, J. P.** See Ennouri, A.

**Volchek, I. Z.; Khaldei, T. V.; Ivanova, V. V.; Chumadurova, I. I.**
Fibrocement materials based on glass fiber.—73-13724

**Vold, C.** See Cukauskas, E. J.; Hoff, H. A.

**Volga, V. I.** See Kolomeitsev, V. V.

**Volk, T. R.; Rubinina, N. M.**
Nonphotorefractive impurities in lithium niobate: magnesium and zinc.—73-02649

**Volkl, E.; Allard, L. F.; Nolan, Theodore A.**
Electron holography applied to the study of ceramic materials.—73-08398

**Volkov, A. A.** See Gorshunov, B. P.

**Volkov, A. A.; Kozlov, G. V.; Lebedev, S. P.**
Soft modes in RADP dipole glass.—73-03811

**Volkov, N. V.** See Patrin, G. S.

**Volkov, V. P.; Skiba, P. A.; Sechko, A. G.**
Local crystallization of titanium-containing glasses under the action of laser radiation.—73-00652

**Volkova, N. E.** See Nemilov, S. V.

**Volkova, S. N.** See Irisova, K. N.

**Volkova, S. N.; Min'ko, N. I.; Miroshnichenko, I. I.**
Features of the structural state of iron in a glass synthesized in a beam of accelerated electrons.—73-00628

**Volkova, V. V.** See Barinova, N. A.

**Volksch, G.** See Heide, Klaus

**Volkwein, Andreas**
Capillary suction of water into concrete and the abnormal viscosity of the pore water.—73-06631

**Vollath, Dieter; Sickafus, Kurt E.**
Synthesis of ceramic oxide powders by microwave plasma pyrolysis.—73-17035; Synthesis of nanosized ceramic nitride powders by microwave-supported plasma reactions.—73-17044; Synthesis of nanosized ceramic oxide powders by microwave plasma reactions.—73-13307

**Vollath, Dieter**
Activities of microwave processing of ceramics in Germany.—73-05685

**Voller, V. R.** See Simpson, D. E.

**Vollmann, Markus** See Waser, Rainer

**Volnyanskii, M. D.** See Moiseenko, V. N.; Strukov, B. A.; Tikhomirova, N. A.; Trubitsyn, M. P.

**Volnyanskii, M. D.; Kudzin, A. Yu.; Chertkov, I. L.**
Using internal friction technique to study defects in [pure and] Cr- and Al-doped $Bi_{12}SiO_{20}$ [single crystals].—73-17106

**Volnyanskii, M. D.; Kudzin, A. Yu.; Katkov, V. F.**
Dielectric properties of $Li_{2-x}Na_xGe_4O_9$ crystals.—73-16445

**Volod'ko, V. G.** See Galina, T. M.

**Volodin, A. G.** See Bakharev, O. N.

**Vologdina, S. G.; Ganyuchenko, V. M.; Kalinin, N. A.**
Prospects for using high-power $CO_2$ lasers to machine and weld quartz glass products.—73-01823

**Voloshinovskii, A. S.** See Antonyak, O. T.; Benderskaya, L. P.; Rodnyi, P. A.

**Voloskova, M. V.** See Bespalova, L. L.

**Volotskii, S. V.** See Anders, A. G.; Anders, E. E.

**Volsgen, Fernando; Storr, Manfred; Kohler, Manfred**
Microbiotic deferrization of the upper cretaceous quartz sands of Weferlingen (Germany).—73-01986

**Voltzke, Dieter; Mulier, Thomas; Abicht, Hans-Peter; Freude, Dieter**
Synthesis of pure fresnoite, $Ba_2TiSi_2O_8$.—73-03052

**Volzhenskii, A. V.** See Boldyrev, A. S.

**Volzhenskii, A. V.; Chistov, Yu. D.; Karpova, T. A.; Sviridov, V. N.; Iskhakova, A. A.**
Concretes in low- and non-clinker cements.—73-13698

**Volzhenskii, A. V.**
Dependence of concrete durability on the dispersibility of portland cement, its concentration, and the absolute volumes of components of hardening mixes.—73-03450

**Vom Wurmb, V.** See Becker, K. D.

**Von Arciszewski, A.** See Konig, W.

**Von Bernuth, Gotz**
Analysis and measurements in ceramic laboratories.—73-12105; Sample preparation and particle measurement.—73-05084

**Von der Osten, W.** See Permogorov, S.

**Von Helmolt, R.; Haupt, L.; Barner, K.; Sondermann, U.**
Metal semiconductor transition and spin glass properties of $La_{2-x}I$

**Von Helmolt, T.; Wecker, J.; Holzapfel, B.; Schultz, L.; Samwer, K.**
Giant negative magnetoresistance in perovskite $La_{1/3}Ba_{1/3}MnO_3$ ferromagnetic films.—73-15327

**Von Klitzing, K.** See Brawner, D. A.

**Von Klitzing, V.** See Kukushkin, I. V.

**Von Landsberg, D.**
History of quicklime production and use from early times to the industrial revolution.—73-09982

**Von Molnar, S.** See Terry, I.

**Von Ortenberg, M.** See Krevet, R.

**Von Sacken, U.** See Davidson, I.

**Von Wedel, K.**
Pendulum grate cooler with horizontal aeration of the clinker.—73-03513

**Von Windheim, J. A.; Venkatesan, Vasudev; Malta, D. M.; Das, Kalyankumar**
Electrical characterization of semiconducting diamond thin films and single crystals.—73-04303

**Von Zuben, A. A. G.** See Morosini, M. B. Z.

**Vondran, Gary L.**
Interground fiber cement.—73-10195

**Vondreele, R. B.** See Marin, S. J.; Parise, John B.

**Vonmolnar, S.** See Ohno, H.

**Vook, R. W.** See Chang, C. Y.; Jo, B. H.

**Vopilov, V. A.; Gurova, N. N.; Buznik, V. M.**
$^{19}F$ nuclear magnetic resonance study of the structural role of fluorine ions in glasses of the system $Al(PO_3)_3$-$BaF_2$ and $Ba(PO_3)_2$-$CdF_2$.—73-00341; Structural role of fluorine ions investigated by the method of nuclear magnetic resonance of $^{19}F$ in glasses of the system $Al(PO_3)_3$-$BaF_2$ and $Ba(PO_3)_2$-$CdF_2$.—73-00410

**Vorlicek, V.** See Irmer, G.

**Vorob'ev, G. P.** See Artem'ev, G. G.

**Vorob'ev, P. G.** See Aleksandrov, V. V.

**Vorob'ev, V. V.** See Asrarov, Sh. A.

**Vorona, I. P.** See Ishchenko, S. S.

**Voronin, A. I.** See Chernyshov, E. M.

**Voronin, B. M.; Shvets, E. A.; Prikhod'ko, G. P.; Starcha, A. V.**
$FePS_3$ and $NiPS_3$ production and electrical conductivity.—73-14924

**Voronin, V. V.** See Razhenov, Yu. M.

**Voronina, T. I.** See Baranov, A. N.

**Voronko, Yu. K.; Eskov, N. A.; Ershova, L. M.; Sobol, A. A.; Ushakov, S. N.**
Polarized luminescence of $Eu^{3+}$ ions in crystals with the garnet structure.—73-02671

**Voronko, Yu. K.; Maksimova, G. V.; Sobol, A. A.**
Anisotropic luminescence centers of $T^{3+}$ ion luminescence in fluoroapatite crystals.—73-08808

**Voronkov, V. P.; Kalygina, V. M.; Mulenkov, S. Yu.; Oborina, E. I.; Salman, E. G.; Smirnova, T. P.**
Influence of laser annealing on the electrical properties of MIS structures based on GaAs.—73-04365

**Voronkova, V. I.** See Aleksandrov, V. V.

**Voronov, V. N.** See Flerov, I. N.

**Voronov, V. V.** See Bagulya, A. V.

**Voronova, I. D.; Gornik, E.; Klyshevich, E. V.; Kremser, C.; Chebotarev, A. P.**
Long-wavelength edge of the residual photoconductivity of In-doped $Pb_{0.78}Sn_{0.22}Te$.—73-11294

**Voronova, L. I.** See Bukhtoyarov, O. I.

**Voronovskii, A. N.** See Dizhur, E. M.

**Vorontsov, B. S.; Revzina, L. A.**
MNDO calculation of two- and three-body energies in glass-forming oxides.—73-14038

**Vorontsov, B. S.; Revzina, L. A.**
Quantum chemical computations of interparticle interactions in the structural groupings of boron oxide.—73-02408

**Vorotilova, L. S.; Ivanov, S. N.; Kasperovich, V. S.; Charnaya, E. V.; Khazanov, E. N.**
NMR of $^{27}Al$ in mixed $Y_xEr_{1-x}AlO_3$ crystals [$x$=1, 0.93, and 0.9].—73-16229

**Vorotinov, A. M.; Sablina, K.**
Spin-glass state in amorphous $Bi_2CuO_4$.—73-16311

**Vortisch, Walter** See Samim, Hamid

**Voshchenkov, Alexander M.**
Plasma etching: an enabling technology for GHz silicon integrated circuits.—73-07736

**Voss, A.; Funken, J.; Alunovic, M.; Sung, H.; Kreutz, E. W.**
Removal and transfer of material in laser-assisted physical vapor deposition of ceramics.—73-13235

**Voss, Eckhard**
New nonstick porcelain enameling systems.—73-10256

**Voss, Kenneth E.** See Yavuz, Bulent O.

**Vosylius, Y.** See Galdikas, A.

**Votava, O.** See Ashworth, S.

**Votel, O.** See Dumas, P.

**Votyakov, E. V.** See Toubin, Yurii K.

**Vouillemet, M.; Risse, M.**
Mixed drying uhf/hot air for the sanitary ceramics industry.—73-10869

**Vovk, O. V.; Lelechenko, V. P.; Soloshenko, V. I.; Roizin, Y. O.; Chkunina, V. N.**
Effect of heat treatment on the parameter of an interface in Si-$SiO_2$ structures after irradiation.—73-11155

**Vozar, Libor** See Kaluzna, Marta

**Vragov, A. P.**
Calculation of interphase mass exchange coefficient in a hydrosuspended layer of a dispersed phase.—73-16041

**Vrancken, Karl C.** See Gillis-D'Hamers, Iwan

**Vrbjarova, Eva; Turi Nagy, Ladislav; Pelikan, Peter**
Reactivity of alkoxysilanes studied by methods of theoretical chemistry.—73-09298

**Vrbos, N.** See Matusinovic, T.

**Vredenberg, A. M.; Hunt, N. E. J.; Schubert, E. F.; Jacobson, D. C.; Poate, J. M.; Zydzik, G. J.**
Controlled atomic spontaneous emission from $Er^{3+}$ in a transparent Si/$SiO_2$ microcavity.—73-16431

**Vreugdenhil, Willem; Sherif, Fawzy G.; Burk, Johst H.; Gadberry, James F.**
Hydrogenation of nitriles by a tungsten carbide catalyst.—73-15995

**Vroom, Alan H.; Whitemore, David W.**
Sulfur polymer concrete for high corrosion resistance.—73-10172

**Vrublevskii, A. I.** See Ivanovskaya, M. I.

**Vu, T. Q.** See Bindilatti, V.; Shih, O. W.; Twardowski, A.

**Vu, T. Q.; Bindilatti, V.; Shapira, Y.; Twardowski, A.; Damianiuk, M.; McNitt, E. J.**
Reversal of magnetic anisotropy of $Cd_{1-x}Fe_xS$ at high magnetic fields.—73-07974

**Vu, T. T.** See Clawson, S. R.

**Vucelic, D.** See Hurem, Z.

**Vucic, Z.** See Gladic, J.

**Vugmeister, B. E.** See Toulouse, J.

**Vukovich, Dennis T.** See Dennis, Roger D.

**Vul, A. Ya.; Makarova, T. L.; Osipov, V. Yu.; Zinchik, Y. S.; Boitsov, S. K.**
Kinetics of Si oxidation and structure of oxide films of thickness <50 Å.—73-07629

**Vulcan, F.** See Soraru, G. D.

**Vulkov, V.; Delchev, N. A.; Nikonova, Nadia S.**
Chemical activating of metallurgical slag in the conditions of granulating.—73-06637

**Vuorinen, P. T.** See Mantyla, T. A.

**Vuorinen, Sakari** See Halvarsson, Mats

**Vuorinen, Sakari; Hoel, R. H.**
Interfacial characterization of chemically vapor deposited titanium carbide on cemented carbide.—73-16186

**Vuorinen, Sakari; Kartsson, L.**
Phase transformation in chemically vapor deposited κ-alumina.—73-17180

**Vuoristo, P. M. J.** See Niemi, K. J.

**Vuoristo, P. M. J.; Niemi, K. J.; Makela, A.; Mantyla, T. A.**
Spray parameter effects on structure and wear properties of detonation gun sprayed WC+17% Co coatings.—73-06857

**Vuye, G.** See Rivory, J.

**Vuye, G.; Fisson, S.; Van, V. N.; Wang, Y.; Rivory, J.; Abeles, F.**
Temperature dependence of the dielectric function of silicon using in situ spectroscopic ellipsometry.—73-16613

**Vyas, P. D.** See Nahar, R. K.

**Vyaselev, O. M.** See Bulaevskii, L. N.

**Vyatkin, A. F.** See Buravlev, A. V.

**Vyatkin, S. V.** See Yamnova, N. A.

**Vyatkin, Yu. F.** See Antipin, V. G.

**Vydrina, Zh. A.** See Uzberg, L. V.

**Vydyanath, H. R.; Ellsworth, J. A.; Fisher, R. F.; Kennedy, J. J.; Johnson, C. J.; Neugebauer, G. T.**
Vapor phase equilibria in the $Cd_{1-x}Zn_xTe$ alloy system.—73-12729

**Vydyanath, H. R.; Ellsworth, J. A.; Kennedy, J. J.; Dean, B.; Johnson, C. J.; Neugebauer, G. T.**
Recipe to minimize Te precipitation in CdTe and (Cd, Zn)Te crystals.—73-07765

**Vydyanath, H. R.; Ellsworth, J. A.; Parkinson, J. B.; Kennedy, J. J.; Dean, B.; Johnson, C. J.**
Thermomigration of Te precipitates and improvement of (Cd, Zn)Te substrate characteristics for the fabrication of LWIR [long-wavelength infrared] (Hg, Cd)Te photodiodes.—73-11482

**Vygranenko, Yu. K.; Slyn'ko, V. V.; Slyn'ko, E. I.**
Deep states in Ga-doped $Pb_{1-x}Sn_xTe$ solid solutions.—73-11130

**Vyodnov, E. B.** See Osipov, V. V.

**Vyskocil, J.** See Musil, J.

**Vysochanskii, Yu. M.** See Perechinskii, S. I.

**Vysochanskii, Yu. M.; Maior, M. M.; Molnar, Sh. B.**
Nonequilibrium phenomena in incommensurate phase of $Sn_2P_2Se_6$.—73-01259

**Vysochanskii, Yu. M.; Maior, M. M.; Perechinskii, S. I.; Tikhomirova, N. A.**
Dynamic domain structure of ferroelectric-semiconductor $Sn_2P_2S_6$.—73-14846

**Vysochanskii, Yu. M.; Perechinskii, S. I.; Prits, I. P.; Rizak, V. M.; Rizak, I. M.; Seikovskaya, A. A.**
Effect of uniaxial compression on phase transitions in the ferroelectrics $Sn_2P_2S_6$ and $Sn_2P_2Se_6$.—73-15257

**Vysotskii, S. A.; Tsarik, A. M.**
Evaluation of the effectiveness and the classification of multicomponent concretes.—73-03468

**Vysotskii, S. L.; Kazakov, G. T.; Nam, B. P.**
Exchange stiffness and nonuniform exchange constant in films of Ga,Sc-substituted yttrium iron garnet.—73-15322

**Vyvenko, O. F.** See Rykov, V. V.

**Wa, Patrick Li Kam** See Thirstrup, Christen

**Waag, A.** See Hellmann, R.; Yakovlev, D. R.

**Wachs, A. L.; Bates, J. B.; Dudney, N. J.; Luck, C. F.**
Plasma diagnostic studies of the influence of process variables upon the atomic and molecular species ejected from $(1-x)Li_4SiO_4$:$xLi_3PO_4$ targets during radio frequency magnetron sputtering.—73-02924

**Wachs, Israel E.** See Deo, Goutam; Hardcastle, Franklin D.

**Wachter, P.** See Bucher, B.; Marabelli, F.; Mendik, M.; Steiner, P.

**Wachtman, John B.** See Lin, Chi-Hsien; Zutshi, Ajoy

**Wada, Akira; Nozawa, Tetsuo**
Optical fibers with suppressed stimulated Brillouin scattering.—73-02651

**Wada, Akira**
Distributed Er-doped optical fibers.—73-07013

**Wada, Hideo** See Kitamura, Takao

**Wada, Hideo; Sakane, K.; Kitamura, Takao; Sunai, M.; Sasaki, N.**
Thermal expansion of aluminum borate.—73-16627

**Wada, Kazumi** See Wada, Yoshinori

**Wada, M.** See Kamiya, Kanichi

**Wada, Mitsuo; Yamashita, Yasuharu; Sawada, Akikatsu; Ishibashi, Yoshihiro**
Ferroelectric phase transition in $Li_{2-x}Na_xGe_4O_9$ (x=0.5).—73-01413

**Wada, Naoki** See Ueta, Yoshihiro

**Wada, Nobuyuki** See Kanba, Seiji

**Wada, Nobuyuki; Kohno, Yoshiaki; Kojima, Shozo; Nakaya, Syunsuke**
Method for production of nonreducible dielectric ceramic composition.—73-01057

**Wada, Norio; Umegaki, Takao**
Effects of cation (Sr, Pb, and Ba) on calcium carbonate polymorphs under diffusional conditions.—73-09930

**Wada, Osamu** See Takami, Tetsuya

**Wada, Satoshi** See Noma, Tatsuo

**Wada, Shigetaka** See Kamiya, Hidehiro; Kamiya, Nobuo; Makino, Hideaki; Makino, Hiroaki; Masaki, Hideyuki; Suda, Akihiko; Sugiyama, Naohiro; Takatori, Kazumasa; Uchiyama, Yasuo; Ukyo, Yoshio; Yamada, Katsunori

**Wada, Shigetaka; Kiyoshige, Masanori**
Erosion and abrasive water jet cutting of ceramics.—73-05792

**Wada, Shigetaka; Kumon, Yasuhiro**
Effects of impact angles of jet stream in the abrasive water jet cutting of $Si_3N_4$ ceramics.—73-16751; Wear of $Si_3N_4$ ceramics by abrasive water jet.—73-09696; 73-17457

**Wada, Shigetaka**
Sand erosion of ceramics.—73-06515

**Wada, Shinji** See Furukawa, Yuji

**Wada, T.** See Kohiki, Shigemi; Matsuura, K.

**Wada, Takahiro** See Nishitani, Mikihiko

**Wada, Takahiro; Ichinose, Ataru; Hamada, Kazuyuki; Yamauchi, Hisao; Tanaka, Shoji**
Layered copper oxides $(R_{1+x}Ce_{2-x})Sr_2Cu_2(M_{1-y}Cu_y)$- $O_{11}$ wherein R is a rare-earth element and M is one or both of Pb and Tl.—73-04843

**Wada, Takahiro; Ichinose, Ataru; Yamauchi, Hisao; Tanaka, Shoji**
Crystal chemistry of copper-based oxide superconductors and related compounds—an approach to the material design.—73-04689

**Wada, Takao** See Ichimura, Masaya

**Wada, Tatsuo** See Shul, Yong-Gun

**Wada, Yoshinori; Wada, Kazumi**
Relaxation of GaAs surface band bending by atomic layer passivation.—73-11417

**Wada, Yukihisa**
Process for firing ceramic honeycomb structural bodies.—73-05242

**Wadayama, Yoshihide** See Okada, Michiya

**Wade, Jonathan A.; White, Charles S.; Wu, Francisco J.**
Predicting creep behavior of silicon nitride components using finite element techniques.—73-17411

**Wadsworth, I.; Stevens, R.**
Silicon carbide whisker-reinforced cordierite.—73-08524

**Wadsworth, J.** See Nieh, T. G.

**Wadsworth, J.; Nieh, T. G.**
Superplasticity in ceramic and metal matrix composites and the role of grain size, segregation, interfaces, and second phase morphology.—73-09[illegible]

**Waechter, D.; Billard, T.; Gogna, P.**
Properties of oxide-nitride-oxide [ONO] stacked films for gate insulation in active matrix displays.—73-04152

**Waerenborgh, J. C.** See Da Silva, M. G. Ferreira

**Wafik, A. H.; Mazen, S. A.; Mansour, S. F.**
Composition dependence of discontinuous magnetization in Li-Ti ferrites.—73-15309

**Wagemann, A.** See Konig, W.

**Wagener, D.** See Egorov, A. V.

**Wagener, Michael** See Schirmacher, Walter

**Wagener, Ulrike; Russel, Christian**
Pyrolytic route to fluoride glasses: II, Preparation of glasses in the system $ZrF_4$-$BaF_2$-$LaF_3$-$AlF_3$-NaF.—73-00694

**Wager, J. F.** See Abu-Dayah, A.; Bhattacharyya, K.; Lim, S.

**Wagh, Arun S.; Douse, Victor E.**
Silicate bonding of laterites: an ancient process for construction components.—73-00014

**Wagh, Arun S.; Singh, Dileep; Subhan, Waseem; Chawla, Nikhilesh**
Mechanical properties of magnesium ammonium phosphate cements and their zeolite composites.—73-03496

**Wagh, Arun S.; Singh, J. P.; Poeppel, R. B.**
Dependence of ceramic fracture properties on porosity.—73-09569

**Wagh, Arun S.**
Porosity dependence of thermal conductivity of ceramics and sedimentary rocks.—73-08954

**Wagner, B. K.** See Benz, R. G.; Rajavel, D.

**Wagner, Christian**
Fast drying of perforated clay blocks.—73-05114

**Wagner, George W.**
Variable temperature $^{127}I$ MAS NMR of ß-AgI: sensitivity of the $^{127}I$ MAS linewidth to $Ag^+$ diffusion.—73-06183

**Wagner, K. H.** See Brignon, A.

**Wagner, Keith E.; Draper, Eric A.; Skalny, Jan**
Use of complementary imaging techniques in concrete deterioration studies.—73-06730

**Wagner, Oliver** See Jansen, Martin

**Wagner, P.** See Jackson, H. W.

**Wagner, R. J.** See Davis, John L.

**Wagner, R. J.; Krebs, J. J.; Stauss, G. H.; White, A. M.**
Submillimeter EPR evidence for the As antisite defect in GaAs.—73-15188

**Wagner, R.; Siegel, S.; Herrmann, M.**
Prediction of the mechanical high-temperature behavior of ceramic materials by measuring Young's modulus.—73-03344

**Wagner, V.** See Hermans, J.

**Wagner, W.; Rauch, F.; Feile, R.; Ottermann, C.; Bange, K.**
Compaction of tungsten oxide films by ion-beam irradiation.—73-13383

**Wagner, William R.** See Senter, Howard J.

**Wagner, Wolfram** See Nyssen, Peter R.

**Wahab, Q.; Glass, R. C.; Ivanov, I. P.; Birch, J.; Sundgren, J.-E.; Willander, M.**
Growth of epitaxial 3C-SiC films on (111) silicon substrates at 850°C by reactive magnetron sputtering.—73-09154

**Wahich, P. F.** See Sundaram, K. B.

**Wahl, G.** See Stumm, T.

**Wahlstrom, M. K.** See Andersson, K. E.

**Wahlstrom, U.; Hultman, L.; Sundgren, J. E.; Adibi, F.; Petrov, I.; Greene, J. E.**
Crystal growth and microstructure of polycrystalline $Ti_{1-x}Al_xN$ alloy films deposited by ultrahigh-vacuum dual-target magnetron sputtering.—73-13385

**Waian, Mitchel** See Coneski, Anthony F.

**Waite, M. M.; Shah, S. Ismat; Doele, B. A.; Unruh, K. M.**
Fabrication and X-ray photoelectron spectroscopy of granular Ge in Al and $Al_2O_3$ matrices.—73-09127

**Waite, M. M.; Shah, S. Ismat; Doele, B. A.**
Effect of the matrix on the oxidation of nanostructured Ge granular films.—73-05386

**Wajler, Cezary** See Blazewicz, Marta

**Wakabayashi, Hajimu** See Akai, Tomoko; Kineri, Tohru

**Wakabayashi, Hajimu; Yamanaka, Hiroshi; Kadono, Kohei; Yamashita, Masaru; Sakaguti, T.; Akai, Tomoko**
Preparation and optical property of highly Au-doped glasses as a nonlinear optical material.—73-14256

**Wakabayashi, Toru** See Kinoshita, Toshiya

**Wakahata, Yasuo** See Ueno, Iwao

**Wakai, Fumihiro** See Murayama, Norimitsu; Nagano, Takayuki; Sakaguchi, Shuji

**Wakai, Fumihiro; Kodama, Yasuharu; Izaki, Kansei; Kawakami, Takamasa**
Process for shaping ceramic composites.—73-02127

**Wakai, Fumihiro; Kodama, Yasuharu; Sakaguchi, Shuji; Murayama, Norimitsu; Rouxel, Tanguy; Sato, N.**
Development of superplastic functional ceramics through grain refinement.—73-01399

**Wakamasu, Satoshi** See Sakagami, Seigou

**Wakamatsu, H.; Szu, S.-P.; Klein, L. C.**
Effect of lithium salts on the ionic conductivity of lithium silicate gels.—73-10431

**Wakamatsu, Mitsuru** See Ishikawa, Makoto

**Wakamatsu, S.** See Kawai, Chihiro

**Wakamatsu, Yoshio; Saito, T.; Ueda, S.; Niino, M.**
Development of a thermal shock evaluation device for functionally gradient materials for aerospace applications.—73-05037

**Wakamori, Koji** See Yamakawa, Akira

**Wakamura, Masato** See Yokouchi, Kishio

**Wakasa, K.; Ikeda, A.; Yoshida, Y.; Yamaki, M.**
Silica investment prepared for dental purposes: effect of cristobalite content on mechanical properties.—73-17427

**Wakasa, K.; Yamaki, M.**
Application of silica-sol investment to dental castable ceramics.—73-16657

**Wakasugi, Mikio** See Yamamoto, Takahiro

**Wakasugi, Takashi** See Hara, Tatsuo; Mishima, Naofumi; Nishikawa, Yoshinori; Ota, Rikuo

**Wakatsuki, Hiromichi** See Kawabata, Shoichi

**Wakatsuki, M.** See Hong, Shi-Ming

**Wakatsuki, M.; Takano, K. J.; Hagi, H.**
Formation processes of materials at high pressure.—73-16796

**Wakayama, Masaki** See Ohashi, Toshio

**Wakayama, S.** See Takaoka, S.

**Wakayama, Shuichi; Nishimura, Hisashi**
Critical stress of microcracking in alumina evaluated by acoustic emission.—73-06362

**Wakita, Hidenobu** See Ono, Yukiyoshi

**Wakita, Koichi** See Kawano, Kenji

**Wakiya, Naoki; Ishizawa, Nobuo; Saiki, Atsushi; Shinozaki, Kazuo; Mizutani, Nobuyasu**
Crystal structural studies of thermal decomposition process of $PbMg_{1/3}Nb_{2/3}O_3$ single crystal into pyrochiore-type compound.—73-16080; Synthesis of a new compound, $Ca_{0.8}Ce_{1.2}Sn_2O_7$, with pyrochlore structure.—73-03040

**Wakiya, Naoki; Sumino, Hiroyasu; Shinozaki, Kazuo; Mizutani, Nobuyasu**
*I-V* characteristics of single grain boundary in ZnO varistor.—73-01193

**Wakuda, Tsuyoshi** See Ni, Bao-Rong

**Wal, A.; Kuzuma, M.; Pociask, M.; Sheregii, E. M.**
Distribution of Hg in $Cd_xHg_{1-x}Te$ by pulsed laser annealing.—73-14840

**Walbank, J.** See Pashby, I. R.

**Walck, J. C.** See Subbarao, E. C.

**Walck, S. D.; Zabinski, J. S.; Donley, M. S.; Bultman, J. E.**
Calibration of an off-axis quartz crystal thickness monitor for a pulsed laser deposition system using a high-resolution scanning electron microscope.—73-12114

**Waldenstrom, Mats G.; Fisher, Udo K. R.; Hillert, Lars H.; Dennis, Mahlon D.**
Diamond tools for rock drilling, metal cutting, and wear part applications.—73-05298

**Waldman, J.** See Gatesman, A. J.; Goodhue, W. D.; Mueller, E. R.

**Waldner, Kurt F.** See Laine, Richard M.

**Waldrop, J. R.; Grant, R. W.; Kraut, E. A.**
Measurement of AlP/GaP(100) heterojunction band offsets by X-ray photoemission spectroscopy.—73-11307

**Waldrop, J. R.; Grant, R. W.; Wang, Y. C.**
Metal Schottky barrier contacts to alpha 6H-SiC.—73-10251

**Waldrop, J. R.; Sullivan, G. J.; Grant, R. W.; Kraut, E. A.; Harrison, William A.**
Effect of interface composition on the band offsets at InAs/AlSb(001) heterojunctions.—73-07465

**Walkenhorst, A.** See Li, Qi; Xi, X.-X.

**Walker, A. C.** See Ehrlich, J. E.; Oberle, J.

**Walker, D.** See McKee, Mark A.

**Walker, E.** See D'Anna, G.; Hoffmann, L.

**Walker, John M.** See Krishnaswamy, S. Visvanathan; Skowrenek, Russell K.

**Walker, P. L.** See Verma, S. K.

**Walker, W. J., Jr.; Reed, J. S.; Verma, S. K.**
Polyethylene glycol [PEG] binders for advanced ceramics.—73-09247

**Walker, W. J., Jr.; Reed, J. S.**
Green testing of pressed compacts.—73-09608

**Walkerhorst, A.; Doughty, C.; Xi, X.-X.; Li, Q.; Lobb, C. J.; Mao, S. N.**
Electric field effects on vortex dynamics in ultrathin $YBa_2Cu_3O_{7-\delta}$ films.—73-08049

**Wall, Donald R.** See Knickerbocker, John U.

**Wall, J.** See Li, M.

**Wall, K. F.; Schulz, Peter A.; Aggarwal, R. L.; Lacovara, P.; Sanchez, A.**
Ti:$Al_2O_3$ master-oscillator/power-amplifier system.—73-15210

**Wallace, J. P.** See Ray-Chaudhuri, A. K.

**Wallace, J. S.** See He, C.

**Wallace, J.** See Simpson, J.

**Wallace, Stephen** See West, Jon K.

**Wallace, Stephen; West, Jon K.; Hench, Larry L.**
Interactions of water with trisiloxane rings: I, Experimental analysis.—73-02301

**Wallace, W.** See Beddoes, J.

**Wallden, L.** See Hamawi, A.

**Wallenberg, L. R.** See Selinder, T. I.

**Wallenberger, Frederick T.; Brown, Sherman D.; Onoda, George Y., Jr.**
ZnO-modified high-modulus glass fibers.—73-00723

**Walling, Richard H.; Moss, Rodney H.**
Safety and environmental aspects of CVD.—73-08362

**Wallis, Gregory D.**
Development and application of porous plastic molds for the casting of sanitary ware and dinnerware.—73-08331

**Walloschek, Horst**
Brickworks with sea view.—73-03975

**Wallraven, R.** See Valkenberg, T.

**Walls, Claudia A.** See Nunn, Stephen D.; Tiegs, Terry N.

**Walls, J. R.** See Ovenston, A.

**Walls, P. A.; Ueki, Masanori**
Analysis of the α-to-ß phase transformation in Y-Si-Al-O-N ceramics.—73-08549

**Walrafen, G. E.** See Yang, W.-H.

**Walrod, Dennis G.** See Cockcroft, Steven L.

**Walsh, Kenneth J.** See Chao, Tsao-Fang

**Walsh, L.** See Newman, J. D.

**Walsoe de Reca, N. E.** See Herren, G.

**Walter, C.; Kranold, R.; Stachel, D.**
Intermediate-range order study of phosphate glasses by using small-angle X-ray scattering (SAXS) techniques.—73-14018

**Walter, G.** See Kranold, R.

**Walter, H.; Weibel, G.**
Lining recommendation for high thermally stressed lime recovery kilns.—73-04010

**Walters, Christopher; Drummond, Charles H., III; Bansal, Narottam P.**
High-temperature flexural strength of $SrO{\cdot}Al_2O_3{\cdot}2SiO_2$ glass-ceramic.—73-17345
**Waltert, Erich**
Batch treatment plant for container glass.—73-07109
**Walther, M.** See Brunner, K.
**Waltman, Curtis J.** See Campos, Francis X.
**Walton, Ronald G.**
Advantages of using an ISO 9000 certified supplier.—73-17460
**Walukiewicz, W.** See Bliss, D. E.; Dreszer, P.; Yu, Kin-Man
**Walyoeslk, E. W.** See Dessa, R. M.
**Walz, D.** See Langlet, M.
**Walz, Frederick W., Jr.** See Chandross, Edwin A.
**Wamboldt, L.** See Jansen, F.
**Wan, C. F.** See Tregilgas, J. H.
**Wan, C. F.; Sulzbach, F. C.; Luttmer, J. D.**
$TiN_xO_y$ transparent electrode material for HgCdTe infrared devices.—73-07370
**Wan, C. T.** See Chambers, D. L.
**Wan, C.; Dupeux, M.**
Solid-state bonding of single crystals of $Ni_{(111)}$
**Wan, J. C.** See Liu, Jin-Xiang
**Wan, J.-U.** See Duh, J.-G.
**Wan, Jin-Seng**
Perforated partition wall board using expanded perlite.—73-10078
**Wan, Jing-Chun** See Chen, Zheng
**Wan, Kai-Tak; Lawn, Brian R.**
Effect of chemical interaction on Barenblatt crack profiles in brittle solids.—73-16454
**Wan, Tian-Ji** See Yuan, Zhang-Fu
**Wan, W. M. Raymond** See Swamy, R. Narayan
**Wan, Xian-Qin; Cui, Chang-Geng; Ren, Zhi-Feng**
Influence of Pb on structural properties of 2212 single crystal in Bi-Sr-Ca-Cu-O system.—73-08108
**Wan, Y. M.; Hebboul, S. E.; Harris, D. C.; Garland, J. C.**
Interlayer Josephson coupling of thermally excited vortices in $Bi_2Sr_2CaCu_2O_{8-y}$.—73-15521
**Wan, Yi** See Chen, Ji-Ping
**Wan, Z.** See Chen, Chen-Jia
**Wand, B.** See Voigt, Manfred
**Wandel, K.** See Ambree, P.; Gruska, B.
**Wang, A. S.** See Chiang, Yih-Cheng
**Wang, A.** See Noel, J.-P.
**Wang, B.** See Wu, W.
**Wang, B.; Szu, S.-P.; Tsai, Men-Ting; Greenblatt, M.; Klein, L. C.**
Preparation, characterization, and ionic conductivity of $(LiCl)_2$-$B_2O_3$-$SiO_2$ xerogels.—73-05459
**Wang, Bing** See Mitra, Sumita B.
**Wang, C. A.; Groves, S. H.; Reinhold, J. H.; Calawa, D. R.**
Critical layer thickness of strained-layer InGaAs/GaAs multiple quantum wells determined by double-crystal X-ray diffraction.—73-14818
**Wang, C. A.; Krueger, C. W.; Flytzanis-Stephanopoulos, M.; Brown, R. A.**
OMVPE regrowth of $CH_3I$ vapor-etched GaAs.—73-15065
**Wang, C. W.; Wu, C. H.; Boone, J. L.; Balestra, C. L.**
Evidence of interaction between two DX centers in *n*-type AlGaAs from RDLTS and temperature-dependent pulse-width DLTS measurements.—73-04333
**Wang, C.-L.; Wang, Y.-G.; Zhang, P.-L.; Zhong, Wei-Lie; Zhao, H.-S.**
Elastic properties of sodium lithium niobate piezoelectric ceramics at low temperatures.—73-04547
**Wang, C.; Williams, M. J.; Lucovsky, G.**
Preparation of microcrystalline Si (μC-Si) thin films by remote plasma-enhanced chemical vapor deposition.—73-02954
**Wang, C.; Zhang, Q.-M.; Bernholc, J.**
Theory of Zn-enhanced disordering in GaAs/AlAs superlattices.—73-07836
**Wang, Chang-Wen** See Chen, Da-Qiang
**Wang, Chen-Yu** See Lee, Chin C.
**Wang, Cheng-Li**
Chromium, cobalt, and iron as coloring elements for ceramic pigments.—73-10808; Use of chromium, cobalt, and iron as coloring elements for ceramic pigments.—73-14672
**Wang, Cheng-Yu** See Tao, Ying; Zou, Xue-Lu
**Wang, Chien-Min** See Lin, Jane-Chyi
**Wang, Ci-Chang; Wang, Jing-Lun; Zhang, Xiang-Chun; Shi, Jing-Zuo**
Computer control system of molten glass temperature in the forming zone of flat glass furnace of up-draw process.—73-14339
**Wang, D.-Z.** See Huang, N.-K.
**Wang, Da-Di** See Ye, Pei-Xian; Zhu, Yong
**Wang, Da-Feng** See Tang, De-Li
**Wang, Da-Yu; Kennedy, Daniel T.; Middleton, Thomas R.; MacAllister, Burton W.**
PTCR device.—73-11641
**Wang, Da-Yu; MacAllister, Burton W.; Kennedy, Daniel T.; Browne, Joanne; Umeya, Kazumasa**
System of dielectric ceramic compositions suitable for microwave applications.—73-11054
**Wang, Da-Yu; Umeya, Kazumasa**
Recent developments in understanding grain-boundary electric and dielectric properties of PTCR barium titanate ceramics.—73-01298
**Wang, Da-Yu**
Electric and dielectric properties of barium titanate Schottky barrier diodes.—73-07311
**Wang, De-Ping; Kake, Ichiro; Tsuji, Kazuhiro**
Effects of high-temperature vaporization of impurities from refractory on the colorization of zirconia surface.—73-14589
**Wang, Dong-Fang; Li, Jian; Mao, Zhi-Yuan**
Abrasive wear resistance of transformation-toughened ceramics.—73-09541
**Wang, Dong-Fang; Mao, Zhi-Yuan**
Abrasive wear of monolithic silicon nitride and a silicon carbide whisker-reinforced silicon nitride composite.—73-09539; Microscopic observations of wear of heat-resistant ceramics.—73-09475
**Wang, Dong-Ming**
Design of electrically heated forehearth and its application.—73-05107
**Wang, Dong-Sheng S.; Pantano, Carlo G.**
Surface chemistry of multicomponent silicate gels.—73-10410
**Wang, E. Z.; Shrive, N. G.**
Griffith criteria for brittle fracture in compression.—73-13544
**Wang, E.** See Buechele, A. C.
**Wang, E.; Buechele, A. C.; Matlack, Keith S.; Fu, S. S.; Macedo, P. B.**
Microstructure and fluoride concentration in Fernald waste glasses.—73-07151
**Wang, F.; Haertling, Gene H.**
Transverse electrooptic properties of magnetron-sputtered PLZT thin films.—73-04576
**Wang, F.; Muller, S.; Wordenweber, Roger**
Large-area epitaxial MgO buffer layers on sapphire substrates for Y-Ba-Cu-O film deposition.—73-15531
**Wang, F.; Wordenweber, Roger**
Large-area epitaxial $CeO_2$ buffer layers on sapphire substrates for the growth of high-quality $YBa_2Cu_3O_7$ films.—73-04752
**Wang, Fu-Ya; Wu, Da-Qing; Jiang, Zhe-Chun**
Crackle and stripping of powder-doped color porcelain.—73-10810
**Wang, G.** See Montgomery, D. G.; Sarkar, Partho
**Wang, G.-M.** See Cao, Gou-Hui
**Wang, G.-Z.** See Chen, J.-H.
**Wang, G.; Roos, J.; Brinkmann, D.; Pasquali, M.; Pistoia, G.**
Comparison of $Li^+$ transport in $Na_{1+x}V_3O_8$ and $Li_{1+x}V_3O_8$ by $^7Li$ NMR investigation.—73-17074
**Wang, Gu-Ya; Zhang, Hui-Fen; Wu, Da-Qing**
Relationship between structure, synthesis temperature, and thermal expansion of cordierite.—73-09301
**Wang, Guo-Cheng** See Liu, Ze-Yong
**Wang, Guo-Fu** See Huang, Yi-Dong
**Wang, Guo-Fu; Luo, Zun-Du**
Phase diagram of $Al_2(WO_4)_3$-related systems and the kinetics of flux volatilization.—73-05447
**Wang, Guo-Mei; Li, Shi-Pu**
Raman spectroscopy of PTC $(Ba_{1-x}Sr_x)TiO_3$ ceramics.—73-05469
**Wang, Guo-Xia** See Lou, Kai-Jun
**Wang, Guo-Zheng**
Approaches to improve wear resistance of rolling ring of double roll.—73-12110
**Wang, H. F.; Yang, X.; Bangert, H.; Torzicky, P.; Wen, L.**
Two-dimensional finite element method simulation of Vickers indentation of hardness measurements on TiN-coated steel.—73-06869
**Wang, H. H.; Whitaker, John F.; Chin, Albert; Mazurowski, J.; Ballingall, J. M.**
Subpicosecond carrier response of unannealed low-temperature-grown GaAs vs temperature.—73-15189
**Wang, H. S.; Eissler, D.; Dietsche, W.; Fischer, A.; Ploog, K.**
$DyBa_2Cu_3O_{7-\delta}$ superconducting thin films with (103) and (013) orientations grown on (001)MgO MBE.—73-04698
**Wang, H.** See Cline, B.; Wang, X.-L.; Zhang, Q.-M.
**Wang, H.-C.** See Weng, C.-T.
**Wang, H.-F.** See Li, J.
**Wang, H.; Fu, L. W.; Shang, S.-X.**
Preparation and properties of $Bi_4Ti_3O_{12}$ single-crystal thin films by atmospheric pressure metallorganic chemical vapor deposition.—73-04567
**Wang, Hai-Feng** See Sun, Shou-En
**Wang, Hai-Lin; Ferrio, Kyle; Steel, D. G.; Hu, Y. Z.; Binder, R.; Koch, S. W.**
Transient nonlinear optical response from excitation-induced dephasing in GaAs.—73-15213
**Wang, Hai-Lin; Jiang, M.; Merlin, R.; Steel, D. G.**
Spin-flip-induced hole burning in GaAs quantum wells: determination of exciton Zeeman splitting.—73-07807
**Wang, Hai-Long** See Shen, Ai-Dong
**Wang, Hai-Zeng; Pang, Wen-Qin**
Hydrothermal synthesis and characterization of $CsZr_2(AsO_4)_3$.—73-16827
**Wang, Hao** See Chai, Chang-Qing
**Wang, Hong** See Gillott, J. E.; Sobolik, Jeffrey L.; Xu, Bao-Min
**Wang, Hong-Jie** See Xu, Hong-Da
**Wang, Hong-Ying** See Wang, Yun-Zhi
**Wang, Hong-Yu; Singh, R. N.; Lowden, Richard A.**
Thermal shock behavior of continuous fiber ceramic composites (CFCC's).—73-16631
**Wang, Hong; Gillott, J. E.**
Effect of three zeolite-containing natural pozzolanic materials on alkali-silica reaction [ASR].—73-09924; Mechanism of alkali-silica reaction and the significance of calcium hydroxide.—73-00136
**Wang, Hong; Jing, Jing; Henriksen, P. N.**
Onset of crystal growth of bismuth on graphite: an atomic force microscopy study.—73-09497
**Wang, Hou-Zhi** See Gu, Hau-Zhi
**Wang, Hsin-Fu; Nelson, John C.; Lin, Chen-Li; Gerberich, William W.; Skowronek, Charles J.; Deve, Herve E.**
Evaluation of adhesion strength in a $Ti/Al_2O_3$ composite.—73-00231
**Wang, Hua-Fu** See Lin, Yuan-Kun
**Wang, Huai-Yu** See Zhou, Yun-Song
**Wang, Hui-Chieh**
Effect of excess $WO_3$ on the dielectric properties of $Pb(Fe_{2/3}W_{1/3})O_3$ [PFW] ceramics.—73-14695
**Wang, Hui-Juan** See Huang, You-Rong
**Wang, J.** See Bauer, A. J.
**Wang, J.-F.** See Zeltner, Walter A.
**Wang, J.-S.** See Beltz, G. E.; Sha, J.
**Wang, J.-T.** See Xue, X.-M.; Zhang, S.-L.
**Wang, J.-U.** See Duh, J.-G.
**Wang, J.-Y.** See He, Hui-Juan; Hu, Z.-W.
**Wang, J.; Brocklesby, W. S.; Lincoln, J. R.; Townsend, J. E.; Payne, David N.**
Local structures of rare-earth ions in glasses: the crystal-chemistry approach.—73-14029
**Wang, J.; Lincoln, J. R.; Brocklesby, W. S.; Deol, R. S.; Mackechnie, C. J.; Pearson, A.**
Fabrication and optical properties of lead germanate glasses and a new class of optical fibers doped with $Tm^{3+}$.—73-07127
**Wang, J.; Piramoon, M. R.; Ponton, C. B.; Marquis, P. M.**
Fabrication and characterization of short alumina fiber-reinforced mullite composites.—73-02820
**Wang, J.; Ponton, C. B.; Marquis, P. M.**
Grain-boundary modification of ceria-stabilized tetragonal zirconia polycrystals by a small amount of alumina addition.—73-09151; Microstructure of pressureless-sintered silver-toughened alumina: an in situ TEM study.—73-03173; Silver-toughened alumina ceramics.—73-06853
**Wang, J.; Zhang, L.; Ren, X.; Zhu, Y.; Gao, X.**
Compositions of alumina–magnesia spinel synthesized from natural raw materials.—73-10708
**Wang, James C. K.** See Johnson, William B.
**Wang, James C. K.**
Pressure-assisted technique for forming self-supporting composite bodies and articles formed thereby.—73-05004
**Wang, Jau-Sheng** See Snitzer, Elias
**Wang, Ji-Yang** See Guan, Qing-Cai; Shi, Lu-Ping; Yang, Chang-Xi; Ye, Pei-Xian
**Wang, Jia-Huan**
Application of microprocessor to batching, mixing, and conveying system in the glass industry.—73-03820
**Wang, Jia-Sheng** See Yu, Jia-Qing
**Wang, Jian** See Li, Wen-Chao; Wang, Jin-Shu
**Wang, Jian-Cheng; Han, Li-Ying; Gao, Jian-Cun**
Microstructure analysis of [optical] thin films deposited by reactive ion plating.—73-17157
**Wang, Jian-N.**
Experimental evidence for Harper-Dorn creep in Mn-Zn ferrite.—73-17314
**Wang, Jian; Zhou, Zhi-Hao**
Glass tank geometries [investigated] by means of a mathematical model.—73-12222
**Wang, Jin-Shu; Wang, Jian; Li, Wen-Chao**
Transformation from quartz to α-cristobalite.—73-12726
**Wang, Jin-Tian**
Flux composition of Jun red glaze and its structure of colored layers.—73-07254
**Wang, Jing-Lun** See Wang, Ci-Chang
**Wang, Jing-Rong** See Yang, Wan-Ming
**Wang, Jing-Zhong** See Li, Rui-Feng
**Wang, K. L.** See Arghavani, R.; Carns, T. K.; Kim, Ki-Nam; Kuo, T. C.; Li, H. S.
**Wang, K.-Y.** See Shen, T.-D.
**Wang, Kai-Ying; Wang, Yi-Zhong; Yin, Lin; Song, L.; Rao, X.-L.; Liu, G.-C.**
$Sm_2Fe_{17}N_x$ powder with high coercivity prepared by high-energy ball milling.—73-17003
**Wang, Ke** See Li, Qin-Hai
**Wang, Ke-Guang** See Feng, Yong
**Wang, Ke-Ming** See Shi, Bo-Rong
**Wang, Ke-Ming; Shi, Bo-Rong; Qu, Bao-Dong; Wang, Zhong-Lie; Liu, Xiang-Dong; Liu, Yao-Gang**
Lateral straggling of Xe ions in potassium titanyl phosphate.—73-08898
**Wang, L. L.; Munir, Z. A.; Maximou, Y. M.**
Thermite reactions: their utilization in the synthesis and processing of materials[—review].—73-09376
**Wang, L. M.** See Lyons, Shirley W.
**Wang, L. S.** See Thiele, E. S.
**Wang, L.** See Taguchi, I.
**Wang, L.-M.; Sung, H.-H.; Chern, J.-H.; Yang, H.-C.; Horng, H.-E.**
Growth of high-$T_c$ $YBa_2Cu_3O_x$ films with an off-axis sputtering configuration.—73-08091
**Wang, L.-P.** See Tang, Xiao-Yong
**Wang, Lei-Ming; Cheng, Xiao-Jun; Li, Jia-Sheng**
Developments in forming machine for silicate brick in China.—73-12131
**Wang, Lei-Ming; Gao, Gui-Jun; Xiao, Hui-Rong**
Semidry pressing process for calcium silicate bricks.—73-10147
**Wang, Li-Jiu; Zhang, Zhi-Bo; Cao, Yong-Min**
Preparation of nickel oxide films by sol-gel process.—73-05978; Preparation of nickel oxide films by sol-gel process.—73-16927
**Wang, Li-Jun; Gao, Ji-Qiang; Wang, Yong-Lan**
High-temperature strength of silicon-nitride-bonded silicon carbide for kiln furniture.—73-10734
**Wang, Li-Ming; Hou, Xu**
Theoretical study on three-photon excitation and photoemission on a negative ele.tron affinity (NEA) GaAs photocathode.—73-11480
**Wang, Lian-Bin** See Xiang, Xin-Yu
**Wang, Lian-Xing** See Wang, Yi
**Wang, Liang-Bin** See Wu, Wen-Bin
**Wang, Lin-Sheng** See Ma, Juan-Rong
**Wang, Ling** See He, Chuan
**Wang, Ling; He, Chuan; Wu, Jian-Guang**
Oxidation of sintered silicon nitride: I, Phase composition and microstructure.—73-03229
**Wang, Long** See Argoitia, Alberto
**Wang, Lu-Min** See Zeng, Dong-Shui
**Wang, M. W.** See Liu, Y. X.
**Wang, M. W.; Collins, D. A.; McGill, T. C.; Grant, R. W.**
X-ray photoelectron spectroscopy investigation of the mixed anion GaSb/InAs heterointerface.—73-11510
**Wang, M.-C.; Hon, Min-Hsiung; Wu, N.-C.**
Process and properties of ceramic tile prepared from blast-furnace slag [BFS] raw materials.—73-04046; 73-14665

**Wang, M.-C.; Hon, Min-Hsiung**
Effect of CaO addition on crystallization processes of $Li_2O$-$Al_2O_3$-$SiO_2$-$TiO_2$ glasses.—73-03721; 73-10366

**Wang, M.-C.; Lin, M.-H.; Hon, K.-M.**
Preparation of ß-spodumene ceramic powders from metal alkoxides.—73-09251

**Wang, M.-C.**
Thermal determinations of mullite crystallization of 65% $Al_2O_3$-35% $SiO_2$ glass fibers.—73-05512

**Wang, M.-J.** See Huang, Y.

**Wang, Min-Quan** See Fan, Xian-Ping; Xiong, Guo-Hong

**Wang, Min-Quan; Fan, Xian-Ping**
Formation mechanism and kinetics of ß-eucryptite in $Li_2O$-$Al_2O_3$-$SiO_2$ system.—73-12583

**Wang, Min-Quan; Hong, Zhang-Lian; Xiong, Guo-Hong**
Formation of 2223 high-$T_c$ superconducting phase in the Bi-Sr-Ca-Cu-O system.—73-04728; Preparation of Bi-Sr-Ca-Cu-O high-$T_c$ superconducting ceramics with fine monophase.—73-11871

**Wang, Min-Quan; Xiong, Guo-Hong; Fang, Xiao-Dan**
Intermediate phase in the formation of superconductive phase in the Bi-Sr-Ca-Cu-O system.—73-04749

**Wang, Ming-Hua** See Feng, Hao

**Wang, Moo-Chin**
Preparation and characterization of ß-spodumene powders by sol-gel process.—73-16907

**Wang, N. P.** See Rao, S. M.

**Wang, N.-C.** See Yau, Hon-Fai

**Wang, Nan-Lin; Zhang, Qi-Rui**
Anderson localization is not the reason for the variation of high-$T_c$ superconductivity.—73-11687

**Wang, P. D.; Torres, C. M.**
Phonon Raman scattering in GaAs-based quantum dots.—73-15088

**Wang, P. W.** See Lacorre, P.

**Wang, P.-L.; Sun, W.-Y.; Yen, T.-S.**
Formation and densification of R-α´-SiAlON's (R=Nd, Sm, Gd, Dy, Er, and Yb).—73-05810

**Wang, Pauchiu E.; Chaki, T. K.**
Sintering behavior and mechanical properties of hydroxyapatite and dicalcium phosphate [DCP].—73-06052

**Wang, Pu-Sen** See Malghan, Subhas G.

**Wang, Pu-Sen; Minor, D. B.; Malghan, Subhas G.**
Binder distribution in $Si_3N_4$ ceramic green bodies studied by stray-field NMR imaging.—73-12925

**Wang, Q.** See Senin, H. B.

**Wang, Qi-Ming** See Qian, Y.

**Wang, Qian-Ping; Li, Ru-Chun; Wu, Zhong-Jie**
Approach to property fluctuation of slips for sanitary porcelain.—73-07235

**Wang, Qian-Ping**
Strengthening coating for desks of silica alumina magnesia.—73-10772

**Wang, Qiang-Ping; Tian, Yong-Shu; Tang, Cui-Fen**
Development of modified partition board of silicon-aluminum-magnesia.—73-10720

**Wang, Qing-Ji** See Chen, Rong

**Wang, Qing-Pu; Zhao, Sheng-Zhi; Zhang, Xing-Yu**
Experimental study of xenon flash lamp pumped $Nd_xY_{1-x}Al_5(BO_3)_4$ (NYAB) *Q*-switched laser and its characteristics.—73-12801

**Wang, R.-P.** See Shi, Jing; Tian, Ming-Liang

**Wang, Rui-Lan** See Yi, H.-R.

**Wang, Run-Wen** See Xu, Bing

**Wang, S.-W.; Kowalik, R. W.; Sands, R.**
High-temperature behavior of salt-coated Nicalon-fiber-reinforced calcium aluminosilicate composite.—73-17342

**Wang, S. M.; Hwu, S.-J.**
Completion of the alkali metal titanium(III) pyrophosphate series: synthesis and structure of $A'TiP_2O_7$ (A'=K, Rb, Cs).—73-02167; $Li_{3-x}Ti_2(PO_4)_3$ (0≤x≤1): a new mixed valent titanium(III/IV) phosphate with a Nasicon-type structure.—73-02318; New barium titanium(III) pyrophosphate: $BaTi_2(P_2O_7)_2$.—73-02349

**Wang, S. S. B.** See Quon, D. H. H.

**Wang, S. Y.** See Jayaraman, A.; Simpson, J.

**Wang, S. Z.; Olsson, E.; Alarco, J. A.; Ivanov, Z. G.;**

**Winkler, D.; Langer, V.**
$YBa_2Cu_3O_7$/$NdGaO_3$/$YBa_2Cu_3O_7$ trilayers by modified off-axis sputtering.—73-08280

**Wang, S. Z.; Rajurkar, K. P.; Kozak, J.**
Effect of grain size on wire electrical discharge machining of polycrystalline diamond [PCD].—73-05759

**Wang, S.-L.** See Lii, K.-H.

**Wang, S.-X.** See Han, Gu-Chang; Lin, G.-Y.

**Wang, Sea-Fue** See Kuromitsu, Yoshirou; Takada, Takahiro

**Wang, Sehng** See Han, Ru-Shan

**Wang, Shan-Ba; Chen, Yuan-Kui**
Negative effect of alkali on burning and properties of portland cement clinker and its improving measures.—73-10060

**Wang, Shan-Ba; Zhow, Zhong-Hui**
Influence of F [fluoride] on crystalline structure of $C_3S$ [tricalcium silicate].—73-10001

**Wang, Shao-Dong; Scrivener, Karen L.**
Activation of ground blast-furnace slag by alkali-metal and alkaline-earth hydroxides—comment.—73-08545

**Wang, Shao-Nan**
Situation of new types of Chinese building material and proposals for it.—73-13645

**Wang, Sheng-Bo** See Wu, Hong-Xing

**Wang, Sheng-Ji**
Removal of cracks and pinholes on once-fired outside wall tiles.—73-07271

**Wang, Shi-Guang** See Liu, Rang-Jiao

**Wang, Shi-Guang; Dai, Yuan-Dong; Zeng, Xiang-Hui**
Preparation of bicrystal substrates and properties of YBaCuO grain-boundary junctions.—73-08177

**Wang, Shi-Ho; Kirkbir, Fikret; Raychaudhuri, Satyabrata; Sarkar, Arnab**
Process for rapidly drying a wet, porous gel monolith.—73-01876

**Wang, Shi-Wei; Zhu, Ying-Jie; Qian, Yi-Tai**
Superconductivity of $NbSr_2Nd_{2-x}Ce_xCu_2O_{10-\delta}$ [0.3≤x≤0.7].—73-04815

**Wang, Shu-Qian**
Properties of calcium-added fly ashes.—73-08499

**Wang, Shu-Qiang** See Yang, Zheng-Fang

**Wang, Shu-Yun**
Fabrication of internally burned tiles.—73-10681

**Wang, Shun-Xi** See Wang, Yu-Gui; Yuan, Song-Liu

**Wang, Su-Su** See Shibuya, Yotsugi; Wong, Ming-Shih

**Wang, T. H.** See Russell-Floyd, R. S.

**Wang, Tao** See Zhang, Li-De

**Wang, Tao; Zhang, Lide; Fan, Xiao-Jun; Hu, Ji-Tong; Mo, Ji-Mei**
Dangling bonds in nanometer-sized granulet silicon nitride [studied] by electron spin resonance.—73-12570

**Wang, Tian-Cheng** See Yang, Wan-Ming

**Wang, Tie-Gun** See Xu, Qin-Lun

**Wang, W. B.** See Shum, Kai

**Wang, W. B.; Shum, Kai; Alfano, R. R.; Szmyd, D.; Nozik, A. J.**
$L_6$-$X_6$ intervalley scattering time and deformation potential for $Al_{0.6}Ga_{0.4}As$ as determined by fs time-resolved ir absorption spectroscopy.—73-11289

**Wang, W. C.; Dura, J. A.; Zborowski, J. T.; Vigliante, A.;**

**Chen, H. C.; Golding, T. D.**
Preparation of Sb/GaSb(111)-oriented multilayer structures using molecular beam epitaxy and migration-enhanced epitaxy.—73-07745

**Wang, W. I.** See Li, L. K.; Li, X.; Zhang, Y.

**Wang, W. J.; Honkanen, S.; Najafi, S. I.; Tervonen, A.**
Loss characteristics of potassium and silver double-ion-exchanged glass waveguides.—73-07045

**Wang, W. S.** See Bhat, Ishwara B.

**Wang, W.** See Li, Z.-S.

**Wang, W.-Y.** See Chen, Kun-Ji

**Wang, W.; Jia, Z.-R.; Din, Z.-Y.**
Preparation and properties of $PbO$-$B_2O_3$-$ZnO$-$SiO_2$ glasses of low softening point.—73-14471

**Wang, Wan-Lu; Gao, Jin-Ying; Liao, Ke-Jun**
Rapid synthesis of diamond film by dc plasma CVD.—73-06009

**Wang, Wan-Lu; Liao, Ke-Jun; Gao, Jin-Ying; Liu, A.-M.**
Internal stress analysis in diamond films formed by dc plasma chemical vapor deposition.—73-13409

**Wang, Wei-Dong; Wu, Bo-Yu**
Fully packaged high-speed $TiLiNbO_3$ waveguide Mach-Zehnder intensity modulator.—73-15266

**Wang, Wei-Jye; Chen, Yu-Wen**
Carbon monoxide hydrogenation on cobalt/alumina and cobalt/NaX catalysts.—73-00213

**Wang, Wen-Cai; Chen, Yu; Hu, Tian-Dou**
EXAFS study of ternary $ZrF_4$-$BaF_2$-$NdF_3$ glasses.—73-00339

**Wang, Wen-Jun**
Mechanism of color difference generation during production of mosaic.—73-10867

**Wang, Wen-Sheng; Ehsani, Hassan; Bhat, Ishwara B.**
Improved CdTe layers on GaAs and Si using atomic layer epitaxy [ALE].—73-11257

**Wang, Wen-Tang** See Yao, Zhi-Cai

**Wang, X. M.** See Toulouse, J.

**Wang, X. S.** See Pond, K.

**Wang, X. W.** See De Marco, M.

**Wang, X. W.; Spitulnik, F.; Campbell, B.; Noble, R.;**

**Hapanowicz, R. P.; Condrate, Robert A., Sr.**
Continuous wave Nd:YAG laser deposition of CdS thin films.—73-11119

**Wang, X.** See Labrie, D.

**Wang, X.-D.** See Ding, M.-Q.

**Wang, X.-L.; Wang, H.; Shang, S.-X.; Ai, Z.-P.; Chen, H.-C.; Jiang, Min-Hua**
Synthesis of a new series of rare-earth vanadates $RBa_2V_3O_{11}$ (R=Y, La, Pr, Nd, Eu, Gd, Dy, Ho, Er, Tm).—73-05508

**Wang, X.-P.** See Cui, C.-G.

**Wang, X.-S.; Huang, C.; Bressler-Hill, V.; Maboudian, R.;**

**Weinberg, W. H.**
Performance of an ultrahigh-vacuum sample transfer system for investigation of molecular beam epitaxy grown semiconductor surfaces.—73-15086

**Wang, X.-S.; Self, K. W.; Maboudian, R.; Huang, C.;**

**Bressler-Hill, V.; Weinberg, W. H.**
Analysis of GaAs(100) surfaces prepared with various wet and in situ sample treatments.—73-07378

**Wang, X.-S.; Self, K.; Leonard, D.; Bressler-Hill, V.;**

**Maboudian, R.; Petroff, P. M.**
Scanning tunneling microscopy studies of Ge/GaAs(100) interface formation.—73-11434

**Wang, X.-Y.** See Zhang, Dao-Yuan

**Wang, Xi-Min** See Zhang, Ke-Cong

**Wang, Xian-Jin** See Gu, Shang-Zhe

**Wang, Xiao-Dong; Hipps, K. W.; Mazur, Ursula**
Infrared and morphological studies of hydrogenated AlN thin films.—73-13403

**Wang, Xiao-Guang** See Huang, You-Rong

**Wang, Xiao-Li; Yao, Xi**
Solid-state reaction for the formation of $Pb(Zn_{1/3}Nb_{2/3})O_3$.—73-05480

**Wang, Xiao-Yang** See Yang, Bei-Fang

**Wang, Xin-Hui**
Imitation of ancient glazed architectural pottery.—73-10857

**Wang, Xin-Rong; Zhu, Jiao-Qun; Xian, Ya-Fang**
Sintering mechanism of portland cement clinker with energy saving and early strength.—73-10154

**Wang, Xiu-Dong**
Using sulfite waste lye as binder for architectural pottery.—73-09797

**Wang, Xue-Mei; Zhang, Dian-Lin**
Second threshold, switching, and sharp *I-V* characteristics of $Rb_{0.3}MoO_3$ at 77 K.—73-05635

**Wang, Xue-Zhong** See Chen, Chen-Jia

**Wang, Xun-Li; Hubbard, Camden R.; Alexander, Kathleen B.; Becher, Paul F.; Fernandez-Baca, Jaime A.; Spooner, Steve**
Neutron diffraction measurements of the residual stresses in $Al_2O_3$-$ZrO_2$ ($CeO_2$) ceramic composites.—73-13574

**Wang, Y. C.** See Waldrop, J. R.

**Wang, Y. H.** See Ho, Pin; Wiesenfeld, Jay M.

**Wang, Y. J.** See Adjerid, S.

**Wang, Y. L.** See Zhu, Yi-Mei

**Wang, Y. Q.** See Bud'ko, S. L.; Hu, Y. Z.; Tao, Y. K.

**Wang, Y.** See Gao, Q.-J.; Rivory, J.; Vuye, G.

**Wang, Y.-G.** See Wang, C.-L.

**Wang, Y.-G.; Ye, H.-Q.; Kuo, K.-H.**
High-resolution transmission electron microscopy study of microstructures of initially hydrated calcium aluminosulfate.—73-00101

**Wang, Y.-G.; Yu, Y.-D.; Ye, H.-Q.; Huang, W.-K.**
HRTEM study of planar defects and polytypes in $MgSiO_3$.—73-09461

**Wang, Y.-H.; Houng, Mau-Phon; Chen, F.-H.; Sze, P. W.;**

**Hong, M.; Mannaerts, J. P.**
Molecular beam epitaxy in situ grown Ag/GaAs Schottky diodes.—73-11334

**Wang, Y.-L.; Wiesmann, H. J.; Liu, C.-F.; Zhu, Y.; Sabatini, R. L.; Suenaga, M.**
Fabrication and properties of textured $YBa_2Cu_3O_7$ thick films on polycrystalline $Ag_{0.9}Pd_{0.1}$ and silver substrates.—73-08073

**Wang, Y.-N.** See Zhu, J.-S.

**Wang, Y.-Q.; Wang, Z.-M.; Zhou, B.-L.; Shi, C.-X.**
Strength degradation of SiC-coated carbon fibers.—73-09676

**Wang, Y.-S.** See He, C.

**Wang, Y.-T.** See Hsu, C.-C.

**Wang, Y.; Liu, J.-J.; Yu, Z.-H.**
Effect of rare-earth elements on microstructure and wear resistance of laser-remelted iron alloy coatings containing metalloids.—73-06776; 73-13828

**Wang, Y.; Worzala, F. J.; Lefkow, A. R.**
Friction and wear properties of partially stabilized zirconia with solid lubricant.—73-09605

**Wang, Ya-Xin; Chen, Hsiung; Hoffman, R. W.**
*K*-edge absorption analysis of hydrogenated diamondlike carbon films [a-C:H].—73-02310

**Wang, Ye-Bin** See Mei, Lin-Feng

**Wang, Yi** See Zheng, Jia-Fan

**Wang, Yi-Zhong** See Wang, Kai-Ying

**Wang, Yi; Wang, Lian-Xing; You, En-Pu**
Humidity sensor of semiconductor ceramics.—73-11251

**Wang, Ying-Long**
Friction and wear performances of [D] detonation-gun- and plasma-gun-sprayed ceramic and cermet hard coatings under dry friction.—73-06796

**Wang, Yong-Lan** See Wang, Li-Jun

**Wang, Yong-Xian** See Liu, Yu

**Wang, Yong; Guo, Li-E.**
Development of Ti-containing opal glazes with high covering power.—73-10825

**Wang, You-Wen** See Xu, Yu-Qing

**Wang, Young-Seong** See Yu, Young-Moon

**Wang, Yu** See Mao, Zhi-Qiang

**Wang, Yu-Gui** See Han, Gu-Chang; Yuan, Song-Liu

**Wang, Yu-Gui; Han, Han-Min; Wang, Shun-Xi**
Influence of technical process on characteristic of Bi2223 thick-film tape.—73-04745

**Wang, Yu-Guo; Qu, Bao-Dong; Zhong, Wei-Lie**
Ion implantation in $PbTiO_3$ films.—73-12614

**Wang, Yu-Guo; Zhong, Wei-Lie; Zhang, P.-L.**
Pyroelectric properties of ferroelectric-polymer composites.—73-07913

**Wang, Yu-Ping; Huang, Wen-Xi; Jiang, You-Xing**
Effect of the combustion of coal mixed with limestone on the burning process of clinker.—73-09921

**Wang, Yuan; Guo, Pei-Ling; Cheh, Cui-Hong**
Application of leak-proof concretes using fly ash.—73-09819

**Wang, Yun-Fu** See Maruno, Shigeo

**Wang, Yun-Zhi; Wang, Hong-Ying; Chen, Long-Qing;**

**Khachaturyan, A. G.**
Shape evolution of a coherent tetragonal precipitate in partially stabilized cubic $ZrO_2$: a computer simulation.—73-03192

**Wang, Yun; Chou, Stephen Y.**
Engineering sub-50-nm quantum effect devices and single-electron transistors using electron-beam lithography.—73-14890

**Wang, Z.** See Jayaraman, A.; Mui, D. S. L.

**Wang, Z.-H.** See Han, Gu-Chang

**Wang, Z.-M.** See Wang, Y.-Q.

**Wang, Zhan-Min** See Jin, Zheng-Guo

**Wang, Zheng-Ping** See Li, Yu-Shu; Tao, Cai-Li

**Wang, Zhi-Jiang** See Shen, Ai-Dong; Xiao, Gang-Yao

**Wang, Zhong-Lie** See Shi, Bo-Rong; Wang, Ke-Ming

**Wange, P.** See Holand, Wolfram

**Wange, P.; Vogel, J.; Gotz, W.; Carl, G.; Holland, W.;**

**Vogel, W.**
Phase formation and crystallization behavior of phosphatic glass-ceramics.—73-14456

**Wanibe, Yoshimoto** See Itoh, Takashi

**Wanka, E.** See Friese, M.

**Wanklyn, B. M.** See Dutta, P. K.; Jandl, S.; Pandit, A. K.; Pradhan, A. K.; Raina, U.

**Wannagat, Ulrich; Schervan, Adrian; Jansen, Martin;**

**Baldus, Hans-Peter; Eiling, Aloys**
Silicon diimide, a process for its preparation and silicon nitride obtained therefrom.—73-05338

**Wanson, Thomas E.** See Poad, William J.

**Wantuck, Paul J.** See Butt, Darryl P.

**Waqif, Mohamed; Saad, Abdul Mohammed; Bensitel, Mohammed; Bachelier, J.; Saur, O.; Lavalley, J. C.**
Comparative study of $SO_2$ adsorption on metal oxides.—73-16057
**Ward, C. C.** See Schreiber, Henry D.
**Ward, John W.**
Gasoline hydrocracking catalyst and process.—73-12368
**Ward, M. A.** See Yogendran, V.
**Ward, Michael A.** See Grifford, Peter M.
**Ward, Michael E.; Harkins, Bruce D.**
High-pressure ceramic joint.—73-05216
**Ward, Valerie** See Thakur, Randhir P. S.
**Warde, C.** See Feng, X. D.
**Warden, M.** See Lee, S. L.
**Warhanek, Hans** See Ohno, Nobuhito
**Waring, Mike J.**
Making the most noise.—73-10561
**Wark, M.** See Fichtner-Schmittler, H.
**Wark, Michael** See Tkachenko, Olga P.
**Warner, Joseph D.** See Bhasin, Kul B.; Sieg, Robert M.; Vitta, Satish
**Warner, Joseph D.; Bhasin, Kul B.; Valco, G. J.**
Superconducting films on microwave dielectric substrates.—73-11915
**Warner, Joseph D.; Bhasin, Kul B.; Varaljay, N. C.**
Growth and patterning of high-$T_c$ superconducting films.—73-11776
**Warnock, J. D.** See Kobeda, E.
**Warnock, J.** See Jonker, B. T.
**Warren, A. C.; Woodall, J. M.; Kirchner, P. D.; Yin, X.; Guo, X.; Pollak, Fred H.**
Electromodulation study of GaAs with excess arsenic.—73-07490
**Warren, G.** See Busta, H. H.
**Warren, P. D.** See Mackin, T. J.
**Warren, P. D.; Mackin, T. J.; Evans, Anthony G.**
Design, analysis, and application of an improved push-through test for the measurement of interface properties in composites.—73-15786
**Warren, R.** See Kim, A. S.; Morrison, C. T.
**Warren, W. L.** See Brinker, C. Jeffrey; Gerardi, G. J.; Seager, C. H.
**Warren, W. L.; Dimos, Duane; Tuttle, Bruce A.; Smyth, Donald M.**
Electronic and ionic trapping at domain walls in $BaTiO_3$.—73-17078
**Warren, W. L.; Kanicki, Jerzy; Robertson, J.; Poindexter, E. H.; McWhorter, P. J.**
Electron paramagnetic resonance investigation of charge trapping centers in amorphous silicon nitride films.—73-07319
**Warren, W. L.; Kanicki, Jerzy; Robertson, J.; Poindexter, E. H.**
Paramagnetic nitrogen defects in silicon nitride.—73-06171
**Warrier, K. G. K.** See Mani, T. V.; Perumal, P.; Varma, Hari Krishna
**Warrier, P. R. S.** See Koshy, J.
**Warrier, Sunil G.; Lin, Ray Y.**
Silver coating on carbon and SiC fibers.—73-10275; Using rapid infrared forming to control interfaces in titanium matrix composites.—73-06871
**Warrington, M. S.** See Holstein, W. L.
**Warwick, Wilbur H.** See Becher, Paul F.
**Waseda, Y.** See Ohta, Hiromichi
**Waseda, Yoshio** See Jacob, K. Thomas; Sugiyama, K.
**Wasen, J.** See Bjorklund, H.
**Waser, Rainer; Vollmann, Markus**
Grain-boundary defect chemistry of acceptor-doped titanates: space charge layer width.—73-06160
**Washburn, J.** See Liliental-Weber, Z.; Lin, X. W.; Piotrowska, A.; Zakharov, N. D.
**Washburn, S.** See Kirtley, J. R.
**Wasik, D.** See Dreszer, P.
**Wasilewski, Z. R.** See Springthorpe, A. J.
**Wasiucionek, M.** See Krok, F.
**Wassermeier, M.** See Bressler-Hill, V.; Hashemi, M. M.; Krishnamurthy, Mohan
**Wassink, B.** See Laishley, E. J.
**Wasyluk, David T.** See Strach, Larry
**Waszczak, J. V.** See Hess, H. F.; James, A. C. W. P.
**Watabe, Michie** See Nogami, Masayuki
**Watanabe, A.; Kato, H.; Yoshikawa, K.**
Properties of alumina/Al/alumina joints produced in air atmosphere.—73-03983
**Watanabe, Akio** See Izaki, Toru; Mitsuhashi, Takefumi; Mukaida, Masakazu
**Watanabe, Akio; Haneda, Hajime; Ikegami, T.; Tanaka, Junzo; Mitsuhashi, Takefumi**
Direct bonding of zirconia system without any fillers—basic research for self-healing.—73-05167
**Watanabe, Akio; Mukaida, Masakazu; Imai, Y.; Osato, Kazuo; Kameyama, T.; Fukuda, K.**
Morphology and structure of tantalum oxide deposit prepared by KrF excimer laser CVD.—73-12633
**Watanabe, Akira** See Hayashi, Satoshi; Saeki, Goji
**Watanabe, Akira; Takahashi, Hirokuni; Nonobe, Kazuo; Kaneko, Takeshi**
Effect of stainless steel fibers on thermal properties of castable refractories.—73-00805
**Watanabe, Atsushi** See Ota, Hiroyuki; Takeuchi, Tetsuya
**Watanabe, Hidemi; Kimura, Osamu**
Sintering and mechanical properties of SiC-whisker/$Al_2O_3$ composites with two-layered structure.—73-06520; 73-13589
**Watanabe, Hideo; Suzuki, Takashi; Yoshizoe, Kikuko**
Sintered ferrite materials and chip parts.—73-11678
**Watanabe, Hitoshi** See Mihara, Takashi; Paz De Araujo, C. A.
**Watanabe, Hitoshi; Mihara, Takashi; Paz De Araujo, C. A.**
Device effects of various Zr/Ti ratios of PZT thin films prepared by sol-gel method.—73-11560
**Watanabe, Isao; Kawano, Kenji; Kumagai, Kenichi**
Magnetic order of Cu moments in $La_{2-x}Ba_xCuO_4$ around $x$=0.12 observed by positive muon spin rotation.—73-11821
**Watanabe, K.** See Nakano, T.
**Watanabe, Kazunari** See Sunahara, Kazuo
**Watanabe, Kazuo; Yamada, Yutaka; Sakuraba, Junji; Hata, Fumiaki; Chong, Chin-Kung; Hasebe, Tsuginori**
$Nb_3Ti_1Sn$ superconducting magnet operated at 11 K in vacuum using high-$T_c$ $(Bi, Pb)_2Sr_2Ca_2Cu_3O_{10}$ current leads.—73-15562
**Watanabe, Keiji** See Nishio, Hiroaki
**Watanabe, Ken** See Yamada, Kazuo
**Watanabe, Kenji** See Takamori, Takeshi; Tanigawa, Yasuo
**Watanabe, Kenji; Takatsu, Sanae; Sato, Matsuhiro; Tajima, Yo**
Measurement of surface oxygen content in silicon nitride powders.—73-16210
**Watanabe, Kikuo** See Awazu, Koichi
**Watanabe, Koichi; Chigira, Shiroshi**
Composite materials consisting of $Li_2O$-$SiO_2$ [LS] crystals and $Na_2O$-CaO-$SiO_2$ [NCS] glass.—73-00311
**Watanabe, Koichi; Matsumura, Kazuhiro; Hirohashi, Masatoshi**
Effect of lithium oxide upon high-$T_c$ bismuth system superconductor (2223 phase).—73-08033
**Watanabe, Koichi; Obomamyuda, Kohichi**
Variation of the chemical composition of molten cryolite ($Na_3AlF_6$) flux during the growth of single corundum crystals.—73-16392
**Watanabe, Koichi; Tomobuchi, Masato; Yoshifuji, Teizou; Ozawa, Tatsuki; Hanaoka, Hirokazu**
Immobilization of simulated high-level nuclear wastes with tholeiite-type basalt.—73-04891; 73-15701
**Watanabe, Koji** See Ishikawa, Makoto
**Watanabe, Kunihiko** See Shiomi, Haruhisa
**Watanabe, M.** See Ichinose, N.; Maeda, Kazuyuki; Niwa, Tomonori; Okubo, T.; Sasaki, T.; Sato, K.
**Watanabe, M.; Komatsu, Y.; Sasaki, T.; Fujiki, Yoshinori**
New oxidation process of potassium titanium dioxide bronze with the hollandite structure.—73-02901
**Watanabe, Makoto; Sakurai, Makoto; Sato, Shoji**
Synthesis and thermal property of sodium diimidocyclotriphosphate.—73-12884
**Watanabe, Mamoru** See Fujiki, Yoshinori
**Watanabe, Masakazu** See Iio, Satoshi; Ito, Toshimichi; Otsuka, Jun; Urashima, Kazuhiro
**Watanabe, Masakazu; Shimamori, Toru; Noda, Yoshiro**
High-temperature properties of $Sc_2O_3$-doped $Si_3N_4$.—73-03308
**Watanabe, Minoru** See Onishi, Masashi; Rennie, John
**Watanabe, Mitsuyoshi** See Narukawa, Akira
**Watanabe, Naoto** See Takizawa, Kazutaka
**Watanabe, Natsuya** See Onodera, Takaki
**Watanabe, Osamu; Hiraoka, Yasunori; Ishida, Hideki**
Densification process of pottery body for building construction: III, Influence of minor additives on the densification of pottery body.—73-00904
**Watanabe, Osamu; Ishida, Hideki**
Densification process of pottery body for building construction: IV, Effect of particle size of feldspar on densification.—73-05734; 73-14649
**Watanabe, Ryuzo** See Kawasaki, Akira; Li, Jing-Feng
**Watanabe, Ryuzo; Kawasaki, Akira**
Improvement of ductility of ceramic-rich region in functionally gradient materials [FGM's] by metal fiber premixing.—73-03598
**Watanabe, Shuichi** See Murakawa, Masao
**Watanabe, Shunji; Hikita, Tokihisa; Kawai, Maki**
Cleaning the surface of $SrTiO_3$(100) and $LaAlO_3$(100) under moderate temperature condition by Bi adsorption/desorption treatment.—73-02747
**Watanabe, T.** See Yamamoto, Teiji
**Watanabe, Tadahiko** See Tani, Eiji
**Watanabe, Tadahiko; Shobu, Kazuhisa; Tani, Eiji**
Effects of $ZrO_2$ addition on the mechanical properties of $TiB_2$-6% $TaB_2$-1% CoB-2% TiC-α% $ZrO_2$ ceramics.—73-17301
**Watanabe, Tadahiko**
Effects of carbide addition on the mechanical properties of the $Ti(C_{0.5},N_{0.5})$-30 wt% $TiB_2$-carbide sintered compacts.—73-03274
**Watanabe, Tadao** See Awaji, Hideo
**Watanabe, Toshiya; Aoshima, Toshihiro; Kitabayashi, Tetsuo; Nakayama, Chiaki**
Resistivity and microstructure of alumina ceramics added with $TiO_2$ fired in reducing atmosphere.—73-16588; 73-16589
**Watanabe, Toshiya; Kitabayashi, Tetsuo**
Effect of additives on the electrostatic force of alumina electrostatic chucks.—73-02779; 73-10934
**Watanabe, Toshiya; Nakayama, Chiaki**
Sintering of alumina green sheet with $TiO_2$ and $Cr_2O_3$ in reducing atmosphere.—73-06057; 73-16995
**Watanabe, Toshizo** See Matsushita, Takeshi
**Watanabe, W.; Hayasaka, K.; Imajo, H.; Urabe, S.**
Continuous-wave sum-frequency generation near 194 nm with a collinear double enhancement cavity.—73-08830
**Watanabe, Y.** See Masuda, S.
**Watanabe, Y.; Saitoh, T.; Miyazaki, M.; Suzuki, K.**
Characterization of $SiO_2$-GaAs interface structures using spectroscopic ellipsometry.—73-14805
**Watanabe, Yasuharu** See Ishihara, Tatsumi
**Watanabe, Yoshihiro** See Hiraka, Masahiro
**Watanabe, Yoshihisa** See Aruga, Atsushi; Nakamura, Yoshikazu; Suefuji, Yoshihito; Tamaki, Kazunori
**Watanabe, Yoshio; Maeda, Fumihiko; Oshima, Masaharu; Michikami, Osamu**
Initial stages of InAs deposition on $SrF_2$-coated $EuBa_2Cu_3O_{7-y}$ thin-film superconductors.—73-11808
**Watanabe, Yuichi** See Oh, Yong-Su; Ryu, Jae-Sang
**Watanabe, Yuichi; Takata, Masayuki**
Science and technology in composite materials.—73-05634
**Watanabe, Yukiho** See Terauchi, Hikaru
**Watari, K.** See Alves, J. L. A.
**Watari, Koji** See Kani, Keiko; Nagaoka, Takaaki; Nakamura, Kazuo; Tsuge, Akira; Tsuzuki, A.
**Watari, Koji; Ishizaki, Kozo; Tsuchiya, Fumiaki**
Phonon scattering and thermal conduction mechanisms of sintered aluminum nitride ceramics.—73-08949
**Watari, Koji; Tsuzuki, A.; Torii, Y.**
Effect of rare-earth oxide addition on the thermal conductivity of sintered aluminum nitride.—73-02587
**Watari, Takanori** See Inoue, Keita; Matsuda, Ohsaku; Ohta, Kouhei; Takeshita, Masaaki
**Watari, Takanori; Bradt, Richard C.**
Grain growth of sintered ZnO with alkali oxide additions.—73-17140; Grain growth of sintered ZnO with alkali oxide additions.—73-17141
**Watari, Takanori; Mori, Koichiro; Torikai, Toshio; Matsuda, Ohsaku**
Growth of alumina/metal composites into porous ceramics by the oxidation of aluminum.—73-13844
**Watari, Takanori; Ohta, Kouhei; Ohta, Noriko; Torikai, Toshio; Matsuda, Ohsaku**
Preparation of alumina/aluminum composites by oxidation of aluminum.—73-00257
**Watarizaki, Jiro** See Kawakami, Masayuki
**Waterloo, Thomas L.** See Claassen, George R.
**Waterman, James R.** See Davis, John L.
**Waterman, James R.; Ruth, R. P.**
Nineteen 1992 U.S. Workshop on the Physics and Chemistry of Mercury Cadmium Telluride and Other Ir Materials.—73-11351
**Watermann, J.** See Grosse, R.
**Waters, Ronald L.**
Glass article inspection and rejection apparatus.—73-12079
**Waters, Shirley B.** See Alexander, Kathleen B.
**Watkins, H. Kenyon** See Gaa, Peter C.
**Watkins, Thomas R.; Green, David J.**
Fracture behavior of chemically-vapor-deposited SiC-coated graphite: I, Experimental results.—73-03296; Fracture behavior of CVD SiC-coated graphite: II, Conditions for the onset of multiple cracking.—73-06432
**Watkins, William L. H.** See Narula, Chaitanya K.
**Watson, M. C.; Clyne, T. W.**
Reaction-induced changes in interfacial and macroscopic mechanical properties of SiC-monofilament-reinforced titanium.—73-03348
**Watson, P. R.** See Mokler, S. M.
**Watson, Paul C.; Harold, Michael P.**
Dynamic effects of vaporization with exothermic reaction in a porous catalytic pellet.—73-08602
**Watson, R. E.** See McMichael, R. D.
**Watson, R. H.** See Ion, S. E.
**Watt, B.** See Miner, C. J.
**Watterich, A.; Gilliam, O. R.; Kappers, L. A.**
Coloration, impurities, and nonlocal charge compensation in $ZnWO_4$.—73-16421
**Watts, A. J.; Varhue, W. J.; Gibson, M. L.**
$SiO_2$ deposition as a byproduct of $SF_6$ plasma in an electron cyclotron resonance reactor.—73-13270
**Watts, B. E.** See Leccabue, F.
**Watts, J.** See Fanchon, E.
**Watts, Michael L.** See Kafka, James D.
**Waugh, K. C.** See Millar, Graeme J.
**Wautelet, M.**
Effects of size, shape, and environment on the phase diagrams of small structures.—73-16127
**Wawner, F. E.** See Gambone, M. L.
**Way, J. Douglas** See Collins, John P.
**Way, S. J.; Shayan, A.**
Synthesis and characterization of crystalline analogs of alkali-aggregate reaction products.—73-03543
**Waychunas, G. A.** See Combes, J. M.
**Wayne, S. F.** See Buljan, Sergej-Tomislav; Sampath, S.
**Waytena, G. L.**
Electron microscopy and energy loss study of low-temperature plasma-deposited oxide on a CZ-grown Si substrate.—73-06212
**We, Wan-Liang** See Cui, Gui-Bing
**Weakliem, Paul C.** See Carter, Lawrence E.
**Weathers, M. S.** See Bassett, W. A.
**Weaver, Bill L.** See Vaidyanathan, K. Ranji
**Weaver, Gabriela C.** See Campos, Francis X.
**Weaver, J. H.** See Duszak, R.; Patrin, J. C.
**Weaver, L.** See Kalnitsky, A.
**Weaver, P. J.** See Banfill, P. F. G.
**Weaver, R. M.** See White, G. Norman
**Webb, D. J.** See Unger, Peter
**Webb, Harold L.** See Pruett, Robert J.
**Webb, J. B.** See Gnezdilov, V. P.; Robertson, M. D.; Xu, Yao-Zhu
**Webb, R. L.** See Dickinson, J. T.
**Webb, R. L.; Jensen, L. C.; Langford, S. C.; Dickinson, J. T.**
Interactions of wide band-gap single crystals with 248-nm excimer laser radiation: I, MgO.—73-09469
**Webb, R. P.** See Gillin, W. P.
**Webber, Stephen E.** See Haruvy, Yair
**Weber, A.; Bringmann, U.; Klages, C.-P.; Taube, K.; Dollein, G.; Meyer, H.**
Plasma deposition of BN, BCN:H, and Me-BCN:H films using N-trimethylborazine (M=Ti, Nb).—73-09241
**Weber, B.** See Pigeat, P.
**Weber, Christian H.; Lofvander, Jan P. A.; Evans, Anthony G.**
Creep anisotropy of a continuous-fiber-reinforced silicon carbide/calcium aluminosilicate composite.—73-13499
**Weber, E. R.** See Chen, W. M.; Fujioka, Hiroshi; Namavar, Fereydoon; Verma, Ashish K.
**Weber, E.** See Piotrowska, A.

**Weber, Gerald**
Electric-field-induced ultrafast intersubband transitions in large GaAs-AlAs quantum wells via electron-interface-phonon interaction.—73-01142
**Weber, Gerhard** See Hinz, Paul
**Weber, H. P.** See Bi, J. Q.; Breguet, J.; Konz, Flurin; Morris, P. J.; Onishchukov, G.
**Weber, H. W.** See Frischberz, M. C.; Wiesinger, H. P.
**Weber, Jurgen** See Dornen, Achim; Scholz, Ferdinand
**Weber, Sylvain** See Kiessling, Uta
**Weber, T.** See Eschnauer, H.; Permogorov, S.
**Weber, W. J.; Tuller, H. L.; Mason, Thomas O.; Cormack, A. N.**
Research needs and opportunities in highly conducting electroceramics.—73-01020
**Weber, Willes H.** See Narula, Chaitanya K.; Wu, Ching-Hsong
**Webster, Elizabeth; Anderson, Marc A.**
Supported microporous ceramic membranes.—73-05015
**Webster, Harold F.**
Ceramic-to-conducting-lead hermetic seal.—73-00280
**Wecharatana, Methi** See Cerkanowicz, Anthony E.
**Wecker, J.** See Von Helmolt, T.
**Weeks, R. A.** See Magruder, R. H., III
**Wefers, Karl** See Fishkis, Maya
**Wegerer, R.** See Ruf, T.; Thomsen, C.
**Wehmann, H.-H.** See Lubnow, A.; Zwinge, G.
**Wehrle, Bernd** See Stein, Andreas
**Wei, Che-Chia** See Hodges, Robert L.
**Wei, Che-Chia**
Oxide-capped titanium silicide formation.—73-14758
**Wei, Chung-Chuang** See Sun, Jwo-Shiun
**Wei, George C.**
Hot-gas method and apparatus for thermal shock testing.—73-05053
**Wei, Guang-Qing**
Factors affecting quality of gypsum molds for sanitary porcelain.—73-07253
**Wei, Hai-Rong** See Yang, Guan-Jun
**Wei, Jian-Jun; Xue, Qun-Ji**
Effects of additives on friction and wear behavior of $Cr_2O_3$ coatings.—73-09585; Effects of surfactants on the tribological properties of a $Cr_2O_3$ coating.—73-06399; Tribochemical mechanisms of $Si_3N_4$ with additives.—73-09519
**Wei, Jing-Qian** See Guan, Qing-Cai; Shi, Lu-Ping
**Wei, Kun; Lu, Wen-Han**
Reaction sintering of Zr-containing mullite materials.—73-10757
**Wei, L. H.** See Wu, Z. L.
**Wei, Ming** See Zhang, Ke-Cong
**Wei, Ming-Jian** See Xing, Wei-Hong
**Wei, R.** See Kustas, F. M.
**Wei, Shao-Xian**
Technological modification of imported large end port glass tank furnace.—73-05131
**Wei, Shih-Long**
Method for forming a metallurgical interconnection layer package for a multilayer ceramic substrate.—73-11028
**Wei, Shou-Xin; Zhang, Ji-Ping; Kang, Bao-Sheng**
One-step firing of color glazed tile in coal-fired roller kilns.—73-10872
**Wei, W.-J.** See Chih, B.-C.; Lee, C.-S.
**Wei, Wang-Shui** See Zhang, Yong-Hong; Zhong, Fu-Min
**Wei, Wang-Shui; Gong, Shang-Min; Luo, Le**
Preparation of Ag-YBaCuO composite tape with starting material produced by codecomposition method.—73-11870
**Wei, Wang-Shui; Xuan, Dong; Hu, Su-Hui**
Effect of $Ar_2$ annealing on properties of $Bi_2Sr_2CaCu_{1.2}La_{0.8}O_x$.—73-11730
**Wei, Wen-Cheng** See Lee, Yeh-Chi; Lo, Ming-Hung; Wu, Tsung-Ming
**Wei, William** See Stoll, Thomas
**Wei, X.; Pal, A. J.; Chen, L.; Ruani, G.; Taliani, C.; Vardeny, Z. V.**
CDW suppression and photoinduced gap states in $BaBiO_3$.—73-02156
**Wei, Xiao-Han** See Christoffersen, Roy
**Wei, Yong-Liang** See Liu, Wen-Chuan
**Weiand, Werner; Merz, R.; Bonk, K.**
Glaze additives—30 years ago and today.—73-00909
**Weibel, G.** See Walter, H.
**Weichert, R.**
Application of defect statistics and fracture mechanics for the description of comminution processes.—73-12921
**Weida, W. A.; Kaufman, J. G.**
Databases in materials science and engineering: an international approach.—73-06566
**Weidemuller, Christian** See Kloss, Gunnar
**Weider, H. H.** See Shin, J.
**Weidner, H.** See Zhang, X. X.
**Weidner, M.; Roseler, A.; Eichler, M.**
Ir ellipsometry investigations of $N_2O$-nitrided silicon oxide thin films on silicon.—73-13411
**Weigelt, J.** See Gerber, T.
**Weigert, M.** See Gehman, B. L.
**Weil, R.** See Benguigui, L.; Netiksis, V.
**Weilert, M. A.; Msall, M. E.; Anderson, A. C.; Wolfe, J. P.**
Phonon scattering from ferroelectric domain walls: phonon imaging from KDP.—73-15277
**Weill, F.** See Darriet, J.
**Weimann, S.** See Wendel, M.
**Weimar, U.** See Gombert, A.
**Weimer, Alan W.; Cochran, Gene A.; Eisman, Glenn A.; Henley, John P.; Hook, Bruce D.; Mills, Lynne K.**
Rapid process for manufacturing aluminum nitride powder.—73-06007
**Weimer, Alan W.; Nilsen, Kevin J.; Cochran, Gene A.; Roach, R. P.**
Kinetics of carbothermal reduction synthesis of beta silicon carbide.—73-05888
**Weimer, M.** See Lengel, G.
**Weimer, W. A.** See Reeve, S. W.
**Weinand, Dieter** See Blomacher, Martin
**Weinberg, Michael C.** See Bae, Byeong-Soo; Goktas, A. A.; Podlesny, J.; Shneidman, V. A.
**Weinberg, Michael C.; Zanotto, E. D.; Manrich, S.**
Classical nucleation theory with a size-dependent interfacial tension: $Li_2O{\cdot}2SiO_2$ crystal nucleation.—73-00308
**Weinberg, Michael C.**
Ceramic Transactions, Volume 30: Nucleation and Crystallization in Liquids and Glasses.—73-17517
**Weinberg, W. H.** See Pond, K.; Wang, X.-S.
**Weiner, J. S.** See Goni, A.
**Weinert, K.; Biermann, D.**
Turning of fiber- and particle-reinforced aluminum.—73-03662
**Weinert, R.; Kolenda, J.; Petrauskas, M.**
Lateral transport in GaAs-(Al,Ga)As superlattices investigated by transient grating measurements.—73-01229
**Weinert, Robert W.** See Krishnaswamy, S. Visvanathan
**Weinl, Gerold; Oskarsson, Rolf G.; Gustafsson, Per**
Sintered carbonitride alloy with highly alloyed binder phase.—73-16018
**Weinman, L. S.** See Ma, Q. Y.
**Weinstein, B. A.** See Lemos, V.
**Weinstein, Jerry G.** See Aghajanian, Michael K.
**Weinstein, Roy** See Liu, Jian-Xiong
**Weinstein, Roy; Chen, In-Gann; Liu, Jian-Xiong; Xu, Jian-Chun**
Permanent magnets of high-$T_c$ superconductors.—73-04784
**Weintraub, S.** See Brill, R. H.
**Weir, D. G.** See Hoke, W. E.
**Weirauch, D. A., Jr.** See Venkataraman, K. S.
**Weiser, Martin W.; Fong, Keith B.**
Application of the Taguchi method of experimental design to improving ceramic processing.—73-04900; Experimental design for improved ceramic processing, emphasizing the Taguchi method.—73-04920
**Weiser, Paul S.; Prawer, Steven; Hoffman, Alon**
Carbon diffusion in uncoated and titanium nitride coated iron substrates during microwave plasma-assisted chemical vapor deposition of diamond.—73-12928
**Weiss, Bernard L.** See Li, E. Herbert
**Weiss, Erelin; Bell, Andrew**
Comparison of the electrical and mechanical strengths of conventional and flux-sintered barium-titanate-based dielectrics.—73-00939
**Weiss, F.** See Hudner, J.
**Weiss, Hans-Jurgen** See Bahr, Hans-Achim; Schultrich, B.
**Weiss, T.** See Schneider, D.
**Weiss, Werner; Barbieri, A.; Van Hove, M. A.; Somorjai, Gabor A.**
Surface structure determination of oxide films grown on a foreign substrate: $Fe_3O_4$ multilayer on Pt(111) identified by LEED.—73-17207
**Weiss, Werner; Somorjai, Gabor A.**
Preparation and structure of 1–8 monolayer-thick epitaxial iron oxide films grown on Pt(111).—73-08711
**Weisser, Stefan** See Ralston, John D.
**Weissmann, Rudolf** See Buerhop, Claudia; Buhler, P.; Helebrant, A.
**Weisweiler, Werner** See Serry, M. A.
**Weisweiler, Werner; Dallibor, W.**
Incorporation of fluorides into cement kiln materials under different modes of operation.—73-09999
**Weisweiler, Werner; Keller, A.**
Problems of gaseous emissions of mercury from cement plants.—73-10097
**Weltekamp, Daniel P.** See Buratto, Steven K.
**Weltzing, Holger** See Meyer, Richard, Jr.
**Weizer, Victor G.** See Fatemi, Navid S.
**Welberry, T. R.** See Butler, B. D.; Khanna, Rita
**Welch, D. F.** See Bour, David P.
**Welch, D. O.** See Zhu, Yi-Mei
**Welch, E.; Yi, Y.; Bifano, T.**
Electrochemical dressing of bronze-bonded diamond grinding wheels.—73-04915
**Welch, John** See Carpio, Ronald A.
**Welhouse, Gereon J.** See Bleam, William F.
**Welker, M.; Hausner, H.**
Agglomerate characteristics and sintering behavior of alumina powders.—73-12909
**Wellbrock, U.; Beier, W.; Frischat, G. H.**
Preparation of $SiO_2$-$TiO_2$-$ZrO_2$ gel glasses and coatings by means of modified alkoxide solutions.—73-10585
**Weller, Mark T.** See Currie, David B.; Dann, Sandra E.; Gormezano, Anne; Jiang, M. R. M.
**Wellhofer, F.** See Bi, Y. J.
**Welling, H.** See Freitag, I.; Golla, D.
**Wells, B. O.** See Dessau, D. S.; King, D. M.; Shen, Z.-X.
**Wellstood, Frederick C.; Kingston, John J.; Clarke, John**
Microelectronic superconducting crossover and coil.—73-11980; Microelectronic superconducting device with multilayer contact.—73-04855
**Welnak, J. T.** See Ray-Chaudhuri, A. K.
**Welp, U.** See Kwok, W. K.; Seidler, G. T.
**Welp, U.; Grimsditch, M.; Fleshler, S.; Nessler, W.; Downey, J.; Crabtree, G. W.**
Effect of uniaxial stress on the superconducting transition in $YBa_2Cu_3O_7$.—73-08041
**Weman, H.** See Miller, M. S.
**Wen, Chao-Zhong**
Application of lithia–mica in lead-free low-temperature glaze.—73-10794
**Wen, J. G.** See Traeholt, C.
**Wen, J.-K.** See Li, J.
**Wen, Jun-Qiang** See Miao, Song-Hua
**Wen, L.** See Wang, H. F.
**Wen, M.** See Yin, S.
**Wen, Qing-Zhe; Clarke, David R.**
Modeling the electrical characteristics of polycrystalline varistors using individual grain-boundary properties.—73-11319
**Wen, Rui-Wu** See Li, Rong-Sheng
**Wen, S. J.** See Campet, G.
**Wen, Tao** See Miao, Bai-He
**Wen, X.-Y.** See Jin, S.
**Wen, Yi-Li** See Hao, Jian-Min
**Wenda, R.** See Poellmann, H.
**Wendel, M.; Lettau, C.; Hansen, W.; Dolgopolov, V.; Bohm, G.; Weimann, S.**
Interacting edge states in quantum wires.—73-14995
**Wenderoth, M.; Gregor, M. J.; Ulbrich, R. G.**
Luminescence from gold-passivated GaAs surfaces excited with a scanning tunneling microscope.—73-04389
**Wendorff, J.** See Garcia, D. E.
**Wendorff, J.; Garcia, D. E.; Janssen, Rolf; Claussen, Nils**
Sapphire-fiber-reinforced RBAO [reaction-bonded alumina].—73-16978
**Wendt, Gerhard** See Wolf, Dorit
**Weng, C.-C.; Tam, M.-T.; Lin, G.-C.**
Acoustic emission characteristics of mortar under compression.—73-09803
**Weng, C.-T.; Wang, H.-C.**
Effect of ZnO additive on the microwave dielectric properties of $(Zr_{0.6}Sn_{0.4})TiO_4$ ceramic.—73-14698
**Weng, L.-J.** See Cong, Q.-Z
**Weng, Lu-Qian; Huang, Dong-Sheng; Jiang, Jian**
Preparation of high-purity, ultrafine $\alpha$-$Al_2O_3$ powders.—73-15930
**Weng, Shi-Xing; Cocivera, Michael**
Preparation of copper indium diselenide by selenization of copper indium oxide.—73-09259
**Weng, Tong-Xu** See Lu, Zhang-Ming
**Weng, Ya-Ying** See Cao, Xian-Cheng
**Wenger, Alfred** See Stieger, Othmar
**Wensley, Doug**
Pottery: A Manual of Techniques.—73-03413
**Went, G. T.** See Ginter, D. M.
**Wentink, D. J.** See Wijers, C. M. J.
**Wentorf, R.** See Beall, M. W.
**Wentzek, Steven E.** See Chen, Catherine S. H.
**Wenzel, T.** See Wiarda, D.
**Weppner, W.** See Schafer, G. W.
**Werckmann, J.; Humbert, P.; Esnouf, C.; Broudic, J. C.; Vilminot, S.**
Microscopic characterization of sol-gel-processed cordierite.—73-13417
**Wereszczak, A. A.** See Jenkins, Michael G.; Raghuraman, S.
**Wereszczak, A. A.; Breder, Kristin; Ferber, Mattison K.**
Role of oxidation in the time-dependent failure behavior of hot isostatically pressed silicon nitride at 1370°C.—73-03349
**Wereszczak, A. A.; Ferber, Mattison K.; Kirkland, T. P.**
Effects of oxidation and creep damage mechanisms on creep rupture behavior in HIPed silicon nitrides.—73-17299
**Werheit, H.** See Kuhlmann, U.
**Werner, Lutz; Caro, Jurgen; Finger, G.; Kornatowski, J.**
Optical second harmonic generation (SHG) on *p*-nitroaniline in large crystals of $AlPO_4$-5.—73-12852
**Werner, P.** See Liliental-Weber, Z.; Zakharov, N. D.
**Werner, P.-E.** See Eriksson, L.
**Werner, P.; Liliental-Weber, Z.; Swider, W.; Sohn, H.; Yau, Wai-Fan; Baranowski, J.**
Defects in GaAs bulk crystals and multilayers caused by In diffusion.—73-04280
**Werner, R.** See Gehman, B. L.
**Werner, W. S. M.** See Losbichler, P.
**Wernet, Judith H.; Feke, Donald L.**
Depletion stabilization/flocculation strategy for fiber-particle microcomposites.—73-09061; Effects of solids loading and dispersion schedule on the state of aqueous alumina/zirconia dispersions.—73-17128
**Werninghaus, T.** See Rossow, U.
**Wersig, C.** See Brinkmann, R.
**Wersing, Wolfram** See Schmidt, Harald
**Wert, J. J.** See Kral, M. V.
**Wertheim, G. K.** See Rowe, J. E.
**Werthen, J. G.** See Chen, J. C.
**Werthner, H.** See Busch, R.
**Wertz, V.** See Simon, J.-F.
**Werynski, B.; Janecka, L.**
Growth of hydraulic activity of portland cement clinker as a result of using precalcining.—73-09977
**Wesling, Kevin F.; Socie, Darrell F.; Beardsley, Brad**
Fatigue of thick thermal barrier coatings [TTBC's].—73-10230
**Wessels, B. W.** See Chen, J.; Feil, W. A.; Lu, H. A.
**Wessels, B. W.; Marks, T. J.; Richeson, D. S.; Tonge, Lauren M.; Zhang, Ji-Ming**
CVD method for forming Bi-containing oxide superconducting films.—73-11950
**Wessels, B. W.; Qian, L. Q.**
Scanning tunneling optical spectroscopy of semiconductor thin films and quantum wells.—73-07785
**Wessicken, R.** See Cartlidge, S.
**West, Alan C.**
Ohmic interactions within electrode ensembles.—73-04147
**West, Anthony R.** See Goto, Takashi; Johnston, D. E.; Reid, W. B.; Skakle, J. M. S.; Smith, R. I.; Suckut, Claudia; Zheng, C.
**West, G. F.; Sen, R.**
Striae in fluoride glass.—73-07079
**West, James W.** See Burkett, Cecil G., Jr.
**West, Jon K.** See Nobrega, M. C. S.; Wallace, Stephen
**West, Jon K.; Wallace, Stephen**
Interactions of water with trisiloxane rings: II, Theoretical analysis.—73-02302
**West, K. W.** See Ge, Wei-Kun; Goni, A.; Pinczuk, A.; Spector, M.
**West, R. D.** See Jahanmir, Said
**Westberg, Helena** See Johansson, Erik
**Westberg, Helena; Boman, Mats; Carlsson, Jan-Otto**
Kinetics in thermal laser-assisted chemical vapor deposition of titanium carbide.—73-13109

**Westberg, Helena; Borman, Mats; Norekrans, Ann-Sofie; Carlsson, Jan-Otto**
Carbon growth by thermal laser-assisted chemical vapor deposition.—73-12931
**Westbrook, Jack H.**
Data compilation, analysis, and access: the role of the computer.—73-09709
**Westenberger, G.** See Hoffmann, H. J.
**Westerheim, A. C.** See Choi, B. I.
**Westerheim, A. C.; Choi, B. I.; Flik, Markus I.; Cima, Michael J.; Slattery, R. L.; Anderson, Alfredo C.**
Radiative substrate heating for high-$T_c$ superconducting thin-film deposition: film-growth-induced temperature variation.—73-11884
**Westerheim, A. C.; McIntyre, P. C.; Basu, S. N.; Bhatt, D; Yujahnes, L. S.; Anderson, Alfredo C.**
Comparison of the surface morphology and microstructure of in situ and ex situ derived $YBa_2Cu_3O_{7-x}$ thin films.—73-11704
**Westfall, Leonard J.**
Making crystal filaments from extruded rods.—73-13127
**Westin, G.; Nygren, Mats**
Sol-gel preparation of M-Sb oxides from $Sb(OBu^n)_3$-M-acetate precursors with M=Mn, Co, Ni.—73-06063
**Westmacott, K. H.** See Pajares, Antonia
**Westphal, C. H.** See Barbeta, V. B.
**Westphal, M. J.**
Cooperative behavior during ferroelectric transitions in $KNO_3$ powder.—73-07873
**Westphal, V.; Kleemann, W.; Glinchuk, M. D.**
Diffuse phase transitions and random-field-induced domain states of the "relaxor" ferroelectric $PbMg_{1/3}Nb_{2/3}O_3$.—73-07880
**Westphalen, R.** See Maassen, M.
**Westra, K. L.** See Konevecki, M. W.
**Westwood, D. I.** See Hooper, S. E.; Scholz, S. M.; Sobiesierski, Z.
**Westwood, D. J.** See Shen, T.-H.
**Westwood, John D.** See Cogan, Stuart F.
**Wetherhold, R. C.** See Jain, L. K.
**Wetherhold, R. C.; Jain, L. K.**
Effect of crack orientation on the fracture properties of composite materials.—73-09573
**Wetsel, A. E.** See Bernstein, J. B.
**Wetzel, P.** See Kafader, U.
**Wetzel, P.; Haderbache, L.; Pirri, C.; Peruchetti, J. C.; Bolmont, D.; Gewinner, G.**
Electronic structure of epitaxial erbium silicide films on Si(111).—73-02261
**Wewel, M.; Blanck, D.; Guhl, R.; Specht, R.**
Surface finishing by turning of coatings made from NiCrBSi-type self-fluxing alloys.—73-09346
**Weyeneth, Bryan A.** See Leung, Roger Y.
**Weyers, Richard E.; Brown, Michael; Al-Qadi, Imad L.**
Rapid method for measuring the acid-soluble chloride content of powdered concrete samples.—73-10128
**Weyers, Richard E.; Herald, S. E.; Feeney, M. A.; Lum, S. F. H.; Bader, C.; Cady, P. D.**
Field method for measuring the chloride content of concrete.—73-13725
**Weymouth, Paul** See Docktor, Thomas
**Weyten, H; Adriansens, W.; Cornelis, J.; Leysen, R.**
Preparation and characterization of high-$T_c$ superconducting $YBa_2Cu_3O_{7-x}$ filaments.—73-01636
**Whalen, Philip** See Marrero, Madelyn
**Whalen, T. J.** See Allor, Richard L.
**Whang, Eun-Joo** See Freund, Friedemann
**Whang, J.** See Hasz, W. C.
**Whang, Ji-Chun**
Burning moderate quicklime for aerated fly ash concretes in vertical kiln.—73-10706
**Whang, K.-W.; Seo, Y.-W.**
Characteristics of hollow cathode discharge plasma and its application for the reactive ion plating of TiN and TiC.—73-09034
**Whangbo, M.-H.; Subramanian, M. A.**
Structural origin of holes in the Tl-O single rock-salt layer superconductor $TlSrRCuO_5$ (R=La, Nd).—73-01667
**Whatmore, R. W.** See Ainger, F.; Osbond, P. C.
**Wheat, H. G.; Harding, K. S.**
Galvanic corrosion in repaired reinforced concrete slabs—an update.—73-03474
**Wheat, T. A.** See Ahmad, A.; Canaday, J. D.; Chehab, S. F.; Kuriakose, A. K.; Pouskouleli, G.; Quon, D. H. H.; Varma, S.
**Wheeler, D. R.** See Miyoshi, Kazuhisa
**Wheeler, R. G.** See Dresselhaus, P. D.
**Wherrett, B. S.** See Bolger, J. A.
**Wherry, David** See Kirby, Robert E.
**Whitaker, A.; Channell, A. D.**
Phase equilibria in the system CdO-ZnO-$B_2O_3$ at 850°C.—73-02380
**Whitaker, A.; Leighton, R. A.**
Phase equilibria in the system $Na_2O$-$B_2O_3$-$Ga_2O_3$ at 600°C.—73-02382
**Whitaker, J.** See Liliental-Weber, Z.
**Whitaker, John F.** See Gupta, S.; Wang, H. H.
**White, A. M.** See Wagner, R. J.
**White, C. W.** See Magruder, R. H., III; Sklad, P. S.
**White, Charles S.** See Wade, Jonathan A.
**White, D. P.**
Effect of ionizing and displacive radiation on the thermal conductivity of alumina.—73-02582
**White, Danny R.** See Claar, Terry D.; Gesing, Adam J.; Kennedy, Christopher R.; Lesher, H. D.; Newkirk, Marc S.
**White, Danny R.; Claar, Terry D.**
Self-supporting composite bodies.—73-10348
**White, G. Norman; Dixon, J. B.; Weaver, R. M.; Kunkle, A. C.**
Sedimentary structure in gray kaolin of Georgia.—73-12296
**White, George** See Perfecto, Eric
**White, Grady S.** See Lindsay, Curtis G.
**White, Grady S.; Raynes, Alan S.; Vaudin, Mark D.; Freiman, Stephen W.**
Fracture behavior of cyclically loaded PZT.—73-14930
**White, J. M.** See Creighton, J. Randall; Tsai, C.; Zhu, X.-Y.
**White, Jeffrey F.** See Mathisen, Melvin P.
**White, Kenneth W.** See Guazzone, Laurent; Hay, Jack C.; Ortiz-Longo, Carlos R.
**White, Kenneth W.; Hay, Jack C.**
Effect of thermoelastic anisotropy on the *R*-curve behavior of monolithic alumina.—73-17295
**White, L. R.** See Scales, Peter J.
**White, L. R.; Tompkins, T. L.; Hsieh, K. C.; Johnson, D. D.**
Ceramic filters for hot gas cleanup.—73-08505
**White, M.** See De Marco, M.
**White, Philip J.**
Electric cells with self-supporting porous ceramic plate.—73-14746
**White, Robert H.** See Fuller, James J.
**White, V.; Cerrina, F.**
Metalless X-ray phase-shift masks for nanolithography.—73-16864
**White, William B.** See Nelson, C.; Yuta, Masako
**Whitehead, Andrew J.** See Ramsey, P. M.
**Whitehead, Andrew J.; Page, Trevor F.**
Nanoindentation studies of thin-film-coated systems.—73-12838
**Whitehead, M.; Sarkar, Partho; Nicholson, Patrick S.**
Nonplanar $Al_2O_3$/YPSZ laminates by electrophoretic deposition using $Al_2O_3$ fiber electrodes.—73-16883
**Whitehead, Roger J.** See Gibb, Terence C.
**Whitehouse, A. F.; Clyne, T. W.**
Effects of reinforced content and shape on cavitation and failure in metal-matrix composites.—73-03277
**Whitemore, David W.** See Vroom, Alan H.
**Whitewide, D.**
Training and development.—73-10611
**Whitfield, H. J.** See Bastow, Timothy J.
**Whitley, T.** See Davey, S. T.
**Whitman, C. I.** See Raman, R.
**Whitman, Pamela K.** See Jansma, Jon B.
**Whitmore, Michael A.** See Schroeder, John
**Whitney, E. Dow**
Ceramic Cutting Tools: Materials, Development, and Performance.—73-17516
**Whittaker, I. R.**
Fusion cast refractories for the glass industry.—73-10731
**Whittemore, Dwight S.** See Sundell, David R.
**Whittemore, Dwight S.**
Insulating refractory.—73-04032
**Whittemore, O. J.**
Ceramic innovations—disappeared and rediscovered.—73-03384; Energy usage in firing ceramics and melting glass.—73-08471
**Whittemore, Robert**
Raw material stockpiling techniques.—73-12294
**Whittingham, M. Stanley** See Li, Ying-Jeng James
**Whittingstall, P.**
Importance of rheology.—73-05054
**Whittington, B. I.; Milestone, N. B.**
Microwave heating of zeolites.—73-13138
**Whittle, R.** See McGovern, I. T.
**Whitworth, T. M.; Gamblin, G. B.; Fritz, S. J.**
Simple air-stream clay separator.—73-12062
**Whychell, Donald T., Sr.** See Neill, Ronald H.
**Wiarda, D.; Wenzel, T.; Uhrmacher, M.; Lieb, K. P.**
Hyperfine interaction of $^{111}$Cd impurities in $Mn_2O_3$, $Mn_3O_4$, and ß-$Fe_2O_3$.—73-12599
**Wicikowski, L.** See Szaniawska, K.
**Wickardt, Andrea** See Gerth, Kirsten
**Wickel, C.** See Lutz, H. D.
**Wicks, G. W.** See Johnson, F. G.; Shank, S. M.
**Wicks, George G.** See Clark, David E.; Molecke, Martin A.; Schulz, Rebecca L.
**Wicks, George G.; Macedo, P. B.; Lodding, A. R.; Clark, David E.**
Performance of SRS [Savannah River Site] waste glass buried in salt at WIPP-MITT program.—73-08304
**Wicks, George G.; Molecke, Martin A.**
International in situ testing of waste forms and package components: an overview of the MIIT [Materials Interface Interactions Test] program.—73-08298
**Wicksted, J. P.** See St. John, W. D.
**Wiczkowski, John K.**
Nondestructive testing of ceramics by confocal laser scanning microscopy.—73-05076
**Widmer, D.** See Williams, T.
**Widom, A.** See Jiang, H.
**Wie, C. R.** See Xie, K.
**Wiechers, J.** See Gelder, D.
**Wieckowski, A.** See Kodintsev, I. M.
**Wiedemeier, Heribert** See Sha, Yi-Gao
**Wiedemeier, Heribert; Huang, Xue-Jun**
Phase studies of the Cd-Fe-Se system in the Cd-rich region.—73-05453
**Wiedemeier, Heribert; Sha, Yi-Gao**
Growth by CVT [chemical vapor transport] and characterization of $Hg_{1-x}Cd_xTe$ epitaxial layers.—73-14946
**Wiedemeier, Heribert; Wu, Guang-Heng**
Fast growth of $Cd_{1-x}Zn_xTe$ single crystals by physical vapor transport.—73-14917; Fast vapor growth of cadmium telluride single crystals.—73-11210
**Wiedensohler, A.** See Maximov, I.
**Wieder, H. H.** See Fernandez, J. M.; Kavanagh, K. L.
**Wieder, H. H.**
Dielectric/semiconductor interfaces.—73-10932
**Wiederhorn, Sheldon M.** See Kim, Doh-Yeon; Luecke, William
**Wiederhorn, Sheldon M.; Quinn, George D.; Krause, Ralph F., Jr.**
Fracture mechanism maps: their applicability to silicon nitride.—73-17327
**Wiederick, Harvey D.** See Ahmad, A.; Sherrit, Stewart
**Wiedmann, L.** See Schroder, F.
**Wiegand, Karl E.** See Hu, Patrick C.
**Wiegel, M.** See Emond, M. H. J.
**Wiegel, M.; Blasse, G.**
Luminescence and nonlinear optical properties of barium fluoromolybdate ($Ba_2MoO_3F_4$).—73-05589
**Wiegers, G. A.** See Van der Lee, A.
**Wiegers, G. A.; Meerschaut, A.**
Misfit layer compounds $(MS)_nTS_2$ (M=Sn, Pb, Bi, rare-earth metals; T=Nb, Ta, Ti, V, Cr; $1.08 \leq n \leq 1.23$): structures and physical properties.—73-05436
**Wieja, Krystyna** See Kurdowski, Wieslaw
**Wieker, W.** See Bruckner, A.; Gabrovsek, R.
**Wieland, K.**
Furnace bottom design considerations.—73-07214
**Wien, W. L.** See King, Wayne E.
**Wiening, Jonathan P.** See Eldridge, Jeffrey I.
**Wiese, G.; Kabos, P.; Patton, C. E.**
Subsidiary absorption spin wave instability processes in yttrium iron garnet thin films, critical modes, and the "kink" effect.—73-07978
**Wiese, G.**
Multistability and chaos at parametrically excited spherical modes in a yttrium iron garnet sphere.—73-04630
**Wiesenfeld, Jay M.; Hasnain, Ghulam; Perino, Joseph S.; Wynn, J. D.; Leibenguth, R. E.; Wang, Y. H.**
Gain-switched GaAs vertical-cavity surface-emitting lasers.—73-14935
**Wiesinger, H. P.; Sauerzopf, T. M.; Weber, H. W.; Gerstenberg, H.; Crabtree, G. W.**
Flux pinning by collision cascades and large defect clusters in single-crystal $YBa_2Cu_3O_{7-\delta}$.—73-08083
**Wiesmann, H. J.** See Wang, Y.-L.
**Wieszorek, Gregorz**
Appraisal of steel corrosion threat with chlorides in reinforced concrete construction.—73-00026
**Wigen, P. E.** See Peterman, D. W.; Shields, P. J.; Singh, Sandeep; Ye, M.
**Wightman, James P.** See Commercon, Pascal
**Wignall, G. D.** See Mook, H. A.; Yethiraj, M.
**Wignarajah, S.** See Sugimoto, Kenji
**Wihsmann, Fred Gustav** See Forkel, Klaus; Gottwald, Gunther
**Wijaranakula, W.**
Dissolution mechanism of oxide precipitates in Czochralski silicon degenerately doped with boron during high-temperature annealing [800° and 1050°C].—73-06153
**Wijayasekera, C. N.** See Dissanayake, M. A. K. L.
**Wijayasekera, C. N.; Mellander, B.-E.**
Phase transitions and ionic conductivity of the lithium sulfate–lithium phosphate system.—73-02391
**Wijayawardhana, C. A.** See Tortorelli, P. F.
**Wijers, C. M. J.; Poppe, G. P. M.; De Boeij, P. L.; Bekker, H. G.; Wentink, D. J.**
Full microscopic treatment of the optical response of the Si(100) 2×1 surface.—73-14932
**Wijingaarden, R. J.** See Van Benige, E. N.
**Wijnen, Peter W. J. G.; Beelen, Theo P. M.; Rummens, Kees P. J.; Van Santen, R. A.**
Role of cations in the formation of aqueous silica gels.—73-00698
**Wilbert, M.** See Smith, R. W.
**Wilbur, P. J.** See Kustas, F. M.
**Wilck, K.** See Ahlkvist, Bo
**Wild, C.** See Samlenski, R.
**Wildbrett, G.** See Bohner, B.
**Wilde, Peter-Michael** See Forkel, Klaus
**Wilde, Richard E.**
Raman spectrum of $Sr_{0.61}Ba_{0.39}Nb_2O_6$.—73-01429
**Wilder, George J.**
Substitute for the comparison microscope.—73-15852
**Wildfeuer, J.**
Engineering and user considerations for custom robotic thermal spray systems.—73-08334
**Wildner, M.** See Giester, G.
**Wilke, Gary D.** See Thomas, Ian M.
**Wilkens, B. J.** See Chan, Siu-Wai; Sunil, D.
**Wilkens, B.** See Ramesh, Ramamoorthy
**Wilkens, C. A.** See Corbin, N. D.
**Wilkens, Peter** See Perfecto, Eric
**Wilker, C.** See Holstein, W. L.
**Wilkins, R.** See Lengel, G.
**Wilkinson, A. P.** See Speck, J. S.
**Wilkinson, A. P.; Cheetham, A. K.; Jarman, R. H.**
Defect structure of congruently melting lithium niobate.—73-09394
**Wilkinson, C. D. W.** See Foad, M. A.; Taylor, R. P.
**Wilkinson, David C.; Tuffe, S. C.**
Development of a three-layer laminated composite based on molybdenum disilicide reinforced with alumina platelets.—73-06767
**Wilkinson, David S.** See Bloyce, D. M.; Conlon, K. T.; Plucknett, Kevin P.
**Wilkinson, David S.** See Tuffe, S.
**Wilkinson, David S.**
Creep damage mechanisms in structural ceramics.—73-06357
**Wilks, Freeman** See Mahfuz, Hassan
**Wilks, S. P.** See Hooper, S. E.
**Will, G.** See Huang, T. C.
**Willadsen, Michael C.** See Larson, Bruce W.
**Willadsen, Michael C.**
Using existing documentation to comply with ISO 9000 standards.—73-17512
**Willander, M.** See Ouacha, A.; Wahab, Q.
**Willard, Mark E.** See Rosolen, Graham
**Wille, L. T.** See Adelman, D.; Oitmaa, J.
**Willems, G. J.; Maes, H. E.**
Incorporation of nitrogen in $Si_3N_4$-capped silicon by cw $Ar^+$-laser melting.—73-13095
**Willems, H. X.** See Van Den Berg, P. H. J.

**Willems, H. X.; De With, G.; Metselaar, R.; Helmholdt, R. B.; Petersen, K. K.**
Neutron diffraction of γ-aluminum oxynitride.—73-12635
**Willems, H. X.; Van Hal, P. F.; De With, G.; Metselaar, R.**
Mechanical properties of γ-aluminum oxynitride.—73-17381
**Willems, Terry** See Pistilli, Michael F.
**Willermet, Pierre A.** See Tamor, Michael A.
**Willert-Porada, M.; Fisher, B.; Gerdes, T.**
Application of microwave heating to combustion synthesis and sintering of $Al_2O_3$-TiC ceramics.—73-05695
**Willert-Porada, M.**
Reaction-rate-controlled microwave processing of ceramic materials.—73-06013
**Willey, Ronald J.** See Busca, Guido
**Williams, Brian E.** See Kaplan, Richard B.
**Williams, Clyde C.** See Goldberg, Harris A.
**Williams, D. B.** See Soni, K. K.
**Williams, D. B.; Soni, K. K.; Tseng, M. W.**
Scanning ion microprobe analysis of composite materials.—73-03190
**Williams, D. R. M.** See Krishnamurthy, Mohan
**Williams, Donald L.**
Inhouse refractory capability for U.S. specialist glassmaker.—73-14599
**Williams, E. J.; Stobbs, W. M.**
Spatial variations in the oxygen content of $YBa_2Cu_3O_{7-\delta}$ epitaxially deposited on MgO as assessed using a transmission electron microscopy moire method.—73-08200
**Williams, Franklin E.**
Repeat performance of 1991 is predicted.—73-13643
**Williams, G. M.** See Arias, J. M.; Bajaj, J.; Blazejewski, E. R.
**Williams, G. M.; De Wames, R. E.; Bajaj, J.; Blazejewski, E. R.**
Photoinduced excess low-frequency noise in HgCdTe photodiodes.—73-11379
**Williams, Hobert L.** See Khare, Gyanesh P.
**Williams, J. O.** See Armitage, D. N.
**Williams, J. R.** See Davey, S. T.; Szebesta, D.
**Williams, J.** See Ganguly, B.
**Williams, Jimmie L.** See Addiego, William P.; Patil, M. D.
**Williams, Jonathan M.** See Harburn, George
**Williams, Jonathan M.; Tilley, R. J. D.; Harburn, George; Williams, R. P.**
Electron and X-ray diffraction study of L-$Ta_2O_5$-type phases in L-$Ta_2O_5$ and some L-$Ta_2O_5$-$M_2O_b$ systems: (M=Al, Ti, Zr, Hf, W).—73-02252
**Williams, Jonathan M.; Tilley, R. J. D.; Harburn, George; Williams, R. P.**
Interpretation of L-$Ta_2O_5$-type diffraction patterns in terms of a 1-D shift lattice.—73-08646
**Williams, M. D.; Chang, T. Y.**
Valence band offset at the asymmetric GaAs/$In_{0.53}Ga_{0.47}As$ interface [determined] by ultraviolet photoemission spectroscopy.—73-11502
**Williams, M. J.** See Wang, C.
**Williams, P. S.** See Giddings, J. Calvin; Pearsall, T. P.
**Williams, R. H.** See Hooper, S. E.; Jenkins, L. C.; Luo, J. K.; Shen, T.-H.
**Williams, R. H.**
Metal–semiconductor interfaces.—73-01243
**Williams, R. J.** See Myers, T. H.
**Williams, R. L.** See McGreer, K. A.
**Williams, R. P.** See Harburn, George; Mercurio, D.; Williams, Jonathan M.
**Williams, S.; Zheng, J. Q.; Shih, M. C.**
In situ X-ray diffraction studies of $YBa_2Cu_3O_x$.—73-11799
**Williams, Sarah**
Why unleaded.—73-10910
**Williams, T. B.** See Morterra, Claudio
**Williams, T.; Schmaile, H.; Reller, A.; Lichtenberg, F.; Widmer, D.; Bednorz, G.**
Crystal structures of $La_2Ti_2O_7$ and $La_5Ti_5O_{17}$: high-resolution electron microscopy.—73-02222
**Williams, Thomas C.** See Schilling, Curtis L., Jr.
**Williams, Wendell S.** See Hakimzadeh, Roshanak; Wisseman, Sarah U.
**Williams, Wendell S.**
Science and the art museum: the analysis of archaeological materials.—73-09795
**Williamson, Colin J.** See Clark, James H.
**Williamson, R. L.** See Drake, J. T.; Rabin, B. H.
**Williamson, R. L.; Rabin, B. H.; Drake, J. T.**
Finite element analysis of thermal residual stresses at graded ceramic-metal interface: I, Model description and geometrical effects.—73-06791
**Williamson, R. L.; Rabin, B. H.**
Numerical modeling of residual stresses in graded ceramic-metal joints.—73-03630
**Williamson, S. L.** See Gupta, S.
**Willis, J. R.**
Asymptotic analysis of crack bridging by ductile fibers.—73-03238
**Willis, Paul B.; McElroy, Paul M.; Hickey, Gregory S.**
Durable, low-surface-energy treatments.—73-12424
**Willis, R. F.** See Gallagher, M. C.; Kim, J.
**Willis, William S.** See Shen, Lu
**Williston, L. R.; Bello, I.; Lau, W. M.**
X-ray photoelectron spectroscopic study of the interactions of $CF^+$ ions with gallium arsenide.—73-07864
**Willmer, K. L.** See Subramanian, M. A.
**Willms, T.** See Frohlich, D.
**Willoughby, A. F. W.** See Archer, N. A.
**Wills, L. A.** See Chen, J.
**Willsher, A.** See Lamarche, A.-M.
**Willy, Somers**
Practical approach of the use of dry steam injection in clay processing.—73-04941
**Wilms, H.**
Criteria for evaluation of silo design codes.—73-12020
**Wilmsen, C. W.** See Shin, J.
**Wilshire, B.** See Evans, R. W.
**Wilshire, B.**
High-temperature properties of monolithic ceramics.—73-09612
**Wilson, Barbara** See Siegel, Peter H.
**Wilson, Charles N.** See Taylor, William J.
**Wilson, G. C.** See Steeper, T. J.
**Wilson, Jim; Stephens, Tony**
Defect reduction in semiconductor manufacturing: a case study of $BPO_4$ elimination in BPSG films.—73-04279
**Wilson, John** See Sasaki, Katsuhiro
**Wilson, M. T.; Li, C. Y.; MacKenzie, J. D.**
Photoluminescence excitation spectroscopy study of CdS nanocrystals in ormosils.—73-15096
**Wilson, R. G.** See Lux, G. E.; Metzger, R. A.; Stevie, F. A.
**Wilson, Richard A.** See Wood, Colin E. C.
**Wilson, Ronald H.** See Iacovangelo, Charles D.
**Wilson, S. R.; Liang, Han-Bin K.**
Characterization of TEOS oxides used in the isolation module of high-speed bipolar and BiCMOS circuits.—73-12752
**Wilson, Syd R.** See Zirkle, Thomas E.
**Wilson, Tim** See Clifft, Greg
**Wilton, Paul V.**
Flame-retaining ceramic burner nozzle.—73-12366
**Wiman, Jorgen V.** See Brandt, N. Gunnar
**Wimmer, Miroslav**
Origin of pinholes in porcelain glazes.—73-00920
**Winand, J.-M.; Rulment, A.; Tarte, P.**
$L^I(M^{VI})_{2-x}(N^{IV})_x(PO_4)_3$ (L=Li, Na; M, N=Ge, Sn, Ti, Zr, Hf): new solid solutions synthesis, X-ray difraction analysis, and ionic conductivity.—73-02313
**Windischmann, Henry** See Cong, Yue
**Windischmann, Henry**
Intrinsic stress and mechanical properties of hydrogenated silicon carbide produced by plasma-enhanced chemical vapor deposition.—73-03321; Intrinsic stress in sputter-deposited thin films.—73-13105
**Winer, Theresa A.** See Kerko, David J.
**Wing, Douglas R.; Fischman, Gary S.**
Influence of a reduced cross section on the mechanical properties of transformation-toughened zirconia bars.—73-15807
**Wingefeld, Gerd** See Schimmel, Gunther
**Winkler, A.** See Bruckner, A.
**Winkler, D.** See Wang, S. Z.
**Winkler, Herwig; Janz, Peter; Gottschamel, Georg**
Sintered microcrystalline ceramic material.—73-09774
**Winkler, Michael; Van Loon, Roxanne**
Open gear lubrication—new technology for the '90's.—73-03509
**Winkler, S.** See Post, E.
**Winnubst, A. J. A.** See Chen, C. S.
**Winnubst, Louis** See Boutz, Michel R.; Den Exter, Peter; Koebrugge, Gerald W.
**Winstanley, Alistair W.** See Hall, Anthony H. P.
**Winter, Charles H.; Lewkebandara, Tilak S.; Proscia, James W.; Sheridan, Philip H.**
Metallorganic precursors to titanium nitride.—73-16000
**Winter, H.** See Gotz, W.
**Winter, Wolfgang; Bogdanow, Christina; Muller, Gerd; Pannhorst, Wolfgang**
Crystallization sequence of barium osumilite and MAS osumilite glass-ceramics with low thermal expansion.—73-06900
**Winter, Wolfgang; Muller, Gerd; Pannhorst, Wolfgang**
Sintering and crystallization of glasses with roedderite-type composition $(Na,K)_2Mg_5Si_{12}O_{30}$.—73-10598
**Winterberger, M.; Andre, C.; Garette, M. F.**
Magnetic properties of green dioptase $CuSiO_3{\cdot}H_2O$ and black dioptase $CuSiO_3$ and magnetic structure of black dioptase.—73-15340
**Winterer, M.; Bornemann, H. J.; Czjzek, G.**
$Gd^{155}$ Mossbauer spectra of $Gd^{3+}$ in borate glasses.—73-13991
**Winters, Harold F.; Coufal, H. J.; Eckstein, W.**
Influence of energy reflected from the target on thin-film characteristics.—73-05866
**Wintersgill, M. C.** See McGowan, P. C.
**Winzer, K.** See Klug, J.
**Wireman, Homer D.** See Dennis, Roger D.
**Wirner, C.; Keiner, C.; Boxleitner, W.; Witzany, M.; Gornik, E.; Vogl, P.**
Direct observation of hot electron distribution function in GaAs/AlGaAs heterostructures.—73-14837
**Wirsching, F.**
Production and use of industrial calcium sulfates and the properties of gypsum building materials produced of them.—73-00170
**Wirth, D. G.** See Chen, Ning-Wei; Feng, H. J.; Krutyholowa, M. W.; Reed, C. T.
**Wirtz, Peter** See Ernst, Josef
**Wischers, G.; Kuhlmann, K.**
Ecological balance of cement and concrete—comparison of ecologically relieving and burdening effects on the environment.—73-00069
**Wischnat, Volker; Roger, Ulrich; Lenhart, Armin**
Formation and oxidation of silicon in container glass melts.—73-10535
**Wise, Stephanie A.** See Namboodri, Shannon L.
**Wise, Stephanie A.; Hooker, Matthew W.**
Carbon-carbon mounts for lightweight optical systems.—73-12415
**Wisk, P. W.** See Abernathy, C. R.; Pearton, S. J.
**Wisnudel, Michele; Tien, Tseng-Ying**
Solid-liquid reactions in the system $Si_3N_4$-ß-SiAlON-$Y_3Al_5O_{12}$.—73-16308
**Wissel, J. M.** See Abou-Elfotouh, Fouad A.
**Wisseman, Sarah U.; Williams, Wendell S.**
Why study artifacts—an interdisciplinary approach.—73-09798
**Wisseman, Sarah U.**
From pots to people: ceramic production in the ancient Mediterranean.—73-09785
**Wissmann, P.** See Rauh, M.
**Wissuchek, D. J.** See He, Ming-Yuan
**Witanachchi, S.** See Mukherjee, P.
**Witek, E.** See Bulga, Z.
**Witham, H. S.** See An, Il-Sin
**Withan, H. S.; Chindaudom, P.; An, Il-Sin; Collins, R. W.; Messier, R.; Vedam, K.**
Effect of preparation conditions on the morphology and electrochromic properties of amorphous tungsten oxide films.—73-09087
**Withers, R. L.** See Butler, B. D.; Khanna, Rita; Thomas, Elizabeth S.; Thompson, John G.
**Withers, R. L.; Thompson, John G.; Barlow, P. J.**
Electron and X-ray powder diffraction study of cubic fluorite-related phases in various $ZrO_2$-$Ln_2O_3$ systems.—73-02253
**Withers, R. L.; Thompson, John G.; Rae, A. D.**
Crystal chemistry underlying ferroelectricity in $Bi_4Ti_3O_{12}$, $Bi_1TiNbO_6$, and $Bi_2WO_6$.—73-01397
**Withrow, Shelby M.; Lloyd, Patrick H.**
Contact fixture for hot glass.—73-15764
**Witschel, H.** See Voigt, Manfred
**Witt, A. F.** See Becla, P.
**Witt, M. C.** See Thompson, I.
**Witte, Robert S.** See Fenlon, Paul F.
**Wittke, Oscar** See Toro, Patricio
**Wittmann, Folker H.** See Hu, X. Z.
**Wittmer, Dale E.** See Knapp, Vincent A.
**Witzany, M.** See Wirner, C.
**Witzel, S.** See Heise, Rainer
**Witzmann, Margret**
Characterization of material interaction for a nonaqueous lead zirconate titanate (PZT) lead casting slip.—73-05704
**Wloch, J.** See Rozwadowski, M.
**Wobker, H.-G.** See Roth, P.
**Wobker, H.-G.; Tonshoff, H. K.**
High-efficiency grinding of structural ceramics.—73-05840
**Woelk, E. G.** See Sherwin, M. E.
**Woerdman, J. P.** See Van Exter, M. P.
**Woerner, M.** See Lohner, A.
**Woetting, G.; Feuer, H.; Gugel, E.**
Influence of powders and processing methods on microstructure and properties of dense silicon nitride.—73-05871
**Wohlecke, M.** See Klauer, S.
**Wohlleben, D.** See Hohn, N.
**Woignier, T.** See Pernot, F.
**Woignier, T.; Phalippou, J.; Hdach, H.**
Evolution of mechanical properties during the alcogel-aerogel-glass process.—73-10440
**Woignier, T.; Phalippou, J.; Sauvajol, J. L.**
Structural and mechanical evolution during the aerogel-glass process.—73-14503
**Woitok, J.** See Hermans, J.; Heuken, M.
**Wojcik, M. A.; Pyzalski, M. M.**
Enrichment of aluminum hydroxides and oxides for the advanced ceramics.—73-08513
**Wojnarovits, I.; Fodor, M.**
Chemical, morphological, and structural changes of silicate fibers in NaOH and $Ca(OH)_2$ solution.—73-13942
**Wojtowicz, T.** See Meyer, J. R.
**Wolcik, J. C.** See Herrera-Gomez, A.; Kendelewicz, T.
**Wolcik, J. C.; Kendelewicz, T.; Herrera-Gomez, A.; Andrews, A. B.; Kim, B. S.; Cowan, P. L.**
Adatom location on the Si(111)7×7 and Si(111)$\sqrt{3}$×$\sqrt{3}$-In surfaces by the X-ray standing wave and photoemission techniques.—73-08547
**Wold, A.** See Albert, M.; Bai, C.-S.; Gao, Y.-M.; Niu, C.-M.; Qian, Y.-T.
**Wold, E.** See Bichri, A.
**Wold, E.; Bremer, J.; Hunderi, O.**
Spectroscopic ir ellipsometry of [100]- and [001]-oriented $YBa_2Cu_3O_{7-\delta}$ films.—73-11903
**Wolden, C.; Mitra, S.; Gleason, K. K.**
Radiative heat transfer in hot-filament chemical vapor deposition diamond reactors.—73-13224
**Wolf, D.** See Hirt, G.
**Wolf, Dieter; Yip, Sidney**
Materials Interfaces: Atomic-Level Structure and Properties.—73-06605
**Wolf, Dorit; Wendt, Gerhard**
Characterization of $Na_2O$-$MnO_x$-$CuO_x$ catalysts for the oxidative dimerization of methane.—73-09437
**Wolf, E. D.** See Porkolab, G. A.
**Wolf, Eduardo E.** See Cen, Wei
**Wolf, G. K.** See Ullmann, J.
**Wolf, G.** See Huber, R.
**Wolf, K.** See Naumov, A.; H.
**Wolf, M.** See Zhu, X.-Y.
**Wolf, Paul J.; Christensen, Thomas M.; Coit, Nathan G.; Swinford, R. W.**
Thin-film properties of germanium oxide synthesized by pulsed laser sputtering in vacuum and oxygen environments.—73-17058
**Wolf, Peter** See Martin, Olivier J. F.; Rymon-Lipinski, Tadeusz
**Wolf, R. M.** See Cillessen, Johannes F. M.; Gijs, M. A. M.
**Wolf, R.** See Ambree, P.
**Wolf, S. A.** See Broussard, P. R.; Culbertson, James C.; Klein, N.; Osofsky, M. A.
**Wolf, T.** See Bottcher, E. Holger; Ratz, S.
**Wolf, U.** See Martin, Andreas
**Wolfe, J. P.** See Lin, Jia-Ling; Weilert, M. A.
**Wolfel, M.** See Rauh, M.
**Wolfenden, Alan**
Measuring moduli of elasticity at high temperatures.—73-15816
**Wolfenstine, J.** See Duong, H.

**Wolffer, N.; Gravey, P.; Picoli, G.; Vieux, V.**
Double phase conjugate mirror and double color pumped oscillator using band-edge photorefractivity in InP:Fe.—73-01131
**Wolffer, N.; Gravey, P.; Rover, V.**
Thresholding of two facing double phase conjugate mirror and semilinear phase conjugate mirror with fanning in BTO [$Bi_{12}TiO_{20}$].—73-08999
**Wolford, D. J.** See Gilliland, G. D.; Northrop, G. A.
**Wolfrum, Alfons** See Mannl, Reinhard
**Wolfrum, K.; Laenen, R.; Laubereau, A.**
Intense bandwidth- and diffraction-limited ps pulses with large tuning range.—73-08891
**Wolfson, R. G.** See Karam, N. H.
**Wolfus, Y.** See Klein, L.
**Wolinski, Wieslaw** See Mossakowska, Agnieszka
**Wolke, J. C. G.; Klein, C. P. A. T.; De Blieck-Hogervorst, J. M. A.; De Groot, Klaas**
Biological and physical properties of apatite coatings.—73-08503
**Woll, J.** See Schaefer, J. A.
**Wollman, D. A.; Van Harlingen, D. J.; Lee, W. C.; Ginsberg, D. M.; Leggett, A. J.**
Experimental determination of the superconducting pairing state of YBCO from phase coherence of YBCO-Pb de SQUID's.—73-15463
**Wollrab, R.** See Chu, J. H.
**Wolna, Malgorzata** See Szwedowska-Kotlinska, Joanna
**Wolna, Malgorzata; Szwedowska-Kotlinska, Joanna**
Antireflection coating on soda-lime glass formed by dipping in water-soluble alkali silicates.—73-14321; $SiO_2$ coating and soda-lime glass formed by sol-gel method.—73-03885
**Wolowicz, T. J.** See Horton, Mitchell
**Wolter, J. H.** See Blom, P. W. M.
**Wolter, Peter A.; Esposito, Arthur N.**
Method of making refractory ceramic products and the products thereof.—73-04036
**Woltersdoof, Jorg; Pippel, Eckhard**
Ceramic materials: microstructural and interface analysis as the prerequisite for the optimization of microstructures: V, The microstructure of long-fiber-reinforced ceramics and glasses.—73-13374; Ceramic materials: microstructural and interface analysis as a prerequisite for the optimization of microstructure: II, High-voltage and high-resolution electron microscopy (HVEM and HREM) for ceramic materials.—73-06191; Ceramic materials: microstructural and interface analysis as a prerequisite for the optimization of microstructures: I, Introduction and microstructural systems.—73-06192
**Woltgens, P. J. M.** See Dekker, C.
**Woltgens, P. J. M.; Dekker, C.; De Wijn, H. W.**
Nonlinear Hall resistivity in $YBa_2Cu_3O_{7-\delta}$ films near the vortex-glass transition.—73-11846
**Wolverson, D.** See Halsall, H. P.
**Won, Dong-Yeon** See Lee, Hee-Gyoun
**Wondergem-de Best, A.; Beerkens, Rudd G. C.; De Waal, Henk**
Comparative model study of antimony and cerium oxide refining.—73-00599
**Wondze, F. R.** See Banys, Y.
**Wong, D. P.** See Dumin, D. J.
**Wong, D. P.; Dumin, D. J.**
Transient flat-band voltage shifts following high-voltage stressing of thin oxides.—73-04181
**Wong, J.; Roedel, R. J.**
Diffusion model for indium in $Hg_{1-x}CdTe$.—73-01127
**Wong, K. K.** See Tobin, S. P.
**Wong, Kai-W.** See Xin, Y.
**Wong, Kai-W.; Fei, Xin**
High-$T_c$ superconducting oxides.—73-01708
**Wong, Ming-Shih; Miyase, Akira; Yuan, Yu-Sheng; Wang, Su-Su**
Processing-microstructure-property relationships of $Al_2O_3$-fiber-reinforced high-temperature superconducting $(Bi,Pb)_2Sr_2Ca_2Cu_3O_y$ composite.—73-15601
**Wong, Ming-Show** See Chen, Ming-Y.; Chu, X.; Li, Dong
**Wong, Ming-Show; Sproul, W. D.**
Reactive magnetron sputter deposition of niobium nitride films.—73-09295
**Wong, S. S.** See Behfar-Rad, A.
**Wong, Terence K. S.** See Rosolen, Graham
**Wong, Terence K. S.; Ingram, S. G.**
Fabrication of sub-20-nm trenches in silicon nitride using $CHF_3/O_2$ reactive ion etching and oblique metallization.—73-09133
**Wong-Ng, Winnie** See Lindsay, Curtis G.
**Wong-Ng, Winnie; Cook, Lawrence P.; Paretzkin, Boris; Hill, Michael D.; Stalick, Judith K.**
Crystal chemistry and phase equilibrium studies of the $BaO(BaCO_3)\cdot 0.5R_2O_3$-$CuO_x$ systems in air: VI, R=neodymium.—73-16076
**Wong-Ng, Winnie; Cook, Lawrence P.**
$BaO$-$1/2Y_2O_3$-$CuO_x$ eutectic melting in air.—73-12540
**Wood, Colin E. C.; Wilson, Richard A.**
Interface contamination by suboxide transport.—73-13357
**Wood, David M.**
Coherent epitaxy, surface effects, and semiconductor alloy phase diagrams.—73-08577
**Wood, F. J.** See Yan, F. Y.
**Wood, J. L.** See Chao, Benjamin S.
**Wood, J. V.** See Kirk, N. B.
**Wood, Peter** See Blech, Ilan A.
**Wood, R. A.; Townsend, P. D.; Skelland, N. D.; Hole, D. E.; Barton, J.; Afonso, C. N.**
Annealing of ion-implanted silver colloids in glass.—73-10495
**Wood, William P.; Yoon, Soo-C.**
High-density sol-gel alumina-based abrasive vitreous bonded grinding wheel.—73-09771
**Woodall, J. M.** See Chang, C. L.; Feenstra, R. M.; Melloch, M. R.; Raisanen, A.; Vaterlaus, A.; Vitomirov, I. M.; Warren, A. C.
**Woodell, Glenn A.** See Rosch, William R.
**Woodfine, J. M.**
Clay industry 1950-1990.—73-12265
**Woodham, R. G.; Cleaver, J. R. A.; Ahmed, H.; Ladbrooke, P. H.**
Γ-gate, and air-bridge fabrication for monolithic microwave-integrated circuits by mixed ion-beam, high-voltage electron-beam, and optical lithography.—73-15197
**Woodley, J.** See Guerrero, E.
**Woodruff, David W.** See Anthony, Thomas R.
**Woods, B. W.** See De Yoreo, J. J.
**Woods, P. T.** See Milton, M. J. T.
**Woodthorpe, John** See Holme, David
**Woodward, M. V.** See Kanaah, A.
**Woodward, T. K.** See D'Asaro, L. D.
**Woolf, D. A.** See Hooper, S. E.; Scholz, S. M.; Shen, T.-H.; Sobieslerski, Z.
**Woollam, John A.** See McGahan, W. A.; Nafis, Suraiya; Orloff, Glennis J.; Xiong, Yi-Ming
**Woolley, J. C.** See Lamarche, A.-M.
**Woolston, Frank** See Slemmons, Whit
**Wooten, L.; Chung, William S. C.**
Test structures for characterization of electrooptic waveguide modulators in $LiNbO_3$.—73-15294
**Worden, R. H.; Rushton, J. C.**
Diagenetic K-feldspar textures: a TEM study and model for diagenetic feldspar growth.—73-15900
**Wordenweber, Roger** See Wang, F.
**Wordenweber, Roger**
Plasma-assisted deposition process for producing a thin layer on a substrate.—73-12091
**Workman, David P.** See Bryson, Nathan
**Worner, E.** See Bensch, W.
**Worner, Wolfgang** See Bischoff, E.
**Worrell, Wayne; Davies, Peter K.**
Electrochemical devices based on single-component solid oxide bodies.—73-11013
**Wortman, J. J.** See Ren, Xiao-Wei; Xu, X.-L.
**Worzala, F. J.** See Wang, Y.
**Wosinski, J. F.**
Refractory-glass outgassing—a test procedure evaluation.—73-14619
**Wotting, G.; Gugel, E.; Schwier, G.**
Fracture toughness of dense silicon nitride.—73-13539
**Wouters, Gaston**
Enameling of titanium-stabilized steel.—73-00228
**Woydt, M.** See Loffelbein, B.; Skopp, A.
**Woydt, M.; Schwenzien, J.**
Dry and water-lubricated slip rolling of $Si_3N_4$- and SiC-based ceramics.—73-17278
**Wozniewski, A.** See Ko, P. L.
**Wright, A. C.** See Peaker, A. R.
**Wright, Adrian C.** See Vedishcheva, Natalia M.
**Wright, Adrian C.; Clare, Alexis G.; Bachra, Bilber; Hannon, A. C.; Sinclair, Roger N.; Vessal, Behnam**
Neutron diffraction study of the structure of alkali silicate glasses.—73-14050
**Wright, Douglas W.** See Tintle, William C.
**Wright, Jeffrey F.**
Report on PEI technical activities at the PEI Technical Forum.—73-17502
**Wright, Peter** See Flanagan, Mark
**Wright, Robert J.** See Dalzell, William J., Jr.; Khan, Abdus S.; Spence, Jarrett L.
**Wright, Robert J.; Dalzell, William J., Jr.**
Ceramic-coated fibers.—73-12349
**Wrobel, J. M.** See Misiewicz, J.
**Wroe, F. C. R.**
Scaling up the microwave firing of ceramics.—73-06028
**Wrona, J.** See Bulga, Z.
**Wu, Albert T.; Nozaki, Shinji; George, Thomas; Lee, Sandra S.; Umeno, Masayoshi**
Masking technique for depositing gallium arsenide on silicon.—73-04519
**Wu, B. J.** See Carns, T. K.
**Wu, B. O.** See Jung, J.-S.
**Wu, Bai-Chang** See Lin, Shu-Jie
**Wu, Bai-Chang; Xie, Fa-Li; Chen, Chuang-Tian; Deng, D.-Q.; Xu, Z.-Y.**
Generation of tunable coherent vacuum uv radiation in $LiB_3O_5$ crystals.—73-01415
**Wu, Bai-Chang; Xie, Fa-Li; Chen, Chuang-Tian**
Type-I and type-II noncritical phase matching of $LiB_3O_5$ crystal.—73-08785
**Wu, Bei-Li L.** See Fanelli, Anthony J.; Haig, Stephen
**Wu, Bing-Qing; Yao, Yu-Shu; Jin, Chang-Qing**
Grain-boundary effect in Bi-system superconductors.—73-11775
**Wu, Bo-Chuang** See Mei, Lin-Feng
**Wu, Bo-Yu** See Wang, Wei-Dong
**Wu, C. H.** See Wang, C. W.
**Wu, C. Y.** See Ho, J. C.
**Wu, C.-J.; Yu, J.-T.**
EPR of the thermally produced $CrO_4^{3-}$ in $CrO_4^{2-}$-doped $(NH_4)_3H(SeO_4)_2$ crystals.—73-02269
**Wu, C.-T.** See Goretta, K. C.; Lee, C.-H.
**Wu, Carl Cm.** See Rice, Roy W.
**Wu, Chang-Yao** See Cao, Xiao-Wen
**Wu, Cheng-Jian**
Hammer crusher of automatic spray discharge.—73-12032
**Wu, Ching-Hsong; Potter, Timothy J.; Tamor, Michael A.**
Method and apparatus for in situ measuring filament temperature and the thickness of a diamond film.—73-01941
**Wu, Ching-Hsong; Weber, Willes H.; Potter, Timothy J.; Tamor, Michael A.**
Laser reflective interferometry for in situ monitoring of diamond film growth by chemical vapor deposition.—73-01909
**Wu, Da-Qing** See Wang, Fu-Ya
**Wu, Da-Xin; Zhou, Hai; Yang, Chuan**
Amorphous $Si_3N_4$ thin films deposited by dc-PCVD plasma CVD method.—73-05690
**Wu, Da-Xuan** See Hu, Hai-Quan
**Wu, David C.** See Menon, Mamballykalathil N.
**Wu, De-Sin** See Liu, Yu
**Wu, Dong-Ho; Mao, Jian; Mao, S. N.; Peng, J. L.; Xi, X.-X.; Venkatesan, T.**
Temperature dependence of penetration depth and surface resistance of $Nd_{1.85}Ce_{0.15}CuO_4$.—73-16610
**Wu, Fei-Qin** See Ou-Yang, Xiao-Sheng
**Wu, Feng-Qing; Puc, Gabe; Foy, Paul; Switzer, Elias; Sigel, George H., Jr.**
Low-loss rare-earth-doped single-mode fiber by sol-gel method.—73-07147
**Wu, Feng-Tie** See Zhang, Wen-Zhen
**Wu, Francisco J.** See Wade, Jonathan A.
**Wu, G.-Y.** See Lin, Y.-S.
**Wu, Guang-Heng** See Wiedemeier, Heribert
**Wu, H. S.** See Schaefer, J. A.
**Wu, Han-Yang**
Densification and dilution of black talc slurry.—73-16694; Development of talc porcelain using black talcum.—73-10823
**Wu, Han; Brooman, Eric W.**
Use of ultrasound technology to prepare polymer-impregnated concrete.—73-03556
**Wu, Hon-Sian J.** See Tong, Hua-Ching
**Wu, Hong** See Zhang, Hong
**Wu, Hong-Xing; Guo, Da-Hao; Wang, Sheng-Bo**
GW-Nd:glass laser system with pulse transmission mode (PTM) *Q*-switching.—73-10445
**Wu, Hui; Ong, N. P.; Li, Y. Q.**
Frequency dependence of vortex-state resistivity in $YBa_2Cu_3O_{7-\delta}$.—73-15487
**Wu, J. Z.; Chu, W. K.**
Anisotropy of the transport critical current in $YBa_2Cu_3O_{1-\delta}(110)$ films.—73-04672
**Wu, J.** See James, P. F.
**Wu, J.-D.** See Su, Y.-L.
**Wu, J.-M.** See Tuan, W.-H.
**Wu, J.; Cao, R.; Yang, X.; Pianetta, P.; Lindau, I.**
Photoemission study of diamond (100) surface.—73-08700
**Wu, J.; Chen, M.; Jones, F. R.; James, P. F.**
Mullite and alumina–silica matrices for composites by modified sol-gel processing.—73-09218
**Wu, Jeffrey C. S.** See Liu, Paul K. T.
**Wu, Jenn-Ming** See Fu, Chen-Tsu
**Wu, Jian-Guang** See He, Chuan; Huang, Yong; Wang, Ling
**Wu, Joseph H. Z.**
Use of surfactants in processing abrasive pigments.—73-02074; Use of surfactants in processing abrasive pigments.—73-12100
**Wu, K. F.; Czekaj, J.; Shaw, M. P.**
Submicron InP transferred electron devices.—73-07819
**Wu, K.** See Zhang, H.
**Wu, Kuo-Chung** See Lin, Wen-Tai
**Wu, Long** See Sun, Jwo-Shiun; Yang, Cheng-Fu
**Wu, M. H.** See Uematsu, T.
**Wu, Maw-Kuen** See Huang, Y.; Kao, Chin-Hai
**Wu, Mei-Ying** See Zhou, E-You
**Wu, Meng-Chyi; Chen, Chyuan-Wei**
Luminescence from $Al_{0.28}Ga_{0.72}As_{0.62}$- $P_{0.38}$ layers grown on $GaAs_{0.61}P_{0.39}$ substrates by liquid-phase epitaxy.—73-11303
**Wu, Mian-Xue; Messing, Gary L.**
Fabrication of oriented SiC-whisker-reinforced mullite matrix composites by tape casting.—73-16775
**Wu, Ming-Cheng; Troung, Charles M.; Coulter, Kent; Goodman, D. W.**
Nature of active sites in the oxidative coupling of methane to ethane over Li/MgO catalysts.—73-08675
**Wu, Ming-Cho; Chen, Yung-Jui; Fitz, John**
Monolithic integration of glass waveguides with semiconductor lasers.—73-01254
**Wu, N.-C.** See Wang, M.-C.
**Wu, Nan-Chung; Yang, Sheng**
Process for the preparation of LAS ceramic sintered bodies.—73-15955
**Wu, P.** See Gao, Y.-M.
**Wu, P.-H.** See Feng, Y.-J.; Zhang, Hui
**Wu, Ping-Yong; Cheng, Zhi-Qiang**
Development of stoneware wall and floor tiles once-fired at low temperature.—73-14651
**Wu, Qi; Zhou, Jian-Ying; Huang, Xu-Guang; Li, Zhen-Xian; Li, Qing-Xing**
New mode locking technique for continuous-wave Nd:YAG laser.—73-15055
**Wu, Ren-Ping** See Zou, Ying-Lin
**Wu, Richard L. C.** See Miyoshi, Kazuhisa
**Wu, S. F.** See Liu, R. S.
**Wu, S.** See Goretta, K. C.
**Wu, S.-L.; Lee, C.-L.; Lei, T.-F.; Lee, T.-L.; Chen, L.-J.**
Interface of the polycrystalline silicon contacted diode formed with a stacked amorphous silicon film.—73-14996
**Wu, S.; Haneman, D.**
Heterojunctions of InP with amorphous hydrogenated silicon.—73-11242
**Wu, Sheng F.** See Hurng, Weir M.
**Wu, Shi-Ming** See Schwartz, Justin
**Wu, Shih-Ching; Hon, Min-Hsiung**
Effects of Al/P composition ratio on the crystallization of $MgO$-$CaO$-$Al_2O_3$-$SiO_2$-$P_2O_5$ bioglass-ceramic system.—73-13970
**Wu, Shin-Ching**
Effects of Al/P composition ratio on the crystallization of $MgO$-$CaO$-$Al_2O_3$-$SiO_2$-$P_2O_5$ bioglass-ceramic system—[reply to comment].—73-14367
**Wu, Si-Jia; Ng, K.-W.; Robertson, J. D.**
*ab*-oriented $YBa_2Cu_3O_7$ thin film grown on *c*-axis layer by radio-frequency sputtering.—73-11681

**Wu, Su-Xing** See Holz, Dietmar
**Wu, Su-Xing; Claussen, Nils**
Reaction bonding and mechanical properties of mullite/silicon carbide composites.—73-17419
**Wu, T.-C.** See Bassett, W. A.
**Wu, Tai-Bor; Lin, Jiu-Nun**
Transition of compensating defect mode in niobium-doped barium titanate.—73-06179
**Wu, Tai-Liu** See Tang, Xiao-Yong
**Wu, Tie-Qiang** See Chen, Shu-Chun
**Wu, Tien-Shou** See Yang, Cheng-Fu
**Wu, Tsung-Ming; Wei, Wen-Cheng; Hsu, Shu-En**
Sol-gel silica in the healing of microcracks in SiC-coated carbon-carbon composites.—73-12444
**Wu, W.** See Chen, Chen-Jia
**Wu, W.; Lanagan, M. T.; Kullberg, M. L.; Poeppel, R. B.; Wang, B.; Danyluk, J.**
Relationship between microstructure and residual stress in $YBa_2Cu_3O_{7-x}$.—73-01648
**Wu, Wei-Sheng**
Melting properties of $PbO-B_2O_3-SiO_2$ system flux.—73-10564
**Wu, Wen-Bin; Li, Fan-Qing; Li, Xiao-Guang; Shi, Lei; Zhou, Guien; Qian, Yi-Tai**
Surface phase decomposition in $Bi_2Sr_2CaCu_2O_y$ single crystals.—73-08234
**Wu, Wen-Bin; Wang, Liang-Bin; Li, Xiao-Guang; Zhou, Guien; Qian, Yi-Tai; Qin, Qiao-Nan**
Phase decomposition and superconductivity in $Bi_2Sr_2CaCu_2O_y$ single crystals.—73-11860
**Wu, Wen-Fa** See Chiou, Bi-Shiou
**Wu, Wen-Fang** See Peng, Min
**Wu, X.-D.** See Luo, J.
**Wu, X.-D.; Foltyn, S. R.; Dye, R. C.; Garcia, A. R.; Nogar, N. S.; Muenchausen, Ross E.**
Pulsed laser deposition of oxide superconducting thin films.—73-11882
**Wu, X.-L.; Goldburg, W. I.; Liu, M. X.; Zue, J. Z.**
Slow dynamics of isotropic-nematic phase transition on silica gels.—73-06969
**Wu, X.-W.** See Lau, W. M.
**Wu, X.; Li, L.**
Melting behavior of batch blanket in glass-melting tanks.—73-14424
**Wu, Xi-Jun; Su, Fang; Qin, Xiao-Ying; Xie, Bin; Ji, Xiao-Li**
Synthesis and ionic conductivity of nanophase $Ca_{1-x}La_xF_{2+x}$.—73-04176
**Wu, Xiao-Zu** See Lu, Ya-Feng
**Wu, Xin-D.; Muenchausen, Ross E.**
Free-standing oxide superconducting articles.—73-04835; Superconducting composite with multilayer patterns and multiple buffer layers.—73-04874; Superconductive articles including cerium oxide layer.—73-04880
**Wu, Xing** See Zhu, Yong
**Wu, Xu; Denis, J. P.; Ozen, G.; Goldner, P.; Pelle, F.**
Blue upconversion luminescence of $Er^{3+}$ ions in vitroceramics doped with $Yb^{3+}$ under ir excitation.—73-05534; Uv blue and green upconversion luminescence of $PbF_2$+$GeO_2$:$Er_2O_3$ pumped with 650 nm.—73-05684
**Wu, Xue-Hua; Wu, Zi-Qin**
New metastable phases in a Pd/amorphous Si bilayer after annealing.—73-08678
**Wu, Xue-Quan** See Bian, Qing-Han; Shi, Cai-Jun; Xu, Zhong-Zi
**Wu, Xue-Quan; Yen, Sheng; Shen, Xiao-Dong; Tang, Ming-Shu; Yang, L.-J.**
Alkali-activated slag–cement-based radioactive waste forms.—73-00019
**Wu, Y.** See Peters, C. H.; Yu, Zhou-Long
**Wu, Y.-H.** See Cao, Gou-Hui; Zhang, Dao-Yuan
**Wu, Y.-L.** See Loh, N.-L.
**Wu, Y.-S.** See Lee, Y.-H.
**Wu, Y.; Lavernia, E. J.**
Microstructure and room temperature mechanical properties of spray-atomized and codeposited Al-12 wt% Si MMC's.—73-03620
**Wu, Yi-Ming** See Tian, Jin-Sheng
**Wu, Yi-Ming; Jiang, Chun; Liu, Jun-Yi**
Production processes of semidry pressed bricks.—73-07195
**Wu, Ying-Kai** See Duan, Su-Qing
**Wu, Yong-Guo** See Cooper, Alfred R.
**Wu, Yueh-Hong** See Hamano, Kenya
**Wu, Yun-Tong** See Nie, Man-Yun
**Wu, Yun-Xiang** See Gu, Hau-Zhi
**Wu, Z. L.; Kuo, P. K.; Wei, L. H.; Gu, S. L.; Thomas, R. L.**
Photothermal characterization of optical thin films.—73-12175
**Wu, Z.-C.** See Yang, K.
**Wu, Z.-H.** See Gao, Xian-Cheng
**Wu, Z.-Q.** See Bo, Bian
**Wu, Zheng-Hong** See Huang, Yong-Xin
**Wu, Zhong-Jie** See Wang, Qian-Ping
**Wu, Zhong-Kang** See Liu, Jin-Song
**Wu, Zhong-Lin; Gui, Zhi-Lun; Li, Long-Tu**
Size estimation of ordered domains in $Pb(Mg_{1/3}Nb_{2/3})O_3$ ceramics.—73-11614
**Wu, Zi-Qin** See Wu, Xue-Hua
**Wu, Zi-Yu** See Gota, S.
**Wu, Zong-Dao** See Su, Mu-Zhen
**Wulff, H.** See Steffen, H.
**Wung, T.-Y.** See Lee, Y.-H.
**Wunsch, D.; Schlecht, B.; Ertl, W.**
Pocket belt conveyor—a special vertical conveyor for the cement industry.—73-01811
**Wurz, U.** See Beier, W.
**Wusirka, Raja R.** See Swaroop, Srinivas H.
**Wuttig, M.** See Hua, Susan Z.
**Wuyts, B.** See Gao, Z. X.
**Wyatt, P. W.** See Bernstein, J. B.; Karulkar, Pramod C.
**Wyatt, R.** See Davey, S. T.
**Wycherley, Brian**
Ceramic fiber—aspects of use under COSHH.—73-06561
**Wycliffe, Paul**
Galling in aluminum alloys and Duralcan aluminum matrix composites.—73-06797
**Wyczisk, F.** See Olivier, J.
**Wynands, Henry; Cocivera, Michael**
Hall effect and resistivity characterization of doped, electrodeposited CdSe.—73-01181
**Wynn, J. D.** See Wiesenfeld, Jay M.
**Wyon, C.** See Gourier, D.; Moncorge, Richard
**Xi, X.-X.** See Li, Qi; Walkerhorst, A.; Wu, Dong-Ho
**Xi, X.-X.; Doughty, C.; Walkenhorst, A.; Kwon, C.; Li, Q.; Venkatesan, T.**
Effects of field-induced hole-density modulation of normal-state and superconducting transport in $YBa_2Cu_3O_{7-x}$.—73-11737
**Xi, Yun-Ping** See Bazant, Zdenek P.
**Xia, F.** See Zhou, Y.-C.
**Xia, Fei** See Yu, Jia-Qing
**Xia, Hua; Jiang, J.-G.; Zhang, Wei; Chen, K.-J.; Zhang, X.-K.; Carlotti, G.**
Elastic properties of a-Ge:H/Si and a-Ge:H/$SiO_2$ heterostructures.—73-12783
**Xia, Hui** See Xia, Qing
**Xia, J. A.** See Shi, F.
**Xia, J.-B.** See Feng, Y.-P.
**Xia, Ke-Nong** See Smith, Thomas K.
**Xia, Qing; Xia, Hui; Ruoff, Arthur L.**
Pressure-induced rock salt phase of aluminum nitride: a metastable structure at ambient condition.—73-08713
**Xia, X.; McQueen, H. J.; Sakaris, P.**
Deformation and microstructure of $Al_2O_3$-particle-reinforced 6061 Al composite.—73-06764
**Xia, Xhong-Fu** See Gunther, Peter
**Xia, Xiang; Xiao, Jing-Kai**
Thermal expansivity of periclase at high temperature and high pressure.—73-05657
**Xia, Y.** See Ge, C.
**Xia, You-Ming; Cheng, Jing-Xiang; Huang, Wen-Xi**
Improving heat transfer between gas and solid in suspended state—a new material sealing and dispersion device.—73-12147
**Xia, Yue-Yuan** See Tan, Chun-Yu
**Xian, Ya-Fang** See Wang, Xin-Rong
**Xiang, Shou-He** See Ma, Yi-H.
**Xiang, X.-D.; Vareka, W. A.; Zettl, A.; Corkill, J. L.; Cohen, M. L.; Kijima, N.**
Metallization of the resistivity tensor in $Bi_2Sr_2CaCuO_x$ through epitaxial intercalation.—73-11830
**Xiang, Xin-Yu; Li, Xiao-Guang; Wang, Lian-Bin**
Calculation of variations of magnetic peak fields of high-$T_c$ superconductors.—73-04677
**Xiang, Yu. N.; Shevchenko, O. G.; Panfilov, A. S.**
Thermopower and fluctuation effects in bismuth cuprate high-$T_c$ crystals.—73-08256
**Xiang, Z. D.** See Cable, M.
**Xiao, Ding-Quan** See Qian, Zheng-Hong
**Xiao, Gang-Yao; Liu, Yu-Pu; Zhang, Ying-Hua; He, Hui-Juan; Zhao, Yong-Hua; Wang, Zhi-Jiang**
Generation and measurement of picosecond electrical pulse and dispersion on stripline.—73-14941
**Xiao, Han-Ning; Huang, Qi-Zhong; Shi, Qiang**
Hot-pressing of SiC/B ultrafine composite powders and microstructure of sintered body.—73-09165
**Xiao, Han-Ning; Jia, Jiang-Qing**
Effects of flux on properties and microstructure of fine porcelain.—73-14653
**Xiao, Hong; Ai, Xing; Yang, H. S.**
Effect of whisker orientation on toughening behavior and cutting performance of $SiO_w$-$Al_2O_3$ composite.—73-06391
**Xiao, Hong; Ai, Xing**
Toughening behavior of SiC whisker-reinforced $Al_2O_3$ ceramic tool material and its effect on tool fracture.—73-06540
**Xiao, Hui-Rong** See Wang, Lei-Ming
**Xiao, Jing-Kai** See Xia, Xiang
**Xiao, Li-Ye; Lin, Liang-Zhen**
Application of high-$T_c$ oxide superconductor (HTSC) to high-field magnet at 4.2 K.—73-07990
**Xiao, Liang-Zhi** See Zou, Bing-Suo
**Xiao, Ling** See Ren, Hong-Tao
**Xiao, Ling-Zhu; Chen, De-Ling; Jiang, Hua**
Development and application of $\alpha$-$Al_2O_3$ fiber-reinforced refractory plastics.—73-10713
**Xiao, Ping; Derby, Brian**
Alumina/aluminum composites formed by the directed oxidation of aluminum using magnesia as a surface dopant.—73-10197; Alumina/aluminum composites formed by the directed oxidation of aluminum using sodium hydroxide as a surface dopant.—73-10198
**Xiao, S. Q.** See Agarwal, M.
**Xiao, Shu-Xin**
Glass-ceramic marble of $MgO-Al_2O_3-SiO_2$ system.—73-10545
**Xiao, T. D.** See Strutt, P. R.
**Xiao, T. D.; Gonsalves, K. E.; Strutt, P. R.; Klemens, P. G.**
Synthesis of Si(N,C) nanostructured powders from an organometallic aerosol using a hot-wall reactor.—73-03054
**Xiao, T. D.; Zhang, Y. D.; Strutt, P. R.**
Synthesis of $Fe_xN$/BN [x=3 or 4] magnetic nanocomposite via chemical processing.—73-07979
**Xiao, X.** See Sturm, J. C.
**Xiao, Yue-Hui** See Phillips, Brian J.; Thomas, Elizabeth S.
**Xie, Bin** See Wu, Xi-Jun
**Xie, Chang-Sheng**
Applications of steel fiber-reinforced refractory to kiln car.—73-10700
**Xie, Cun-Yi** See Mo, Chi-Mei; Zhang, Li-De
**Xie, Cun-Yi; Zhang, Li-De; Mo, Chi-Mei**
Internal friction and modulus of nano-$ZrO_2$ solids.—73-12822
**Xie, Er-Qing** See Zhang, Fang-Qing
**Xie, Fa-Li** See Lin, Shu-Jie; Wu, Bai-Chang
**Xie, G.-S.; Cai, Mei-Liang**
Preparation of nonoxidizing abrasive by sol-gel method.—73-09767
**Xie, G.-S.**
Thermal shock resistance of high-alumina ceramics.—73-08991
**Xie, Hong-Bo** See Zhang, Jie
**Xie, J.-J.; Zhang, T.; Lu, W.-C.**
Hydrogen chemisorption on metal/oxide composite catalysts.—73-08883
**Xie, Jian-Lin; Xu, Ye-Jing; Jia, Guang-Yao**
Effect of andalusite, sillimanite, and kyanite on phase composition and thermal shock resistance of refractories.—73-03999
**Xie, K.; Wie, C. R.**
Semiinsulating properties and photoluminescence quenching in Cu-diffused InP.—73-11444
**Xie, Ping** See Fu, Yan; Gu, Ping; Shen, Yang; Xu, Zhong-Zi
**Xie, Ping; Beaudoin, James J.**
Effects of transition zone microstructure on bond strength of aggregate–portland cement paste interfaces.—73-03461; Mechanism of sulfate expansion: I, Thermodynamic principle of crystallization pressure.—73-10040; Modification of transition zone microstructure—silica fume coating of aggregate surfaces.—73-10057
**Xie, Ping; Gu, Ping; Beaudoin, James J.**
Application of electrical conductivity methods in interfacial cement chemistry.—73-06626
**Xie, Ping; Gu, Ping; Xu, Zhong-Zi; Beaudoin, James J.**
Rationalized ac impedance model for microstructural characterization of hydrating cement systems.—73-00182
**Xie, Ping**
Effect of particle size distribution of coal gangue on properties of fired products.—73-09082
**Xie, Q. H.** See Kaviani, Kian
**Xie, Shi-Guang** See Nie, Man-Yun
**Xie, W. X.; Douay, M.; Bernage, P.; Niay, P.; Bayon, J. F.; Georges, T.**
Second-order diffraction efficiency in Bragg gratings written within germanosilicate fibers.—73-16592
**Xie, W.** See Grillo, D. C.
**Xie, Wei-Yi** See Zhang, Zhong-Xian
**Xie, Xiao-Ming** See Cai, Jie
**Xie, Y.-H.** See Fitzgerald, E. A.; Kuo, J. M.
**Xie, Yi-Yuan** See Yuan, Feng-Chi
**Xin, Jin-Rong** See Yang, Wan-Ming
**Xin, Y.; Wong, Kai-W.; Sun, G. F.; Lu, D. F.**
Fluorine-doped high-$T_c$ cuprate $TlSr_2CaCu_2O_7$.—73-15474
**Xin, Ying; Sheng, Zheng-Zhi; Li, Yu-Fang**
Method of fabricating thallium-containing ceramic superconductors.—73-15686
**Xing, An-Shi** See Yao, Shu-Gang
**Xing, Chao** See Yuan, Zhang-Fu
**Xing, Lei** See Tesanovic, Zlatko
**Xing, Wei-Hong; Wei, Ming-Jian**
Development of ceramic wall and floor tiles using fly ash.—73-10817
**Xing, Xiu-San** See Diao, Xiao-Xue
**Xiong, G.-C.** See Chen, J.
**Xiong, Guang-Cheng** See Li, Yi-Jie
**Xiong, Guang-Cheng; Lian, G.-J.; Li, Jie**
Properties of epitaxial $YBa_2Cu_3O_7$ thin films prepared by pulsed laser ablation.—73-11879
**Xiong, Guang-Cheng; Lian, G.-J.; Zhu, X.; Li, J.; Gan, Zi-Zhao; Jing, D.**
$YBa_2Cu_3O_{7-\delta}$ thin films and microstrip resonators on $MgLaAl_{11}O_{19}$ substrates.—73-08278
**Xiong, Guang-Ying; Dong, Jian**
Optical properties of the diluted magnetic semiconductors $Zn_{1-x}Fe_xSe$ thin films.—73-07705
**Xiong, Guo-Hong** See Fan, Xian-Ping; Wang, Min-Quan
**Xiong, Guo-Hong; Wang, Min-Quan; Fan, Xian-Ping**
Reaction process of Bi-Sr-Ca-Cu-O system and the formation mechanism of 2212 superconducting phase.—73-04798
**Xiong, Hong-Qi** See Huang, Run-Sheng
**Xiong, Mao-Ren** See Dong, Dun-Zhuo; Jiang, Ying-Hong
**Xiong, Yi-Ming; Snyder, Paul G.; Woollam, John A.**
Photoellipsometry determination of surface Fermi level in GaAs(100).—73-07719; Photoellipsometry: a modulation spectroscopy method applied to *n*-type GaAs.—73-12174
**Xiong, Yin-Wei**
Cause and prevention of orange glaze during firing of brown glaze.—73-10804
**Xiong-Skiba, P.** See Carroll, D. L.
**Xiong-Skiba, P.; Carroll, D. L.; Doering, D. L.; Siek, K. H.**
Defects induced by electron bombardment and substrate doping in $SiO_2$ thin films.—73-06149
**Xu, A.** See Chandra Satish; Sarkar, Shondeep L.
**Xu, A.; Sarkar, Shondeep L.**
Microstructural study of gypsum-activated fly ash hydration in cement paste.—73-00141
**Xu, B.-K.** See Li, Xi
**Xu, B.-M.** See Zhao, M.-Y.
**Xu, Bao-Min; Wang, Hong; Yin, Zhi-Wen**
Doping in low-temperature-sintered $SrTiO_3$ GBBL [grain boundary barrier layers] capacitors.—73-04079
**Xu, Bing; Lin, Li-Huang; Ou-Yang, Bin; Li, Qing-Guo; Wang, Run-Wen**
Temporal characteristics of gain-switched $Ti^{3+}$:$Al_2O_3$ laser.—73-08981
**Xu, Bo; Kevan, Larry**
Far-ir study of metal particle formation in alkali-metal cation-exchanged X zeolites exposed to Na vapor.—73-09405
**Xu, C.-L.** See Zhang, S.-J.
**Xu, Cheng** See Li, Ru-Kang
**Xu, Chong-Quan** See Zhang, Hong-Xi
**Xu, D.** See Balachandran, Uthamalingam
**Xu, Di-Chun; Hao, Xiao-Chun; Zhu, Xuan-Hui**
Agglomeration control in the preparation of ultrafine $ZrO_2$ ($Y_2O_3$) powder by means of a wet-chemical process.—73-05686
**Xu, Feng-Juan** See Ji, Shang-Xing

**Xu, Feng**
Application of bentonite to building paint.—73-12256
**Xu, Gen-C.** See He, Guang-S.
**Xu, Gu; Nicholson, Patrick S.**
Ultrasonic attenuation study of hydronium ß´´-alumina.—73-01040; Ultrasonic attenuation study of $NH_4^+/H_3O^+$-$Rb^+$-ß´´-alumina.—73-06182; Ultrasonic shear wave attenuation study on $Na^+$, $K^+$ ß´´-alumina.—73-01041
**Xu, Guang-Hong** See Zeng, Shao-Xian
**Xu, Guang-Liang** See Huang, Wen-Xi; Lu, Zhong-Yuan
**Xu, Guang-Liang; Huang, Wen-Xi; Lu, Zhong-Yuan**
Effect of ZnO on burning of portland cement clinker in rapid heating-up burning.—73-09927
**Xu, Guang-Ling** See Huang, Wen-Xi
**Xu, Guo-Hua**
Application of $Si_3N_4$-bonded SiC in electric arc furnace ladle.—73-10699
**Xu, Guo-Xiang** See Ju, Bing-Xu
**Xu, Hao; Zeng, Zheng-Dong; Lin, Wen-Xiong**
Measurements of principal refractive indices and their thermal coefficients of $LiNbO_3$ crystals heavily doped with magnesium.—73-11588
**Xu, Hockin H. K.; Jahanmir, Said**
Simple technique for observing subsurface damage in machining of ceramics.—73-08443
**Xu, Hockin H. K.; Ostertag, Claudia P.; Braun, Linda M.; Lloyd, Isabel K.**
Effects of fiber volume fraction on mechanical properties of SiC-fiber/$Si_3N_4$-matrix composites.—73-13516; Short-crack mechanical properties and failure mechanism of $Si_3N_4$-matrix/SiC fiber composite—correction.—73-17426; Short-crack mechanical properties and failure mechanisms of $Si_3N_4$-matrix/SiC-fiber composites.—73-13587
**Xu, Hong-Da; Wang, Hong-Jie; Xue, Shou-Qing**
Thin-film BiPbSrCaCuO dc SQUID's operating at liquid nitrogen temperature.—73-11936
**Xu, J. H.** See Koga, T.
**Xu, J. M.** See Tan, Gen-Lin
**Xu, J.-Z.** See Xu, Z.-Y.
**Xu, Jian-Chun** See Liu, Jian-Xiong; Weinstein, Roy
**Xu, Jian-Hua**
Chinese copper red glazes.—73-10807
**Xu, Jie; Qiu, Tai; Li, Yuan-Qiang**
Superplasticity of ceramic materials.—73-12332
**Xu, Jing-Fu**
Effects of $P_2O_5$ in glazes.—73-10835
**Xu, Jun** See Chen, Kun-Ji
**Xu, L.-K.** See Chen, H.-C.
**Xu, Li-Liang; Yao, Li**
Preparation of color mix for art porcelain.—73-10883
**Xu, Mao-Lai**
Reparation of large area setting slump in annular kiln preheat zone during firing.—73-12239
**Xu, Ming** See Polonka, J.
**Xu, Ming-Xia** See Jin, Zheng-Guo
**Xu, N.-K.** See Liu, Z.-T.
**Xu, Ning** See Zhang, Xiao-Feng
**Xu, P.-C.; Lindenschmidt, K.-E.; Meguid, S. A.**
High-frequency leaky Lamb wave [LLW] measurement of elastic properties of coatings.—73-08404
**Xu, Pei-Cang** See Yang, Xing-Hua
**Xu, Pin-Kun**
Microstructure and properties of pyrophyllite fire bricks.—73-07218
**Xu, Qi-Chang** See Meyer, Richard, Jr.; Newnham, Robert E.
**Xu, Qi-Gao** See Jin, Ji-Rong
**Xu, Qin** See Singh, Vijay P.
**Xu, Qin-Lun; Chen, Zhao-Jia; Peng, Ding-Kun; Chen, Yin; Wang, Tie-Gun; Pan, Xing-Yan**
Characterization and properties of YBCO samples containing metastannate inclusion.—73-07996
**Xu, Qun-Yin; Anderson, Marc A.**
Sol-gel route to synthesis of microporous ceramic membranes: preparation and characterization of microporous $TiO_2$ and $ZrO_2$ xerogels.—73-13279
**Xu, R.-Q.** See Lin, Zu-Xiang
**Xu, S.** See Huang, M.
**Xu, S.-R.** See Zhang, Xu-Shou
**Xu, Shu-Hui** See He, Guo-Ping; Shen, Ding-Kun
**Xu, Tian-Bing** See Shi, Bo-Rong
**Xu, Wei** See Lau, Kei May
**Xu, Wei-Guang**
Manufacture of glazed tile utilizing water-granulated slag from blast furnace.—73-10865
**Xu, Wen-Yang** See Li, Jian-Quan; Li, Rui-Feng
**Xu, Wen-Yang; Dong, Jin-Xiang; Li, Jian-Quan; Ma, J.-P.; Dou, T.**
Crystallization process of zeolite ZSM-5 and zeolite ZSM-35 in a special autoclave.—73-05726
**Xu, Wu; Gliermann, G.**
Luminescence of $K_3[Re(CN)_6O_2]$ crystals.—73-12828
**Xu, X.-L.; Misra, V.; Ozturk, Mehmet C.; Wortman, J. J.; Harris, G. S.; Spanos, L.**
Effects of oxygen doping on properties of microcrystalline silicon film grown using rapid thermal chemical vapor deposition [RTCVD].—73-16466
**Xu, Xian-Yu; Yang, Li-Qun; Chen, Jian**
Burning cement clinker from the raw meal using barite and fluorspar as a combined additive.—73-09834
**Xu, Xiao-Hong; Sun, Su-Zhen; Pen, Chang-Qi**
Development of new biomagnetic materials.—73-15313
**Xu, Xiao-Jian** See Sun, Qing-Ping
**Xu, Xin; Della Ratta, Anthony D.; Sosonkina, Jane; Melngailis, J.**
Focused ion-beam-induced deposition and ion milling as a function of angle of ion incidence.—73-09135
**Xu, Xue-Ren R.**
Application of weight function method for crack analysis in thermal stress fields.—73-06325
**Xu, Xue-Ying** See Li, Jun-Suo
**Xu, Y. P.; Huang, R. S.; Rigby, G. A.**
Sputter-deposited silicon films.—73-15175
**Xu, Y.** See Campet, G.; Ma, Z.
**Xu, Yao-Zhu; Beaulieu, Y.; Webb, J. B.**
Photoreflectance measurements of the $E_1$ and $E_1+\Delta_1$ optical transitions in $In_{1-x}Al_xSb$ epilayers.—73-15099
**Xu, Ye-Jing** See Xie, Jian-Lin
**Xu, Yong-Li; Reifsnider, Kenneth L.**
Micromechanical analysis of fiber crack propagation in composite materials due to transverse tensile loads.—73-09648
**Xu, Yong-Nian** See Ching, W. Y.
**Xu, You-Lin; Cheng, Xiao-Jun**
Fabrication of nonfired brick using lead-zinc tails.—73-06653
**Xu, You-Ren** See Huang, Chao-M.
**Xu, You-Ren; Huang, Chao-M.; Kriven, Waltraud M.; Zangvil, Avigdor**
Residual α-$Si_3N_4$ in O´ crystals in $CeO_2$-doped O´+ß´-SiAlON ceramics.—73-17193
**Xu, You-Ren; Zangvil, Avigdor; Lipowitz, Jonathan; Rabe, James A.; Zank, Gregg A.**
Microstructure and microchemistry of polymer-derived crystalline SiC fibers.—73-03169
**Xu, You; Zhang, Guo-Ying; Duan, Ming-Qian**
Calculations of the Faraday rotation in RE-substituted iron garnets.—73-04592
**Xu, Yu-Heng** See Liu, Jin-Song
**Xu, Yu-Qing; Wang, You-Wen; Ding, Zi-Shang**
Nucleation and crystal growth of SiC ultrafine powder.—73-06266
**Xu, Yue-Ping; Guo, Jing-Kun; Huang, Xiao-Xian**
Grain growth in ultrafine Y-TZP ceramics.—73-06221; Sintering kinetics of ultrafine $ZrO_2$-$Y_2O_3$ powder.—73-06056
**Xu, Yue-Ping; Nakahira, Atsushi; Niihara, Koichi**
Characteristics of $Al_2O_3$-SiC nanocomposite prepared by sol-gel processing.—73-17113
**Xu, Z. R.** See Chawla, K. K.
**Xu, Z. R.; Chawla, K. K.; Li, X.**
Effect of high-temperature exposure on the tensile strength of alumina fiber Nextel 610.—73-17287
**Xu, Z.** See Ducker, William A.; Viehland, Dwight
**Xu, Z.-Y.** See Wu, Bai-Chang
**Xu, Z.-Y.; Jin, S.-R.; Luo, C.-P.; Xu, J.-Z.**
Well width dependence of the exciton lifetime in narrow GaAs/GaAlAs quantum wells.—73-15228
**Xu, Z.; Viehland, Dwight; Yang, P.; Payne, D. A.**
Hot-stage transmission electron microscopy studies of phase transformations in tin-modified lead zirconate titanate.—73-09460
**Xu, Zhong-Zi** See Gu, Ping; Shen, Yang; Xie, Ping
**Xu, Zhong-Zi; Deng, Yong-Mei; Wu, Xue-Quan; Tang, Ming-Shu; Beaudoin, James J.**
Influence of various hydraulic binders on performance of very low porosity cementitious systems.—73-03490
**Xu, Zhong-Zi; Gu, Ping; Xie, Ping; Beaudoin, James J.**
Application of ac impedance techniques in studies of porous cementitious materials: II, Relationship between ACIS [ac impedance spectroscopy] behavior and the porous microstructure.—73-06625; Application of ac impedance techniques in studies of porous cementitious materials: III, ACIS [ac impedance spectroscopy] behavior of very low porosity cementitious systems.—73-13678
**Xu, Zhong-Zi; Hooton, R. D.**
Migration of alkali ions in mortar due to several mechanisms.—73-06690
**Xu, Zhong-Zi; Tang, Ming-Shu; Beaudoin, James J.**
Ideal structural model for very low porosity cementitious [VLP] systems.—73-03480; Relationships between composition, structure, and mechanical properties of very low porosity cementitious systems.—73-00184
**Xuan, Dong** See Wei, Wang-Shui
**Xuan, Y.** See Luo, H.
**Xue, De-Sheng** See Sun, Ji-Jun
**Xue, J. S.** See Gong, W. H.; Soderholm, L.
**Xue, Liang A.; Chen, I-Wei**
New SiC-whisker-reinforced lithium aluminosilicate composite.—73-02905
**Xue, Liang A.**
Effect of liquid-forming additives on low-temperature superplastic deformation of alumina.—73-02583
**Xue, Qi** See Lu, De-Xin
**Xue, Qun-Ji** See Wei, Jian-Jun
**Xue, Shou-Qing** See Xu, Hong-Da
**Xue, Song-Sheng; Fang, Zheng-Xiu; Gan, Fu-Xi**
Optical, structural, and crystalline properties of $GeSb_2Te_4$ thin films.—73-12644
**Xue, X.-M.; Sui, Z.-T.; Wang, J.-T.**
Effect of zirconium on wettability of alumina and zirconia by silver-indium base alloy.—73-00223; Wettability and interfacial reaction of alumina and zirconia by reactive silver-indium base alloy at mid-temperatures.—73-00276
**Xue, Xian-Yu; Stebbins, Jonathan F.**
$^{23}Na$ NMR chemical shifts and local Na coordination environments in silicate crystals, melts, and glasses.—73-16224
**Xue, Y. Y.** See Lin, J. G.; Tao, Y. K.
**Xue, Z.-Y.** See Zheng, Lu-Bin
**Ya Shapiro, B.** See Klein, L.
**Yaanson, N. A.** See Ibragimov, K. I.
**Yaba, Susumu; Kikugawa, Shinya; Ohta, Yukinori**
Quartz glass substrate for polysilicon thin film transistor liquid crystal display.—73-14558
**Yaba, Susumu; Kikugawa, Shinya**
Transparent quartz glass and process for its production.—73-14560
**Yabe, K.** See Shimokawa, Katsuyoshi
**Yablokov, Yu. V.; Ivanova, T. A.; Shipunova, S. Yu.; Zvereva, I. A.; Bobrysheva, N. P.**
Distribution of paramagnetic impurity in $LaSrAl_{1-x}Cr_xO_4$ and $YCaAl_{1-x}Cr_xO_4$ ceramics [x<0.15].—73-16113
**Yablonskii, D. A.** See Krivoruchko, V. N.; Zvyagin, A. I.
**Yabuki, Youichi**
Apparatus for cutting molten glass for forming glass products.—73-01843
**Yabuta, Kazuya; Nishio, Hiroaki; Uematsu, Keizo**
Effect of process-related oxidation on microstructure and mechanical properties of ß´-*o´*-SiAlON ceramics.—73-02793; Quantitative analysis of *o´*-phase in ß´-*o´* SiAlON ceramics by image analysis technique.—73-03187
**Yacullo, L.** See Mundi, L. A.
**Yada, Keiji** See Li, Jian-Qi
**Yadav, D.** See Sharma, K. M.
**Yadav, K. L.** See Prasad, K.
**Yadav, K. L.; Choudhary, R. N. P.**
Structural and dielectric properties of PLLZT ceramics.—73-16603
**Yadava, Y. P.** See Koshy, J.
**Yaegashi, Seiji** See Murakami, Hirohiko
**Yaegashi, Takehisa** See Sakashita, Keiichi
**Yafyasov, A. M.; Perepelkin, A. D.; Bezhevol'nov, V. B.**
Parameters of the energy band structure of surface layers of zero-gap semiconductors (CdHg)Te and HgTe by the field effect method in electrolytes.—73-01271
**Yafyasov, A. M.; Savitskii, V. G.; Kovtun, R. N.; Perepelkin, A. D.; Bozhevolnov, V. B.**
Band structure parameters of surface layers of epitaxial films of narrow-gap solid solutions.—73-11082
**Yagami, T.** See Matsuo, T.
**Yagata, Masayuki** See Ueda, Fumihiro
**Yagi, Hideaki; Ichikawa, Keiichi**
High-temperature humidity sensor using a limiting-current-type plane oxygen sensor.—73-11250; 73-01188
**Yagi, Hideaki; Nakata, Michitoshi**
Humidity sensor using $Al_2O_3$, $TiO_2$, and $SnO_2$ prepared by sol-gel method.—73-04357; Humidity sensor using $Al_2O_3$, $TiO_2$, and $SnO_2$ prepared by sol-gel method.—73-11252
**Yagi, Hironasa** See Mori, Yusuki
**Yagi, Isao; Kakizawa, Katsutoshi; Murakami, Kenji; Kaneko, Shoji**
Preferred orientation of $SnO_2$ thin films grown from tri-*n*-butyltin acetate by spray pyrolysis technique.—73-16906
**Yagi, Juki** See Miyahara, Mitsuo
**Yagi, Katsumichi; Minoda, Hiroki; Shima, Masashi**
Reflection electron microscopy study of thin-film growth.—73-06276
**Yagi, T.** See Yamaya, K.
**Yagi, T.; Utsumi, W.**
Direct conversion of graphite into hexagonal diamond under high pressure.—73-16714
**Yagi, Takeshi** See Hihara, Hiroshi
**Yago, Anya** See Mackinnon, Ian D. R.
**Yaguchi, T.** See Aida, Toshiyuki
**Yajima, T.; Iwahara, Hiroyasu; Uchida, H.**
Protonic and oxide ionic conduction in $BaCeO_3$-based ceramics: effect of partial substitution for Ba in $BaCe_{0.9}Nd_{0.1}O_{3-\alpha}$ with Ca.—73-04156
**Yajima, T.; Kazeoka, H.; Yogo, Toshinobu; Iwahara, Hiroyasu**
Proton conduction in sintered oxides based on $CaZrO_3$.—73-04154
**Yajima, Y.** See Saeki, M.
**Yajima, Yasuhide** See Ishida, Hideaki
**Yakawa, Chiori** See Sasaki, Hirokazu
**Yakhkind, A. K.**
Concentration criteria for the focusing distribution of the refractive index in gradient glasses.—73-00439
**Yakhkind, E. Z.** See Ilisavskii, Yu. V.
**Yakhmi, J. V.** See Gunasekaran, R. A.
**Yakimenko, G. S.; Khvostenko, N. I.; Zavorotnii, A. S.**
Determination of the concentration of etching solution components containing nitric and hydrofluoric acids.—73-00947
**Yakimov, S.** See Chaplanov, Victor A.; Galkin, Igor M.
**Yakimova, E. E.** See Tsygankov, V. N.
**Yakimova, R.** See Paskova, T.; Popov, A.
**Yakimovich, D. T.** See Demidovich, B. K.
**Yakobchuk, L. M.** See Antonov, G. I.
**Yakovlev, Yu. I.** See Bresler, M. S.
**Yakovlev, A. A.** See Malov, V. V.
**Yakovlev, D. R.** See Hellmann, R.; Koch, M.; Pozina, G. R.
**Yakovlev, D. R.; Ossau, W.; Landwehr, G.; Bucknelltassius, R. N.; Waag, A.; Schmeusser, S.**
Two-dimensional exciton magnetic polaron in CdTe/$Cd_{1-x}Mn_xTe$ quantum-well structures.—73-07846
**Yakovlev, E. B.** See Burkat, T. M.
**Yakovlev, I. A.** See Aleksandrov, V. V.; Lebed, B. M.
**Yakovlev, M. P.** See Zuev, V. V.
**Yakovlev, S. V.** See Lebed, B. M.
**Yakovlev, V. A.** See Alieva, E. V.
**Yakovlev, V. Yu.** See Gritsenko, B. P.
**Yakovlev, V.** See Antonova, K.; Layadi, N.
**Yakovlev, V.; Drevillon, B.; Layadi, N.; Roca i Cabarrocas, P.**
Real-time spectroellipsometry investigation of the interaction of silane with a Pd thin film: formation of palladium silicides.—73-08720
**Yakovlev, Y. P.** See Bi ranov, A. N.; Bresler, M. S.
**Yakovleva, O. L.** See D'yachenko, S. S.
**Yakovloev, A. A.** See Storozhev, N. R.
**Yakshibaev, R. F.** See Kadrgulov, R. F.
**Yakubovich, O. V.; Dadashov, M. S.**
Synthesis and crystal structure of ammonium analog of leucophosphite, $NH_4\{Fe_2[PO_4]_2(OH)(H_2O)\}\cdot H_2O$.—73-16350
**Yakubovich, O. V.; Dimitrova, O. V.; Savina, G. V.**
Synthesis and crystal structure of chromium polyphosphate, $Cr(PO_3)_3$.—73-02482
**Yakubovich, O. V.; Mel'nikov, O. K.**
Crystal structure of $K_2Mn_2[P_2O_7]F_2$. Crystal chemistry of diorthophosphates of Fe and Mn.—73-02196
**Yakubovskaya, N. Yu.** See Kuvshinova, K. A.

**Yakupova, L. S.** See Sazonov, S. V.
**Yakusheva, N. A.** See Zhuravlev, K. S.
**Yakushige, Noriyuki; Korenobu, Toshirou; Oka, Matoo**
Properties of crystalline graphite.—73-00844
**Yalyshev, Yu. I.** See Burmistrov, S. A.
**Yamada, A.** See Okamoto, Tamotsu
**Yamada, Chikashi; Kimura, Takahiro**
Anisotropy in SHG from reconstructed surfaces of GaAs.—73-14772
**Yamada, E.** See Sato, H.
**Yamada, Hiroshi** See Aomine, Nobutaka
**Yamada, Hirotake** See Nishioka, Masao
**Yamada, Hirotake; Tanaka, Ritsu**
Formation of ceramic thin film on ceramic body.—73-12078
**Yamada, K.** See Arai, M.
**Yamada, Katsunori; Kamiya, Nobuo; Wada, Shigetaka**
Abrasive wear of $Al_2O_3$-SiC composites.—73-03233
**Yamada, Kawakatsu** See Komatsu, Shojiro
**Yamada, Kazuo; Yamamoto, Masataka; Asai, Youichi; Watanabe, Ken**
Experimental study on nondestructive crack depth evaluation by elastic wave method.—73-09958
**Yamada, Kazuya** See Nishida, Toshihiko
**Yamada, Keiji** See Sakashita, Keiichi
**Yamada, Keiko** See Nogami, Masayuki
**Yamada, Kenjiro; Sawaoka, Akira B.**
Nucleation and growth of diamond in detonation products.—73-09225
**Yamada, Koji** See Kamata, Norihiko; Taniguchi, Satoshi
**Yamada, Kouichi** See Sawada, Kazuo
**Yamada, M.** See Green, A. M.
**Yamada, Masaaki** See Mori, Daisuke
**Yamada, Masahiro** See Kawamura, Mitsunori
**Yamada, Masao; Nakano, Motoo; Collins, G. J.; Tamura, Tetsuro; Takazawa, Akira**
Porous semiconductor light-emitting device.—73-15241
**Yamada, Minoru**
Theoretical analysis of self-sustained pulsation phenomena in narrow-stripe semiconductor lasers.—73-15203
**Yamada, Naohito** See Nakasuji, Yoshizumi; Tsuruta, Hideyoshi
**Yamada, Naohito; Hattori, Mitsuru; Masuda, Masaaki; Matsui, Minoru**
Analysis of fracture strength of $Si_3N_4$ using Weibull's multimodal distribution.—73-03237; Fracture strength of $Si_3N_4$ using Weibull's multimodal distribution.—73-13535
**Yamada, Nobuyuki** See Tomishima, Hiroshi
**Yamada, Ryuzo** See Kohno, Kiyoshi
**Yamada, S.** See Kitao, M.
**Yamada, Shinji** See Yamashita, Kimihiro
**Yamada, T.** See Sato, H.
**Yamada, Tadatoshi** See Ohara, Akinori
**Yamada, Takao** See Nakano, Kikuo
**Yamada, Tatsuya** See Awaji, Hideo
**Yamada, Tomoo** See Kamata, Kiichiro
**Yamada, Tomoyuki** See Abe, Hitoshi
**Yamada, Toshihiko** See Hayashi, Kunio
**Yamada, Toshiro** See Matsubara, Shigeo
**Yamada, Toshiyuki** See Kita, Hideki
**Yamada, Y.** See Nishikubo, K.
**Yamada, Y.; Shiota, I.; Yoshida, K.**
Structural change of titanium-oxide-evaporated films during in situ heating in an electron microscope.—73-17199
**Yamada, Yoshihiro** See Furukawa, Yuji
**Yamada, Yoshiyasu** See Mori, Toshiyuki
**Yamada, Yutaka** See Watanabe, Kazuo
**Yamade, Yasue** See Ono, Yukiyoshi
**Yamade, Yoshiaki; Kawaguchi, Yoshiaki; Takeda, Nobou; Kishi, Teruo**
Effect of defects and grain size on strength of mullite ceramics.—73-06376; Slow crack growth of mullite ceramics.—73-06524
**Yamafuji, Kaoru** See Matsushita, Teruo; Ni, Bao-Rong
**Yamaga, M.; Takeuchi, Hideo; Han, T. P. J.; Henderson, B.**
Electron paramagnetic resonance and optical spectra of $Cr^{3+}$-doped $YAlO_3$.—73-16485
**Yamaga, Shigeki** See Yoshikawa, Akihiko
**Yamagata, Hideki** See Tou, Hideki
**Yamagata, Kazuo** See Omori, Naoya
**Yamagata, Shigeru; Kuriyama, Michiya; Hariya, Yu; Terada, Shoichi**
Property modification of silica glass by ultrahigh pressure heating.—73-00538; 73-10474
**Yamagata, Shigeru**
Degradation of transmission of silica glass on excimer laser irradiation.—73-03781; 73-10429; Effects of OH group on distribution of refractive index in silica glass.—73-00471; 73-10433
**Yamagishi, Chitake** See Ishii, Mamoru; Shiogai, Tatsuya; Tsukamoto, Keizou
**Yamagishi, Chitake; Hakoshima, Junichiro; Nakajoh, S.; Miyata, Noboru; Tsukamoto, Keizou**
Mechanical properties of SiC whisker-reinforced ß-SiAlON composites.—73-06481
**Yamagishi, Chitake; Miyata, Noboru; Hakoshima, Junichiro; Tsukamoto, Keizou; Iseki, Takayoshi**
Preparation of SiAlON powder by carbothermal reduction and nitridation: III, Preparation of Z=0 SiAlON ($Si_3N_4$).—73-16934
**Yamagishi, Chitake; Shiogai, Tatsuya; Minamisawa, Kazuyoshi; Iseki, Takayoshi**
Preparation of SiAlON powder by carbothermal reduction and nitridation: II, Preparation of Z=0.5–1 SiAlON.—73-16933
**Yamagishi, Chitake; Shiogai, Tatsuya; Sashida, Norikazu; Tsukamoto, Keizou; Iseki, Takayoshi**
Synthesis of ß′-SiAlON powder by fluidized bed furnace.—73-17025
**Yamagishi, Chitake; Tsukamoto, Keizou; Shiogai, Tatsuya; Hayashi, Mutsuo; Iseki, Takayoshi**
Synthesis of ß-SiAlON powder by carbothermal reduction and nitridation: III, Reaction process of ß-SiAlON (Z=3).—73-17027
**Yamagishi, H.** See Nevin, W. A.
**Yamagishi, Hirotoshi** See Fusegawa, Izumi; Oda, Tetsuhiro
**Yamagishi, T.** See Ma, H. L.
**Yamagishi, Takashi** See Mizuno, Toshiaki; Yokoi, Koji
**Yamagishi, Wataru** See Suzuki, Hitoshi
**Yamaguchi, Akira** See Yu, Jing-Kun
**Yamaguchi, Akira; Yu, Jing-Kun**
Behavior of carbon obtained from pitch and resin added to carbon-containing refractories.—73-14574
**Yamaguchi, Atsuko; Tada, Tetsuya; Ninomiya, Toshiyuki**
Time-resolved spectroscopy of photoluminescence in hydrogenated amorphous silicon.—73-02716
**Yamaguchi, E. S.; Ryason, P. R.**
Inelastic electron tunneling spectra of lubricant oil additives on native aluminum oxide surfaces.—73-09467
**Yamaguchi, H.** See Tsukamoto, Yuji
**Yamaguchi, Hirofumi** See Yano, Shinsuke
**Yamaguchi, Hiroshi; Horikoshi, Yoshiji**
Influence of monomolecular steps on the first-order structure transition of an InAs(001) surface.—73-14984
**Yamaguchi, Hiroyuki** See Koibuchi, Kiyoshi
**Yamaguchi, I.** See Dai, Y.; Sakka, Sumio
**Yamaguchi, Jun** See Ino, Juichi
**Yamaguchi, Katsuhiko** See Ishizaki, Futoshi; Senoo, Tatsuya
**Yamaguchi, Katsuhiko; Ishizaki, Futoshi; Goto, Naoyuki; Yatsuda, Hisao; Enomoto, Goro; Yasui, Hideo**
High-dispersion optical glass.—73-14544
**Yamaguchi, Masashi** See Kanai, Kunio
**Yamaguchi, Minoru**
Apparatus for driving rollers in roller hearth kiln.—73-12247
**Yamaguchi, Osamu** See Hirota, Ken; Inamura, Suguru; Ishida, Koji; Kimoto, Shinya; Matsumoto, Yousuke; Saiki, J.; Shimazaki, M.; Yamakata, Koji; Yazawa, Tetsuo
**Yamaguchi, Ryoji** See Egashira, Makoto
**Yamaguchi, Shizuo; Matsuda, Isao; Suzuki, Masao**
Dependence of the frequency shift of the optical-microwave double resonance signal in the Cs $D_2$ line on the pumping frequency and power of a GaAs semiconductor laser.—73-01122
**Yamaguchi, Shu** See Terabe, Kazuya
**Yamaguchi, Shu; Tange, Masayoshi; Iguchi, Yoshiaki; Imai, Atsuo**
Ionic conduction in partially ion-exchanged Sr ß-alumina; $Sr_{1-y}Na_{2y}MgAl_{10}O_{17}$.—73-00985
**Yamaguchi, T.** See Hamada, Hiroki; Inoue, A.; Mori, Toshiyuki; Nomura, Takashi
**Yamaguchi, Takashi** See Imai, Hiroyuki; Kato, Shuuji
**Yamaguchi, Takashi; Kanai, Ken**
Development of cell structure due to Benard–Marangoni-type convection in $RuO_2$-glass thick films.—73-04074
**Yamaguchi, Tetsuro; Takeshita, Takuo; Hagino, Sadaaki**
Superconductive ceramic wire and method for making [the] same.—73-04881
**Yamaguchi, Tetsuya** See Yamashita, Hirofumi
**Yamaguchi, Toshinao; Ueda, Fumito; Imamura, Masaaki**
Growth of superconductive $Bi_2Sr_2CaCu_2O_y$ film by liquid phase epitaxy.—73-15494
**Yamaguchi, Toshio** See Patnaik, S.
**Yamaguchi, Yasuo** See Momozawa, Nobuyuki
**Yamaguchi, Yohichi** See Nagasawa, Hiroyuki
**Yamaguchi, Yoichi** See Takahashi, Kenichi
**Yamaguchi, Yoshimi** See Kitaoka, Satoshi
**Yamaguchi, Yoshimi; Kitaoka, Satoshi; Tamura, Hiroshi**
Friction and wear properties of fine ceramics in high-temperature and high-pressure water.—73-03303
**Yamaguchi, Yoshimi**
Application of engineering ceramics to the mechanical parts.—73-12314
**Yamai, Iwao** See Katagiri, Naruhito; Ota, Toshitaka
**Yamaishi, K.** See Miyahara, Nobuyuki; Mutoh, Yoshiharu
**Yamakata, Koji; Hirota, Ken; Yamaguchi, Osamu; Kume, Hideki; Inamura, Suguru; Miyamoto, Hiroki**
Formation of alumina/zirconia (3 mol% yttria) composite powders prepared by the hydrazine method.—73-16788
**Yamakawa, Akira** See Matsui, Tatsuji; Nishioka, Takao; Yamamoto, Takehisa
**Yamakawa, Akira; Doi, Yoshihiko; Miyake, Masaya**
Formation of a ceramic composite by centrifugal casting.—73-04972
**Yamakawa, Akira; Miyake, Masaya; Ishizaki, Kozo**
Anomalous microstructure in $Si_3N_4$ ceramics with $Al_2O_3$-$Y_2O_3$-AlN additives.—73-17108; Changes of YAP phase content and some properties by the annealing of $Si_3N_4$-$Al_2O_3$-$Y_2O_3$-AlN ceramic.—73-16048; Homogeneity in $Si_3N_4$ ceramics [examined] by ultrasonic pulse transmission method.—73-17144
**Yamakawa, Akira; Miyake, Masaya; Sakanoue, Hitoyuki; Sogabe, Koichi**
Sintered body of aluminum nitride.—73-04233; Sintered body of aluminum nitride.—73-12526
**Yamakawa, Akira; Miyake, Masaya; Yanai, Tomohiro; Ishizaki, Kozo**
Formation mechanism of pores in massive $Si_3N_4$-$Al_2O_3$-MgO ceramics during sintering.—73-16786
**Yamakawa, Akira; Nishioka, Takao; Miyake, Masaya; Wakamori, Koji; Nakamura, Akira; Mashimo, Tsutomu**
Shock-yielding properties of $Si_3N_4$ ceramics: correlation with the microstructure and static mechanical strength.—73-17425
**Yamakawa, Akira; Sasame, Akira**
Method for forming metallized layer on an aluminum nitride sintered body.—73-10324
**Yamakawa, Akira; Sogabe, Kouiti; Shimoda, Kouhei; Miyake, Masaya**
Aluminum nitride sintered body and process for producing the same.—73-05283
**Yamakawa, Akira**
Silicon carbide whisker and its application.—73-05275
**Yamakawa, H.** See Shimizu, S.
**Yamakawa, Koji** See Yasumoto, Takaaki
**Yamakawa, Seishiro** See Komori, Kiyotaka
**Yamaki, M.** See Wakasa, K.
**Yamaki, Shyuichi** See Kimura, Daisuke
**Yamaki, Y. R.; Maahs, H. G.**
Influence of fiber surface treatment on the mechanical properties of fabric-reinforced carbon-carbon composites.—73-13550
**Yamamatsu, Junko** See Horino, Kenji
**Yamamoto, H.; Seki, S.; Ishiba, T.**
Eu site symmetry in $AEu(MoO_4)_2$ (A=Cs or Rb) generating saturated red luminescence.—73-02272
**Yamamoto, Hideharu** See Kawashima, Takeshi; Torizuka, Shiro
**Yamamoto, Hideki; Kamiya, Kanichi; Matsuoka, Jun; Nasu, Hiroyuki**
EXAFS study on the coordination state of germanium in $PbO$-$GeO_2$ glasses—relation between structure and optical nonlinearity.—73-16143
**Yamamoto, Hirokazu** See Murakami, Yuichiro
**Yamamoto, Hiroki; Funakubo, Hiroshi; Shinozaki, Kazuo; Mizutani, Nobuyasu**
Grain-boundary structure of $Bi_2O_3$-diffused $BaTiO_3$ BL capacitor.—73-00974; Grain-boundary structure of $Bi_2O_3$-diffused BL capacitor.—73-10953
**Yamamoto, Hiroshi** See Hirano, Shinichi; Ikesue, Akio; Shikano, Hiroshi
**Yamamoto, Hiroshi; Nomura, Junichi; Niimi, Hideaki; Yoneda, Yasunobu**
Semiconductor ceramic composition for secondary electron multipliers.—73-11542
**Yamamoto, Hiroyuki** See Ohashi, Masao
**Yamamoto, Joyce K.** See Haneda, Hajime
**Yamamoto, K.; Hammond, R. H.; Harris, James S., Jr.**
Relative effect on the oxygen concentration in $YBa_2Cu_3O_{7-\delta}$ of atomic and ionic oxygen fluxes, produced by a small compact electron cyclotron resonance source.—73-01649
**Yamamoto, K.; Kashida, S.**
X-ray study of the cation distribution in $Cu_2Se$, $Cu_{1.8}Se$, and $Cu_{1.8}S$; analysis by the maximum entropy method.—73-02547
**Yamamoto, Kazuhisa** See Mizuuchi, Kiminori
**Yamamoto, Kazuhisa; Mizuuchi, Kiminori; Taniuchi, Tetsuo**
Quasi-phase-matched second harmonic generation in an $LiTaO_3$ waveguide.—73-07914
**Yamamoto, Kazunao; Namikawa, Hiroshi**
Dielectric relaxation of porous glass.—73-03784; 73-14155; Dielectric relaxation of Vycor-type borosilicate glass.—73-03785; 73-14156
**Yamamoto, Kazunuki** See Takada, Toshio
**Yamamoto, Kenji** See Kanazuka, Yasuo
**Yamamoto, Kiyoshi** See Sugii, Nobuyuki
**Yamamoto, Koichi**
Bacteriostatic and fungistatic glass powders.—73-00435
**Yamamoto, M.** See Sato, Kenji
**Yamamoto, Masataka** See Yamada, Kazuo
**Yamamoto, Mitsuo** See Ikeda, Yasuhira
**Yamamoto, Naoichi** See Muranaka, Shigetoshi
**Yamamoto, Naoki; Kikuchi, Makoto; Atake, Tooru**
Incommensurate-commensurate phase transition of $BaZnGeO_4$ studied by electron microscopy and diffraction.—73-12601
**Yamamoto, Norio** See Kano, Fumiyoshi
**Yamamoto, Osamu** See Kanno, R.; Mukai, Yasuo; Nishijima, M.; Ogawa, Minoru; Takeda, Yasuo
**Yamamoto, Osamu; Sasamoto, Tadashi; Inagaki, Michio**
Coating of SiC gradient carbon material with mullite film and its oxidation resistance.—73-17216
**Yamamoto, Shigemi** See Kubota, Yoshitaka
**Yamamoto, Shigeru** See Komori, Kiyotaka; Nagai, Hiroki; Tanaka, Tsuneshichi
**Yamamoto, Shin** See Nanko, Makoto
**Yamamoto, Shunji** See Ohara, Akinori
**Yamamoto, Susumu; Kawabe, Nozomu; Awazu, Tomoyuki**
Process for producing an elongated superconductor.—73-01735
**Yamamoto, Susumu; Kawabe, Nozomu; Murai, Teruyuki**
Fabrication of sintered oxide superconducting wires by a powder-in-tube method.—73-01706
**Yamamoto, Susumu; Murai, Teruyuki; Kawabe, Nozomu; Tohioka, Masaaki**
Method for producing an elongated sintered article.—73-04989
**Yamamoto, Susumu; Murai, Teruyuki; Kawabe, Nozomu; Yazu, Shuji; Jodai, Tetsuji**
Process for producing sintered ceramic wire.—73-12093
**Yamamoto, T.** See Fujii, Satoshi; Fukami, T.; Kobayashi, K.
**Yamamoto, Takahiko** See Yoshida, Noriyuki
**Yamamoto, Takahiro; Wakasugi, Mikio**
Resistance of polymer-modified cement mortar to oil attack.—73-10140
**Yamamoto, Takahisa; Sakuma, Taketo**
Fabrication of barium titanate single crystals by solid-state grain growth.—73-09128
**Yamamoto, Takashi; Terui, Giichi; Ueyama, Tamotsu**
Metallic Ag addition effects on $Y_1Ba_2Cu_3O_{7-x}$ superconducting thick films.—73-11829
**Yamamoto, Takehisa; Nishioka, Takao; Awazu, Tomoyuki; Yamakawa, Akira**
Silicon nitride sintered body.—73-12523
**Yamamoto, Takehisa; Nishioka, Takao; Matsunuma, Kenji; Yamakawa, Akira; Miyake, Masaya**
Silicon nitride sintered body and process for producing the same.—73-12522
**Yamamoto, Takeyuki; Ishida, Hideki; Mitsuda, Takeshi**
Properties of autoclaved calcium silicate materials using waste tile: influence of $SiO_2$ sources.—73-10107
**Yamamoto, Tatsuya; Salamanca-Riba, L.; Foldeaki, Maria; O'Handley, Robert C.**
Magnetization and critical current density measurements of textured bulk Y-Ba-Cu-O superconductor.—73-01597

**Yamamoto, Teiji; Inai, Makoto; Takebe, T.; Watanabe, T.**
Pregrowth treatment dependence of surface morphology for GaAs grown on exactly oriented (111)A substrates by molecular beam epitaxy.—73-04448
**Yamamoto, Tomihiko** See Fujii, Satoshi
**Yamamoto, Tsutomu**
Recent trend of carbide tool materials.—73-08539
**Yamamoto, Tsuyoshi** See Takashima, Toshiyuki
**Yamamoto, Tsuyoshi; Nobuhara, Hiroyuki; Tanaka, Kazuhiro; Odagawa, T.; Sugawara, M.; Fujii, T.**
Low-threshold tensile-strained InGaAs-InGaAs quantum well lasers with single-step separate-confinement heterostructures.—73-15026
**Yamamoto, Y.** See Meguro, T.
**Yamamoto, Yoichi** See Senda, Tetsuya
**Yamamoto, Yoshiaki** See Nakagiri, Yasushi
**Yamamoto, Yoshiharu; Gotani, Kiyoshi; Shigaki, Noriyoshi**
Thermal decomposition process of ammonium paratungstate.—73-06297
**Yamamoto, Yoshiharu; Matsumoto, Akihide; Honkawa, Satoru; Shigaki, Noriyoshi**
Formation mechanism of ultrafine tungsten oxide particle during thermal decomposition of ammonium paratungstate [APT].—73-09453
**Yamamoto, Yoshimasa** See Yui, Toshio
**Yamamoto, Yoshinori** See Yuzawa, Yukio
**Yamamoto, Yuji** See Izawa, Hajime
**Yamamoto, Yutaka** See Makino, Akihiro
**Yamamoto, Yutaka; Makino, Akihiro**
Application of Mn-Zn ferrite with fine grain size to magnetic heads.—73-04590
**Yamamura, Hiroshi** See Hoshino, Hirokuni; Kobayashi, Hidehiko; Kubota, Yoshitaka; Kuramochi, Hideto; Mori, Toshiyuki; Oguri, Hitoshi
**Yamamura, Takashi; Hamazaki, Yoshihisa; Kaneshige, Toshihiko; Toyoda, Takeharu; Nishi, Masaaki; Kato, Hisaki**
Alumina-spinel castable refractories for steel teeming ladle.—73-14567
**Yamamura, Takemi** See Ichikawa, Kenji; Ishikawa, Toshihiro
**Yamamura, Takemi; Kugimoto, Junichi; Ishikawa, Toshihiro; Sioji, Yasuhiro; Shibuya, Masaki**
Carbon fibers having high strength and high modulus of elasticity and polymer composition for their production.—73-12448
**Yamamura, Takemi; Shibuya, Masaki; Ohtsubo, Hideki; Hiratuka, Tooru**
Inorganic fiber sinter and process for producing [the] same.—73-15997
**Yamamuro, K.** See Shimizu, S.
**Yamamuro, T.** See Ebisawa, Y.
**Yamana, Kazuo** See Kitagawa, Kazuichi
**Yamana, Kazuo; Miyamoto, Masaki; Doi, Kenji; Arahori, Tadahisa; Nakamura, Yoshihide; Terasaki, Fukunaga**
Improving thermal shock fracture resistance of the mullite tube closing one end.—73-14596
**Yamana, Shozo** See Kuwajima, Hidegi
**Yamanaka, Hiroshi** See Akai, Tomoko; Fukumi, Kohei; Wakabayashi, Hajimu
**Yamanaka, Ichiji**
Production process of glass beads for accessories.—73-00688
**Yamanaka, Kazunori** See Yokoyama, Hiromitsu
**Yamanaka, Mitsugu** See Ikoma, Keiko
**Yamanaka, S.** See Kawamura, Kazuro
**Yamanaka, Seiji; Maruyama, Gunjiro; Ueyama, Tamotsu**
Thermal decomposition of polyvinylbutyral [PVB]/PLZT, PMN dielectric powder composite.—73-01039; 73-10996
**Yamanaka, Shoji** See Ohashi, Masao
**Yamanaka, Shoji**
Design and synthesis of functional layered nanocomposites by intercalation reactions.—73-16699
**Yamanaka, Shozo** See Kashihara, Seiichi
**Yamanaka, Takamitsu** See Ohtaka, Osamu
**Yamanaka, Takayuki** See Kano, Fumiyoshi
**Yamane, Hisanori** See Aizawa, Masanobu; Chen, Xian-Tong; Masumoto, Hiroshi; Nakazawa, Hidenobu; Young, Byung-Chun
**Yamane, Hisanori; Miyazaki, Yuzuru; Hirai, Toshio**
New oxide superconductors containing carbonate groups.—73-01612
**Yamane, Hisanori; Takagi, S.; Oku, T.; Ohnishi, N.; Hiraga, Kenji; Awaji, S.**
Crystallographic relationship between $Y_2Cu_2O_5$ and 123 phase in chemical vapor deposited Y-Ba-Cu-O superconducting films.—73-11719
**Yamane, Hisanori; Young, Byung-Chun; Hirai, Toshio**
Crystal structure of anatase-type $TiO_2$-$SnO_2$ solid solution prepared by CVD.—73-02189
**Yamane, Masayuki** See Kokubu, Toshinori; Sekiya, Takao; Takada, Toshimi
**Yamane, Masayuki; Noda, Satoshi**
GRIN elements with large geometry.—73-05825; GRIN elements with large geometry.—73-13077
**Yamane, Takeshi** See Maruta, Toshihisa
**Yamanis, Jean** See Fanelli, Anthony J.; Haig, Stephen
**Yamanishi, Itsuo** See Hiroki, Nobuyoshi
**Yamano, Koji** See Iyori, Masahiro; Kamino, Maruo; Takai, Minoru
**Yamaoka, S.** See Akaishi, M.; Kondo, Kenichi
**Yamasaki, H.; Endo, K.; Kosaka, S.; Umeda, M.; Yoshida, S.; Kajimura, K.**
Scaling of the flux pinning force in epitaxial $Bi_2Sr_2Ca_2Cu_3O_x$ thin films.—73-15615
**Yamasaki, H.; Endo, K.; Nakagawa, Y.**
Critical current density of high-quality $Bi_2Sr_2Ca_2Cu_3O_x$ thin films prepared by metallorganic chemical vapor deposition.—73-11711
**Yamasaki, Hisashi** See Mashimo, Tsutomu
**Yamasaki, Hitoshi** See Yoshida, Naomi
**Yamasaki, Kaname** See Konagai, M.; Takemura, Yasushi
**Yamasaki, N.** See Yanagisawa, K.
**Yamasaki, Seiji; Inaba, Hiroshi; Sakai, H.; Tatsumisago, Masahiro; Tohge, Noboru; Minami, T.**
Water-repellent coatings on glass substrates by the sol-gel process.—73-14528
**Yamasaki, Seiji; Makita, Kensuke; Inaba, Hiroshi**
Water-repellent metal oxide film coated on glass substrate and method of forming [the] same.—73-03972
**Yamasaki, Y.** See Matsuda, Ohsaku
**Yamashika, Yujiro** See Uo, Motohiro
**Yamashina, T.** See Hirohata, Y.
**Yamashita, Hirofumi; Yamaguchi, Tetsuya; Miyagawa, Ryohei**
Microstructure of a sputtered Ti film on an indium tin oxide substrate.—73-17167
**Yamashita, Hiroshi** See Kawabata, Kyoko; Kitamura, Naoyuki; Matsubara, Ichiro; Matsuoka, Jun; Mori, Hideo; Morita, Toshifumi
**Yamashita, Hiroshi; Demiya, Mitsunori; Mori, Hideo; Maekawa, Takashi**
Synthesis of microporous silica-gel particles in W/O emulsion and an application to high-performance liquid chromatography.—73-00710
**Yamashita, K.** See Sadamura, H.
**Yamashita, Kimihiro** See Matsuda, Motohide; Umegaki, Takeo
**Yamashita, Kimihiro; Arashi, Tomohiro; Kitagaki, Kazuhisa; Yamada, Shinji; Umegaki, Takao; Ogawa, Kenji**
Preparation of apatite thin films through rf sputtering from calcium phosphate [CP] glasses.—73-16916
**Yamashita, Kimihiro; Tanaka, M.; Umegaki, Takeo**
Roles of microstructure in super $Na^+$ ionic conduction of glass-ceramic NARPSIO-V.—73-14728
**Yamashita, Kyoko** See Uo, Motohiro
**Yamashita, Masaru** See Kadono, Kohei; Wakabayashi, Hajimu
**Yamashita, Nobuyuki** See Yasutomi, Yoshiyuki
**Yamashita, Suminari** See Kuninishi, Kenji; Uchida, Kiyohiko
**Yamashita, T.** See Golden, S. J.; Ma, H. L.
**Yamashita, Toru** See Sakurai, Takeshi
**Yamashita, Tsutomu** See Ishii, Mamoru; Sugai, Tokuko; Suzuki, Hajime
**Yamashita, Yasuharu** See Wada, Mitsuo
**Yamashita, Yohachi** See Kanai, Hideyuki
**Yamashita, Yohachi**
PZN-based relaxors for MLCC's [multilayer ceramic capacitors].—73-14726
**Yamashita, Yoji** See Sano, Michihiro
**Yamasita, Suminari** See Nukui, Hideki
**Yamato, Fujio** See Mizunuma, Tatsuya
**Yamato, Kohji** See Miyashita, Takahiro
**Yamauchi, Hisao** See Adachi, Seiji; Ikemachi, Takaaki; Li, Yi; Maeda, Toshihiko; Matsuura, K.; Munakata, F.; Sakurai, Takeshi; Sugii, Nobuyuki; Wada, Takahiro
**Yamauchi, I.** See Fukuhara, M.
**Yamauchi, Kazuhisa; Ohmatsu, Kazuya; Ishida, Tetsuya; Gotoh, Tomoji; Yazu, Shuji; Jodai, Tetsuji**
Method of producing a composite oxide superconductive wire.—73-04853
**Yamauchi, N.** See Hirano, M.
**Yamauchi, Nobuyasu** See Ohta, Hitoshi
**Yamauchi, Shigeru** See Mizusaki, Junichiro
**Yamauchi, Shinji** See Nakano, Kikuo
**Yamauchi, Shinji; Kobayashi, Toshiro**
Effects of process zone and specimen geometry on fracture toughness of silicon nitride ceramic.—73-06397
**Yamauchi, Takayasu** See Sato, Kazuhisa
**Yamauchi, Y.** See Lopez, M.
**Yamauchi, Yukihiko** See Kanematsu, Wataru; Ohji, Tatsuki
**Yamauchi, Yukihiko; Miyajima, Tatsuya; Ito, Shoji; Kubo, Katsushi**
*R*-curve behavior of silicon nitride ceramics under a cyclic loading condition at elevated temperatures.—73-17418; Evaluation of fatigue behavior of ceramics toughened by grain bridging mechanisms.—73-17308; Size effect on fatigue behavior in structural ceramics.—73-09670; Size effect on fatigue behavior in structural ceramics.—73-17431
**Yamauchi, Yukihiko; Ohji, Tatsuki; Kanematsu, Wataru; Ito, Shoji; Kubo, Katsushi**
Fatigue behavior of structural ceramics.—73-06416
**Yamauchi, Yukihito** See Ohji, Tatsuki
**Yamauchi, Yutaka** See Aratani, Shinichi
**Yamaya, K.** See Higuchi, Mikio
**Yamaya, K.; Yagi, T.; Okajima, Y.**
Transport properties near superconducting-nonsuperconducting phase boundary in $CaLaBaCu_3O_y$.—73-15660
**Yamaya, Susumu** See Mashimo, Tsutomu
**Yamaye, Makoto** See Takeuchi, Genki
**Yamazaki, Akira** See Kudou, Yoshihiko
**Yamazaki, Atsushi** See Kosuge, Katsunori
**Yamazaki, Hisashi** See Mashimo, Tsutomu
**Yamazaki, Masanobu** See Iwata, Hitoshi
**Yamazaki, Masanobu; Noguchi, Kazumi**
Bonding glass for assembling a magnetic head, and a magnetic head.—73-03906
**Yamazaki, Shiro** See Manabe, Katsuhide
**Yamazaki, Shunpei** See Hayashi, Shigenori; Ohtani, Hisashi
**Yamazaki, Shunpei; Kadono, Masaya**
Industrial diamond coating and method of manufacturing the same.—73-05304
**Yamazaki, Shunpei**
Carbon substance and its manufacturing method.—73-05288; ECR CVD method for forming BN films.—73-12464; Method of forming electronic devices utilizing diamond.—73-04522; Method of manufacturing a superconducting oxide pattern by laser sublimation.—73-01719; Method of shaping superconducting oxide material.—73-04854; Oxide superconducting device having uniform oxygen concentration.—73-01726; Plasma-enhanced CVD of oxide superconducting films by utilizing a magnetic field.—73-04864; Production of oxide superconducting films by multilayer deposition.—73-04870; Superconducting lead on integrated circuit.—73-12000
**Yamazaki, Y.** See Nakatsu, K.
**Yamazoe, N.** See Deshimaru, Yuichi; Teraoka, Y.
**Yamazoe, Noboru** See Mitani, Yoshio; Nagase, Katsumi
**Yamnova, N. A.** See Kalacheva, L. V.; Mikheeva, M. G.; Rastsvetaeva, R. K.
**Yamnova, N. A.; Kalacheva, L. V.; Pushcharovskii, D. Yu.; Kalinin, V. V.**
Crystal structure of taikanite, $Sr_3BaMn_2[Si_4O_{12}]O_2$.—73-16096
**Yamnova, N. A.; Pushcharovskii, D. Yu.; Khomyakov, A. P.**
Crystal structure of new natural fluorocarbonate $Na_3Ca(Mn,Ca)(CO_3)_3F$.—73-02205
**Yamnova, N. A.; Pushcharovskii, D. Yu.; Mernaf, T.; Kalinin, V. V.; Kalacheva, L. V.**
Crystal structure of new native Na, Ba, Mn fluorosilicate.—73-16086
**Yamnova, N. A.; Pushcharovskii, D. Yu.; Vyatkin, S. V.; Khomyakov, A. P.**
Crystal structure of new natural sulfatocarbonate, $Na_{25}BaTR_2(CO_3)_{11}(HCO_3)_4(SO_4)_2F_2Cl$.—73-16088
**Yamnova, N. A.; Rastsvetaeva, R. K.; Pushcharovskii, D. Yu.; Mernaf, T.; Mikheeva, M. G.; Khomyakov, A. P.**
Crystal structure of new ring Na, K silicate, $Na_{16}K_2[Si_{18}O_{36}(OH)_{18}]\cdot 38H_2O$.—73-16090
**Yamoto, Isao** See Kawano, Fusao
**Yampolskii, S. V.** See Grishin, A. M.
**Yan, Cheng-Yue**
Formula for carbonation speed of fly ash concrete.—73-06659
**Yan, F. Y.; Wood, F. J.; Mills, K. C.**
Use of optical basicity to estimate the viscosities of glasses and melts.—73-14305
**Yan, Ji-Hong** See Zu, Li-Ming
**Yan, Kai-Fang** See Liang, Qing-Shan
**Yan, Kai-Fang**
Rapid drying of non-load-bearing perforated bricks.—73-10688
**Yan, Li-Yung** See Jeng, Ming-Chang
**Yan, M. F.** See Huo, D. T. C.
**Yan, P.**
Hydration of Sr- and Ba-bearing sulfoaluminates in the presence of sulfates.—73-06666
**Yan, Peng-Xun; Yang, Si-Ze**
Corrosion behavior of various TiN thin films produced by ion mixing and PVD methods.—73-17218
**Yan, Q.-W.** See Lin, Q.
**Yan, R. H.** See Jeon, D. Y.
**Yan, Ruey-Fong** See Yuan, Dah-Wei
**Yan, S.** See Meletis, E. I.
**Yan, Shao-Lin** See Zeng, Wen-Sheng
**Yan, Y. F.** See Harris, J. M.
**Yan, Yong-Nian; Sines, George**
Biaxial compressive strength of silicon nitride: new data—micromechanics models.—73-06333
**Yan, Yong; Blanchin, Marie-Genevieve; Picard, C.; Gerdanian, P.**
Oxygen ordering in $YBa_2Cu_3O_x$ ($7\geq x\geq 6$) superconductors with equilibrium defect structure at room temperature.—73-04783
**Yanagawa, T.; Nakano, H.; Ishida, Yuzo; Sasaki, Y.**
Photodarkening mechanism in colored filter glasses.—73-00389
**Yanagawa, Teruaki** See Ogihara, Takashi
**Yanagibashi, Minoru** See Sato, Ichiya
**Yanagida, H.** See Nakahara, Hirohiko; Shimizu, S.
**Yanagida, Hiroaki** See Bae, Seung-Young; Bhalla, Amar S.; Fujitsu, Satoru; Hikita, Kazuyasu; Ishida, Atsumu; Ito, Hidetaka; Koumoto, Kunihito; Mori, Norihisa; Muto, Norio; Nakamura, Yoshinobu; Oh, Yong-Su; Ohara, Yoshinobu; Okuda, Koji; Pan, Guang; Seo, Won-Seon; Seo, Yong-Gyo; Takeda, Shunji; Ushio, Yoshijiro
**Yanagida, Hiroaki**
Inorganic intelligent materials.—73-06574; Intelligent materials—keys to technology friendly to environment and people.—73-06576
**Yanagida, S.** See Shiragami, Tsutomu
**Yanagisawa, K.; Nishioka, M.; Ioku, Koji; Yamasaki, N.**
Densification of silica gels by hydrothermal hot-pressing.—73-09059
**Yanagisawa, K.**
Formation of perovskite-type $Pb(Mg_{1/3}Nb_{2/3})O_3$ under hydrothermal conditions.—73-17136
**Yanagisawa, M.**
Adsorption of perfluoropolyethers on $SiO_2$ surfaces for thin-film magnetic disk overcoats.—73-06883
**Yanagisawa, Masaaki** See Hirose, Yoichi
**Yanagisawa, Masaaki; Sato, Isao; Kageyama, Sachiko; Kubo, Yukio**
Effect of undecomposed carbonate on the oxygen analysis of $YBa_2Cu_3O_{7-y}$.—73-01534
**Yanagisawa, Masaaki; Sato, Isao; Kageyama, Sachiko**
Rapid purity evaluation and impurity rare earth analysis of zirconium oxide powders by ICP-MS.—73-01926
**Yanagisawa, Masaaki; Sugiura, Isao; Hotta, Tadashi; Tsubaki, Junichiro; Hosono, Hideo**
Discoloration of alumina ceramics with ultraviolet radiation and elucidation of its mechanism.—73-16449; 73-16450
**Yanagisawa, Tsuneo** See Kuroda, Kazuyuki
**Yanagita, Hiroaki; Toratani, Hisayoshi; Kasuga, Tomoko**
Faraday rotation glass.—73-00431
**Yanai, Tomohiro** See Sasaki, Gen; Yamakawa, Akira
**Yanai, Tomohiro; Ishizaki, Kozo**
Mechanical properties of $Si_3N_4$ ceramics prepared from carbon-coated powders.—73-09641; 73-17391
**Yanase, Akira** See Kubo, Yasunori
**Yanase, T.** See Suzuki, K.
**Yanata, Kohei; Suzuki, Kyoichi; Oka, Yasuo**
Magnetooptical properties of $Cd_{1-x}Mn_xSe$ microcrystallites in $SiO_2$ glass prepared by rf sputtering.—73-02641

**Yanchev, I. Y.** See Lilov, S. K.

**Yanevich, G. N.** See Balankin, A. S.

**Yang, Ai-Ling** See Zhang, Xiu-Miao

**Yang, B.** See Zhang, Fang-Qing

**Yang, B.-C.** See Cui, C.-G.

**Yang, Bao-Cheng; Lin, Yuan-Qi; Ge, Liang**
Normal and polarized absorption spectra of the Cr:$Mg_2SiO_4$ crystal.—73-05441

**Yang, Bei-Fang** See Zhang, Dao-Yuan

**Yang, Bei-Fang; Deng, Hua; Wang, Xiao-Yang**
Effect of heat treatment conditions on $T_c$ and phase structure of 110-K superconductor in BiPbSrCaCuO system.—73-11732

**Yang, C.-Y.** See Ajimine, Eric M.

**Yang, Chang-Xi** See Ye, Pei-Xian

**Yang, Chang-Xi; Lian, Ying-Wu; Ye, Pei-Xian; Guan, Qing-Cai; Wang, Ji-Yang**
Further study of dc space charge field in [KTN] $KTa_{1-x}Nb_xO_3$:Cu crystals.—73-08874

**Yang, Cheng-Fu; Wu, Long; Wu, Tien-Shou**
Effect of CuO on the sintering and dielectric characteristics of $(Ba_{1-x}Sr_x)(Ti_{0.9}Zr_{0.1})O_3$.—73-05757

**Yang, Chih-Kai; Dy, K. S.**
Band structure of ZnO using the LMTO method.—73-16036

**Yang, Chuan** See Wu, Da-Xin

**Yang, Dan-Sheng; Da, Yuan-Dong; Liu, Rang-Jiao**
Growth of $BaZrO_3$ epitaxial seed layer by magnetron sputtering.—73-13080

**Yang, Doo-Young; Kim, Chang-Eun; Hahn, Soo-Kap**
Gettering in Czochralski-grown single-crystal silicon wafer.—73-04345

**Yang, E. S.** See Chow, Julie L.; Gennser, Ulf; Ma, Q. Y.

**Yang, En-Lin**
Historical development of greenish porcelain (qingci).—73-00008

**Yang, F.-L.; Chang, Y.-S.; Li, C.-S.**
Formation and properties of copper film on Tl-(Pb, Bi)-Sr-Ca-Cu-O superconductor by electrodeposition from aqueous solution.—73-01555

**Yang, F.-S.** See Tsaur, S.-S.

**Yang, Fang; Henderson, B.; O'Donnell, K. P.**
Optical spectra of ultrathin II-VI quantum wells.—73-15074

**Yang, G. L.** See Luo, H.

**Yang, G.** See Zhao, Y.

**Yang, Guan-Jun; Zhang, Tai-Xian; Deng, Ju; Wei, Hai-Rong**
Development of titanium aluminide composites.—73-10216

**Yang, Gwon-Seung** See Lee, Jong-Kook

**Yang, H. S.** See Xiao, Hong

**Yang, H.-C.** See Wang, L.-M.

**Yang, H.-G.** See Zhu, Yong

**Yang, H.; McCormick, P. G.**
Synthesis of titanium oxynitride by mechanical milling.—73-13312

**Yang, Hang-Rong** See Dong, Liang-Jun

**Yang, Hong-Chuan** See Cai, Chuan-Bing

**Yang, Hong-Shun; Zhan, Xiao-Nong; Zu, Chang-Fei**
Effects of substitution of Fe for Cu in $La_{1.85}Sr_{0.15}CuO_{4-\delta}$ polycrystalline samples.—73-08048

**Yang, Hong-Shun; Zheng, Ping; Hou, Bi-Hui**
Effects of F doping in $YBa_2Cu_3O_{7-\delta}$ polycrystalline samples.—73-08044

**Yang, Hui** See Ge, Man-Zhen

**Yang, Hung-Duen** See Meen, Teen-Hang

**Yang, J. C.; Lu, Y. C.; Sass, S. L.**
Influence of crystallography and oxide and metallic types on the structure and properties of metal-ceramic interfaces.—73-13845

**Yang, J. Y.** See Mackin, T. J.

**Yang, J.-L.** See Zhang, Xiao-Dong

**Yang, J.-M.** See Chen, S. T. J.; Thayer, Robert B.; Zaldivar, R. J.

**Yang, J.-S.** See Cho, H.-S.

**Yang, Jing; Ohgishi, Sakichi; Ono, Hironobu**
Chemical and pore change of ALC [autoclaved lightweight concrete] under carbonation accelerated test.—73-09850

**Yang, Joon-Hwan** See Eom, Tae-Hyoung; Han, In-Sub

**Yang, K.** See Zhang, X.-C.

**Yang, K.; Mirabelli, E.; Wu, Z.-C.; Schowalter, L. J.**
In situ laser light scattering for monitoring III-V semiconductor film growth by molecular beam epitaxy.—73-11265

**Yang, K.; Schowalter, L. J.; Laurich, B. K.; Campbell, I. H.; Smith, D. L.**
Molecular beam epitaxy on exact and vicinal GaAs($\bar{1}\bar{1}\bar{1}$).—73-11337

**Yang, L.** See Mars, D. E.

**Yang, L.-J.** See Wu, Xue-Quan

**Yang, Li** See Mao, Zhi-Qiang

**Yang, Li-Qun** See Xu, Xian-Yu

**Yang, Li-Wu** See Chin, Albert

**Yang, Lina; Dorsinville, R.; Alfano, R. R.**
Optical nonlinearity of iron ions in glass matrices.—73-10464

**Yang, Ming-Jey** See Thompson, Philip E.

**Yang, Ming; Stevens, R.**
Hot-pressing kinetics of alumina composites reinforced with SiC whiskers.—73-02852

**Yang, N.-P.** See Zeng, You-Yi

**Yang, Nan-Ru** See Feng, Xiu-Ping; Jiang, W.; Zeng, Yan-Wei

**Yang, P.** See Xu, Z.

**Yang, Pei-Chun; Zhu, Wei; Glass, Jeffrey T.**
Method for fabricating diamond films on nondiamond substrates and related structures.—73-12481

**Yang, Q.** See Li, P.

**Yang, Qing** See Gao, Bao-Qin; Zhu, Yi-Hua

**Yang, Ralph T.** See Baksh, M. Safdar A.

**Yang, S. J.** See Yeh, T. S.

**Yang, S.** See Qian, Y.-T.

**Yang, S.-Y.; Abelson, J. R.**
Amorphous silicon alloys on c-Si: influence of substrate cleaning and ion bombardment on film adhesion and microstructure.—73-09016

**Yang, S.-Z.** See Zhang, Hui

**Yang, Sen-Zu** See Sun, Zhi-Jian

**Yang, Shen-Yan; Huang, Jin-Chang**
Analytical methods for high-temperature superconducting materials.—73-11686

**Yang, Sheng** See Wu, Nan-Chung

**Yang, Sheng-Jenn** See Yu, Chang-Feng

**Yang, Si-Ze** See Yan, Peng-Xun

**Yang, T.-J.** See Chen, K.

**Yang, W.-H.; Huber, T. E.; Lubin, J. A.; Walrafen, G. E.; Huber, C. A.**
Raman and X-ray scattering from dense semiconductor-dielectric nanocomposites.—73-05463

**Yang, Wan-Ming; Wang, Jing-Rong; Li, Jian-Ping; Wang, Tian-Cheng; Luo, Chang-Xun; Xin, Jin-Rong**
Behavior of ac susceptibility of YBCO and BSCCO superconductors in dc magnetic fields.—73-11693

**Yang, Wu-Hua** See Sridhar, Narayanaswamy

**Yang, X.** See Cao, R.; Wang, H. F.; Wu, J.

**Yang, X.-Q.; Ruckman, M. W.; Skotheim, T. A.; Denboer, M.; Zheng, Y.; Badzian, A. R.**
X-ray absorption study of diamond films grown by chemical vapor deposition.—73-02540

**Yang, X.; Cao, R.; Terry, J.; Pianetta, P.**
Si(100) and Ge(100) core-level shifts: a reevaluation.—73-07797

**Yang, X.; Rahaman, M. N.**
SiC-platelet-reinforced $Al_2O_3$ composites by free sintering of coated powders.—73-16983

**Yang, X.; Young, R. J.**
Microstructure of a Nicalon/SiC composite and fiber deformation in the composites.—73-03170

**Yang, Xiao-Ming; Chung, D. D. L.**
Latex-modified cement mortar reinforced by short carbon fibers.—73-10027

**Yang, Xing-Hua; Xu, Pei-Cang; Li, Guang-Hui**
Glassy phase in ZAS refractories [studied] with Raman probe.—73-14592

**Yang, Y. H.; Feng, G. F.; Katiyar, M.; Maley, N.; Abelson, J. R.**
Ellipsometry and X-ray photoelectron spectroscopy study of $SnO_2$ reduction at the interface with sputtered a-Si:H.—73-08613

**Yang, Y. X.** See Cable, M.

**Yang, Y. X.; Howson, M. A.; Milne, Steven J.**
Solution-based processing of $YBa_2Cu_3O_x$ superconducting thin films.—73-11901

**Yang, Y.-C.** See Gao, Q.-J.; Zhang, Xiao-Dong

**Yang, Y.-H.** See Zhang, Fang-Qing

**Yang, Y.-N.** See Duszak, R.

**Yang, Yang** See Yoda, Akihiko

**Yang, Yi-Feng; Lee, Ji-Ung; Nordman, James E.**
Effects of target presputtering on stoichiometry of sputtered Bi-Sr-Ca-Cu-O thin films.—73-09110

**Yang, Yu-Rong** See Huang, Wen-Xi

**Yang, Yu-Rong; Huang, Wen-Xi; Qian, Guang-Ren**
Influence of $SO_3$ in $C_2A_xF_{1-x}$-$C_{11}A_7$-$CaF_2$-$C_2S$ system on formation of $C_{11}A_7CaF_2$.—73-10012

**Yang, Yu-Xiang; Chen, Rong-San; Dai, An-Bang**
Adsorption properties of local diatomites.—73-12253

**Yang, Yu; Li, Guo-Zhen; Cao, Yan**
Preparation and transport properties of superconducting BPSCCO thin films.—73-15590

**Yang, Yuemei L.; Struck, Lisa M.; Sutcu, Leyla F.; Develyn, M. P.**
Chemistry of hydrogen on diamond(100).—73-05369

**Yang, Z.** See Harris, K. A.; Yin, S.

**Yang, Z.-H.** See Zhong, Wei-Lie

**Yang, Zhan-Ming; Cai, Xiu-Ming**
Research on low-temperature and fast-firing sanitary ware of $K_2O$-$Na_2O$-$Al_2O_3$-$SiO_2$.—73-14666

**Yang, Zheng-Fang; Wang, Shu-Qiang; Tan, Jia-Qi**
High-temperature stability of SiC$_w$/ZTM composite.—73-06309

**Yang, Zhi-Jun; Yao, Kai-Yi**
Effects of several kinds of anisotropy on the coercivity behaviors of iron oxides.—73-04608

**Yang, Zhi-Xiong** See Zeng, Shao-Xian

**Yanka, R. W.** See Gold, Jeffrey S.; Harris, K. A.; Myers, T. H.

**Yanka, R. W.; Harris, K. A.; Mohnkern, L. M.; Reisinger, A. R.; Myers, T. H.; Otsuka, N.**
Band gap uniformity and layer stability of HgTe-CdTe superlattices grown by photon-assisted molecular beam epitaxy.—73-11080

**Yannacopoulos, S.** See Oguocha, I. N. A.

**Yannoni, Costantino S.** See Johnson, Robert D.

**Yano, Mitsuaki; Okuizumi, Masaru; Iwai, Yoshio; Inoue, Masataka**
Molecular beam epitaxial growth and optical analysis of InAs/AlSb strained-layer superlattices.—73-11324

**Yano, Morotake** See Nishikawa, Takashi

**Yano, Shinsuke** See Abe, Masahiro; Sakai, Hiroaki

**Yano, Shinsuke; Hirai, Takami**
Preparation process of high-permittivity material.—73-01063

**Yano, Shinsuke; Yamaguchi, Hirofumi; Hirai, Takami**
Dielectric ceramic body including $TiO_2$ dispersion in crystallized cordierite matrix phase, method of producing the same, and circuit board using the same.—73-04199; Distributed constant circuit board using ceramic substrate material.—73-01050

**Yano, T.** See Hayashi, Shigeo; Okada, Kiyoshi; Suematsu, H.

**Yano, Tetsuji** See Takada, Toshimi

**Yano, Toyohiko** See Kato, Hideo; Kato, Satoshi; Lin, Bor-Wen; Yasuda, Kouichi

**Yano, Toyohiko; Kiyohara, Masakatsu; Otsuka, Nozomu**
Thermal and mechanical properties of aluminum titanate–mullite composites: III, Effects of aluminum titanate particle size.—73-06116; 73-13322

**Yano, Yoshihiko** See Daitoh, Yoshihiro; Yoneda, Yasuhiro

**Yano, Yoshihiko; Morooka, Hisao**
Fabrication of thin-film varistors using sputtering technique.—73-14913

**Yano, Yoshihiko; Shirakawa, Yukihiko; Morooka, Hisao**
Electrical properties of ZnO/PrCo oxide multilayered composites.—73-04306; 73-11183

**Yanovskaya, M. I.; Turevskaya, E. P.; Kessler, V. G.; Obvintseva, I. E.; Turova, N. Ya.**
Application of metal alkoxides in the synthesis of oxides.—73-11554

**Yanovskii, V. K.** See Aleksandrov, V. V.

**Yanson, I. K.; Fisun, V. V.; Rybalchenko, L. F.**
Influence of electrical and magnetic fields on the excess current in HTSC–normal metal point contacts.—73-08105

**Yanush, O. V.** See Kabanov, V. O.; Karapetyan, G. O.

**Yanush, O. V.; Mukhitdinova, I. A.; Valov, P. M.; Sukhov, D. A.**
Oxide glass structure components by molecular spectroscopy data.—73-14063

**Yanushkevich, K. I.** See Petrakovskii, G. A.

**Yanushkevich, T. M.** See Blankova, E. B.

**Yao, D.** See Dauskardt, R. H.

**Yao, Da-Ping; Shang, Jian-Ku**
Anomalous temperature dependence of cyclic fatigue-crack growth in a silicon carbide matrix composite.—73-17238; Fluid-assisted fatigue crack growth in $Si_3N_4$.—73-17322

**Yao, Guo-Liang** See Zhou, Hong-Fu

**Yao, Hiroshi** See Sekikawa, Taro

**Yao, J.** See Huang, M.

**Yao, Jia-Liang; Huang, Bai-Yu**
Effects of complex additives on hydration of fly ash.—73-09103; Non-steam-cured fly ash products.—73-10069

**Yao, Kai-Yi** See Yang, Zhi-Jun

**Yao, Li** See Xu, Li-Liang

**Yao, Shu-Dian** See Su, Fen-Wei

**Yao, Shu-Gang; Xing, An-Shi; Shi, Ying-Ming**
Brick made from iron ore tails without pressing, firing, and steam curing.—73-06629

**Yao, Takafumi** See Shan, W.; Zhu, Zi-Qiang

**Yao, Takeshi** See Tanahashi, Masami

**Yao, Takeshi; Kokubo, Tadashi**
Applications of ion-implanted glasses for biomedical uses.—73-03708; Ceramics for cancer treatments.—73-03710

**Yao, Takeshi; Maki, Jun; Jinno, Hiroshi**
Decomposition of iron spinel under low oxygen partial pressure.—73-02226

**Yao, X. Y.** See MacGill, R. A.

**Yao, Xi** See Liu, Don-Hang; Su, Shi-Mei; Wang, Xiao-Li

**Yao, Xi-Xian** See Chen, Wu-Ming

**Yao, Xian** See Rai, G.

**Yao, Xian; Rai, G.**
Synthesis of polycrystalline cubic boron nitride.—73-16020

**Yao, Xing-Wen; Gao, Shi-Jian**
Face cracking of glazed tiles.—73-10844

**Yao, Y.-D.** See Kuo, P.-C.

**Yao, Yu-Shu** See Wu, Bing-Qing

**Yao, Zhen** See Mao, Zhi-Qiang

**Yao, Zheng**
Development of low-temperature glaze for high-alumina porcelain of spark plugs.—73-16705

**Yao, Zhi-Cai; Wang, Wen-Tang; Miao, Jin-Shan**
Cordierite–aluminum titanate honeycomb ceramics.—73-08508

**Yap, D.** See Lui, M.

**Yarar, B.** See Lee, Y. J.

**Yarbrough, W. A.** See Dubray, J. J.

**Yarbrough, W. A.**
Current research problems and opportunities in the vapor phase synthesis of diamond and cubic boron nitride.—73-02759

**Yaremov, P. S.; Il'in, V. G.; Sandul, G. V.**
Effect of chlorides and fluorides on leaching of basalt fibers. Features of formation of porous structure in hydrothermal conditions.—73-16455; Features of leaching and sorption-structural properties of basalt fibers.—73-16497

**Yarikhin, E. B.** See Kozhurkov, V. N.

**Yarmakovskii, V. N.** See Serykh, R. L.

**Yarovets, V. I.** See Gladyshevskii, E. I.

**Yarovskii, D. I.** See Tseitlin, S. Yu.

**Yartys, V. A.; Mitrokhin, S. V.; Verbetskii, V. N.**
Crystal structure of $TiFe_{1.16}V_{0.84}D_{1.9}$.—73-12564

**Yartys, V. A.; Pavlenko, V. V.; Khidirov, I.**
Neutronographic investigation of the deuteride $Tb_3Ni_6Al_2D_{6.5}$.—73-12637

**Yarushina, T. V.** See Bocharov, L. D.

**Yarzhembitskii, V. B.** See Gusev, O. K.

**Yarzhou, L.** See Masse, G.

**Yasaka, Hiroshi; Iga, Ryuzo; Noguchi, Yoshio; Yoshikuni, Y.**
Pure effects of strain in strained-layer multiple quantum well lasers.—73-15128

**Yashchishin, I. N.** See Petrovskii, G. T.

**Yashchishin, I. N.; Vakhula, Ya. I.; Novosad, P. V.**
Surface crystallization of glass in an atmosphere of carbon dioxide.—73-14117

**Yashiki, Tetsuo** See Ikegaya, Akihiko

**Yashima, Masatomo** See Cho, Woo-Seok; Hayakawa, Motozo; Kakihana, Masato; Kim, Dae-Joon

**Yashima, Masatomo; Arashi, Haruo; Kakihana, Masato; Yoshimura, Masahiro**
Raman scattering study of cubic-to-tetragonal phase transition in $Zr_{1-x}Ce_xO_2$ solid solution.—73-08717; Tetragonal↔monoclinic phase transition temperature of rare-earth-doped zirconia prepared by arc melting.—73-08774

**Yashima, Masatomo; Ishizawa, Nobuo; Noma, Tatsuo; Yoshimura, Masahiro**
Tetragonal-to-monoclinic phase transition temperature of rare-earth-doped zirconia prepared by arc melting.—73-16366

**Yashima, Masatomo; Morimoto, Kenji; Ishizawa, Nobuo; Yoshimura, Masahiro**
Diffusionless tetragonal–cubic transformation temperature in zirconia–ceria solid solutions.—73-02237

**Yashima, Masatomo; Ohtake, Katsuya; Arashi, Haruo; Kakihana, Masato; Yoshimura, Masahiro**
Cubic-tetragonal phase boundary in $Zr_{1-x}Y_xO_{2-x/2}$ solid solutions [determined] by Raman spectroscopy.—73-12569
**Yashima, Masatomo; Ohtake, Katsuya; Kakihana, Masato; Yoshimura, Masahiro**
Synthesis of metastable tetragonal (*t'*) zirconia-ceria solid solutions by the polymerized complex method.—73-17040
**Yashima, Masatomo; Takashina, Hiroyuki; Kakihana, Masato; Yoshimura, Masahiro**
Low-temperature phase equilibria by the flux method and the metastable-stable phase diagram in the $ZrO_2$-$CeO_2$ system.—73-12623
**Yashin, A. E.** See Semikin, E. I.
**Yashina, N. A.** See Vasil'ev, V. I.
**Yasietis, V.** See Babeanskas, E.
**Yaskolko, E. V.** See Khabibullaev, P. K.
**Yaskov, D. A.** See Andreeva, E. V.
**Yasonov, I. V.** See Genkina, E. A.
**Yassievich, L. N.** See Bresler, M. S.
**Yastrebov, S. G.** See Ivanov-Omskii, V. I.
**Yasu, Shuji** See Tanaka, Saburo
**Yasuda P., T.** See Bjorkman, C. H.
**Yasuda, Eiichi** See Akatsu, Takashi; Bao, Qin-Li; Kimura, Shiushichi; Ogasawara, Toshio; Ohnishi, Kazumasa; Tanabe, Yasuhiro; Tsuru, Yasuhiko
**Yasuda, Eiichi; Bao, Qin-Li; Niihara, Koichi**
Effects of fine SiC particles on the creep of MgO at high temperatures.—73-06395; 73-13517
**Yasuda, Eiichi**
Science and technology of composites—fundamental theory on the strength of reinforced materials by long fibers.—73-17424
**Yasuda, H.** See Mori, H.
**Yasuda, Isamu** See Mizusaki, Junichiro
**Yasuda, Kouichi** See Igsawa, Shigenari; Kimura, Shiushichi; Matsuo, Yohtaro; Ohsawa, Shigenari; Suzuki, Yoshitaka; Tsuru, Yasuhiko
**Yasuda, Kouichi; Matsuo, Yohtaro; Kimura, Shiushichi; Mori, T.**
Analysis of dependence of volume fraction and micropore shape on fracture toughness by the equivalent inclusion method.—73-03236
**Yasuda, Kouichi; Matsuo, Yohtaro; Kimura, Shiushichi**
Analysis of effects of elastic inhomogeneity and residual thermal stress on fracture toughness by the equivalent inclusion method.—73-06323; Effects of elastic inhomogeneity and residual thermal stress on fracture toughness [analyzed] by the equivalent inclusion method.—73-13515
**Yasuda, Kouichi; Ohsawa, Shigenari; Matsuo, Yohtaro; Kimura, Shiushichi**
Evaluation of the actual fracture energy of the carbon fiber-reinforced silicon nitride composite by the Kr-BET adsorption technique.—73-13527; 73-06409
**Yasuda, Kouichi; Ohsawa, Shigenari; Matsuo, Yohtaro**
Influence of microcracking on fracture toughness of $TiO_2$ sintered body.—73-13552
**Yasuda, Kouichi; Tatami, Junichi; Asada, Kazutoshi; Matsuo, Yohtaro; Kimura, Shiushichi**
Influence of crack propagation path on the fracture toughness of polycrystalline $Al_2O_3$.—73-17356; Influence of grain size and secondary phase on the fracture toughness of sintered MgO bodies: I, Addition of $Al_2O_3$.—73-03317
**Yasuda, Kouichi; Tsuru, Yasuhiko; Kanemichi, Yukihiro; Matsuo, Yohtaro; Kimura, Shiushichi**
Influence of grain size and secondary phase on the fracture toughness of sintered MgO bodies: I, Addition of $Al_2O_3$.—73-13551
**Yasuda, Kouichi; Tsuru, Yasuhiko; Matsuo, Yohtaro; Kimura, Shiushichi; Yano, Toyohiko**
Influence of grain size and secondary phase on the fracture toughness of sintered MgO bodies: III, Addition of CoO.—73-17358
**Yasuda, Shunichi** See Isai, Masaaki
**Yasuda, T.** See Bjorkman, C. H.; Lucovsky, G.; Ma, Y.; Tan, I.-H.
**Yasuda, T.; Ma, Y.; Chen, Y. L.; Lucovsky, G.; Maher, D. M.**
Effects of predeposition HF/$NH_4$F treatments on the electrical properties of $SiO_2$/Si structures formed by low-temperature plasma-assisted oxidation and deposition processes.—73-05551
**Yasuda, T.; Ma, Y.; Habermehl, S.; Lucovsky, G.**
Low-temperature formation of device-quality $SiO_2$/Si interfaces by a two-step plasma-assisted oxidation/deposition process.—73-09194
**Yasue, Tamotsu** See Kojima, Yoshiyuki
**Yasue, Tamotsu; Asano, Gota; Kojima, Yoshiyuki; Arai, Yasuo**
Synthesis of calcium-deficient tobermorite under atmospheric pressure and its $CO_2$ adsorption ability.—73-17034
**Yasue, Tamotsu; Kanai, Kensuke; Kojima, Yoshiyuki; Arai, Yasuo**
Synthesis and characteristics of fibrous $3CaO{\cdot}Al_2O_3{\cdot}3CaCO_3{\cdot}32H_2O$.—73-13291; Synthesis and characteristics of fibrous $3CaO{\cdot}Al_2O_3{\cdot}32CaCO_3{\cdot}3H_2O$.—73-03036
**Yasue, Tamotsu; Kojima, Yoshiyuki; Kishimoto, Yukinao**
Preparation of α-gypsum hemihydrate and control of its crystal shape under atmospheric pressure.—73-10091
**Yasue, Tamotsu; Shioya, Yoshihiro; Arai, Yasuo**
Synthesis and characteristics of $Al^{3+}$-substituted tobermorite by alkoxide method.—73-03035
**Yasui, Hideo** See Yamaguchi, Katsuhiko
**Yasui, Itaru** See Nanba, T.; Ryu, Bong-Gi; Sakamura, Hiroyasu
**Yasui, Itaru; Utsuno, Futoshi**
Designing glass material systems using a database.—73-03389
**Yasui, Itaru**
Advances in basic science of traditional glasses.—73-04898
**Yasuike, Yoshiyuki** See Ikeda, Yasuhira
**Yasukawa, Akemi** See Ishikawa, Tatsuo
**Yasumori, Atsuo** See Sekiya, Takao; Takada, Toshimi
**Yasumoto, Takaaki; Yamakawa, Koji; Iwase, Nobuo; Shinosawa, Noriko**
Reaction between AlN and metal thin films during high-temperature annealing.—73-13889
**Yasumura, N.** See Goto, Seishi
**Yasunaga, Toru** See Honda, Kinya
**Yasuoka, Hiroshi** See Berastegui, Pedro; Kakihana, Masato; Makaki, Hiromasa; Mazaki, Hiromasa; Tsuda, Toshinobu
**Yasuoka, Hiroshi; Mazaki, Hiromasa; Tochihara, S.; Kakihana, Masato; Yoshimura, Masahiro**
Critical currents of ceramic superconductors induced by pulsed magnetic fields.—73-11713
**Yasuoka, K.** See Machida, M.
**Yasuoka, M.** See Kumazawa, Takeshi
**Yasuoka, Masaki** See Nagaoka, Takaaki; Nakamura, Kazuo
**Yasuoka, Masaki** See Proverbio, Edoardo
**Yasuoka, Masaki; Brito, Manuel E.; Hirao, Kiyoshi; Kanzaki, Shuzo**
Effect of dispersed particle size on mechanical properties of alumina/nonoxide composites.—73-09574; 73-17283
**Yasuoka, Norio** See Komura, Osamu
**Yasutake, K.** See Chen, Z.
**Yasutomi, Yoshiyuki** See Kikuchi, Shigeru; Sakai, Junji
**Yasutomi, Yoshiyuki; Miyoshi, Tadahiko; Sobue, Masahisa; Yamashita, Nobuyuki; Nagase, Hiroshi; Tanno, Kiyohiko**
Conductive material and process for preparing the same.—73-04195
**Yasutomi, Yoshiyuki; Sobue, Masahisa; Shinozaki, S.**
Sintering property of green compacts of Si and TiC mixed powders in nitrogen.—73-03013
**Yasuyoshi, Akio** See Kadono, Kohei
**Yates, H. M.** See Armitage, D. N.
**Yates, J. R.** See Greaves, I.
**Yates, J. T., Jr.** See Chen, P. G.; Smentkowski, V. S.
**Yatlinko, I. I.** See Kazakova, L. P.
**Yato, Hisanari** See Hashimoto, Noboru
**Yatsenko, E. A.** See Zubekhin, A. P.
**Yatsuda, Hisao** See Yamaguchi, Katsuhiko
**Yau, Hon-Fai** See Chang, Chi-Ching
**Yau, Hon-Fai; Tong, Yuh-Ping; Chang, Chi-Ching; Wang, N.-C.**
Induced self-pumping phase conjugation in $BaTiO_3$.—73-08886
**Yau, Wai-Fan** See Werner, P.
**Yavich, B. S.** See Sobolev, M. M.
**Yavid, V. Yu.** See Petrov, V. V.
**Yavuz, Bulent O.; Larkin, Matthew P.; Voss, Kenneth E.**
Thermal-shock- and creep-resistant porous mullite articles prepared from topaz and process for manufacture.—73-05247
**Yawale, S. P.; Pakade, S. V.**
Dc conductivity and hopping mechanism in $Bi_2O_3$-$B_2O_3$ glasses.—73-10427
**Yazaki, Eiki** See Hashimoto, Shin
**Yazawa, Junji** See Ryoke, Katsumi
**Yazawa, Tetsuo; Miyake, Akiko; Tanaka, Hiroshi**
Preparation of porous $SiO_2$-$ZrO_2$ glass from sol containing polyethylene glycol [PEG].—73-00685
**Yazawa, Tetsuo; Tanaka, Hiroshi; Nakamichi, Hiroshi; Eguchi, K.; Yamaguchi, Osamu**
Preparation of heat- and water-vapor-resistant composite porous glass membrane coated on porous alumina tubing by sol-gel method.—73-02951
**Yazawa, Tetsuya; Tanaka, Hiroshi; Eguchi, K.; Yokoyama, S.; Arai, T.**
Novel porous glass with chemical resistance and good shaping ability prepared from borosilicate glass containing ZnO.—73-00672
**Yazawa, Tetsuya**
High-performance liquid chromatography packing materials made of porous glass.—73-03733
**Yazawa, Yasunori**
Middle- and small-scale electric glass-melting furnaces.—73-05121
**Yazeva, T. V.** See Aliev, G. P.; Kokhanovskii, S. I.
**Yazu, Shuji** See Fujita, Nobuhiko; Harada, Keizo; Itozaki, Hideo; Sumiya, Hitoshi; Tanaka, Saburo; Yamamoto, Susumu; Yamauchi, Kazuhisa
**Ye, C.** See Baude, P. F.
**Ye, Da-Nian** See Zhang, Zhen-Yu
**Ye, F.; Moss, D.; Simmons, J. G.; Jessup, P. E.; Landheer, D.; Champion, H. G.**
Four-channel ridge waveguide quantum well wavelength division demultiplexing detector and its optimization.—73-07538
**Ye, G.** See Li, Z.
**Ye, Guo-Tian** See Li, Zai-Geng
**Ye, H.-Q.** See Ning, X.-G.; Wang, Y.-G.
**Ye, Jin-Hua** See Kumakura, Hiroaki
**Ye, M.** See Diko, Pave
**Ye, M.; Jones, D. E.; Wigen, P. E.**
Controlling chaos in a thin circular yttrium iron garnet film.—73-04594
**Ye, Pei-Xian** See Yang, Chang-Xi
**Ye, Pei-Xian; Yang, Chang-Xi; Lian, Ying-Wu; Wang, Da-Di; Guan, Qing-Cai; Wang, Ji-Yang**
Photorefractive diffraction dynamic in paraelectric $KTa_{1-x}Nb_xO_3$ crystals.—73-08952
**Ye, Pei; Hemann, John H.; Sandifer, Jerry B.**
Failure statistics of an oxide-oxide ceramic composite.—73-17317
**Ye, Qing; Kong, Jian-Min; Liu, Bau-Yuan**
Effect of fluorite-gypsum composite mineralizer on the microstructure and properties of portland cement clinker phase.—73-09905
**Ye, Tian-Shui** See Guo, Heng-Qun
**Ye, Z.-Z.; Liu, Ya-Ping; Zhou, Zhen-Hong; Reif, R.**
Structural characterization of low-temperature epi-silicon grown on {100} and {111}Si substrates using ultrahigh resolution cross-sectional TEM.—73-06287
**Yeager, Glenn J.** See Negas, Taki
**Yeckley, Russell L.** See Ault, Neil N.; Ferber, Mattison K.; Tiegs, Terry N.
**Yee, Tin-B.**
Superconductive device and method for demonstrating autorotation.—73-04883
**Yeganeh, M. S.** See Qi, J.
**Yeganeh, M. S.; Qi, J.; Yodh, A. G.; Tamargo, M. C.**
Interface quantum well states observed by three-wave mixing in ZnSe/GaAs heterostructures.—73-07613
**Yeh, Byung-Hahn** See Suh, Im-Choon
**Yeh, M.-H.; Liu, Y.-C.; Liu, K.-S.; Lin, I-Nan; Lee, J. Y. M.; Cheng, Hsiu-Feng**
Electrical characteristics of barium titanate films prepared by laser ablation.—73-07885
**Yeh, T. S.; Hu, L. J.; Tu, S. L.; Yang, S. J.; Hsu, S.-E.; Hsu, K.**
Growth and characterization of $Bi_{12}(Si_{1-x}Ti_x)O_{20}$ mixed crystals.—73-05572
**Yehia, I.** See Paulus, E. F.
**Yellen, S. L.; Shepard, A. H.; Dalby, R. J.; Baumann, J. A.; Serreze, H. B.; Guido, T. S.**
Reliability of GaAs-based semiconductor diode lasers: 0.6–1.1 μm.—73-15146
**Yellepeddi, Ravi S.** See Adamson, Barry W.
**Yelon, A.** See Lecours, A.; Tao, Y.
**Yelon, W. B.** See Malik, S. K.
**Yen, A.** See Klein, J. D.
**Yen, Ann-Jeng; Lee, Yih-Shing; Tseng, Tseung-Yuen**
Electrical properties of multilayer-chip ZnO varistors in a moist-air environment.—73-14871
**Yen, H.; Kvam, E. P.; Bashir, R.; Neudeck, G. W.**
Microstructural examination of extended crystal defects in silicon selective epitaxial growth [SEG].—73-17155
**Yen, Sheng** See Wu, Xue-Quan
**Yen, T.-S.** See Shi, J.-L.; Sun, W.-Y.; Wang, P.-L.
**Yen, T.-S.; Sun, W.-Y.**
Phase relationship studies of silicon nitride system—a key to materials design.—73-05451
**Yen, Tsung-Fu; Chang, Yen-Hwei**
Scattering-loss mechanism in $CaF_2$-film-assisted diffusion bonding of $MgF_2$ ceramics.—73-08966
**Yen, W. M.** See Eilers, H.
**Yeo, Yung-Kee** See Colon, Jose E.; Elsaesser, David W.
**Yeom, Sun-Min; Kim, Kwang-Ho; Shin, Dong-Won**
Preparation and characterization of fine $TiO_2$ powders by vapor-phase hydrolysis of $TiCl_4$.—73-02931
**Yeom, T.-H.; Chang, Y.-M.; Rudowicz, C.; Choh, S.-H.**
$Cr^{3+}$ centers in $LiNbO_3$: experimental and theoretical investigation of spin Hamiltonian parameters.—73-16071
**Yeomans, J. A.** See Powell, K. L.; Sun, X.
**Yeremenko, V. N.; Velikanova, T. Ya.; Gordiichuk, O. V.**
Carbides of Rare-earth Metals: Phase Diagrams of R.E.M.-C Systems.—73-13650
**Yerkess, J.** See Jones, D. W.
**Yeshuran, Y.** See Klein, L.
**Yethiraj, M.** See Mook, H. A.
**Yethiraj, M.; Mook, H. A.; Wignall, G. D.; Cubitt, R.; Forgan, E. M.; Lee, S. L.**
Anisotropic vortex lattice in $YBa_2Cu_3O_7$.—73-15387
**Yethiraj, M.; Mook, H. A.; Wignall, G. D.; Cubitt, R.; Forgan, E. M.; Paul, D. M.**
Small-angle neutron scattering study of flux line lattices in twinned $YBa_2Cu_3O_7$.—73-15623
**Yetter, Wilson** See Saha, Bijay S.
**Yeung, Yau-Yuen** See Rudowicz, C.
**Yi, Cao** See Bo, Bian
**Yi, H.-R.; Wang, Rui-Lan; Li, Jing-Wei**
Growth of $GdBa_2Cu_3O_7$ superconducting thin films on (100)$SrTiO_3$ single-crystal substrates at various substrate temperatures.—73-11777; Growth of $GdBa_2Cu_3O_7$ superconducting thin films on nonlattice-matched MgO substrate.—73-11778
**Yi, J.** See Jia, Q. X.
**Yi, Jae-Yel; Bernholc, J.**
Atomic structure of Al-GaAs(110) interfaces.—73-08554
**Yi, S.** See Palsule, C.
**Yi, Xin-Jian** See Hao, Jian-Hua
**Yi, Y.** See Welch, E.
**Yifrach, Y.** See Tirosh, J.
**Yih, P. H.** See Li, J. P.
**Yiin, T. Y.** See Arunajatesan, S.
**Yilmaz, V. T.** See Sagoe-Crentsil, K. K.
**Yilmaz, V. T.; Glasser, Fredrick P.**
Early hydration of tricalcium aluminate-gypsum mixtures in the presence of sulfonated melamine formaldehyde superplasticizer.—73-00067
**Yilmaz, V. T.; Kindness, A.; Glasser, Fredrick P.**
Determination of sulfonated naphthalene formaldehyde superplasticizer in cement: a new spectrofluorimetric method and assessment of the uv method.—73-09884
**Yilmaz, V. T.; Menek, N.; Odabasoglu, M.**
Quantitative determination of triethanolamine [TEA] in cements.—73-06710
**Yilmaz, V. T.; Odabasoglu, M.; Icbudak, H.; Olmez, H.**
Degradation of cement superplasticizers in a high alkaline solution.—73-03449
**Yilmaz, V. T.; Sagoe-Crentsil, K. K.; Glasser, Fredrick P.**
Effect of commercial plasticizers on $CL^-$ ion partitioning in OPC mortar and its implications for the corrosion of steel embedded in concrete.—73-09901; Properties of inorganic corrosion inhibition admixtures in steel-containing OPC mortars: II, Electrochemical properties.—73-10113
**Yilmaz, V. T.**
Chemical attack on alkali-resistant glass fibers in a hydrating cement matrix: characterization of corrosion products.—73-10421

**Yin, A.** See Hu, B.; Luo, H.
**Yin, Bao-Lu** See Huang, Fang
**Yin, Bing; Hu, Ying-Hua**
Problems in production of autoclaved lime–fly ash bricks and their preventive measures.—73-10096
**Yin, D.** See Chen, J.
**Yin, D.-L.** See Han, Ru-Shan; Li, Jian-Qi
**Yin, Gyong-Phil; Choi, Sang-Heul**
Hydration properties of α-tricalcium phosphate in tris solution.—73-16512
**Yin, Hong; Hu, Xiao-Li**
Heat transfer mathematical model within a ceramic body during firing process.—73-13085
**Yin, Hong; Liu, Xheng-Qun; Hu, Xiao-Li**
Influence of kiln atmospheres on electrical porcelain firing.—73-08475
**Yin, Hong; Liu, Zhen-Qun; Hu, Xiao-Li**
Physicochemical reaction heat during ceramic firing.—73-08432
**Yin, L.-W.; Nguyen, N. X.; Hwang, Y.; Ibbetson, J. P.; Kolbas, R. M.; Gossard, A. C.**
Temperature investigation of the gate-drain diode of power GaAs MESFET with low-temperature-grown (Al)GaAs passivation.—73-15202
**Yin, Lin** See Wang, Kai-Ying
**Yin, S.; Zhou, H.; Zhao, F.; Wen, M.; Yang, Z.; Zhang, J.**
Wavelength multiplexed holographic storage in a sensitive photorefractive crystal using a visible-light tunable diode laser.—73-11629
**Yin, Sheng** See Miao, Bai-He
**Yin, Sheng; Cao, Hong; Hu, Yao-He**
$Al_2O_3$-MgO-$ZrO_2$ ceramic foam filter.—73-03989
**Yin, X.** See Warren, A. C.
**Yin, Z.** See Smith, F. W.
**Yin, Z.-W.** See Song, Xiang-Yun; Zhao, M.-Y.
**Yin, Zhan-Feng** See Kasrai, Masoud
**Yin, Zhi-Wen** See Xu, Bao-Min
**Yin, Zhou-Lan** See Gao, Xiao-Hui
**Ying, Jackie Y.; McMahon, Gregory**
Quantum size effects in zinc oxide nanoclusters synthesized by reactive sublimation.—73-05462
**Yip, S. K.** See Sun, Y. S.
**Yip, Sidney** See Wolf, Dieter
**Yitai, Qian; Yuan, Hu; Bing, Lu**
Thermal stability of pure and doped $SnO_2$ ultrafine particles.—73-12720
**Ylilammi, Markku** See Kattelus, H.; Kattelus, Hanno
**Ylilammi, Markku; Ranta-Aho, Timo**
Optical determination of the film thicknesses in multilayer thin-film structures.—73-15827
**Yndurain, Felix**
Optical properties of amorphous semiconductors.—73-01265
**Yo, Chul-Hyun** See Lee, Hyung-Bock
**Yoashima, Masatomo** See Du, Yong
**Yoda, Akihiko; Yokomuro, Takashi; Yang, Yang**
Durability of 34–31 year aged RC structures using Class-B portland blast-furnace slag cement.—73-09894
**Yoda, Akihiko**
Neutralization of portland blast-furnace slag cement concrete subjected to atmospheric exposure for 30 years and effects of finishing materials.—73-10061
**Yoda, M.; Nagao, M.**
Fracture and subcritical growth characteristics of indented cracks in soda-lime glass.—73-10442
**Yoda, Osamu** See Ishibashi, Teruo
**Yoden, Hiroyoshi** See Hashimoto, Noboru
**Yoder, K. B.** See Stone, D. S.
**Yoder, M. D.** See Shapoval, S. Y.
**Yoder, M.** See Barbour, J. C.
**Yoder, Max N.**
Silicon carbide and SiCAlN heterojunction bipolar transistor structures.—73-14762
**Yoder, R.** See Genzel, I.
**Yodh, A. G.** See Qi, J.; Yeganeh, M. S.
**Yodoshi, K.** See Hamada, Hiroki
**Yogendran, V.; Langan, Brian W.; Ward, M. A.**
Hydration of cement and silica fume paste.—73-00106
**Yogo, Nobukazu** See Kubo, Hiroyuki; Sato, Bunryo
**Yogo, Toshinobu** See Hirano, Shinichi; Miura, Masashi; Yajima, T.
**Yogoro, Takayuki** See Nagata, Norifumi
**Yoko, Toshinobu** See Dimitrov, Vesselin V.; Fujihara, S.; Hashimoto, Tadanori; Hu, Li-Li; Jin, Ji-Sun; Miyaji, Fumiaki; Sakka, Sumio
**Yokobori, A. T.; Jian, C.-Y.; Adachi, T.; Yokobori, T.**
Viscoelasticity in alumina ceramics at room temperature.—73-09690
**Yokobori, T.** See Yokobori, A. T.
**Yokoe, Nobuo; Ohkoda, Hitoshi; Kikuyama, Hiroshi**
Dielectric ceramic composition.—73-11012
**Yokogawa, Kazuhiko** See Higuchi, Masatoshi
**Yokogawa, T.; Floyd, P. D.; Merz, J. L.; Luo, H.; Furdyna, J. K.**
Disordering induced by impurity diffusion in ZnSe-based superlatticcs and optical waveguides fabricated by disordering.—73-07451
**Yokogawa, Yoshiyuke** See Toriyama, Motohiro
**Yokogawa, Yoshiyuki; Kawamoto, Yukari; Toriyama, Motohiro; Suzuki, T.; Kawamura, S.**
Tricalcium phosphate coating on zirconia by using calcium metaphosphate and tetracalcium phosphate.—73-03067
**Yokogawa, Yoshiyuki; Kawamoto, Yukari; Toriyama, Motohiro**
Preparation of trimagnesium phosphate by mechanochemical reaction.—73-02975
**Yokogawa, Yoshiyuki; Toriyama, Motohiro; Kawamoto, Yukari; Suzuki, T.; Kawamura, S.**
Apatite coating on yttria-doped partially stabilized zirconia plate in the presence of water vapor.—73-12920
**Yokogawa, Yoshiyuki; Toriyama, Motohiro; Kawamoto, Yukari**
Apatite coating on yttria-doped partially stabilized zirconia plate in the presence of water vapor.—73-05693
**Yokoi, H.; Kingery, W. David**
Interface and microstructure development of coated alumina powders during heating.—73-13406
**Yokoi, Hiroshi** See Ikoma, Shuji
**Yokoi, Hiroyuki; Takeyama, Shojiro; Miura, Noboru; Bauer, Gunther**
Ultrahigh magnetic field effect on the structural phase transition in (Pb, Ge)Te.—73-07850
**Yokoi, Hitoshi** See Iio, Satoshi
**Yokoi, Koji** See Mizuno, Toshiaki
**Yokoi, Koji; Mizuno, Toshiaki; Doushita, Kazuhiro; Yamagishi, Takashi**
Silica glass flakes with submicron thickness.—73-14489
**Yokoi, Masato** See Enomoto, Ryo
**Yokokawa, Harumi** See Kawada, Tatsuya; Sakai, Natsuko
**Yokokawa, Harumi; Sakai, Natsuko; Kawada, Tatsuya; Dokiya, Masayuki**
Synthesis of titanium nitride whiskers from potassium fluorotitanate(IV)[—comment on using chemical equilibria calculation].—73-02501; Thermodynamic stability of perovskites and related compounds in some alkaline earth–transition metal–oxygen systems.—73-02525
**Yokokawa, Harumi**
Thermodynamics database MALT2.—73-09751
**Yokokawa, T.** See Unuma, Hidero
**Yokomizo, S.** See Lim, W.-Y.
**Yokomuro, Takashi** See Yoda, Akihiko
**Yokoo, Akihiko** See Ichitsuka, Takeshi
**Yokoo, Kuniyoshi; Tanaka, Hiroshi; Sato, Shinji; Murota, J.; Ono, S.**
Emission characteristics of metal-oxide-semiconductor electron tunneling cathode.—73-11192
**Yokota, H.** See Kogo, T.
**Yokota, Hiroshi** See Ishikawa, Shinji; Nakazawa, Takao; Ohga, Yuichi
**Yokota, Kozo** See Kondo, Yoshihito
**Yokota, Minoru** See Nagata, Masayuki
**Yokouchi, Kishio** See Aoki, Shigenori
**Yokouchi, Kishio; Kamezaki, Hiroshi; Wakamura, Masato; Kamehara, Nobuo; Niwa, Koichi**
Multilayer wiring board.—73-11039
**Yokouchi, Noriyuki** See Uchida, Takashi
**Yokoya, Takayoshi; Takahashi, Takashi; Fujiwara, Akihiko; Koike, Y.**
Superconducting energy gap in $Bi_2Sr_2CaCu_2O_8$ observed by high-resolution photoemission spectroscopy.—73-15634
**Yokoyama, Hiromitsu; Imanaka, Yoshihiko; Yamanaka, Kazunori; Kamehara, Nobuo; Niwa, Koichi; Uzumaki, Takuya**
Method for manufacturing an oxide superconducting circuit board by printing.—73-11965
**Yokoyama, Hiroshi** See Ohgushi, Tatsuo
**Yokoyama, Hisanori** See Kubo, Yukio; Shimizu, Noriyuki
**Yokoyama, Kenji; Ebisawa, Fumihiro**
Artificial olfactory sensor on plural quartz crystals.—73-03776
**Yokoyama, M.** See Li, J.-W.; Sasaki, T.
**Yokoyama, Masao; Nanao, Tsutomo; Eguchi, Tamiyuki; Taniguchi, Masao**
Synthesis and characterization of zinc sulfide thin films by pyrolysis and application to thin-film electroluminescence.—73-01341; 73-11472
**Yokoyama, S.** See Yazawa, Tetsuya
**Yokoyama, Shigeru** See Maruta, Toshihisa
**Yokoyama, Yoichi** See Matsumura, Tatsuo
**Yokoyama, Yoshio** See Narushima, Takayuki
**Yoldas, B. E.**
Effect of ultrastructure on crystallization of mullite.—73-05775; Thermochemical basis for structural variations and defect formation in sol-gel-derived glasses.—73-14119
**Yolton, C. F.** See Mukhopadhyay, D. K.
**Yom, S.-S.** See Kim, T.-W.; Yoon, Y.-S.
**Yom, S.-S.; Kang, W.-N.; Yoon, Y.-S.; Lee, J.-I.; Choi, D.-J.; Kim, T.-W.**
Growth of gamma-$Al_2O_3$ thin films on silicon by low-pressure metallorganic chemical vapor deposition.—73-09155
**Yon, Kyung-Yol** See Mitchell, Brian S.
**Yoneda, A.** See Askarpour, V.
**Yoneda, K.** See Hanafusa, H.
**Yoneda, Koji** See Ogasawara, Toshio
**Yoneda, N.** See Ito, Shigeru
**Yoneda, Takashige** See Hayashi, Yasuo
**Yoneda, Takehiko** See Fujimaru, Takuya
**Yoneda, Yasuhiro; Kasatani, Hirofumi; Terauchi, Hikaru; Yano, Yoshihiko; Terashima, Takahito; Bando, Yoshichika**
Ferroelectric phase transition in $BaTiO_3$ films.—73-07888
**Yoneda, Yasunobu** See Ueno, Yasushi; Yamamoto, Hiroshi
**Yonemoto, Toshikuni** See Sato, Kazuhisa
**Yonemoto, Toshikuni; Nitta, H.; Tadaki, Teiriki**
Modeling and simulation of the oxidative stabilization process of pitch-based carbon fibers.—73-13480
**Yonenaga, Ichiro; Sumino, Koji**
Effects of dopants on dynamic behavior of dislocations and mechanical strength in InP.—73-07470
**Yoneta, Minoru; Hamasaki, Tetsuya; Ohishi, Masakazu; Saito, H.**
Low-temperature epitaxial growth of Zn chalcogenides on GaAs(001) by postheated molecular beams.—73-11296
**Yoneta, Yasuhito** See Hirano, Shinichi
**Yoneyama, Hiroshi**
Electrochemical aspects of light-induced heterogeneous reactions on semiconductors.—73-07488
**Yoneyama, Kouichi** See Saeki, Tatsuhiko; Tanzil, Gunawan
**Yoneyama, Takao** See Kondo, Ichiharu; Sato, Ichiya; Mitomo, Mamoru; Nishida, Toshihiko
**Yonezu, H.** See Kawai, T.; Lopez, M.
**Yong, Y.-K.; Stewart, J. T.; Ballato, A.**
Laminated plate theory for high-frequency, piezoelectric thin-film resonators.—73-07895
**Yong, You-Sing; Kennedy, Eric M.; Cant, Noel W.**
Oxide catalyzed reactions of ethylene oxide under conditions relevant to ethylene epoxidation over supported silver.—73-02660
**Yonogami, Takashi; Mizutani, Tatsumi**
Radiation damage in $SiO_2$/Si induced by low-energy electrons via plasmon excitation.—73-07759
**Yonushonis, Thomas M.** See Scharman, Alan J.
**Yoo, Beoung-D.** See Lee, Kyu-Mann
**Yoo, Byueng-Su; McKee, Mark A.; Kim, Sang-Gi; Lee, E. H.**
Structural and electrical properties of InSb epitaxial films grown on GaAs by low-pressure MOCVD.—73-15182
**Yoo, H. M.; Ohuchi, F. S.; Stoebe, T. G.**
Influence of substrate temperature on the growth of InGaAs layers on (111)ß-GaAs.—73-11273
**Yoo, Han-Ill** See Lee, K.-C.; Park, T.-H.
**Yoo, J. M.; Mukherjee, K.**
Stability of high-*T*$_c$ phase in $Bi_{1.6}Pb_{0.4}Sr_2Ca_2Cu_3O_x$ compounds prepared by hot isostatic pressing.—73-01662
**Yoo, Jin-Beon** See Kim, Jeong-Soo
**Yoo, K.-H.** See Kim, T.-W.
**Yoo, K.-H.; Park, J.-C.; Lee, H.-G.**
Angular dependence of magnetoresistance and critical current density in $YBa_2Cu_3O_{7-\delta}$ thin films.—73-04669
**Yoo, Kwang-Soo** See Ahn, Sang-Wook; Lee, Byung-Ha
**Yoo, Kwang-Soo; Kim, Jong-Man; Jung, Hyung-Jin**
Electrical properties of semiconducting $VO_2$-based critical temperature sensors.—73-14872
**Yoo, S. I.** See Allenspach, P.
**Yoo, Sung-Keun** See Otsuka, Akio
**Yoo, W. J.; Steinbruchel, C.**
Growth of plasma-generated particles and behavior of particle clouds during sputtering of silicon and silicon dioxide.—73-09156
**Yoo, Y.-C.; Jeon, J.-S.**
High-temperature deformation behaviors of $SiC_p$/Al-14 Fe composites.—73-06800
**Yoon, Duk-Yong** See Lee, Ho-Yong; Jeon, Jae-Ho
**Yoon, E.** See Aydil, Eray S.
**Yoon, Eui-Joos; Gottscho, Richard A.; Donnelly, Vincent M.; Hobson, W. S.**
In situ passivation of GaAs after $BCl_3/Cl_2$ reactive ion etching.—73-07581
**Yoon, Eui-Park** See Lee, Sang-Hak
**Yoon, Eui-Sik; Bergemont, Albert M.; Kovacs, Ronald P.**
Self-aligned stacked gate EPROM cell using tantalum oxide control gate dielectric.—73-11050
**Yoon, Jong-S.; Deshpandey, Chandra V.; Bunshah, Rointan F.**
Effect of substrate bias on properties of silicon nitride films prepared by activated reactive evaporation.—73-13020
**Yoon, K.-B.** See Park, Y.-S.
**Yoon, K.-J.; Cho, S.-J.**
Influence of Weibull modulus on distribution of estimated modulus.—73-09623
**Yoon, Ki-Hyun; Cho, Yong-Soo; Lee, D.-H.; Kang, Dong-Heon**
Interfacial phenomena and dielectric properties of $Pb(Mg_{1/3}Nb_{2/3})O_3$ ceramics with excess PbO.—73-13408
**Yoon, Ki-Hyun; Cho, Yong-Soo; Nam, Yun-Woo; Kang, Dong-Heon**
Synthesis of $Pb(Mg_{1/3}Nb_{2/3})O_3$ by $Li_2SO_4$-$Na_2SO_4$ molten salts.—73-13308
**Yoon, Ki-Hyun; Chung, Ki-Sup**
Photoelectrochemical effects of $BaTiO_3$ thin-film electrodes prepared by the sol-gel method.—73-10981
**Yoon, Ki-Hyun; Kim, Dong-Pil; Kim, Eung-Soo**
Effect of $BaWO_4$ on the microwave dielectric properties of $Ba(Mg_{1/3}Ta_{2/3})O_3$ ceramics.—73-07303
**Yoon, Ki-Hyun; Kim, Seung-Yun; Nam, Yun-Woo; Cho, Yong-Soo; Kang, Dong-Heon**
Effect of excess MgO on dielectric electrostrictive properties of $0.99Pb(Mg_{1/3}Nb_{2/3})O_3$- $0.01Pb(Mn_{2/3}W_{1/3})O_3$.—73-12772
**Yoon, Ki-Hyun; Lee, Hyun-Im; Lee, Keun-Haeng**
Characterization of SiC-SiC whisker matrix retaining electrolyte in phosphoric acid fuel cell.—73-04064
**Yoon, Kyung-Jin** See Cho, Seong-Jai
**Yoon, Kyung-Jin; Park, Seong-Khil; Kim, Jong-Jip**
Fracture toughness testing in alumina.—73-06442
**Yoon, Man-Soon** See Kim, Su-Nuk
**Yoon, Man-Soon; Im, Jong-In; Kim, Su-Nuk; Jang, Sei-Joo**
Development of PLZTN for shear type accelerometer.—73-01398
**Yoon, Sang-Ok; Choi, Whan; Kim, Kyung-Yong**
Microwave dielectric properties of CaO-added (Ba, Pb)O-$Nd_2O_3$-$TiO_2$ ceramics.—73-07343
**Yoon, Seok-Jin** See Kim, Goo-Dae
**Yoon, Seok-Jin; Kim, Hyun-Jai; Jeong, Hyung-Jin**
Dielectric and piezoelectric properties of $xPb(Al_{2/3}W_{1/3})O_3$-$(1-x)$- $Pb(Zr_{0.52}Ti_{0.48})O_3$ ceramic system.—73-08834
**Yoon, Soo-C.** See Jahanmir, Said; Wood, William P.
**Yoon, Soon-Fatt** See Zhang, D.-H.
**Yoon, Soon-Fatt; Radhakrishnan, K.**
Factors influencing Si segregation and its effect on the two-dimensional electron gas mobility in inverted GaAs/*n*-AlGaAs heterostructures.—73-14915
**Yoon, Soon-Fatt**
Surface morphology and quality of strained InGaAs grown by molecular beam epitaxy on GaAs.—73-11466; Surface roughness of strained $In_{0.1}Ga_{0.9}As$ films grown on GaAs substrates by molecular beam epitaxy.—73-03202
**Yoon, Sung-Pil** See Hyun, Sang-Hoon
**Yoon, Tae-Ill; Choi, Se-Young; Lee, Yong-Keun; Lee, Jae-Hu**
Preparation and characterization of antireflective film in $TiO_2$-$SiO_2$ system by sol-gel method.—73-10574
**Yoon, Tae-Kyung** See Hwang, Kyu-Hong; Kim, Shin

**Yoon, Y.-S.** See Kim, T.-W.; Yom, S.-S.
**Yoon, Y.-S.; Kang, W.-N.; Shin, H.-S.; Yom, S.-S.; Kim, T.-W.; Lee, Jong-Yong**
Structural properties of $BaTiO_3$ thin films on Si grown by metallorganic chemical vapor deposition.—73-01668
**Yorlov, A. L.**
Effects of creep at room temperature in ceramics during indentation.—73-09586
**Yoshida, Akihiko** See Mizuno, Yasuo; Tanahashi, Ichiro; Guo, Qi-Xin; Hirao, Yuji
**Yoshida, Akira** See Komorita, Kazunori
**Yoshida, Akira; Tamura, Hirotaka; Gotoh, Kohtaroh; Imamura, Takeshi; Hasuo, Shinya; Akimitsu, Jun**
Selective plasma oxidation of oxygen-deficient $YBa_2Cu_3O_{7-x}$.—73-08195
**Yoshida, Akira**
Fabrication and characterization of InN and InAlN crystalline thin films by microwave-excited metallorganic vapor phase epitaxy.—73-14904
**Yoshida, H.** See Hirano, Masanori; Nanbu, K.; Tamura, S.
**Yoshida, Hideaki** See Kuromitsu, Yoshirou
**Yoshida, Hideto** See Fukuda, Koichiro
**Yoshida, Hideto; Miyata, Noboru; Sagawa, Masaaki; Ishikawa, S.; Naito, K.; Enomoto, N.**
Preparation of unidirectionally reinforced carbon–SiC composite by repeated infiltration of polycarbosilane.—73-05983; 73-13209
**Yoshida, Hisatsugu** See Asakura, Etsuro
**Yoshida, Hisatsugu; Asakura, Etsuro**
Zeta potential of cement with new type apparatus applying laser or ultrasonic technology.—73-10194
**Yoshida, Hitoshi** See Sakai, Hitoshi; Shimizu, Hideki
**Yoshida, Ichiro** See Hashimoto, Junichi
**Yoshida, Isao** See Kamei, Masayuki
**Yoshida, J.** See Kato, Kazutoshi
**Yoshida, K.** See Tamura, S.; Yamada, Y.
**Yoshida, Katsuhito; Tsuji, Kazuo**
Method of synthesizing diamond.—73-05318
**Yoshida, Kazuaki** See Hihara, Hiroshi
**Yoshida, Kazuharu** See Ito, Shigeru
**Yoshida, Kazuhiro** See Ohta, Hitoshi
**Yoshida, Kiyohide** See Muramatsu, Gyo
**Yoshida, Koukichi** See Ogihara, Takashi
**Yoshida, Kozaburo; Igarashi, Hideaki; Ohsaki, Masashi; Daimon, Masaki**
Heat of hydration and strength development of alite–belite–blast-furnace slag composite.—73-09980; 73-09981
**Yoshida, Kozaburo; Igarashi, Hideaki**
Effects of limestone powder of hydration of super-low-heat cement.—73-09936; Strength development and heat of hydration of low heat cement.—73-06721
**Yoshida, Kozaburo; Okabayashi, Shigeo; Igarashi, Hideaki; Takahashi, Toshiyuki**
Effects of curing temperature on strength development and heat of hydration of super-low-heat cement.—73-09932
**Yoshida, Manabu** See Matsuhiro, Keiji; Sakai, Hitoshi
**Yoshida, Masahiro; Kimura, Nobuo; Okamura, Hiromichi**
Ivory-colored zirconia sintered body, process for its production and its use.—73-05220
**Yoshida, Masamichi** See Nakamura, Makoto
**Yoshida, Masashi; Endo, Akihiko**
Improvement of $J_c$ of Ag-sheathed Bi-2212 tapes using melt-growth technique under reduced oxygen partial pressure [0.01 atm].—73-11796
**Yoshida, Masatomo** See Takebe, Hiromichi
**Yoshida, Naomi; Yamasaki, Hitoshi; Hamada, Ikuhisa; Kato, Yasuyoshi; Konishi, Kunihiko; Matsuda, Toshiaki**
Process for producing a denitration catalyst.—73-12397
**Yoshida, Norifumi** See Saito, Fumihiko
**Yoshida, Noriyuki** See Takahashi, Kenichi; Takano, Satoshi
**Yoshida, Noriyuki; Takano, Satoshi; Hara, Tsukushi; Okaniwa, Kiyoshi; Yamamoto, Takahiko**
Laser ablation method of preparing oxide superconducting films on elongated substrates.—73-01709
**Yoshida, Noriyuki; Takano, Satoshi; Okuda, Shigeru; Hayashi, Noriki; Hara, Tsukushi; Okaniwa, Kiyoshi**
Method of preparing oxide superconducting films by laser ablation.—73-11976
**Yoshida, S.** See Akinaga, H.; Yamasaki, H.
**Yoshida, Seikoh** See Sasaki, Masahiro
**Yoshida, Shoji** See Sawada, Kiyoshi
**Yoshida, Shuichi** See Hashimoto, Kenji
**Yoshida, Shuji; Tsutsumi, Yasuyuki; Noudomi, Satoru; Kawaguchi, Junichi**
Overglaze colors for pottery.—73-04053
**Yoshida, Shuji; Tsutsumi, Yasuyuki**
Properties of lead-free frits for glazes.—73-10887
**Yoshida, T.** See Eguchi, K.; Harada, K.; Nishizawa, Kenichi; Terashima, K.
**Yoshida, Takashi** See Konishi, Masahiro; Nagashima, Satoko
**Yoshida, Takeshi; Tsunekawa, Tetsuya; Nakano, Masayoshi**
Ab initio calculations of nonlinear optical properties of silicon compounds.—73-16403
**Yoshida, Tetsuro** See Sakurai, Yoshihito
**Yoshida, Tomonori; Joe, Yasuichi; Shizawa, Mitsuaki**
Autogenous shrinkage properties of various cement pastes.—73-09824
**Yoshida, Tomoyuki; Matsui, Noboru**
Effects of heat treatment in $H_2$-$N_2$ atmosphere on the performance of screen-printed CdS/CdTe solar cells.—73-01139
**Yoshida, Tomoyuki**
Analysis of photocurrent in screen-printed CdS/CdTe solar cells.—73-01074
**Yoshida, Y.** See Sato, K.; Templeton, T. L.; Wakasa, K.
**Yoshida, Yasuhiko** See Murayama, Yoichi
**Yoshida, Yasuo** See Mitani, Yoshio
**Yoshida, Yoshihiro** See Edagawa, Noboru
**Yoshida, Yutaka** See Doi, Toshiya
**Yoshifuji, Teizou** See Watanabe, Koichi
**Yoshigawa, M.** See Tomozawa, Minoru
**Yoshihara, K.** See Kubecek, V.
**Yoshihiro, Onoda** See Masahiro, Tamamaki
**Yoshihisa, Hamada** See Kosuge, Katsunori
**Yoshikado, S.** See Ito, Yoshiaki
**Yoshikawa, Akihiko; Iguchi, Akiyoshi; Yamaga, Shigeki**
Photocatalytic growth-rate enhancement in MOMBE of GaAs on ZnSe by surface photoabsorption.—73-04435
**Yoshikawa, Fumiaki; Nigo, Seisuke; Kiyohara, Shohzoh; Taguchi, Seiji**
Application of computer to estimation of refractory wear and solidified-layer distributions in the blast-furnace hearth.—73-14570
**Yoshikawa, Hiroaki** See Takahashi, Katsumasa
**Yoshikawa, K.** See Takeda, Yasuo; Watanabe, A.
**Yoshikawa, Masahiro** See Mori, Masashi
**Yoshikawa, Nobuyuki** See Han, Xiao-Yi
**Yoshikawa, Shoko** See Kuromitsu, Yoshirou; Newnham, Robert E.; Takada, Takahiro
**Yoshikawa, Shuichi** See Takai, Minoru
**Yoshikawa, Takaya; Ishida, Noboru**
Combined body of ceramics and metal.—73-03679
**Yoshikawa, Tomohisa** See Tsugeki, Keiichi
**Yoshikawa, Y.** See Miyake, M.
**Yoshiki, Masahiko** See Kanai, Hideyuki
**Yoshikuni, Y.** See Kano, Fumiyoshi; Yasaka, Hiroshi
**Yoshimatsu, Hideyuki; Osaka, Akiyoshi; Miura, Yoshinari; Kawasaki, H.**
$Al_2O_3$ coating on MgO particles.—73-05687
**Yoshimori, Hiroyuki** See Mihara, Takashi
**Yoshimoto, K.** See Kanbara, Kunihiko
**Yoshimoto, Katsuhiko** See Jang, Young
**Yoshimoto, Masahiro; Kajimoto, Atsushi; Matsunami, Hiroyuki**
Laser-assisted atomic layer epitaxy of GaP in chemical beam epitaxy.—73-04379
**Yoshimoto, Tetsuo** See Mori, Toru
**Yoshimoto, Toshikazu** See Matsumura, Tatsuo
**Yoshimura, Hironori; Nakamura, Seiichirou; Odani, Niro**
Surface-coated cermet blade member.—73-10353
**Yoshimura, Ichiro** See Ohga, Yuichi
**Yoshimura, K.** See Imai, T.
**Yoshimura, Kazuyoshi; Kubota, Hiroshi; Tanaka, Hiroshi; Date, Yumiko; Nakanishi, Makoto; Ohmura, Tomohiko**
Compositional phase separation in $La_{2-x}Ba_xCuO_4$ near the optimum composition for superconductivity.—73-08008
**Yoshimura, Kuniaki; Okamura, Soichiro; Tsukamoto, Takeyo**
Preparation of $Bi_4Ti_3O_{12}$ thin films with $c$-axis orientation by MOCVD using $Bi(o\text{-}C_7H_7)_3$ and $Ti(i\text{-}OC_3H_7)_2(DPM)_2$.—73-16918
**Yoshimura, Kuniaki**
Magnetic encoder having a magnetic recording medium containing barium ferrite.—73-11675
**Yoshimura, Masahiro** See Asano, Tetsuo; Berastegui, Pedro; Cho, Woo-Seok; Du, Yong; Hayakawa, Motozo; Iio, Satoshi; oku, Koji; Kajiyoshi, Koji; Kakihana, Masato; Kim, Kwang-Jin; Makaki, Hiromasa; Okada, Akira; Yashima, Masatomo; Yasuoka, Hiroshi
**Yoshimura, Matsuichi** See Mori, Junichirou
**Yoshimura, Reiko** See Tanaka, Shigenori
**Yoshimura, Tadashi** See Eguchi, Tadataka
**Yoshimura, Yasuhiro; Nakamura, Takeshi; Matsushita, Kenichi**
Internal friction in $MgAl_2O_4$ spinel doped with gallium oxide or alumina.—73-02305
**Yoshinaga, H.** See Tsurekawa, S.
**Yoshinaga, Hideo** See Ikuhara, Yuichi
**Yoshinari, Hiromi** See Mori, Kaname
**Yoshinari, Makoto** See Obitsu, Masamichi
**Yoshinari, Takeshi; Uchida, Masashi**
Antimicrobial ceramics.—73-05154
**Yoshino, Hiroyuki**
Manufacturing process of (cold cathode discharge lamp-type) neon sign tubes.—73-03856
**Yoshino, J.** See Ishizaki, Nobuo; Vina, L.
**Yoshino, Masao** See Sato, Rikiya
**Yoshino, Yuichi** See Ishii, Yoshiro
**Yoshinobu, Tatsuo** See Fuyuki, Takashi
**Yoshio, M.** See Ikeda, Susumu
**Yoshio, Masaki** See Ikeda, Susumu; Miyashita, Takahiro
**Yoshio, Masayuki** See Ikeda, Susumu
**Yoshio, Tetsuo** See Oda, Kohei
**Yoshio, Tetsuo; Oda, Kohei; Suemasu, Takeshi; Kohno, A.**
Corrosion behavior of mullite ceramics in water at 300°C.—73-03213; 73-13468
**Yoshioka, J.** See Shimura, H.
**Yoshioka, Takakazu** See Takahashi, Ichiro
**Yoshisato, Yorinobu** See Kamino, Maruo
**Yoshisato, Yoshisato** See Takai, Minoru
**Yoshitake, Masaaki; Nosaka, Toshikazu; Okamoto, A.; Ogawa, S.; Nishikawa, Kazuhiro**
Deposition of Zr-C thin films and plasma-polymerized hydrocarbon films in the reactive magnetron sputtering process.—73-12978
**Yoshitake, Masaaki; Nosaka, Toshikazu; Okamoto, A.; Ogawa, S.**
Use of the ion-beam current as a process control in the reactive sputtering of zirconium oxide.—73-09384
**Yoshitomi, J.** See Ikesue, Akio; Kawano, Fusao; Kawasaki, Hisato
**Yoshitomi, J.**
Application of rheology in monolithic refractories.—73-14571
**Yoshizaki, R.** See Zhu, Yi-Mei
**Yoshizane, Toshimasa** See Yuzawa, Yukio
**Yoshizawa, Chiaki** See Tsuyuki, Naomitsu
**Yoshizawa, M.; Sugawara, H.; Nakamura, Y.; Oki, N.**
Novel elastic anomalies in Zr-N films.—73-08929
**Yoshizawa, N.** See Shiraishi, M.
**Yoshizawa, Nobuyuki** See Ooe, Masaharu
**Yoshizawa, Shuji** See Tenya, Kenichi
**Yoshizoe, Kikuko** See Watanabe, Hideo
**Yosohiro, Sugie** See Masafumi, Kobune
**Yost, William T.** See Sathish, Shamachary
**Yota, J.; Burrows, V. A.**
Chemical and electrochemical treatments of GaAs with $Na_2S$ and $(NH_4)_2S$ solutions: a surface chemical study.—73-07413
**Yotsuya, Tsutomu** See Kusaka, Tadaoki
**Yotsuya, Tsutomu; Suzuki, Yoshihiko; Ogawa, Soichi; Takahata, Ryoichi**
Automatically position-controlled system with high-$T_c$ oxide superconductor.—73-04675
**You, En-Pu** See Wang, Yi
**You, H.** See Foster, C. M.
**You, Hui-Guo** See Zhou, E-You
**You, Jae-Keun** See Choi, D.-M.
**You, Jae-Keun; Lee, Eung-Sang**
Preparation of alumina membranes: I.—73-13181
**You, R.** See Tsaur, S.-S.
**Youchison, D. L.; Eddy, C. R., Jr.; Sartwell, B. D.**
Role of oxygen in the electron cyclotron resonance plasma-assisted chemical vapor deposition of diamond films.—73-09309
**Youchison, W. L.; Eddy, C. R., Jr.; Sartwell, B. D.**
Characterization of electron cyclotron resonance plasmas optimized for the deposition of polycrystalline diamond films.—73-05703
**Youdelis, W. V.** See Li, Yi
**Youm, Do-Jun,** See Seong, Dae-Jin
**Youm, H.-N.** See Hwang, I.-S.
**Youm, H.-N.; Chang, J.-S.; Lee, J.-M.**
Structural changes during the calcination of raw coke.—73-12695
**Youm, H.-N.; Kim, K.-J.; Lee, J.-M.; Chung, Y.-J.**
Effects of impregnation on the manufacture of high-density carbon materials.—73-16752
**Youn, D.** See Moukwa, M.
**Youn, Hyun** See Baek, Kyung-Seon
**Younes, C. M.** See Ciliberto, Enrico
**Young, Albert C.** See Tiegs, Terry N.
**Young, Byung-Chun** See Yamane, Hisanori
**Young, Byung-Chun; Yamane, Hisanori; Hirai, Toshio**
$TiO_2$-$SnO_2$ deposits prepared by CVD.—73-06123; 73-17064
**Young, Eric**
Forecasting color trends in 1993-94.—73-06616
**Young, J. Francis** See Okada, Yoshihiko; Sun, Guo-Kuang
**Young, J. Francis**
Research on cement-based materials: expanding our horizons.—73-06712
**Young, Kevin E.** See Slade, Robert C. T.
**Young, L.** See Hui, D.
**Young, M. L.; Gless, J.; Gough, J. S.**
Assessment of electrical inhomogeneity of undoped and doped $Hg_{1-x}Cd_xTe$ MOVPE (IMP) [interdiffusion multilayer process] layers by variable magnetic field Hall profile measurements.—73-11074
**Young, Mike**
Art of successful screen printing.—73-14324
**Young, P. M.** See Grein, C. H.
**Young, Paul G.** See Alterovitz, Samuel A.
**Young, R. J.** See Yang, X.
**Young, R. J.; Cleaver, J. R. A.; Ahmed, H.**
Characteristics of gas-assisted focused ion beam etching.—73-11097
**Young, R. M.; Partlow, W. D.**
Amorphous silicon, amorphous carbon, and amorphous silicon carbide deposited by remote plasma chemical vapor deposition.—73-09017
**Young, R. Scott** See Gardner, Mickey R.
**Young, Richard** See Carkner, Don
**Young, S. J.** See Fancey, K. S.
**Young, V. G.** See Marin, S. J.
**Youngdahl, C. A.** See Balachandran, Uthamalingam
**Younis, L. B.; Viskanta, Raymond**
Experimental determination of the volumetric heat transfer coefficient between stream of air and ceramic foam.—73-05564
**Younkman, Lora B.** See Azad, Abdul M.
**Youns, M. N.** See Zaghloul, M. S.
**Youssef, A. M.; Hamada, M. A.; Nawar, N.**
Changes in surface and catalytic properties of the $CuO/Al_2O_3$ system induced by doping with MgO.—73-05535
**Yousuf, A.; Mollah, M.; Hess, Thomas R.; Tsai, Yung-Nien; Cocke, D. L.**
FTIR and XPS investigations of the effects of carbonation on the solidification/stabilization of cement-based systems—portland type V with zinc.—73-06662
**Yu, Ai-Bing; Standish, Nicholas; McLean, Arnold**
Porosity calculation of binary mixtures of nonspherical particles.—73-02928
**Yu, Bing** See Lin, Chen-Fu
**Yu, Bing-Kun**
Preparation of diamond and diamondlike thin films.—73-05325
**Yu, Chang-Feng; Lee, Joseph Yu-Min; Lin, I-Nan; Yang, Sheng-Jenn; Hsu, S.-E.**
Fabrication of Bi(Pb)-Sr-Ca-Cu-O superconducting thin films by rapid thermal annealing.—73-11759
**Yu, Cheng-Sheng; Tsai, Ming-Shan**
Separation between first overtone and fundamental resonant frequencies in PZT ceramic resonators.—73-04571
**Yu, Chris C.** See Kim, Sung C.
**Yu, D.-Y.** See Cong, Q.-Z.
**Yu, Fu-Dong; Lu, H.-B.**
Development of imitation granite porcelain brick.—73-10820
**Yu, Fu-Dong**
Development of imitation granite porcelain tiles.—73-10821; Low-temperature transparent green stock glaze using albite and lipidolite.—73-10864

**Yu, G.-F.** See Shen, H.-Y.

**Yu, Ga-Er; Parrick, J.; Edirisinghe, M. J.; Finch, D.; Ralph, B.**
Synthesis of silicon oxynitride from a polymeric precursor: I, Hydrolysis of dichloromethyl silane.—73-09363

**Yu, Gui-Yu** See Feng, Xiu-Ping

**Yu, H.** See Schaefer, J. A.

**Yu, Hui-Jun** See Lin, Zu-Xiang

**Yu, Hyo-Shin** See Lee, Jae-Chun

**Yu, J.** See Zhuang, Wei-Hua

**Yu, J.-L.** See Chen, C.-C.

**Yu, J.-T.** See Wu, C.-J.

**Yu, Jia-Hua** See Huang, Shao-Hua

**Yu, Jia-Qing; Zhao, Hang-Wei; Wang, Jia-Sheng; Xia, Fei**
Effect of $Al_2O_3$ and $Bi_2O_3$ on the formation mechanism of Sn-doped $Ba_2Ti_9O_{20}$.—73-08603

**Yu, Jing-Kun** See Yamaguchi, Akira

**Yu, Jing-Kun; Yamaguchi, Akira**
Behavior of Al on microstructure and properties of MgO-C-Al refractories.—73-03992; 73-14573

**Yu, Kang-Tai; Jin, Tao; Zhang, Sbu-Mei**
Analysis technique for glaze surface defects and its applications.—73-08373

**Yu, Kin-Man** See Liliental-Weber, Z.

**Yu, Kin-Man; Walukiewicz, W.; Chan, L. Y.; Leon, R.; Haller, E. E.; Jaklevic, J. M.**
Effects of rapid quenching on the impurity site location in Zn-diffused InP.—73-07475

**Yu, L.** See Lorenzana, J.

**Yu, L.-H.** See Shang, S.-S.

**Yu, Lai-Gui; Zhang, Xu-Shou**
Friction and wear behavior of electroless Ni-P coating.—73-09603

**Yu, Larry S.** See Ho, Pin

**Yu, Li-Da** See He, Dai-Ying; Li, Ying; Zhao, Yan-Zhao

**Yu, Li-Da**
Diopside opal.—73-10826

**Yu, Ming-L.**
Model for the atomic layer epitaxy of GaAs.—73-01246

**Yu, Nu** See Raghuraman, R.

**Yu, P. K. L.** See Clawson, S. R.

**Yu, P. W.** See Reynolds, D. C.

**Yu, P. W.; Stutz, C. E.**
Effects of heat treatment on the 0.8-eV photoluminescence emission in GaAs grown by molecular beam epitaxy at low temperatures.—73-14863

**Yu, Qian**
Problems of magnesium oxychloride cements.—73-10098

**Yu, R. C.; Salomon, M. B.; Lu, Jian-Ping; Lee, W. C.**
Thermal conductivity of an untwinned $YBa_2Cu_3O_{7-\delta}$ single crystal and a new interpretation of the superconducting-state thermal transport.—73-08252

**Yu, Rong-Chi** See Hsu, Wan Peter

**Yu, S. H.; Riman, Richard E.; Danforth, Stephen C.; Leung, Roger Y.; Gonczy, Stephen T.**
Pyrolysis of titanium metal-filled poly(siloxane) preceramic polymers: effect of atmosphere on the chemistry of titanium transformation.—73-16966

**Yu, S. W.; Page, C. L.**
Diffusion in cementitious materials: I, Comparative study of chloride and oxygen diffusion in hydrated cement pastes.—73-00063

**Yu, T. C.** See Chen, Kuo-Tong

**Yu, T. H.** See Chin, Albert

**Yu, W.-Y.** See Jonker, B. T.

**Yu, Wen-Hai** See Ding, Yi

**Yu, Xu-Jin** See Jiang, Jin-Ming

**Yu, Y. H.** See Denes, G.

**Yu, Y.-D.** See Wang, Y.-G.

**Yu, Ya-Qin; Song, Xiao-Yu**
Ti-Ta oxide complex doped with $Eu^{3+}$.—73-05520

**Yu, You-Long; Jiang, Zuo-Hong; Gao, Jun**
Properties of self-pumped phase conjugation in Co-doped potassium sodium strontium barium niobate (KNSBN:Co).—73-12872

**Yu, Young-Moon; Kim, Byong-Ho; Wang, Young-Seong**
Sensitizing effect of $Cr^{3+}$ in Nd:laser glass of silicate system.—73-10480

**Yu, Yun-Lin; Ding, Feng; Zhou, Zhi-Hao**
Physical modeling of an oil-fired glass tank furnace.—73-05128

**Yu, Z. J.; Sywe, B. S.; Ahmed, A. U.; Edgar, J. H.**
Growth and characterization of GaN on sapphire and silicon.—73-14945

**Yu, Z.** See Littler, C. L.; Lowney, Jeremiah R.; Ren, J.

**Yu, Z.-H.** See Wang, Y.; Zhang, Zhi-Guo

**Yu, Z.-M.; Rogelet, T.; Flodstrom, S. A.**
Diamond growth on turbostratic carbon by hot filament chemical vapor deposition.—73-12985

**Yu, Zheng** See Chen, Sha-Ou; Shi, Ke-Xin

**Yu, Zhi; Ang, Chen**
Positron annihilation study of $SrTiO_3$-based ceramics.—73-03108

**Yu, Zhong-Da; Mukai, Kusuhiro; Kawasaki, Kazuhiko; Furusato, Isao**
Relation between corrosion rate of magnesia refractories by molten slag and penetration rate of slag into refractories.—73-04018; 73-14620

**Yu, Zhou-Long; Gao, Li-Zhen; Yuan, Song-Yue; Wu, Y.**
Solid defect structure and catalytic activity of perovskite-type catalysts $La_{1-x}Sr_xNiO_{3-\lambda}$ and $La_{1-0.333x}Th_xNiO_{3-\lambda}$.—73-08732

**Yuan, Dah-Wei; Chengn, Vun-Shing; Yan, Ruey-Fong; Simkovich, George**
Reaction-formed processes for AlN/Al ceramic composites.—73-13892

**Yuan, Feng-Chi; Cheng, Bin-Ji; Xie, Yi-Yuan**
Preparation of superconducting YBCO tape on metal substrates by MOCVD.—73-15597

**Yuan, H.** See Gao, Q.-J.

**Yuan, Hu** See Yitai, Qian

**Yuan, J.** See Gupta, V.

**Yuan, Ming-Dong** See Liu, Ke-Zhong

**Yuan, Qi-Ming** See Liu, Qian

**Yuan, Run-Zhang** See Cai, Ke-Feng

**Yuan, Run-Zhang; Gao, Qiong-Ying; Mao, Ruo-Ging**
Simultaneous production of cement and electrical power by fluidized bed combustion of pretreated gangue.—73-06716

**Yuan, Shu** See Springholz, G.

**Yuan, Song-Liu; Wang, Yu-Gui; Wang, Shun-Xi**
Magnetization and flux pinning in recold-pressed Bi-based bulk materials.—73-11824; Thermally activated flux creep in a bismuth-based bulk material.—73-11934

**Yuan, Song-Yue** See Yu, Zhou-Long

**Yuan, T.** See Jiang, H.

**Yuan, W.-F.** See Han, Gu-Chang

**Yuan, Y. F.; Heavens, O. S.**
Anomalous optical and electrical properties of the $M/MoO_3/M$ sandwich structure.—73-16411

**Yuan, Yong** See Zhang, Xi-Nian

**Yuan, Yu-Sheng** See Wong, Ming-Shih

**Yuan, Z.** See Mo, Chi-Mei

**Yuan, Zhang-Fu; Wan, Tian-Ji; Fan, You-San; Xing, Chao**
Production of $ZrO_2$ by use of plasma technique and its application.—73-16959

**Yuanluo, X.** See Limin, C.

**Yuasa, Noboru** See Nakata, Yoshihisa

**Yuasa, Sinji** See Taketomi, Susamu

**Yuda, Ryoichi; Ito, Kenichi; Masuda, Hiroshi**
Nuclear fuel pellets having an aluminosilicate deposition phase.—73-04897

**Yudanova, L. I.** See Koselov, B. A.

**Yudin, A. S.** See Bunina, L. K.; Kudzin, A. Yu.

**Yudin, D. M.** See Evstrop'ev, S. K.; Kasymova, S. S.

**Yue, C. F.** See Pan, Wu-Yi

**Yue, T.-M.; Lau, W.-S.; Jiang, C.-Y.**
Technology in pulsed Nd:YAG laser drilling of an Al-Li-based/SiC metal matrix composite.—73-06109

**Yue, Xue-Feng** See Lu, Xin-Liang; Mu, Xiao-Dong

**Yue, Xue-Feng; Shao, Z.-S.; Lu, Xin-Liang; Song, Yong-Yuan; Chen, H.-C.**
Formation of self-pumped phase conjugation in a Cu-doped KNSBN crystal.—73-08628

**Yue, Yong; Lu, Jing-Cai; Pang, Wen-Qin**
Crystallization of $Na_{1-x}Zr_{2-x}Nb_x(PO_4)_3$ ($0<x<1$) series under hydrothermal conditions.—73-08591

**Yugami, H.; Suemoto, T.; Ishigame, M.**
Fluorescence line narrowing study of $Eu^{3+}$ in YSZ: a new direction of research in superionic materials.—73-00971

**Yugo, S.** See Kimura, T.

**Yugova, T. G.** See Govorkov, A. V.; Vdovin, V. I.

**Yuhaku, Satoru** See Nakatani, Seiichi

**Yuhas, Donald E.** See Leung, Roger Y.

**Yuhda, Sadayuki** See Nagata, Norifumi

**Yuhya, S.** See Kikuchi, K.

**Yui, Toshio; Yamamoto, Yoshimasa; Miyakawa, Naohisa**
Molding for automobile windows.—73-10649

**Yujahnes, L. S.** See Westerheim, A. C.

**Yukhimchuk, V. A.** See Artamonov, V. V.

**Yukna, A.** See Brazdeikis, A.

**Yuldashev, S. U.** See Andrukhiv, A. M.; Ivanov-Omskii, V. I.

**Yumankov, A. P.** See Suleimenov, S. T.

**Yumankov, A. P.; Mirzakhodzhaev, A. A.**
Bioglass-ceramics in medicine.—73-14331

**Yumoto, H.**
Functional materials prepared by electron shower method.—73-16800

**Yun, H. M.; Goldsby, Jon C.; DiCarlo, J. A.**
Stress-rupture behavior of small-diameter polycrystalline alumina fibers.—73-09678

**Yun, H.** See Gong, W. H.; Nakua, A.

**Yun, J.; Guven, G.; Chu, Y. T.**
Chemical etching for fine-grained $YBa_2Cu_3O_{7-x}$.—73-07999

**Yun, Jon-Do** See Chou, Ye-T.

**Yun, S.-H.** See Lee, Byung-Ha

**Yun, Young-Ho** See Lee, Byung-Ha

**Yunusov, M. Yu.; Bogomolova, L. D.; Ismatov, K. Yu.**
Effect of manganese oxide on the properties and structure of lead silicate semiconducting glasses.—73-14853

**Yur'ev, G. S.** See Zhalilov, N. S.

**Yur'ev, V. A.** See Kalinushkin, V. P.

**Yurchenko, N. Yu.** See Malovichko, G. I.

**Yurek, Greg** See Grumblatt, Gerard

**Yurgartis, S. W.; MacGibbon, B. S.; Mulvaney, P.**
Quantification of microcracking in brittle matrix composites.—73-05081

**Yuri, M.** See Imafuji, Osamu

**Yuri, Masatada** See Tomiki, Tetsuhiko

**Yurieva, T. M.** See Plyasova, L. M.

**Yurimoto, Hisayoshi** See Sakaguchi, Isao

**Yuritsin, N. S.; Fokin, V. M.; Kalnina, A. M.; Filipovich, V. N.**
Kinetics of crystal nucleation on the surface of cordierite glass.—73-14024

**Yuriyev, V. P.** See Belyaeva, A. I.

**Yurkevich, T. N.** See Dyatlova, E. M.

**Yurkov, A. L.; Skidan, B. S.**
Mechanical properties of reaction-sintered materials based on boron carbide.—73-03336

**Yurkov, L. F.** See Konovalova, L. D.

**Yurkov, N. A.** See Konovalova, L. D.

**Yurova, E. S.** See Kartavykh, A. V.

**Yuta, Masako; White, William B.**
Photoluminescence of sulfide phosphors with the $MB_2S_4$ composition.—73-01282

**Yuzawa, Yukio; Yamamoto, Yoshinori; Ohira, Hiroyuki; Yoshizane, Toshimasa; Shibasaki, Nobuyuki**
Ceramic conveyor belt.—73-15939

**Yuzer, H.** See Ozturk, Z. Z.

**Yuzhelevskii, Ya. I.** See Bykov, A. M.

**Zaanen, J.** See Anisimov, V. I.

**Zabasajja, John N.** See Tataruchuk, Bruce J.

**Zabava, L. K.** See Sokolinskaya, M. A.

**Zabinski, J. S.** See McDevitt, N. T.; Walck, S. D.

**Zabinski, J. S.; Donley, M. S.; Dyhouse, V. J.; McDevitt, N. T.**
Chemical and tribological characterization of PbO-$MoS_2$ films grown by pulsed laser deposition.—73-16670

**Zabinski, J. S.; Donley, M. S.; McDevitt, N. T.**
Mechanistic study of the synergism between $Sb_2O_3$ and $MoS_2$ lubricant systems using Raman spectroscopy.—73-06938

**Zabkar, A.** See Panjan, P.

**Zaboklicki, A. K.** See Konig, W.

**Zabolotnyi, V. A.** See Solov'eva, L. P.

**Zacharias, M.** See Stolze, F.

**Zadiraka, Yu. V.; Mamikin, E. T.; Mamikin, A. E.; Maistrenko, A. A.; Runova, R. F.; Vlasova, Marina V.**
Preparation and properties of calcium hydrosilicate, intended for use as protective coating.—73-06698

**Zadiraka, Yu. V.; Potseluiko, M. N.; Rozanov, K. V.; Barabanov, Yu. P.; Vlasova, Marina V.; Podrezov, Yu. N.**
Properties of ceramic implants for stomatology.—73-08522

**Zadnik, Marjan G.** See Li, De-Yu

**Zadnipru, I. B.** See Syrbu, N. N.

**Zadoo, Durga P.** See Mahfuz, Hassan

**Zadorozhnaya, T. A.** See Ustichenko, V. A.

**Zadorozhnaya, V. N.** See Slavov, V. I.

**Zagdoun, Georges; Trouve, Maurice; Pegouret, Jean**
Process for formation of an aluminum oxide based layer on glass, the product thus obtained, and its use in windows incorporating a conductive layer.—73-00756

**Zaghi, Farshad** See Cagliostro, D.

**Zaghloul, M. S.; Youns, M. N.**
Effect of both irradiation energy and annealing temperatures on Hall voltage of new concrete mixer.—73-00072

**Zagoskin, V. T.** See Golubnichaya, G. V.

**Zagumennyi, A. I.** See Popov, P. A.

**Zaharchenya, R. J.; Vasilevskaya, T. N.**
Temperature effects on phase composition and properties of aluminum alkoxide hydrolysis products.—73-16361

**Zaharescu, Maria; Pirlog, C.; Crisan, Maria; Gartner, M.; Vasilescu, A.**
$TiO_2$-based vitreous coatings obtained by sol-gel method.—73-09379

**Zaharescu, Maria; Pirlog, C.; Crisan, Maria**
$SiO_2$-based vitreous coatings obtained by sol-gel method.—73-10601

**Zaharescu, Maria; Pirlog, C.; Gartner, M.; Moise, F.; Teodorescu, V.**
$SiO_2$-$Sm_2O_3$ vitreous films via the sol-gel method.—73-09329

**Zaharova, N. B.** See Kazakova, L. P.

**Zahavi, J.** See Altshulin, S.; Riabkina-Fishman, M.

**Zahler, M.; Cohen, E.; Salzman, J.; Linder, E.; Pfeiffer, L. N.**
Exciton states in GaAs/AlGaAs Bragg confining structures studied by resonant Raman scattering.—73-14899

**Zahn, D. R. T.** See McGovern, I. T.; Nowak, C.; Rossow, U.; Scholz, S. M.

**Zahn, D. R. T.; Krost, A.; Kolodziejczyk, M.; Richter, W.**
Epitaxial $Ga_2Se_3$ layers grown on GaAs(100) using a heterovalent exchange reaction.—73-07505

**Zahn, Ingo; Monter, Burghardt**
X-ray microstructural analysis of thin polycrystalline coatings with $YBa_2Cu_3O_{7-\delta}$ coatings as example.—73-09521

**Zahorski, D.; Mariani, J. L.; Escadafals, L.; Gilles, J.**
Spectroscopic ellipsometry [SE]: a new tool for on-line quality control.—73-12198

**Zahra, A.-M.; Zahra, C. Y.; Piriou, B.**
DSC and Raman studies of lead borate and lead silicate glasses.—73-00327

**Zahra, C. Y.** See Zahra, A.-M.

**Zaidi, M. A.; Zazoui, M.; Bourgoin, J. C.**
Defects in electron-irradiated GaInP.—73-09397

**Zaikovskii, V. I.** See Beutel, Tilman

**Zaitsev, A. G.** See Hollman, E. K.

**Zaitsev, A. L.**
Mechanisms of hard alloy wear in frictional processes with polymers and composite materials.—73-03615

**Zaitsev, Alexander I.; Zemchenko, Mikhail A.; Litvina, Alexandra D.; Mogutnov, B. M.**
Thermodynamic calculation of phase equilibria in the $CaF_2$-$SiO_2$-CaO system.—73-05515

**Zaitsev, D. F.**
Temperature drift of modulation characteristics in semiconductor lasers.—73-15200

**Zaitsev, G. P.** See Ordan'yan, S. S.; Samokhvalova, T. I.

**Zaitsev, N. N.; Osad'ko, I. S.**
Theory of a form [of] homogeneous admixed bands of polymers and glasses.—73-10411

**Zaitsev, R. O.** See Khlopkin, M. N.

**Zaitsev, R. O.; Mikhailova, Yu. V.**
Electron-hole asymmetry in the phase diagram of $Zn_{2-x}M_xCuO_4$ compounds.—73-02257; Phonon-free superconductivity of cubic monocarbides and mononitrides.—73-16272

**Zaitsev, R. O.**
Electron-hole asymmetry in the phase diagram of $Ln_{2-x}{}^{3+}M_xCuO_4$ compounds.—73-02256

**Zaitsev, S. M.** See Kul'buzhev, B. S.

**Zaitsev, V. K.** See Vinokurova, L. I.

**Zaitsev, V. K.; Kitirov, S. A.; Kalyazin, A. E.; Marchuk, N. D.; Ordin, S. V.**
Thermal expansion of highest manganese silicide [$MnSi_{1.71-1.75}$].—73-16629

**Zaitsev, Yu. V.; Kovler, K. L.; Ivanov, I. A.; Makridin, N. I.; Klochkov, A. P.**
Peculiarities of destruction of lightweight concretes of class B15 on mixed fine aggregate.—73-00159

**Zaitseva, N. P.; Ganikhanov, F. Sh.; Kachalov, O. V.**
Optical properties of KDP crystals obtained at high growth rate.—73-02654

**Zaitseva, N. V.; Kopelevich, Ya. V.; Kochina, I. I.; Lemanov, V. V.; Syrnikov, P. P.**
Lattice parameters and electrical resistivity dependences of $YBa_2Cu_3O_x$ ceramics on oxygen content.—73-01585
**Zaitseva, S. I.** See Moiseev, G. K.
**Zaitzev-Zotov, S. V.**
Classical-to-quantum crossover in CDW creep at low temperatures.—73-17248
**Zajac, Gerry W.** See Esfahani, Rasoul N.
**Zakhanikova, L. P.** See Abramov, A. A.
**Zakhar'in, V. I.; Rubtsov, N. M.; Rubtsov, V. I.; Shul'ga, Yu. M.**
Low-temperature silicon nitride: a promising dielectric in semiconductor technology.—73-10969
**Zakharchenko, O. F.** See Ovramenko, N. A.
**Zakharchuk, N. F.** See Koselov, B. A.
**Zakharenkov, L. F.** See Kozlovskii, V. V.
**Zakharenkov, L. F.; Golubev, Valeri; Kozlovskii, V. V.**
Microelectronic devices: prospects for rare earths.—73-04405
**Zakharenkov, L. F.**
Rare-earth applications in III-V crystal growth technology.—73-04463
**Zakharov, G. N.; Khudro, A. K.; Mel'chakov, E. N.**
Radiation defects and thermoluminescence of barium fluoride.—73-16582
**Zakharov, I. A.** See Mosin, Yu. M.
**Zakharov, N. D.** See Barabanenkov, Yu. A.; Liliental-Weber, Z.; Onorin, S. A.
**Zakharov, N. D.; Liliental-Weber, Z.; Swider, W.; Washburn, J.; Brown, A. S.; Metzger, R.**
Ordering in InGaAs/InAlAs layers.—73-15079
**Zakharov, N. D.; Werner, P.; Chen, Y.; Swider, W.; Liliental-Weber, Z.; Washburn, J.**
Compositional nonuniformities and strain relaxation at misoriented $In_xGa_{1-x}As/GaAs$ interfaces.—73-14814
**Zakharov, R. G.** See Golikov, Yu. V.
**Zakharov, S. I.; Tapinskaya, O. V.; Frolov, A. A.**
Float polishing principle applied to working optical glass components.—73-07129
**Zakharova, T. V.** See Barvinok, G. M.
**Zakhvalinskii, V. S.** See Dvorkin, A. A.
**Zaki, M. I.; Mansour, S. A. A.; Taha, F.; Mekhemer, G. A. H.**
Chromia on silica and alumina catalysts: surface structural consequences of interfacial events in the impregnation course of aquated Cr(111) ions.—73-16055
**Zakosarenko, V. M.; Il'ichev, E. V.**
Possibility of determining type of Josephson junctions from its noise characteristics.—73-15584
**Zakrevskii, V. A.; Nikolaev, V. I.; Smirnov, B. I.; Shuldiner, A. V.**
Twinning-induced emission phenomena in $NaNO_2$ crystals.—73-16388
**Zalar, A.; Hofmann, S.; Pimentel, F.; Panjan, P.**
Auger electron spectroscopy studies of interfacial reactions in metal/semiconductor multilayers activated during differential scanning calorimetry measurements.—73-11077
**Zalar, B.** See Dolinsek, J.
**Zalczer, Gilbert; Thomas, Olivier; Piel, J.-P.; Stehle, J. L.**
Ir spectroscopic ellipsometry: instrumentation and applications in semiconductors.—73-12151
**Zaldivar, R. J.; Rellick, G. S.; Yang, J.-M.**
Microstructural observations on the failure modes of a unidirectional carbon-carbon composite.—73-13422
**Zaldo, C.** See Moya, E.; Prieto, C.
**Zaldo, C.; Moya, E.; Magana, L. F.; Kovacs, L.; Polgar, K.**
Optically induced gratings in Fe- and Mn-doped $Bi_4Ge_3O_{12}$ single crystals.—73-02658
**Zalevskaya, T. L.** See Pishch, I. V.
**Zalevskii, I. D.** See Gorbylev, V. A.
**Zalizovskii, E. V.**
New ceramic brick production technologies.—73-14564
**Zama, Hideaki** See Oda, Shunri; Sakai, Kenji
**Zama, Koichi** See Tachikawa, Kyoji
**Zamadics, Maggie** See Lee, Chui-Wee
**Zambon, D.** See Aamili, A.
**Zambonin, P. G.** See Torsi, Luisa
**Zamkova, N. G.; Zinenko, V. I.**
Calculation of effective interaction constant between $BX_4$ tetrahedra in crystals of $K_2SO_4$ type.—73-16040
**Zanadian, M.** See Arias, J. M.
**Zanadvorov, P. N.** See Lebedeva, E. L.
**Zandbergen, H. W.** See Tracholt, C.
**Zander, W.** See Copetti, C. A.
**Zandian, M.** See Blazejewski, E. R.; Shin, S. H.; Zucca, R.
**Zandian, V.; Florry, J. S.; Taylor, Derek**
Conversion of fused silica powder to quartz.—73-17120; Factors affecting the rate of devitrification of fused silica powder.—73-02829
**Zangvil, Avigdor** See Huang, Chao-M.; Xu, You-Ren
**Zanibelli, Laura** See Lockhart, Thomas P.
**Zank, Gregg A.** See Atwell, William H.; Xu, You-Ren
**Zank, Gregg A.; Sneddon, Larry G.; Su, Kai**
Borazine derivatized polycarbosilane polymers and the ceramics derived therefrom.—73-05286
**Zanni, H.** See Masse, S.
**Zanni-Thevenau, H.** See Rassem, R.
**Zanoli, A.** See Boussant-Roux, Y.; Gagniard, Patrick
**Zanoli, A.; Duvierre, Gerard; Sertain, E.**
High-zirconia fused-cast refractories: a solution to defect and corrosion problems in special glasses.—73-00821; Refractories for special glasses.—73-10760
**Zanoni, R.; Piancastelli, M. N.; Marsi, M.; Margaritondo, G.**
Synchrotron-radiation-stimulated tungsten deposition on silicon from $W(CO)_6$.—73-03034
**Zanoria, Elmer; Danyluk, Steven**
Ball-on-flat reciprocating sliding wear of single-crystal, semiconductor silicon at room temperature.—73-06327
**Zanotto, E. D.** See Muller, E.; Weinberg, Michael C.
**Zapol'skii, V. A.; Bobkova, N. M.; Stanishevskii, V. N.**
Optimization of ratio of coloring components during the electric founding of ruby-colored selenide glass.—73-00382
**Zaporozhchenko, R. G.; Zaporozhchenko, V. A.; Pilipovich, I. V.**
Influence of the absorption edge on dispersion nonlinearity of $CdS_xSe_{1-x}$ microcrystals in glasses and its appearance in self-diffraction experiments.—73-14986
**Zaporozhchenko, V. A.** See Zaporozhchenko, R. G.
**Zarembo, L. K.; Karpachev, S. N.; Belyaeva, O. Yu.**
Magnetization process and magnetoacoustic resonance lineshape of polydomain YIG crystal.—73-15346
**Zarestky, J.** See Hayden, S. M.
**Zaretskaya, E. P.** See Gremenok, V. F.
**Zaretskii, Yu. G.; Ukhanov, Yu. I.; Shmartsev, Y. V.**
Normal vibrations of atomic groups in sillenite lattice: I, $O_{(1)}$; Normal vibrations of atomic groups in sillenite lattice: II, $Me(O_3Bi_3)_4$ groups.—73-02362
**Zargarova, M. I.** See Akhmedova, N. A.
**Zaripov, N. G.; Kaibyshev, O. A.; Petrova, L. V.; Efimov, O. Yu.; Pityulin, A. N.**
Role of the metallic phase in high-temperature deformation of titanium-carbide-based ceramics.—73-09667
**Zaritskii, A. A.** See Vodakov, Yu. A.
**Zarko, V. I.; Kozub, G. M.; Maikov, A. A.; Malygin, A. A.**
Effect of $TiO_2$ layer on dielectric properties of pyrogenic silica.—73-16463
**Zarubina, T. V.** See Edelman, I. S.; Kalyamin, A. V.
**Zarwasch, R.** See Ofner, H.; Rille, E.
**Zarzycki, J.** See Chaumont, D.; Pinero, M.
**Zasavitskii, I. I.** See Trofimov, V. T.; Valeiko, M. V.
**Zasavitskii, I. I.; Matveenko, A. V.; Matsonashvili, B. N.; Trofimov, V. T.**
Kinetics and spectrum of the photoconductivity of $PbTe/Pb_{1-x}Sn_xTe$ heterostructures grown on $BaF_2$ substrates.—73-07628
**Zaslavskii, A. M.** See Kushkov, V. D.
**Zaslavskii, A. M.; Zverlin, A. V.; Melnikov, A. V.**
Synthesis and structure of $R_2TiO_5$ [R=La–Lu, Y] thin films.—73-03039
**Zaslavskii, A.** See Grutzmacher, D. A.
**Zaumseil, P.** See Lubnow, A.
**Zav'yalov, V. V.; Radantsev, V. F.; Deryabina, T. I.**
Characteristics of the tunneling across Schottky barriers made of narrow-gap semiconductor *p*-type $Hg_{1-x}Cd_xTe$.—73-01098
**Zav'yalova, A. A.; Lomov, A. A.; Osipov, A. F.; Sirochenko, V. P.**
Near-to-surface layers of semiconductor substrates studied by X-ray diffraction and electrophysical technique.—73-15822
**Zavada, V. A.** See Gogotsi, G. A.
**Zavadskii, E. A.** See Asadov, S. K.
**Zavadskii, E. A.; Kamenev, V. I.; Malyshev, E. N.**
Two symmetry modifications of $DyBa_2Cu_3O_x$ single crystals.—73-08271
**Zavaliangos, A.** See Brodkin, D.
**Zavalii, P. Yu.** See Kuz'ma, Yu. B.
**Zavargo, Z.** See Djuric, Mirjana
**Zavartsev, Yu. D.** See Storozhev, N. R.
**Zavislyak, I. V.** See Gaiovich, I. Yu.
**Zavorotnii, A. S.** See Yakimenko, G. S.
**Zavorotnyi, V. F.** See Pereverzeva, L. P.
**Zavyalov, V. N.** See Kirillov, A. P.
**Zawadzki, Edward A.** See Vitunac, Edward A.
**Zawadzki, P. A.** See Liu, H.
**Zayas, M. E.; Marquez, H.; Rivera, E.; Rincon, J. M.**
Thermal stability and microstructure of new laser matrix cadmium-zinc glasses.—73-00563
**Zayas, M. E.; Rivera, E.; Rincon, J. M.**
Obtention and characterization of new optical glasses on the ZnO-CdO-$SiO_2$ system depicting high refraction index and low dispersion.—73-14238
**Zayats, A. V.** See Georgobiani, A. N.
**Zayats, N. I.** See Silich, L. M.
**Zayed, H. A.** See Abo El Soud, A. M.
**Zaykoski, James A.** See Talmy, Inna G.
**Zaykoski, James A.; Talmy, Inna G.**
Gallium and germanium substitutions in celsian.—73-16161
**Zaytsev, V. A.; Gorbatenko, I. V.; Taymarov, M. A.**
Total emissivities of refractories in vacuum.—73-10777
**Zaytsev, V. V.** See Bagaev, V. S.
**Zaytseva, S.** See Kolesov, Yu.
**Zazo, M.** See Torres, L.
**Zazoui, M.** See Zaidi, M. A.
**Zazzera, L.; Evans, J. F.**
In situ internal reflection infrared study of aqueous hydrofluoric acid and ultraviolet/ozone-treated silicon(100) surfaces.—73-05056
**Zborowski, J. T.** See Dura, J. A.; Wang, W. C.
**Zdansky, K.** See Kot, M.
**Zdornaya, Z. M.** See Samchenko, N. P.
**Zdorov, A. I.; Bershtein, V. L.**
New data on raw mixes burning in dry process kilns on the basis of an artificial clayish component.—73-10064
**Zec, S.** See Gajic, R.
**Zecchina, A.** See Marchese, Leonardo; Scarano, D.
**Zecchina, A.; Bordiga, Silvia; Spoto, G.; Scarano, D.; Petrini, G.; Leofanti, G.**
Low-temperature FTIR investigation of the interaction of CO with nanosized ZSM-5 and silicalite.—73-08903
**Zecchina, A.; Bordiga, Silvia; Spoto, G.; Scarano, D.; Petrini, G.; Leofanti, G.**
Low-temperature FTIR investigation of the interaction of CO with nanosized ZSM5 and silicalite.—73-16202
**Zednicek, W.** See Ajuwa, C. I.; Mayer, C. A.
**Zegadi, A.; Slifkin, M. A.; Djamin, M.; Tomlinson, R. D.; Neumann, H.**
Photoacoustic spectroscopy of defect states in $CuInSe_2$ single crystals.—73-04434
**Zegrya, G. G.** See Aidaraliev, M. Sh.; Andaspaeva, A. A.
**Zehr, Bradley D.**
Development of inorganic microwave dissolution.—73-15789
**Zeigler, G.** See Cao, G. Z.
**Zeijlmans, B. R. P.** See Van Exter, M. P.
**Zelnally, A. Kh.** See Lebedeva, N. N.
**Zeisel, P.**
Operating experiences from a multichamber shaft kiln [for lime burning].—73-12234
**Zelske, Thomas; Hohlwein, Dietmar; Sonntag, R.; Grybos, J.; Fubanek, F.; Elchhorn, Klaus**
Structure of the superconducting ortho-II phase of $YBa_2Cu_3O_{6.51}$.—73-11909
**Zel'tser, Yu. G.; Shchukin, V. M.; Babiev, V. G.**
Metal guiding separation rings for horizontal continuous casting machines.—73-00831
**Zelaya, D.** See Ramirez-Bon, R.
**Zelaya, O.** See Espinoza-Beltran, F. J.; Gonzalez-Hernandez, J.; Ramirez-Bon, R.
**Zelaya-Angel, O.** See Espinoza-Beltran, F. J.
**Zelazowska, E.**
Metal oxide and titanium oxynitride coatings on soda-lime glass.—73-14035
**Zeldovich, B. Y.** See Dooghin, A. V.
**Zelenskii, S. E.** See Belyi, M. U.
**Zelensky, V. F.** See Shevyakova, E. P.
**Zelinski, B. J. J.** See Denesuk, M.
**Zelinskii, V. Yu.; Kasenov, T. B.**
Ceramics made of slag obtained in aluminothermic reduction of niobium.—73-02007
**Zeller, Joe**
Color predictions and the economy.—73-06613
**Zellmer, H.** See Golla, D.
**Zeltner, Walter A.** See Sheng, Guang-Yao
**Zeltner, Walter A.; Wang, J.-F.; Omatete, Ogbemi O.; Janney, Mark A.; Tejedor-Tejedor, M. I.; Anderson, Marc A.**
Model hydrous oxide colloids for particle electrophoresis.—73-08420
**Zelyavsky, W. B.** See Kurdyumov, A. V.
**Zema, N.** See Camagni, P.
**Zembutsu, S.** See Jupina, M. H.; Ohki, A.
**Zemchenko, Mikhail A.** See Zaitsev, Alexander I.
**Zemel'ko, V. I.** See Lyubin, V. M.
**Zemlyanov, M. G.** See Parshin, P. P.
**Zemlyanskii, Yu. V.; Itkin, S. M.**
Ultrasonic control of the hydrothermal treatment of quartz ceramics.—73-03068
**Zemlyanukhin, A. V.; Alekseev, V. D.; Timofeeva, T. V.**
Construction of antistatic floors coated with ceramics.—73-08387
**Zempolich, William G.; Baker, Paul A.**
Experimental and natural mimetic dolomitization of aragonite.—73-15902
**Zemskii, I.** See Beger, V. N.
**Zemskii, V. I.** See Beger, V. N.
**Zemskov, B. G.** See Alekseeva, G. T.
**Zeng, A.; Eldridge, J. E.; Lavoie, C.; Tiedje, T.**
Characterization of $GaAs/Ga_{1-x}Al_xAs$ multilayer systems by ir spectroscopy at normal incidence.—73-14801
**Zeng, Dong-Shui; Hampden-Smith, Mark J.; Wang, Lu-Min**
Synthesis and characterization of group VI metal silicide–silicon carbide compositions via solid-state displacement reactions of nanosize grains of $M_2C$ and silicon.—73-06078
**Zeng, J.** See Ramulu, M.
**Zeng, Jian-Ren; Tanaka, Isao; Niihara, Koichi**
Lifetime of silicon nitride limited by cavity nucleation in the intergranular glassy phase.—73-03322
**Zeng, Jin-Chuan** See Guo, Heng-Qun
**Zeng, Kai-Yang; Rowcliffe, David J.**
Experimental measurement of residual stress field around a sharp indentation in glass.—73-05046
**Zeng, L.-X.; Guan, Z.-D.; Zhao, X.-F.**
Lifetime prediction for ceramics under elevated temperature with static fatigue.—73-06469
**Zeng, L.-X.; Guan, Z.-D.**
Crack growth behavior of sintered silicon nitride subjected to cyclic loading.—73-06347
**Zeng, Lin-Ke; Zhang, Gong-Yuan; Gao, Wei**
Dynamic measuring of temperature field on porcelain body surface during firing.—73-07246
**Zeng, Quan-Pu; Mao, Xiao-Nan; Lu, Feng**
Interface reaction of TiC particle-reinforced titanium composites.—73-10241
**Zeng, R.-R.** See Shen, H.-Y.
**Zeng, Shang-Tang** See Ma, Juan-Rong
**Zeng, Shao-Xian; Guo, Jing-Kun; Yang, Zhi-Xiong; Cai, Jie; Cao, Wan-Peng**
Submicrometer hydroxyapatite bioceramics.—73-05182
**Zeng, Shao-Xian; Yang, Zhi-Xiong; Ling, Ping; Xu, Guang-Hong; Cao, Wan-Peng**
Hydroxyapatite/$Al_2O_3$ composite biomaterial implant.—73-05170
**Zeng, W.-G.** See Siu, G.-G.
**Zeng, Wen-Sheng; Qiou, Ping; Yan, Shao-Lin**
Charge transfer investigation: X-ray photoelectron spectroscopy on superconducting $Tl_2Ca_2Ba_2Cu_3O_{10}$.—73-01503
**Zeng, Xiang-Hui** See Wang, Shi-Guang
**Zeng, Xing-Lin; Cao, Lie-Zhao**
Alternating current susceptibility of $Bi_2Sr_2CaCu_2O_y$ single crystal in dc magnetic field up to 4 T.—73-11684
**Zeng, Y. W.; Fagherazzi, G.; Pinna, F.; Polizzi, S.; Riello, P.; Signoretto, M.**
Short-range structure of zirconia xerogel and aerogel, determined by wide angle X-ray scattering.—73-05476
**Zeng, Yan-Wei; Yang, Nan-Ru**
Comparative study of the ferrite phase in high-iron cements with pure $C_2A_xF_{1-x}$ by Mossbauer spectrometry.—73-00045
**Zeng, You-Yi; Zhang, Jian-Zhuang; Luo, W.-A.; Yang, N.-P.; Cai, Y.-M.; Hua, Z.-Y.**
Depositing $In_2O_3$ films as conductive buffer layers for high-temperature $YBa_2Cu_3O_{7-x}$ superconducting thin films on silicon.—73-15414

**Zeng, You-Yi; Zhang, Zhuang-Jian; Luo, Wei-Ang; Cai, Y.-M.; Shen, X.-L.; Yang, N.-P.**
Role of the silver intermediate layer in the $YBa_2Cu_3O_{7-x}$/Ag/$In_2O_3$/Si system.—73-11894

**Zeng, Z.-D.** See Shen, H.-Y.

**Zeng, Zhao-Yang; Shi, Ke-Xing; Ding, Shi-Ying**
Critical current irreversibility and possible $J_c(H)$ modification of oxide superconductors.—73-04687

**Zeng, Zheng-Dong** See Xu, Hao

**Zeng, Zuo-Tao; Ren, Yu-Fang; Meng, Jian**
Preparation and electrical properties of bismuth strontium dimanganese hexoxide [$BiSrMn_2O_6$].—73-15110

**Zenger, Manfred F.** See Kladnig, Wolfgang F.

**Zengerle, R.** See Bruckner, H. J.

**Zenker, R.**
Electron-beam surface modification: state of the art (review).—73-10225

**Zenkov, A. V.** See Gan'shina, E. A.

**Zenone, F.** See Sersale, Riccardo

**Zeppenfeld, K.; Potgen, Rainer; Reehuis, M.; Jeltschko, W.; Behrens, R. K.**
Preparation of $Yb_2Cr_2C_3$ and magnetic properties of the carbides $R_2Cr_2C_3$ (R=Yb, Ld–Lu) with $Ho_2Cr_2C_3$-type structure.—73-04639

**Zerbino, J. O.; Perdriel, C.; Arvia, A. J.**
Ellipsometry of hydrous platinum oxide layers [HPtOL's] and electrodispersed platinum surfaces resulting from their electroreduction.—73-17131

**Zetkova, Katerina** See Trojan, Miroslav

**Zettl, A.** See Xiang, X.-D.

**Zettler, J.-T.; Mikkelsen, H.; Trepk, T.; Leo, K.; Kurz, H.; Richter, W.**
Modulated ellipsometry for characterization of multiple quantum wells [MQW's] and superlattices.—73-15821

**Zetzmann, Klaus** See Binder, Dieter

**Zeus, D.**
Evolution of mechanical seals by the use of advanced ceramics as tribomaterial.—73-02012

**Zevin, L.** See Laor, A.

**Zgonik, M.; Schlesser, R.; Biaggio, I.; Voit, E.; Tscherry, J.; Gunter, P.**
Materials constants of $KNbO_3$ relevant for electro- and acoustooptics.—73-07898

**Zha, C. S.** See Kalinichev, A. G.

**Zha, C. S.; Kalinichev, A. G.; Bass, Jay D.**
Pressure dependence of optical absorption in $PbTiO_3$ to 35 GPa: observation of the tetragonal-to-cubic phase transition.—73-12866

**Zhabrev, V. A.** See Sviridov, S. I.

**Zhad'ko, I. P.** See Buyanov, A. V.; Gasan-Zade, S. G.

**Zhalilov, N. S.; Sanygin, V. P.; Yur'ev, G. S.; Marenkin, S. F.; Lazarev, V. B.**
Oriented films of semiconductor compounds $Zn_3As_2$ and $Cd_3As_2$ on sapphire substrates.—73-15080

**Zhan, Xi-Han** See Li, Lai-Feng

**Zhan, Xiao-Nong** See Yang, Hong-Shun

**Zhan, Yi-Hua**
X-ray fluorescence (XRF) spectrometer for analysis of silicate ceramic materials.—73-15862

**Zhang, Bao-Lin; Zhuang, Han-Rui; Fu, Xi-Ren**
Self-propagating high-temperature synthesis of SiC powder in pressurized $N_2$ atmosphere.—73-06032

**Zhang, Bing; Zhu, Ji-Kang**
Discrete variational $X_\alpha$ (DV-$X_\alpha$) method studies on energy levels and vibrational structure of $MgF_2$:$V^{2+}$ crystals.—73-12572

**Zhang, Bo-Jun** See Maher, D. M.; Ren, Xiao-Wei

**Zhang, C.** See Balachandran, Uthamalingam

**Zhang, Chang-Gui; Ji, He-Lin; Jin, Xin**
Growth of single-crystal $Y_{1-x}Gd_xBa_2Cu_3O_{6+y}$.—73-08092

**Zhang, Chang-Jiang**
Effects of fly ash in original state on properties of cement.—73-09935

**Zhang, Chun-Ping** See Song, Q. Wang

**Zhang, D. H.; Brodie, D. E.**
Transparent conducting ZnO films deposited by ion-beam-assisted reactive deposition.—73-07371

**Zhang, D.-F.** See Zhu, Yong

**Zhang, D.-H.; Radhakrishnan, K.; Yoon, Soon-Fatt; Li, H.-M.; Lek, A.-W.; Lau, E.-H.**
Characteristics of heavily Be-doped GaAs layers grown by molecular beam epitaxy.—73-11098

**Zhang, Dao-Biao** See Zhao, Tong-Rong

**Zhang, Dao-Yuan; Yang, Bei-Fang; Jiang, Yi; Wu, Y.-H.; Wang, X.-Y.; Ruan, Y.-Z.**
Mossbauer study of the high-temperature BiPbSrCaCuSnO superconductor.—73-02336

**Zhang, Deng-Xia; Liu, Xiao-Ping; Ma, Cheng-Hui**
Explosive pretreatment of $ZrSiO_4$ powder.—73-05797

**Zhang, Dian-Lin** See Wang, Xue-Mei

**Zhang, Dian-You** See Zhou, Lei

**Zhang, Dian-Yuan** See Ju, Bing-Xiu

**Zhang, F. C.** See Bonesteel, N. E.; Luo, H.

**Zhang, F.** See Li, P.; Zhang, Guo-Wei

**Zhang, F.-P.** See Zhang, S.-J.

**Zhang, F.-Q.** See Cong, Q.-Z.

**Zhang, Fang-Qing; Zhang, Nan-Ping; Xie, Er-Qing; Yang, B.; Yang, Y.-H.; Chen, G.-H.**
Electrical properties of boron-doped polycrystalline diamond films.—73-12789

**Zhang, Fu-Ping** See Hu, Hai-Quan

**Zhang, G. M.** See Rekow, E. D.

**Zhang, G. M.; Anand, D. K.; Ghosh, S.; Ko, W. F.**
Formation of macro- and microcracks during machining of ceramics.—73-05814

**Zhang, Gong-Li** See Li, Jin-Min

**Zhang, Gong-Yuan** See Zeng, Lin-Ke

**Zhang, Gou-Dong; Ovchinnikov, Alexander; Nappi, Jari; Asonen, H.; Pessa, M.**
Optimization and characteristics of Al-free strained-layer InGaAs/GaInAsP/GaInP SCH-QW lasers ($\lambda \approx 980$ nm) grown by gas-source MBE.—73-15077

**Zhang, Guang-Fu** See Zhang, Xiao-Feng

**Zhang, Guang-Yin** See Chen, Xiao-Bo

**Zhang, Gui-Lan; Chen, Wen-Ju; Sun, Da-Liang; Song, Yong-Yuan; Chen, Huan-Chu**
Radiationless transition of $Eu^{3+}$ excited state $^5D_0$ in SBN crystals.—73-12666

**Zhang, Guo-Ding** See Chen, Rong

**Zhang, Guo-Fan** See Fan, Zhang-Guo

**Zhang, Guo-Wei; Ouyang, Jin-Lin; Meng, Xiu-Kun; Ma, L.; Qi, S.-K.; Zhang, F.**
Reactions during preparation and sliding of sintered Fe-Mo-S wear-resistant materials.—73-05470

**Zhang, Guo-Ying** See Xu, You

**Zhang, H. J.; Boutinaud, P.; Garcia, A.; Chaminade, J. P.; Fouassier, C.**
Luminescence of the cadmium oxyfluoromolybdate, $CdMoO_3F_2$.—73-08906

**Zhang, H. Y.; He, X. H.; Shih, Y. H.**
Two-wave coupling and self-pumped phase conjugation at near-ir wavelengths in $BaTiO_3$.—73-09003

**Zhang, H.** See Duray, S. J.; Li, X.

**Zhang, H.-W.** See Ji, Yang-Yang; Zhang, S.-J.

**Zhang, H.; Chen, G.-S.; Feng, S.-Q.; Wu, K.; Zhu, X.; Feng, Q.-R.**
Superconductivity at 77 K in $(Pb,Cu)Sr_2(Ca,Y)Cu_2O_7$ by postannealing.—73-04813

**Zhang, H.; Odler, Ivan**
Texture of $SO_3$-rich portland cement clinkers.—73-03544

**Zhang, Hai**
Insulation of silica crown on glass tank furnace.—73-04008

**Zhang, Heng-Bin** See Li, Xi

**Zhang, Hong-Quan** See Sun, Shu-Zhen

**Zhang, Hong-Xi; Xu, Chong-Quan; Shang, Xue-Bin**
Spectroscopy and energy levels of $Cr^{3+}$ in magnesium-doped lithium niobate.—73-04572

**Zhang, Hong-Xue; Moilanen, Hannu; Uusimaki, Antti; Leppavuoi, S.; Rautioaho, R.**
Transformation process of laser-ablated PZT thin films.—73-04575

**Zhang, Hong; Wu, Hong; Hu, Su-Hui**
Noncrystalline BiPbSbSrCaCuO and its heat-treatment effect.—73-11845

**Zhang, Hong; Wu, Hong; Liu, Yi-Jun**
Critical current density and magnetization decay in oxygen-deficient YBCO.—73-11709

**Zhang, Huan-Bo; Sato, Hiroshi S.**
Universal relationship between $T_c$ and hole content in $p$-type cuprate superconductors.—73-15662

**Zhang, Hui-Fen** See Wang, Gu-Ya

**Zhang, Hui; Sun, Z.-J.; Yang, S.-Z.; Ji, Z.-M.; Wu, P.-H.; Zhang, S.-Y.**
Preparation of $YBa_2Cu_3O_{7-x}$ superconducting thin films over large-area substrates.—73-04791

**Zhang, J. L.; Evetts, J. E.**
Preparation of BaHfO using a spray-drying method.—73-05968

**Zhang, J. L.; Li, B. R.**
Synthesis and unit cell data of a new cadmium antimonate electronic ceramic.—73-08766

**Zhang, J. P.** See Frischherz, M. C.; Marks, L. D.

**Zhang, J.** See Tonner, B. P.; Yin, S.

**Zhang, J.-D.** See Gao, Yuan-Kai

**Zhang, J.-X.; Siu, G.-G.; Shao, H.-Q.**
Resonance-type internal friction of 1:1:1:2 Bi-Sr-Ca-Cu-O superconductor at very low frequencies.—73-01650

**Zhang, J.-Y.** See Pei, Zhi-Wu

**Zhang, J.-Z.; Golz, John W.; Johnson, D. Lynn; McAvoy, D. T.; Halpern, B. L.; Schmitt, J. J.**
Jet vapor deposition of nanostructure composite materials.—73-05883

**Zhang, J.; Ma, J. F.; Nagler, S. E.; Brown, S. E.**
Polarization kinetics of the CDW state of $K_{0.3}MoO_3$.—73-16570

**Zhang, Ji-Guang** See Pugh, J. Richard

**Zhang, Ji-Ming** See Wessels, B. W.

**Zhang, Ji-Ping** See Wei, Shou-Xin

**Zhang, Ji-Ping; Tang, Bao-Sheng**
Wall and floor tile body and glaze formulas for once fast firing at low temperature.—73-10907

**Zhang, Ji-Wu** See Baker, Mark D.

**Zhang, Jian-Hui**
Application of green stock of opalescent glazes to household stoneware.—73-10793

**Zhang, Jian-Zhuang** See Zeng, You-Yi

**Zhang, Jie; Xie, Hong-Bo**
Approach to formation procedure of glaze bubble.—73-10797

**Zhang, Jin-Min** See Lam, Khin-Yong

**Zhang, Jin-Min; Lam, Khin-Yong**
Transformation shear of precipitated zirconia particles.—73-05521

**Zhang, K.** See Hardy, W. N.

**Zhang, Kai; Miller, D. L.**
Electrical properties of low-temperature [LT] GaAs grown by molecular beam epitaxy and migration-enhanced epitaxy.—73-14869

**Zhang, Ke-Cong; Wei, Ming; Wang, Xi-Min**
Solvent–solute interaction in KTP crystal growth solution.—73-06066

**Zhang, L.** See Wang, J.

**Zhang, L.-De** See Mo, Chi-Mei

**Zhang, L.; Madey, Theodore E.**
Initial stages of sintering of nanostructured WC-7 wt% Co.—73-13850

**Zhang, Lei**
Nonfired and nonautoclaved fly ash bricks.—73-10070

**Zhang, Li-De** See Mo, Chi-Mei; Xie, Cun-Yi

**Zhang, Li-De; Mo, Chi-Mei; Wang, Tao; Xie, Cun-Yi**
Strong polarity and bond characterization of nanostructured silicon nitride solids.—73-05645

**Zhang, Li-Feng; Lin, Jun-Fan; Chen, Yi**
Characterization of dispersions and surface states of NiO/$\gamma$-alumina and NiO/$La_2O_3$-$\gamma$-alumina catalysts.—73-06141; Surface NiO species in NiO/$SiO_2$ catalysts [studied] using temperature-programmed reduction and X-ray diffraction.—73-02473

**Zhang, Li-Li; Zhang, Yong-Ming**
Effect of $TiO_2$ on ceramic acidity and basicity.—73-13022

**Zhang, Li-Qing** See Hu, Zhi-Xin

**Zhang, Li-Yuan** See Zhou, Yun-Song

**Zhang, Li**
Gold luster glaze.—73-07257; Purple copper glaze.—73-10888

**Zhang, Liang-Ying** See Su, Shi-Mei

**Zhang, Lide** See Wang, Tao

**Zhang, Liu-Wan** See Cai, Jie

**Zhang, Lu-Ming; Li, Zai-Geng**
Effects of ultrafine $SiO_2$, $Al_2O_3$, and $Cr_2O_3$ powders on character of ultralow cement corundum castables.—73-10726

**Zhang, M.** See Kirk, A.; Li, Z.-S.

**Zhang, Min-Hong; Gjorv, Odd E.**
Effect of silica fume on cement hydration in low-porosity cement pastes.—73-00075; Effect of silica fume on pore structure and chloride diffusivity of low-porosity cement pastes.—73-00076; Penetration of cement paste into lightweight aggregate.—73-03514

**Zhang, Ming-Dong** See Ren, Quan

**Zhang, Ming-Qian; Lan, Ren-Jie; Liu, Jun-Shen; Chen, X.-C.; Zhou, W.-Y.**
Phase cooperation between the $ZnFe_2O_4$ and $\alpha$-$Fe_2O_3$ phases of ferrite catalysts in the oxidate dehydrogenation of $n$-butenes.—73-02373

**Zhang, Ming-Sheng** See Tian, Ming-Liang

**Zhang, Nan-Ping** See Zhang, Fang-Qing

**Zhang, Ning; Tu, Shu-Jing; Zhang, Shi-Jian; Jiang, Sou-Hong**
New die designing for refractory testing bar.—73-04933

**Zhang, P.-L.** See Lin, Q.; Wang, C.-L.; Wang, Yu-Guo; Zhong, Wei-Lie

**Zhang, Pei-Xing; Chen, Yi-Min; Shi, Li-Ping**
Crystal structure of $C_4A_3\bar{S}$ [tetracalcium trialuminate sulfate].—73-13700

**Zhang, Pin-Xuan; Jing, Bing; Zhang, Wen-Jie**
Wear mechanism of fused dolomite–graphite brick.—73-07229

**Zhang, Ping-Yu** See Zhang, Xu-Shou

**Zhang, Ping; Seetharaman, Seshadri**
Dissolution of MgO in CaO-"FeO"-$CaF_2$-$SiO_2$ slags under static conditions.—73-09525

**Zhang, Q.-M.** See Cao, Wen-Wu; Wang, C.

**Zhang, Q.-M.; Cao, Wen-Wu; Wang, H.; Cross, L. Eric**
Characterization of the performance of 1-3 type piezocomposites for low-frequency applications.—73-01394

**Zhang, Q.-M.; Wang, H.; Cross, L. Eric**
Piezoelectric tubes and tubular composites for actuator and sensor applications.—73-07908

**Zhang, Q.-R.** See Sha, J.

**Zhang, Q.; Itoh, T.; Abe, M.; Tamaura, Y.**
Preparation of NiZn ferrite films by spin-spray ferrite plating on oxygen-plasma-treated substrates.—73-04638

**Zhang, Qi-Feng** See Cao, Xiao-An

**Zhang, Qi-Hai** See Han, Chuan-Xi

**Zhang, Qi-Ming** See Meyer, Richard, Jr.

**Zhang, Qi-Rui** See Wang, Nan-Lin

**Zhang, Qin-Zhe** See Sun, Bi-Wu

**Zhang, Rong-Shi; Zhao, Yu-Sheng**
Application of titanium glaze to the ceramic tiles.—73-10795

**Zhang, S.** See Guth, J. R.

**Zhang, S.-J.; Guo, X.-Y.; Zhang, F.-P.; Xu, C.-L.; Shi, F.-L.; Zhang, H.-W.**
Effects of rapid recurrent annealing on structure and magnetooptical properties of garnet films.—73-04607

**Zhang, S.-L.; Wang, J.-T.; Kaplan, W.; Ostling, M.**
Silicon nitride films deposited from $SiH_2Cl_2$-$NH_3$ by low-pressure chemical vapor deposition: kinetics, thermodynamics, composition, and structure.—73-08731

**Zhang, S.-Y.** See Zhang, Hui

**Zhang, S.; Zhu, Y. F.; Brodie, D. E.**
Photoconducting $TiO_2$ prepared by spray pyrolysis using $TiCl_4$.—73-09238

**Zhang, Shan-Yong**
Titanium-carbonitride-based cermets: processes and properties.—73-06867

**Zhang, Sheng** See Ota, Toshitaka

**Zhang, Shi-Chang** See Messing, Gary L.

**Zhang, Shi-Jian** See Zhang, Ning

**Zhang, Shi-Min** See Hao, Jian-Min

**Zhang, Shu-Gin** See Shu, Xing-Tian

**Zhang, Shu-Mei** See Yu, Kang-Tai

**Zhang, Si-Yuan; Ren, Jin-Sheng**
Calculation of $4f^65d$ energy levels of $Eu^{2+}$ ion in KX (X=Cl, Br, I) crystals.—73-08560

**Zhang, T. J.** See Chang, H. L. M.; Foster, C. M.

**Zhang, T.** See Ding, M.-Q.; Xie, J.-J.

**Zhang, T.; Evans, Julian R. G.**
Use of a heated sprue in the injection molding of large ceramic sections.—73-15859

**Zhang, Tai-Xian** See Yang, Guan-Jun

**Zhang, Tian-Jie**
Application of illite group raw materials to sanitary pottery body.—73-14644

**Zhang, Tian-Xing**
Using copper ore tailing to fabricate exterior wall tile once-fired at low temperature.—73-14673

**Zhang, Tong; Hwang, Y.; Sun, J.; Edwards, V. N.; Kolbas, R. M.; Caldwell, P. J.**
Origin of photoluminescence from $Er^{3+}$ centers in erbium-doped GaAs and $Al_{0.4}Ga_{0.6}As$ grown by MBE.—73-11369

**Zhang, Tong; Sun, J.; Edwards, N. V.; Moxey, D. E.; Kolbas, R. M.; Caldwell, P. J.**
Photoluminescence study of energy transfer processes in erbium-doped $Al_xGa_{1-x}As$ grown by MBE.—73-04441
**Zhang, Wei** See Xia, Hua
**Zhang, Wei-Da; Duan, Li-Yuan**
Preparation of ultrafine α-$Fe_2O_3$ powders.—73-09271
**Zhang, Wei-Da; Duan, Li-Zhu; Su, Yan-Ren**
Preparation of iron hydroxide gel and its thermal transformation.—73-13192
**Zhang, Wen-Bang; Glasser, Fredrick P.**
Preparation of $Al_2O_3$-$ZrO_2$ composites by inorganic sol-gel processing.—73-05966
**Zhang, Wen-Bang; Lachowski, E. E.; Glasser, Fredrick P.**
Structural evolution in $ZrO_2$-$Al_2O_3$ gels during sintering.—73-17012
**Zhang, Wen-Jie** See Zhang, Pin-Xuan
**Zhang, Wen-Li**
Action mechanism of mineralizers in synthesis of $ZrO_2$-$SiO_2$ ceramic pigments.—73-09009
**Zhang, Wen-Pu** See Zhou, Shan-Yuan
**Zhang, Wen-Zhen; Wu, Feng-Tie; Pu, Ji-Xiong**
Intracavity frequency doubling effect of β-$BaB_2O_4$ (BBO) in colliding pulse mode-lock (CPM) unstable resonator Nd:YAG laser.—73-08894
**Zhang, Wu-Yang** See Li, Rong-Sheng
**Zhang, X. D.; Riley, J. D.; Lecky, R. C. G.; Kermister, G.; Denecke, R.; Faul, J.**
Angle-resolved photoemission and band structure of the alloy $Al_{0.5}Ga_{0.5}As$ compared to that of the superlattice $[(AlAs)_2/(GaAs)_2]_{10}$.—73-04239
**Zhang, X. F.** See Darriet, J.
**Zhang, X. F.**
Identification of the interface between $SrTiO_3$(001) substrate and a $Bi_2Sr_2CaCu_2$ superconducting thin film.—73-08099
**Zhang, X. H.** See Ma, H. L.
**Zhang, X. X.; Hong, P.; Di Bartolo, B.**
Impurity-phonon interaction effects on the phonon density of states in MgO:$V^{2+}$.—73-02291
**Zhang, X. X.; Villaverde, A. B.; Bass, M.; Chai, B. H. T.; Weidner, H.; Ramotar, R. I.**
Spectroscopy and laser performance of Nd-doped gadolinium lithium fluoride.—73-08969
**Zhang, X.** See Gao, Q.-J.
**Zhang, X.-C.; Jin, Y.; Yang, K.; Schowalter, L. J.**
Resonant nonlinear susceptibility near the GaAs band gap.—73-07773
**Zhang, X.-K.** See Xia, Hua
**Zhang, X.; Ong, C.-K.**
Pressure-induced structural transition in $SiO_2$ glass.—73-06957
**Zhang, Xi-Nian; Yuan, Yong; Li, Fei-Liu**
Durable china.—73-10829
**Zhang, Xian-Li** See Miao, Song-Hua
**Zhang, Xian-Zhou** See Sun, Ji-Jun
**Zhang, Xiang-Chun** See Wang, Ci-Chang
**Zhang, Xiao** See McCamy, J. W.
**Zhang, Xiao-Dong** See Zu, Li-Ming
**Zhang, Xiao-Dong; Pan, Qi; Ge, Sen-Li; Yang, Y.-C.; Yang, J.-L.; Ding, Y.-F.**
Neutron diffraction study of $Y_2Fe_{14}BN_{1-\delta}$.—73-02347
**Zhang, Xiao-Feng; Zhuang, Zhi-Cheng; Xu, Ning; Zhang, Guang-Fu; Zheng, Zhi-Hao**
Raman scattering in diamond film prepared by hot-filament chemical vapor deposition.—73-12668
**Zhang, Xiao-Ming**
Continuous on-line determination of CO concentration in kilns for firing porcelain.—73-10809
**Zhang, Xiao-Pin** See Sun, Bi-Wu
**Zhang, Xiao; Joy, David C.**
Electron holographic characterization of ferroelectric thin films.—73-04550
**Zhang, Xing-Yu** See Wang, Qing-Pu
**Zhang, Xiu-Miao; Shi, Guo-Hua; Yang, Ai-Ling; Shao, D.-L.**
Correlations between properties of plasma-enhanced chemically vapor deposited silicon nitride and the deposition conditions.—73-12959
**Zhang, Xu-Dong**
Boron slurry as a magnesia raw material.—73-10704
**Zhang, Xu-Li** See Zhi, Yu
**Zhang, Xu-Shou** See Yu, Lai-Gui
**Zhang, Xu-Shou; Zhang, Ping-Yu; Liu, H.-W.; Zhao, Wei; Xu, S.-R.**
Microstructure and tribology of $MoS_x$ films modified by ion beam bombardment.—73-09487
**Zhang, Y. A.** See Strozier, J.
**Zhang, Y. D.** See Xiao, T. D.
**Zhang, Y. F.; Dunn-Rankin, D.; Taborek, P.**
Potential role of atomic carbon in diamond deposition.—73-13170
**Zhang, Y. H.** See Tomiya, S.
**Zhang, Y.** See Fang, Chang-Ming
**Zhang, Y.-F.** See Lin, Chin
**Zhang, Y.-Z.** See Zheng, Lu-Bin
**Zhang, Y.; Katz, L.; Wang, W. I.**
Orientation dependence of normal incidence [ir] absorption in ellipsoidal-valley quantum wells.—73-11367
**Zhang, Ya-Fei**
Reduction of pigment content in color slime for mosaic tiles.—73-10891
**Zhang, Yan** See Zou, Bing-Suo
**Zhang, Yan; Davies, Peter K.**
Stabilization of ordered zirconium titanates through the chemical substitution of $Ti^{4+}$ by $Al^{3+}/Ta^{5+}$.—73-04173
**Zhang, Yao** See Tanaka, Hiroshi; Uematsu, Keizo
**Zhang, Yao; Kawasaki, Mutsurou; Ando, Kiminari; Kato, Zenji; Uchida, Nozomu; Uematsu, Keizo**
Surface segregation of PVA during drying of a PVA-water-$Al_2O_3$ slurry.—73-03032; 73-13290
**Zhang, Yao; Tang, Xiao-Xia; Kato, Zenji**
Measurement of diffusion of PVA through pores of an $Al_2O_3$ compact.—73-05909
**Zhang, Yao; Tang, Xiao-Xia; Uchida, Nozomu; Uematsu, Keizo**
Mathematical modeling simulation for segregation of PVA during drying.—73-16859; Mathematical simulation for segregation of PVA during drying.—73-05908; Measurement of diffusion of PVA through pores of an $Al_2O_3$ compact.—73-12830
**Zhang, Yi-Tong** See Feng, Yong; Jin, Ji-Rong; Jin, Xin; Shi, Zhi-Xiang
**Zhang, Yi-Tong; Jin, Xin; Fang, Hong-Chang**
Flux creep and pinning in Ag-doped high-$T_c$ superconductor $YBa_2Cu_3O_{6+x}$.—73-04725
**Zhang, Ying-Hua** See Xiao, Gang-Yao
**Zhang, Yong-Bing** See Ren, De-He
**Zhang, Yong-Hong** See Sun, Yue
**Zhang, Yong-Hong; Luo, Le; Wei, Wang-Shui**
Effects of gamma radiation on electromagnetic properties of $YBa_2Cu_3O_x$ by melting texture growth (MTG).—73-11738
**Zhang, Yong-Ming** See Zhang, Li-Li
**Zhang, Yu** See Sun, Qing-Ying
**Zhang, Yu-Heng** See Feng, Yong; Mao, Zhi-Qiang
**Zhang, Yu-Ling** See Liang, Jing-Kui
**Zhang, Yu-Tong** See Chen, Wu-Ming
**Zhang, Z. Y.** See Heller, E. J.
**Zhang, Z.-X.** See Gao, Q.-J.
**Zhang, Z.; Hafele, H. G.**
Nondegenerate diffraction on transient gratings in InSb.—73-15057
**Zhang, Z.**
Mossbauer spectroscopic study of densified sodium borate glasses containing iron.—73-10389; Structural study of undensified and densified silicate glasses containing iron by Mossbauer and infrared spectroscopy: implication for bond deformation in silicate glasses.—73-10406
**Zhang, Zhan** See Li, Jia
**Zhang, Zhang-Hui** See Jin, Fang-Ming
**Zhang, Zhe** See Rocheleau, Richard E.
**Zhang, Zhen-Yu; Ye, Da-Nian**
Dissipative structure and its application to ceramic research.—73-10827
**Zhang, Zhi-Bo** See Wang, Li-Jiu
**Zhang, Zhi-Bo; Hosono, Hideo; Abe, Yoshihiro**
Preparation of porous glass-ceramics in $Na_2O$-CaO-$TiO_2$-$P_2O_5$ system.—73-03875
**Zhang, Zhi-Fan; Scotto, Cathy S.; Laine, Richard M.**
Pure silicon carbide fibers from polymethylsilane.—73-16963
**Zhang, Zhi-Guo; Ding, Xue-Zhou; Zhu, Yong; Jiang, Q.; Mi, X.; Yu, Z.-H.**
Noise reduction in image amplification in photorefractive $BaTiO_3$.—73-08928
**Zhang, Zhi-Ping**
Etched engraving glaze for color-glaze wall and floor tiles.—73-10837
**Zhang, Zhi-Yi; Grattan, K. T. V.; Palmer, A. W.**
Thermal characteristics of alexandrite fluorescence decay at high temperatures, induced by a visible laser diode emission.—73-02704
**Zhang, Zhong-Xian; Gao, Hang-Jun; Long, Huai-Sheng; Xie, Wei-Yi; Huang, Jie-Ping**
All-fiber frequency shifter using $LiNbO_3$ sound area wave (SAW) device.—73-01391
**Zhang, Zhou-Min** See Bang, Christopher A.
**Zhang, Zhuang-Jian** See Zeng, You-Yi
**Zhang, Zong-Tao; Huang, Yong; Jiang, Zuo-Zhao**
Electrophoretic deposition [ED] forming of SiC-TZP composites in a nonaqueous sol media.—73-13044
**Zhang, Zu-Yi; Soga, Naohiro**
Residual stress in glass layer coated on ceramic substrate.—73-05628
**Zhao, B.-R.** See Lin, Q.
**Zhao, Da-Chun; Pan, Xiao-Ren**
Electrical and surface properties of thin film of Li glass solid electrolyte.—73-10942
**Zhao, F.** See Yin, S.
**Zhao, Fang-Ran**
Behavior of admixtures for pressed silicate concretes.—73-09827
**Zhao, Fei** See Feng, Xiu-Ji
**Zhao, Feng-Qi; Bilige, Normin**
Ground-state energy of the shallow bound polaron in ternary mixed crystal.—73-01178
**Zhao, G.** See Stacy, T.
**Zhao, Gang-Kai** See Ulrich, Richard K.
**Zhao, H.-S.** See Wang, C.-L.
**Zhao, Hang-Wei** See Yu, Jia-Qing
**Zhao, Hong; Darwin, David**
Quantitative backscattered electron analysis of cement paste.—73-10121
**Zhao, Huan-Jiong** See Liu, Ze-Yong
**Zhao, Hui-Ling** See Li, Yan-Bing
**Zhao, J. N.** See Riley, David R.
**Zhao, J.-Y.** See Hu, Z.-W.
**Zhao, Ji-Zen; Zhou, Lei; Li, Miao-Chun**
Forsterite insulation board for alloy steel concasting tundish.—73-04003
**Zhao, Jia-Lorg** See Gao, Ying
**Zhao, Jin-Cai; Hidaka, H.; Takamura, A.; Pelizzetti, Ezio; Serpone, Nick**
Photodegradation of surfactants: II, ζ-potential measurements in the photocatalytic oxidation of surfactants in aqueous $TiO_2$ dispersions.—73-08950
**Zhao, Jun-Hong** See French, Jonathan D.
**Zhao, L.** See Beddoes, J.
**Zhao, M.-Y.; Yin, Z.-W.; Xu, B.-M.**
Grain-boundary characteristics in PLZT, GBBLC [grain-boundary barrier layer capacitors], and high-$T_c$ superconducting ceramics and their relation to properties.—73-13400
**Zhao, Ming-Jun; Li, Yu-Lin; Qin, Yu-Wen**
Electrooptic and photoelectric effects of $Bi_{12}SiO_{20}$ (BSO) crystals.—73-11190
**Zhao, Mu-Yu** See Li, Xi
**Zhao, Q.-X.** See Lundstrom, T.
**Zhao, Qing-Chun** See He, Hui-Juan
**Zhao, Ru-Peng; Goringe, M. J.; Myhra, S.; Turner, P. S.**
Transmission electron microscopy and high-resolution transmission electron microscopy studies of the early stages in the degradation of $YBa_2Cu_3O_{7-\delta}$ superconductor in water vapor.—73-01698
**Zhao, S.** See Pan, L. S.
**Zhao, Sheng-Zhi** See Wang, Qing-Pu
**Zhao, Shu-Qing** See Ji, Yang-Yang
**Zhao, T.** See Ge, R.
**Zhao, Tong-Rong; Zhang, Dao-Biao**
Growth and characterization of photorefractive $BaTiO_3$ single crystal.—73-05828
**Zhao, Wei** See Zhang, Xu-Shou
**Zhao, X.-F.** See Zeng, L.-X.
**Zhao, Xin-Li**
Optimal firing temperature curve for ceramic wall and floor tile.—73-07265
**Zhao, Xing-Rong** See Hao, Jian-Hua
**Zhao, Xiu-Jian; Sakka, Sumio**
Influence of alkali content and alkali mixing on the chemical durability of fluorozirconate glasses.—73-06929
**Zhao, Xiu-Zhi** See Ma, Jun-Rong
**Zhao, Xiu-Zhi; Meng, Hai-Bin**
Application of inorganic waste residue.—73-09818
**Zhao, Y.** See Shi, F.
**Zhao, Y.-C.** See Gao, Yuan-Kai
**Zhao, Y.; Liu, H. K.; Yang, G.; Dou, S. X.**
Effects of substitution for Cu in $CuO_2$ planes with dopants of different electron configurations in $YBa_2Cu_3O_7$.—73-08047
**Zhao, Yan-Zhao; Yu, Li-Da**
Ce-Pr pigment synthesis mechanism and its coloring characteristics.—73-10805
**Zhao, Ye-Quan** See Liu, Jin-Song
**Zhao, Ying-Jie** See Zhong, Jing-Chang
**Zhao, Yong-Hua** See Xiao, Gang-Yao
**Zhao, Yu-Sheng** See Zhang, Rong-Shi
**Zhao, Yu-Zhen** See Che, Guang-Can
**Zhao, Z. G.** See Kong, J.
**Zhao, Zhi-Hong; Lin, Feng-Ying; Hu, He-Fang**
$InF_3$-based fluoride glasses.—73-03737
**Zhao, Zhi-Jun** See Sun, Qing-Ping
**Zhao, Zhong-Xian** See Li, Jian-Qi
**Zharikov, E. V.** See Popov, P. A.
**Zharkova, N.** See Dzjubenko, N.
**Zhdanov, R. Sh.** See Genkina, E. A.
**Zhdanov, S. P.** See Karger, J.; Venzel, B. I.
**Zhebrovskaya, E. B.** See Shevelevich, R. S.
**Zhebrunov, S. V.** See Grinberg, V. Ya.
**Zhegalin, V. A.** See Akchurin, R. Kh.
**Zhekov, V. I.** See Asatryan, G. R.
**Zhelvakova, N. S.** See Putlyaev, I. E.
**Zhen, Yong-S.; Hrdina, Kenneth**
Process for preparing submicron/nanosize ceramic powders from precursors incorporated within a polymeric foam.—73-01875
**Zheng, An-Zhong** See Chen, Zhi-Qiang; Liu, Gui-Hai; Lu, De-Xin
**Zheng, An-Zhong; Song, Shu-Sen**
Thermal degradation of polycrystalline fibers of $Al_2O_3$-$SiO_2$ system.—73-16625
**Zheng, B.** See Ren, F. Y. G.
**Zheng, C.; West, Anthony R.**
Barium neodymium titanates: stoichiometry and phase equilibria.—73-02150
**Zheng, D. N.** See Liu, R. S.
**Zheng, D.** See Ge, R.
**Zheng, Fang** See Li, Xing-Jiao
**Zheng, Fen** See Li, Ya-Li
**Zheng, Gui-Zheng** See Zhou, Fu-Zheng
**Zheng, Guo-Zhen** See Shen, Jin-Xi
**Zheng, H.** See MacKenzie, J. D.
**Zheng, J. P.; Kwok, Hoi S.**
Preparation of indium tin oxide films at room temperature by pulsed laser deposition.—73-16923
**Zheng, J. Q.** See Williams, S.
**Zheng, J.** See Forslund, Bertil
**Zheng, Jia-Fan; Wang, Yi; Hu, Yun-Xiang**
Dielectric properties of ferroelectric ceramic material in the system $SrTiO_3$- $(K_{0.5}Bi_{0.5})TiO_3Bi_2O_3$·$3TiO_2$ at low frequencies: I, Dielectric constant, dissipation factor, temperature, and frequency characteristics of capacitor.—73-11562; Effects of additives on the bending strength and heat shock resistance of sintered bodies of stabilized aluminum titanate.—73-13514
**Zheng, Jia-Fan; Wang, Yi**
Reflection spectrum and coloring of mixed black glazes colored by ions.—73-10892
**Zheng, Jian-Guo; Li, Qi; Feng, Duan**
Electron microscopic study of partial dislocations in textured Y-Ba-Cu-O superconductors.—73-11745
**Zheng, Jing-Min; Johnson, Paul E.**
Evolution of topology during simulated sintering of powder compacts.—73-03144
**Zheng, L.; Ramalingam, S.; Shi, T.; Peterson, R. L.**
Aluminum nitride thin-film sensor for force, acceleration, and acoustic emission sensing.—73-14769
**Zheng, Le-Min** See Chen, Rong
**Zheng, Li-Ye**
Production of perforated bricks using architectural discard residues.—73-07194
**Zheng, Liu; Cui, Xue-Hua; Tang, Ming-Shu**
MgO-type delayed expansive cement.—73-00139
**Zheng, Long-Lie** See Huang, Yong
**Zheng, Lu-Bin; Hao, Yu-Zhi; Tao, Long-Xiang; Zhang, Y.-Z.; Xue, Z.-Y.**
MAS NMR and ir studies of pillared clays.—73-05434
**Zheng, Ping** See Yang, Hong-Shun
**Zheng, Q.-Q.** See Han, Ru-Shan
**Zheng, Qi-Guang** See Li, Xing-Jiao

**Zheng, Qing-Qi** See Gong, Xin-Gao
**Zheng, X.** See Carns, T. K.
**Zheng, Y.** See Li, L.; Lightfoot, P.; Pei, S.; Yang, X.-Q.
**Zheng, Zhi-Do; Liu, Yan-Ling; Coyle, Thomas W.**
Fracture resistance of silicon-carbide-platelet-reinforced alumina composite.—73-03298
**Zheng, Zhi-Hao** See Zhang, Xiao-Feng
**Zhereb, V. P.** See Kargin, Yu. F.
**Zherlitsyn, S. V.** See Burma, N. G.
**Zhernov, A. P.** See Panova, G. Kh.
**Zherzdev, A. V.; Karpov, V. G.; Pevtsov, A. B.; Pilatov, A. G.; Feoktistov, N. A.**
Electroluminescence emitted by *p-i-n* structures made of a-$Si_{1-x}C_x$:H.—73-01151
**Zhi, Yu** See Chen, Ang
**Zhi, Yu; Chen, Ang; Zhang, Xu-Li**
Dielectric properties and defect structure of $Sr_{1-x}La_xTiO_3$ ceramics.—73-04076
**Zhikharev, V. N.** See Popik, Yu. V.
**Zhil'tsov, A. P.** See Gorina, I. N.
**Zhilin, A. A.** See Dymshits, O. S.; Shepilov, M. P.
**Zhilin, A. A.; Kuchinskii, S. A.; Chastchin, S. V.**
Glass-ceramic materials in the $Na_2O$-$Nb_2O_5$-$SiO_2$ system and formation of optical materials with variable refractive index therefrom.—73-14197
**Zhilin, A. A.; Nastai, E. G.; Nikonorov, N. V.; Petrovskii, G. T.; Chuvaeva, T. I.**
New possibilities for optical glass-ceramics for integral optics.—73-00521
**Zhilin, A. A.; Sokolova, E. V.; Strekalova, J. L.; Chuvaeva, T. I.; Shepilov, M. P.**
Distinguishing features of crystallization during preparation of transparent glass-ceramics in $Al_2O_3$-$B_2O_3$-$P_2O_5$ system.—73-13962
**Zhilinskaya, E. A.** See Vlasov, Yu. G.
**Zhilyaev, V. A.; Askarova, L. Kh.**
Regularities of the oxidation-reduction reactions in mixtures of carbides and oxides of metals of the IVA and VA groups.—73-12675
**Zhilyaev, Yu. V.** See Evstropov, V. V.
**Zhimalov, A. B.** See Matveev, V. A.
**Zhitinskaya, M. K.** See Berezin, A. V.; Chernik, I. A.; Mel'nik, R. B.; Nemov, S. A.
**Zhizhin, G.** See Antonova, K.
**Zhliyaev, Yu. V.** See Evstropov, V. V.
**Zhmykhov, G. V.; Borul'ko, V. I.; Petrenko, A. G.**
Features of the recombination kinetics of paramagnetic defects during vitrification of molten silicates in external magnetic fields.—73-00627
**Zhmyreva, I. A.; Kolohkov, V. P.; Lisitsyna, E. A.**
Vibrational and vibronic spectra of fluoride- and nitride-activated phosphate glasses.—73-00423
**Zhoga, L. V.; Shpeizman, V. V.**
Destruction of ferroelectric ceramics in electric and stress fields.—73-15255
**Zhong, Bai-Qian** See Okada, Yoshihiko
**Zhong, Fu-Min; Jiang, Xiao-Long; Gong, Shi-Ming**
X-ray analysis of $SrCaCu_3O_x$ phase.—73-11941; XRD study of high-$J_c$ $YBa_2Cu_3O_{7-\delta}$ bulk material grown by melt-textured growth (MTG) method.—73-04826
**Zhong, Ji-Pin; Clark, David E.**
Interaction between colloidal particles in $SiO_2$ and $TiO_2$ sols.—73-07146
**Zhong, Ji-Pin; Fathi, Zak; LaTorre, G. P.; Folz, D. C.; Clark, David E.**
Microwave densification of porous silica gel.—73-05916; 73-14429
**Zhong, Jing-Chang; Li, Rong-Hui; Zhu, Bao-Ren; Zhao, Ying-Jie**
Noise of semiconductor laser arrays.—73-07695
**Zhong, L.; Tsuya, H.; Shimura, F.**
Measurement of the electronic transfer process in nitride film on a silicon substrate via photoconductance decay.—73-12832
**Zhong, Qian** See Inniss, Daryl
**Zhong, Qing-Hua**
Development of glazed tiles utilizing Guangfen black talcum.—73-07243
**Zhong, W.** See Balachandran, Uthamalingam
**Zhong, Wei-Bin; Sun, Geng-Chen; Zhong, Xiang-Chong**
Thermomechanical properties and thermal shock resistance of reaction-sintered zirconia-corundum-mullite materials.—73-04025; Reactive sintering of zircon and alumina/bauxite.—73-09505
**Zhong, Wei-Lie** See Wang, C.-L.; Wang, Yu-Guo
**Zhong, Wei-Lie; Jiang, B.; Zhang, P.-L.; Ma, J.-M.; Cheng, H.-M.; Yang, Z.-H.**
Phase transition in $PbTiO_3$ ultrafine particles of different sizes.—73-01423
**Zhong, Xiang-Chong** See Li, Ting-Shou; Sun, Geng-Chen; Zhong, Wei-Bin
**Zhong, Xiang-Chong**
Developing high-performance refractories based on Chinese raw materials.—73-14583; Outlook of refractory development in China for 1990's.—73-04012; Progress in basic research of refractories in China.—73-14611
**Zhong, Ziang-Chong** See Zhong, Wei-Bin
**Zhorin, V. V.** See Avanesov, A. G.
**Zhou, Ai-Guo**
Mechanism on stability of α-alumina suspensions.—73-09202
**Zhou, Ao** See Huang, You-Rong
**Zhou, B.-L.** See Wang, Y.-Q.
**Zhou, E-You; You, Hui-Guo; Wu, Mei-Ying**
Fabrication of Bi (2223)/Ag tapes.—73-11758
**Zhou, Fang-Qiao** See Hao, Jian-Hua
**Zhou, Fu-Zheng** See Ma, Jian-Wei; Shi, Mei-Guang
**Zhou, Fu-Zheng; Shen, Li-Qing; Zheng, Gui-Zheng**
Stable output of laser diode (LD) array pumped continuous wave (cw) and quasi-cw Nd:YAG laser.—73-11452
**Zhou, G. L.** See Ma, Z.
**Zhou, G. L.; Morkoc, H.**
Si/SiGe heterostructures and devices.—73-15161
**Zhou, G.-E.** See Ren, D.-M.
**Zhou, G.-F.** See Chuang, Y.-C.
**Zhou, Guien** See Wu, Wen-Bin
**Zhou, Guo-Sheng** See Li, Gui-Lan
**Zhou, H.** See Yin, S.
**Zhou, H.; Singh, R. N.**
Reaction kinetics and mechanism in Si-C and Si-C-Mo systems.—73-09293
**Zhou, Hai** See Wu, Da-Xin
**Zhou, Hai-Li; Li, Zhong-He**
Electromelting mullite ceramics with added $Ca_2SiO_4$.—73-16759; Synthesis of β-$Ca_2SiO_4$ —73-17026
**Zhou, Hai-Yan; Hirata, T.**
Coloration in ceria-doped zirconia induced by reduction heat treatment.—73-08824
**Zhou, Hong-Fu; Yao, Guo-Liang**
Application of forsterite ceramics and their production processes.—73-10918
**Zhou, Hong-Lin**
White and light porcelain fired at low temperature.—73-10909
**Zhou, J. F.** See Kim, Dai-Sik
**Zhou, J.** See Bayasi, Z.; Zhou, Y.-C.
**Zhou, Ji-Cai** See Ma, Juan-Rong
**Zhou, Ji-Ping** See Riley, David R.
**Zhou, Ji-Ping; McDevitt, John T.**
Reaction of the oxygen-deficient $YBa_2Cu_3O_8$ phase with water.—73-04797
**Zhou, Jian-Ren; Bahadur, Shyam**
SEM studies of material damage in alumina ceramics by angular single and multiple particle impacts.—73-06280
**Zhou, Jian-Ying** See Wu, Qi
**Zhou, L.** See Kuriyagawa, T.
**Zhou, Lei** See Zhao, Ji-Zen
**Zhou, Lei; Li, Xian-Min; Zhang, Dian-You**
Development of semigraphitized silicon carbide–carbon brick.—73-07206
**Zhou, Li-Min** See Kim, Jang-Kyo
**Zhou, Li-Min; Mai, Yiu-Wing; Gao, Yu-Chen**
Crack growth resistance model for fiber-reinforced ceramic materials.—73-06349
**Zhou, Li-Min; Mai, Yiu-Wing**
Analysis of fiber frictional sliding in fiber bundle pushout test.—73-17237; New model for evaluation of the interfacial friction coefficient and residual clamping stress in a fiber-pushout test.—73-08924
**Zhou, Lian** See Feng, Yong
**Zhou, Lu-Wei** See Chen, Kai-Yuan
**Zhou, M.; Oel, Heribert J.**
Effects of iron [on] the "whiteness" of porcelain, particularly during dry preparation: I, Investigative methods.—73-10832; Effects of iron on the "whiteness" of porcelain, particularly during dry preparation: II, Tests, results, and discussion.—73-10833
**Zhou, Meng** See Shu, Xing-Tian
**Zhou, P.-A.** See Ko, P. L.
**Zhou, Qing-De** See Fang, Liang
**Zhou, Quan** See Sigel, George, Jr.
**Zhou, Quan; Fan, Fu-Kang**
Processes of ultrafine ceramic powders of high purity.—73-13215
**Zhou, Shan-Yuan; Zhang, Wen-Pu; Tong, Bin-Xiang**
Analysis and study of some bone china.—73-10791
**Zhou, Song-Qing**
Thermodynamic problems of ceramic powder engineering.—73-08780
**Zhou, W.-Y.** See Zhang, Ming-Qian
**Zhou, W.; Liu, R. S.; Edwards, P. P.**
New perovskite-related compounds in the $BaO$-$Ti_2O_3$ system.—73-02352
**Zhou, Xing-Jiang** See Li, Jian-Qi
**Zhou, Y. S.; Tiersten, H. F.**
In-plane acceleration sensitivity of contoured quartz resonators stiffened by quartz cover plates supported by clips.—73-12812
**Zhou, Y.** See Ge, Q.-L.; Lin, G.-Y.; Zhu, W.-Z.
**Zhou, Y.-C.; Chang, X.; Zhou, J.; Xia, F.**
Branching phenomena in $Si_3N_4$ whiskers.—73-17110
**Zhou, Y.-P.** See Shen, H.-Y.
**Zhou, Y.-R.** See Sha, J.
**Zhou, Ya-Dong; Liu, Guo-Qing; He, Xian-Li**
Growth of $Li_2B_4O_7$ single crystal.—73-05831
**Zhou, Yi** See Li, Ning-Fang
**Zhou, Yong; Shen, De-Fang; Gan, Fu-Xi**
Magnetic and magnetooptical properties of Cu-doped Bi, Al:DyIG films prepared by the pyrolysis method.—73-05591
**Zhou, Yun-Song; Zhang, Li-Yuan; Wang, Huai-Yu**
Influence on electronic structure and superconductivity due to the partial substitution of Ni for Cu in $YBa_2(Cu_{1-x}Ni_x)_3O_{7-y}$.—73-11805
**Zhou, Yun-Song; Zhang, Li-Yuan**
Theory of superconductivity of $Bi_2Sr_2Ca_2Cu_3O_{10}$.—73-11933
**Zhou, Zhen-Hong** See Ye, Z.-Z.
**Zhou, Zhi-Hao** See Wang, Jian; Yu, Yun-Lin
**Zhou, Zhi-Hao; Tang, Wei-Long**
Computer simulating the stretching process on float glass.—73-14340
**Zhou, Zhi-Hong; Gunter, William D.**
Nature of the surface charge of kaolinite.—73-16547
**Zhou, Zhi-Ping** See MacFarlane, Douglas R.
**Zhou, Zhuang** See Mu, Xiao-Dong
**Zhovnir, G. I.** See Babentsov, V. N.
**Zhow, Zhong-Hui** See Wang, Shan-Ba
**Zhu, B. F.; Hench, Larry L.**
Sintering of silica gels at a constant rate of heating.—73-16996
**Zhu, Bao-Ren** See Zhong, Jing-Chang
**Zhu, D.-H.; Lu, H.-B.; Tao, K.; Liu, B.-X.**
Preliminary study of the formation of $WSi_2$ by high-current W ion implantation.—73-08708
**Zhu, Dong** See Huang, Chao-M.
**Zhu, Guang** See Jin, Feng
**Zhu, Gui-Hong** See Liu, Qi
**Zhu, H.-X.; Liu, S.-K.**
Mechanical properties of squeeze-cast zinc alloy matrix composites containing α-alumina fibers.—73-06820
**Zhu, Hai-Yan; Hirata, T.**
Ce 3*d* and Zr 3*d* X-ray photoelectron spectroscopy spectra of $ZrO_2$-12 mol% $CeO_2$ after heat treatments and $Ar^+$ etching.—73-08565
**Zhu, Hai-Yan**
X-ray diffraction study of the *t*-to-*m* phase transformation in 12 mol% ceria-doped zirconia at low temperatures.—73-16394
**Zhu, Hong-Yuan** See Peng, Min
**Zhu, J.** See Alonso, R. G.; Greef, R.
**Zhu, J.-S.; Liu, Z.-M.; Fung, P. C. W.; Li, J.; Wang, Y.-N.**
Certain mechanical behavior of Y-123 specimens with pinning centers from different origins.—73-15396
**Zhu, Ji-Kang** See Zhang, Bing
**Zhu, Jian-Gang** See Chang, Thomas
**Zhu, Jian-Guo** See Qian, Zheng-Hong
**Zhu, Jiao-Qun** See Wang, Xin-Rong
**Zhu, Li-Qun** See Liu, Wei-Dong
**Zhu, Ming-Guang; Chung, D. D. L.**
Active brazing alloy containing carbon fibers for metal-ceramic joining.—73-13794
**Zhu, Ning-Hua; Jing, Feng**
Guided mode field distributions of Ti:$LiNbO_3$ optical waveguides.—73-07893
**Zhu, Pei-Nan** See Bao, Man-Ling; Shen, Cheng-Fu
**Zhu, Pei-Ran** See Shi, Bo-Rong
**Zhu, Qi-Biao** See Chen, Xi-Kum
**Zhu, W.-J.** See Li, Jian-Qi
**Zhu, W.-Z.; Lei, T.-C.; Zhou, Y.**
Time-dependent tetragonal-to-monoclinic transition in hot-pressed zirconia stabilized with 2 mol% yttria.—73-17213
**Zhu, W.; Akbar, Sheikh A.**
Mixed conduction in β-alumina-type materials: a critical review.—73-14719
**Zhu, W.; Tan, B.-H.; Tan, H.-S.**
Diamond thin films synthesized by a multinozzle oxyacetylene chemical vapor deposition method.—73-16710
**Zhu, Wei** See Yang, Pei-Chun
**Zhu, Wen; Nicholson, Patrick S.**
Influence of oxygen partial pressure and temperature on Bi-Pb-Sr-Ca-Cu-O 110-K superconductor phase formation and its stability.—73-08107
**Zhu, X.** See Ge, R.; Xiong, Guang-Cheng; Zhang, H.
**Zhu, X.-Y.; White, J. M.**
Dynamics of $NH_3$ photodesorption from GaAs(100): role of electronic quenching.—73-07457
**Zhu, X.-Y.; Wolf, M.; White, J. M.**
Laser-assisted nitridation of GaAs: mechanisms.—73-05892
**Zhu, Xiu-Ying** See Sun, Qing-Ying
**Zhu, Xuan-Hui** See Xu, Di-Chun
**Zhu, Y. F.** See Zhang, S.
**Zhu, Y. T.** See Manthiram, A.
**Zhu, Y.** See Wang, J.; Wang, Y.-L.
**Zhu, Y.-C.** See Jin, S.
**Zhu, Y.-M.** See King, A. H.
**Zhu, Yi-Hua; Lu, Hui; Lu, Yuan-Cheng; Pan, Xiao-Ren**
Characterization of $SnO_2$ films deposited by dc gas discharge activating reaction evaporation onto amorphous and crystalline substrates.—73-06198
**Zhu, Yi-Hua; Yang, Qing; Pan, Xiao-Ren; Ren, Z.-M.; He, M.-Q.**
Aggregate structure of coralloid $ZnO_x$ films.—73-05353
**Zhu, Yi-Mei; Budhani, R. C.; Cai, Z. X.; Welch, D. O.; Suenaga, M.; Yoshizaki, R.**
Structure of $Au^{2+}$ ion-irradiation-induced defects in high-$T_c$ superconductors.—73-04809
**Zhu, Yi-Mei; Sabatini, R. L.; Wang, Y. L.; Suenaga, M.**
Effects of ozone oxygenation of $YBa_2Cu_3O_{7-\delta}$ thin crystals.—73-01536
**Zhu, Yi-Mei; Suenaga, M.; Tafto, J.**
Interface of orthogonally oriented twins in $YBa_2Cu_3O_{7-\delta}$.—73-04748; Interpretation of tweed contrast from the $YBa_2Cu_3O_{7-\delta}$ system.—73-04747
**Zhu, Ying-Jie** See Li, Ru-Kang; Wang, Shi-Wei
**Zhu, Yong** See Zhang, Zhi-Guo
**Zhu, Yong; Wang, Da-Di; Wu, Xing; Yang, H.-G.; Zhang, D.-F.; Jiang, Y.-D.**
Photorefractive performances of 45°-cut $BaTiO_3$ crystals.—73-08953
**Zhu, Yun-Tian T.; Manthiram, A.**
New route for the synthesis of tungsten carbide-cobalt nanocomposites.—73-13876
**Zhu, Zhen-Feng; He, Guo-Rui**
Using polymer theory to study the relationship between the structure of silicate melt and the color stability of Cd(S,Se) crystals.—73-10904
**Zhu, Zhong-Tian**
Comparison and selection of two kinds of pneumatic clutches.—73-12119
**Zhu, Zi-Qiang** See Shan, W.
**Zhu, Zi-Qiang; Yao, Takafumi; Mori, Hiroshi**
Selective doping of *n*-type ZnSe layers with chlorine grown by molecular beam epitaxy.—73-04474
**Zhuang, D.-K.** See Chen, Kun-Ji
**Zhuang, Han-Rui** See Zhang, Bao-Lin
**Zhuang, Jian; Li, Gan-Sheng; Gao, Xian-Cheng; Guo, Xi-Bin; Huang, Yi-Hao; Shi, Zhen-Zhu**
Barium strontium titanate photorefractive device and method for making the same.—73-11631
**Zhuang, Wei-Hua; Chen, Chao; Teng, Da; Yu, J.; Li, Y.-Z.**
Photoluminescence and surface photovoltaic spectra of strained InP on GaAs.—73-01278
**Zhuang, Zhi-Cheng** See Zhang, Xiao-Feng

**Zhukov, A. E.** See Alferov, Zh. I.
**Zhukov, A. I.** See Kovtun, G. P.
**Zhukov, N. D.; Aleksandrova, E. A.; Terekhov, L. M.**
Preliminary organic binder removal from castings.—73-01817
**Zhukov, S. G.** See Fetisov, G. V.
**Zhukov, V. A.** See Grebnik, V. G.
**Zhukov, V. M.** See Bondarev, V. N.
**Zhukov, V. P.** See Gubanov, V. A.
**Zhukov, V. V.** See Eremenko, V. V.
**Zhukovets, V. F.; Kozin, N. I.; Musikhin, L. A.; Osintsev, V. V.**
Control of homogeneity of $LiNbO_3$ crystals by measuring the external angle of scalar synchronism of the SHG.—73-07872
**Zhukovsky, V. M.** See Slinkina, M. V.
**Zhuo, Dun-Shui**
Method to minimize error in determining chemical durability of optical and laser glasses.—73-03801
**Zhuo, Ke-Xiang** See Ruan, Yu-Zhong
**Zhuo, Tao-Shen; Kuang, An-Xiang**
Piezoelectric ceramic transformer material with large output power.—73-04565
**Zhur'yari, E. L.; Rozhnova, T. A.; Cheban, V. M.**
Features of production of cordierite glass-ceramics applicable for hardening.—73-00626; Obtaining cordierite glass-ceramics suitable for strengthening.—73-00673
**Zhuravkevich, E. V.** See Bert, N. A.
**Zhuravlev, K. S.; Yakusheva, N. A.; Shamirzaev, T. S.; Pogadaev, V. G.; Shegai, O. A.**
Influence of Gd doping of a Bi molten solution on residual impurities in epitaxial GaAs.—73-11271
**Zhuravlev, M. V.** See Kuznetsov, M. V.
**Zhuravlev, V. D.** See Fotiev, A. A.; Surat, L. L.
**Zhuravlev, V. D.; Velikodnyi, Yu. A.; Surat, L. L.**
Isomorphic miscibility of the metavanadates of calcium, copper, and zinc.—73-16190
**Zhuravlev, Yu. F.** See Budishevskii, V. S.
**Zhuravleva, L. I.** See Ostroushko, A. A.
**Zhuravleva, N. V.; Lukin, E. S.**
Silicon-nitride-based ceramics: a review.—73-15972
**Zhuravleva, Zh. A.** See Konorova, L. F.
**Zhurov, V. V.** See Roginskaya, Yu. E.
**Zia, P.; Ahmed, S. H.; Garg, R. K.**
Flexural and shear behavior of concrete beams reinforced with 3-D continuous carbon fiber fabric.—73-00094
**Ziborov, A. V.** See Plyasova, L. M.
**Zibrov, I. P.** See Barabanenkov, Yu. A.; Nabakhtiani, G. N.
**Ziegenmeyer, I.** See Zwinge, G.
**Ziegler, G.**
Development trends in advanced ceramics.—73-02009
**Ziegler, J.** See Chu, J. H.
**Zielinger, J. P.** See Ennouri, A.
**Zielinski, Marek** See Cyrkiewicz, Marceli
**Ziemann, P.** See Siebold, T.
**Ziemath, Ervino Carlos** See Diaz Mora, Nora
**Zientek, M. J.** See Hnat, J. G.
**Zievers, Elizabeth C.** See Zievers, James F.
**Zievers, James F.; Zievers, Elizabeth C.; Eggerstedt, Paul**
Ceramic filter element and method of manufacture.—73-02029
**Zigone, M.** See Seguy, P.
**Zil'berman, A. B.** See Andreeva, E. V.
**Zil'bershtein, A. Kh.**
Transverse Faraday effect in crystal with birefringence inversion (CdS).—73-02718
**Ziling, C.; Pokrovskii, L.; Terpugov, N.; Savatinova, I.; Kuneva, M.; Tonchev, S.**
Optical and structural properties of annealed PE:$LiNbO_3$ waveguides formed wth pyrophosphoric and benzoic acid.—73-01420
**Zilliacus, R.** See Ronkainen, H.
**Zimin, S. P.; Koregina, E. L.; Bochkareva, L. V.**
Properties of compensated lead cadmium sulfide films.—73-15124
**Zimmerlin, B.** See Zum Gahr, Karl-Heinz
**Zimmerman, F.** See McKechnie, T. N.
**Zimmerman, R.** See Frohlich, D.
**Zimmermann, H.** See Lobe, K.
**Zimmermann, P.** See Lee, S. L.
**Zimmermann, U.; Keck, K.; Thierauf, A.**
Tunneling spectroscopy of YBCO "break junctions."—73-08269
**Zinchenko, E. A.** See Buyanov, A. V.
**Zinchenko, E. A.** See Gasan-Zade, S. G.
**Zinchik, Y. S.** See Vul, A. Ya.
**Zinck, J. J.** See Liu, B.; Rajavel, D.
**Zindler, R. W.; Parsons, R. R.**
$1/f$ noise in $Bi_2Sr_2Ca_2Cu_3$-O and its impact on bolometer performance.—73-08153
**Zinenko, V. I.** See Zamkova, N. G.
**Zing, Shi-Ben; Matlack, Keith S.; Pegg, Ian L.**
Effect of humic acids on the dissolution of nuclear waste glasses.—73-08295
**Zingaro, Ralph A.** See Nair, M. T. S.
**Zinger, G. M.** See Vasil'ev, A. V.
**Zink, Jeffrey I.; Dunn, Bruce S.**
Photonic materials by the sol-gel process.—73-02920
**Zink, Marianne; Russel, Christian; Muller-Simon, Hayo**
Voltammetric sensor for glass tanks.—73-10619
**Zinke-Allmang, Martin**
Dynamic effects of coherent epitaxial strain and surface stability: Ge on Si(100).—73-07456
**Zinov'ev, S. Yu.**
Synthesis and physical-chemical investigation of La-M-Ga garnets (M=Sc, In, Lu).—73-16352
**Zinoviev, A. P.** See Solonenko, O. P.
**Zinovik, M. A.**
Physicochemical bases for predicting the synthesis of oxides with a spinel structure with prescribed properties.—73-02393
**Zioli, J.** See Borsa, F.
**Ziolkowski, J.** See Bobinski, W.
**Zipperian, Donald C.**
Microstructural analysis using image analysis.—73-09476
**Ziq, K. A.** See Hamdan, N. M.
**Zirkle, Thomas E.; Wilson, Syd R.; Sundaram, S. L.; Caie, Timothy S.; Raupp, Gregory B.**
Sequential deposition of $SiO_2$ and poly-Si in isolation trenches.—73-06034
**Zirnheld, Richard A.; Goubeaux, Ronald J.**
Ceramic substrate blower motor resistor array.—73-11006
**Zironi, E. P.** See Falcony, C.
**Zivica, Vladimir**
Alkali-silicate admixture for cement composites incorporating pozzolan or blast-furnace slag.—73-13677
**Zivkov, Catherine** See Des Courieres, Thierry
**Zivkovic, Alexandre** See Mottet, Leon-Philippe; Robyn, Pierre
**Zizka, Tomas** See Sonda, Ivan
**Zlatanovic, M.** See Gredic, T.
**Zlatanovic, M.; Gredic, T.**
Combined plasma nitridation/PVD processes.—73-10205
**Zlatic, V.** See Miljak, M.
**Zlatkin, A. T.** See Lube, E. L.
**Zlatkovskii, V. B.; Nemets, I. N.; Shapovalov, N. A.**
Electrokinetic and rheological properties of magnesia suspensions.—73-02811
**Zlenko, V. Ya.; Kolobova, V. I.; Kuyan, S. V.**
Nature of cracks forming in glass insulators of electrical connectors.—73-00252
**Zlenko, V. Ya.; Valyukhov, D. P.; Ushanev, A. T.**
Failure of glass insulators in electric connectors.—73-00480
**Zlokazov, V. B.** See Babushkin, A. N.
**Zlokazova, G. M.** See Babushkin, A. N.
**Zlomanov, V. P.** See Lashkarev, G. V.
**Zmija, J.** See Borowiec, M. T.
**Znamenskii, D. A.** See Antonenko, V. I.
**Znamierowska, T.** See Jungowska, W.; Szcygiel, I.; Szuszklewicz, W.
**Znasik, P.** See Majling, Jan
**Zocchi, F.** See Zocchi, M.
**Zocchi, M.; Depero, L. E.; Zocchi, F.**
Crystal structure of the cesium bronze $Cs(Mo_{0.95}W_{0.05})_7O_{21}$.—73-02215
**Zoglmeyr, G. S.**
Technical and environmental aspects of the use of phenolic resins in modern day refractories.—73-14626
**Zok, Frank W.** See Bannister, M.; Folsom, Craig A.; Spearing, S. Mark; Velamakanni, Bhaskar V.
**Zolliker, M.** See Roessli, B.
**Zollner, A.**
Nested process controls for a critical process with large batch size.—73-08352
**Zolotarskii, A. Z.; Skverskii, N. A.**
Technological lines for small capacity plants.—73-14566
**Zolotav, M. S.** See Nobrega, M. C. S.
**Zolotukhin, A. V.**
MKTA-2500 microanalyzer for engineering monitoring.—73-08419
**Zolotukhina, L. V.** See Dmitriev, A. V.
**Zoltai, L. D.** See Stoner, B. R.
**Zoltan, Leslie D.** See Vandersande, Jan W.
**Zones, Stacey I.**
Zeolite SSZ-32.—73-05254
**Zong, Xian-Fu** See Shen, Cheng-Fu
**Zook, Larry J.** See Gheorghiu, Tudor C.
**Zorenko, A. V.** See Vassilevski, K. V.
**Zorin, I. A.** See Artem'ev, G. G.
**Zorya, L. N.** See Krot, V. V.
**Zotov, V. V.** See Burlak, A. V.
**Zotova, N. V.** See Aidaraliev, M. Sh.; Gusev, O. B.
**Zou, Bing-Suo; Zhang, Yan; Xiao, Liang-Zhi**
Self-trapped state and phonon localization in $TiO_2$ quantum dot with a dipole layer.—73-01313
**Zou, G.** See Van Hove, M.
**Zou, Gao-Yu**
High-grade body glaze for underglaze soft porcelain.—73-07258
**Zou, J.** See Pierre, A. C.
**Zou, Nan-Zhi; Chao, K. A.; Galperin, Yu. M.**
Phonon-assisted resonant magnetotunneling in Al/GaAs-GaAs-AlGaAs heterostructures.—73-15089
**Zou, Shi-Chang** See Li, Yi-Jie
**Zou, Xue-Lu** See Izumitani, Teturo
**Zou, Xue-Lu; Izumitani, Teturo**
Excitation energy transfer of $Nd^{3+}$-$Yb^{3+}$-$Er^{3+}$ in several glasses.—73-03730; Fluorescence mechanisms and dynamics of $Tm^{3+}$ singly doped and $Yb^{3+}$, $Tm^{3+}$ doubly doped glasses.—73-06918; Spectroscopic and dynamic characteristics of energy transfer of $Nd^{3+}\rightarrow Yb^{3+}$ and $Yb^{3+}\rightarrow Er^{3+}$ in aluminate glasses.—73-03759; Spectroscopic properties and mechanisms of excited state absorption and energy transfer upconversion for $Er^{3+}$-doped glasses.—73-06972
**Zou, Xue-Lu; Li, Jia-Zhi; Wang, Cheng-Yu**
Effect of heat treatment below the glass nucleation temperature on the crystallization of $TiO_2$-containing MgO-$Al_2O_3$-$SiO_2$ glasses.—73-03834
**Zou, Yao** See Osinski, Julian S.
**Zou, Yao; Osinski, Julian S.; Grodzinski, Piotr; Dapkus, P. D.; Rideout, W. C.; Sharfin, W. F.**
Auger recombination, gain, and temperature sensitivity of 1.5-μm compressively strained semiconductor laser.—73-14780
**Zou, Yi-Cong** See Guan, Jian-Shi
**Zou, Ying-Lin; Wu, Ren-Ping**
Fine porcelain with high silica.—73-10846
**Zou, Yun; Petric, Anthony**
Structure and conductivity of zirconium-doped polycrystalline lithium yttrium oxide.—73-16329
**Zou, Z.** See Baskaran, G.
**Zoubkova, Ya.; Krynetskii, I. B.; Levitin, R. Z.**
Magnetoelastic properties of rare-earth cuprates $R_2Cu_2O_5$ [R=Tb–Lu, Y].—73-17374
**Zoz, E. I.** See Karaulov, A. G.
**Zoz, E. I.; Karaulov, A. G.**
Comparative study of the solid solutions in the $ZrO_2$-$HfO_2$-MgO(CaO) systems.—73-02165
**Zsadon, B., Jr.; Papp, J.; Czaran, E.; Kallo, D.**
Preparation and optical study of zeolite-AgI inclusion complexes.—73-08709
**Zschech, E.; Troger, L.; Arvanitis, D.; Michaelis, H.;**
**Grimm, U.; Baberschke, K.**
Self-absorption effect in the fluorescence yield of NiO at the oxygen *K*-edge.—73-05636
**Zsiga, Z.** See Takadoum, J.
**Zsofi, Laszlo** See Batori, Jozsef
**Zu, Chang-Fei** See Yang, Hong-Shun
**Zu, Li-Ming; Zhang, Xiao-Dong; Yan, Ji-Hong**
Domestic porcelain body with china stone of Pangyang, Shandong, China.—73-10828
**Zub, M. P.** See Samokhvalov, V. S.
**Zub, N. G.**
Frequency dependence of surface resistivity of [superconducting] films: low-frequency electromagnetic losses.—73-15486
**Zubanov, A. E.** See Atkarskaya, A. B.
**Zubeck, R.** See Lee, H. J.
**Zubekhin, A. P.; Tkachev, A. G.; Yatsenko, E. A.**
Composition and structure of the intermediate layer on the boundary between metal and protective coating.—73-06760
**Zuber, A.** See Kaiser, N.
**Zubov, E. E.** See D'yakonov, V. P.; Fita, I. M.
**Zubov, V. E.**
Temperature dependence of equatorial Kerr effect in $FeBO_3$.—73-16360
**Zubrilov, A. S.** See Anikin, M. M.
**Zubritskii, V. V.**
Phonon focusing and incomplete electric breakdown orientation in lithium niobate.—73-15276
**Zucca, R.; Zandian, M.; Arias, J. M.; Gil, R. V.**
HgCdTe double heterostructure diode lasers grown by molecular beam epitaxy.—73-07557
**Zucchetti, Dario**
Diagnostics and monitoring for vitreous enameling.—73-10217
**Zucchinali, Alberto** See Biazzi, Roberto
**Zucker, J. E.** See Feldman, R. D.
**Zucker, O.** See Matthes, B.
**Zue, J. Z.** See Wu, X.-I.
**Zuev, A. P.** See Buravlev, A. V.
**Zuev, M. G.** See Malykh, A. G.; Mazurenko, V. G.; Snegirev, A. I.
**Zuev, M. G.; Dotsenko, V. P.; Efryushina, N. P.**
Phase relations in the system $Y_2O_3$-$B_2O_3$-$V_2O_5$ in the subsolidus region.—73-16258
**Zuev, V. V.; Klyshevich, A. I.; Styaponavichyus, A. A.; Yakovlev, M. P.**
Temperature dependence of the relaxation time of the photoconductivity of *n*-type $Cd_xHg_{1-x}Te$ in a microwave field.—73-07830
**Zuhr, R. A.** See Magruder, R. H., III; McCamy, J. W.
**Zukauskas, A.** See Jursenas, S.
**Zukoski, Charles F.** See Miller, Kelly T.
**Zukoski, Charles F.; Struble, Leslie J.**
Rheology of cementitious systems.—73-06713
**Zukowski, P. W.**
Self-recovery of implanted semiconductors.—73-11442
**Zuleeg, R.** See Paz De Araujo, C. A.; Scott, J. F.
**Zum Gahr, Karl-Heinz** See Schussler, Andreas
**Zum Gahr, Karl-Heinz; Bundschuh, W.; Zimmerlin, B.**
Effect of grain size on friction and sliding wear of oxide ceramics.—73-06379
**Zumberkovic, V.** See Jokanovic, V.
**Zunger, Alex** See Benguigui, L.; Dandrea, R. G.; Osorio, Roberto
**Zuo, Chang-Ming** See Qian, Zheng-Hong
**Zupancic, Joseph J.** See Leung, Roger Y.
**Zureckl, Zbigniew; Hayduk, Edward A., Jr.; North, John G.; Swan, Robert B.; Mitchell, David L., Jr.**
Graphite/carbon articles for elevated temperature service and method of manufacture.—73-12466; Method of forming titanium nitride coatings on carbon/graphite substrates by electric arc thermal spray process using titanium feed wire and nitrogen as the atomizing gas.—73-05316
**Zushinskii, D. A.** See Ber, B. Ya.
**Zusman, Rivka** See Avnir, David
**Zussman, A.; Levine, B. F.; Hobson, W. S.**
Long-wavelength $GaAs/Al_xGa_{1-x}As$ quantum well infrared photodetectors grown using metallorganic chemical vapor deposition.—73-15014
**Zutshi, Ajoy; Haber, Richard A.; Niesz, Dale E.; Adams, Jane W.; Wachtman, John B.; Ferber, Mattison K.**
Processing, microstructure, and wear behavior of silicon nitride hot-pressed with alumina and yttria.—73-09501
**Zvanut, M. E.; Carlos, W. E.; Twigg, M. E.; Stahlbush, R. E.; Godbey, D. J.**
Interfacial point defects in heavily implanted silicon germanium alloys.—73-09413
**Zverev, N. D.** See Garin, B. M.
**Zverev, V. M.; Silin, V. P.**
Elasticity and thermal expansion anomalies of anisotropic high-$T_c$ superconductors.—73-15447
**Zvereva, I. A.** See Chezhina, N. V.; Yablokov, Yu. V.
**Zvereva, O. V.** See Dan'kov, I. A.; Dem'yanets, L. N.; Genkina, E. A.
**Zvereva, O. V.; Mininzon, Yu. M.; Smol'skii, I. L.**
Features of twinning in berlinite crystals.—73-16151
**Zvereva, O. V.; Mininzon, Yu. M.**
Features of gallium orthophosphate growth under hydrothermal conditions.—73-16148
**Zverlin, A. V.** See Kushkov, V. D.; Zaslavskii, A. M.
**Zvonareva, T. K.** See Aver'yanov, V. L.
**Zvonkov, B. N.** See Aleshkin, V. Ya.; Karpovich, I. A.
**Zvosec, Charles M.** See Mottet, Leon-Philippe

**Zvyagin, A. I.** See Startsev, S. V.
**Zvyagin, A. I.; Yablonskii, D. A.; Pashchenko, V. A.**
Magnetic orientation phase transition in $Gd_2CuO_4$: resonance, magnetic, and acoustic investigations.—73-07336
**Zvyagin, B. B.; Romanov, E. G.**
Possibilities of symbolic description and systematic derivation of high-$T_c$ superconductor-like structures.—73-01633
**Zvyagin, S. A.** See Eremenko, V. V.
**Zwart, Cornelis H.** See Linke, Erich A. E.
**Zwick, A.** See Martinez, S.
**Zwicker, Harry R.** See Newkirk, Marc S.
**Zwinge, G.; Wehmann, H.-H.; Schlachetzki, A.; Hsu, C.-C.**
Orientation-dependent growth of InGaAs/InP for applications in laser-diode arrays.—73-11368
**Zwinge, G.; Ziegenmeyer, I.; Wehmann, H.-H.; Tang, G.-P.; Schlachetzki, A.**
InP on Si substrates characterized by spectroscopic ellipsometry.—73-11276
**Zyabnev, A. M.** See Dmitriev, A. V.
**Zyabnev, A. M.; Kraevskii, S. L.; Solinov, V. F.**
Properties of glass tubes made of photochromic glasses.—73-00535
**Zybell, Paul; Bertocchi, Ruggero**
Black glass pastes for glazing and their production.—73-03904
**Zybin, S. V.** See Kalikmanov, Vitaly I.
**Zydzik, G. J.** See Lee, H. G.; Vredenberg, A. M.
**Zygmunt, A.** See Drulis, H.; Kaczorowski, Dariusz
**Zykov, G. A.** See Lashkarev, G. V.; Gavrikova, T. A.
**Zykova, T. A.** See Permyakova, T. V.
**Zyrnicki, W.** See Kulakowska-Pawlak, B.
**Zyskind, J. L.** See Sher, A.
**Zysler, R. D.; Butera, A.; Fainstein, A.; Tovar, M.; Fisk, Z.**
Dc magnetization measurements in $Eu_2CuO_4:Gd^{3+}$.—73-04602
**Zytkiewicz, Z. R.** See Dobaczewski, L.
**Zyuzin, I. V.** See Blankova, E. B.

# CERAMIC ABSTRACTS

## November–December, 1994

Compiled by the American Ceramic Society

## SUBJECT INDEX FOR 1994

The abstract number appears at the end of each citation. Abstracts are numbered continuously through an entire volume. Subject entries are not in strict alphabetical order. Entries were computer sorted and numbers and capital letters appear before lower case letters.


**ablation,**
Ablated flux characteristics during pulsed laser ablation deposition of multicomponent oxides.—73-12907
Flux-creep-flow crossover in laser ablation YBCO thin film.—73-04726
Laser ablation deposition of $YBa_2Cu_3O_{7-x}$ thin films using a microwave plasma disk reactor oxygen source.—73-11814
**abrasion resistance,**
Abrasion-resistant coatings for glass articles.—73-00724
Abrasive wear resistance of transformation-toughened ceramics.—73-09541
Aluminum-oxide-based sintered object and process for producing the same.—73-12339
Comparison of abrasion model test results and machining tests with PVD-coated indexable inserts.—73-06758
Testing abrasive wear in mineral comminution.—73-01833
**abrasion,**
Abrasion testing of glass-ceramics.—73-00432
Abrasive wear rates of certain ceramics and cermets relative to their microhardness and fracture toughness.—73-09540
High-temperature abrasion of refractories.—73-00820
Wear tester capable of monitoring and evaluating the movement pattern of abrasive particles in three-body abrasion.—73-15760
**abrasives,**
Abrasive compact of cubic boron nitride and method of making [the] same.—73-09768
Abrasive grain and manufacture for the same.—73-09769
Abrasive grain size and glass surface finish.—73-00584
Accelerated wear testing using the grit size effect.—73-05016
Brush with success.—73-03414
Garnet, industrial.—73-12274
Glass-bonded ceramic composites.—73-03417
Glass-ceramic bonded abrasive articles.—73-13658
Granular abrasive material.—73-03418
Influence of the mass flux and impact angle of the abrasive on the erosion resistance of materials used in pulverized fuel blends and other components in thermal power stations.—73-09622
Magnetic abrasive finishing of WC-Co curved surfaces.—73-05907
Manufacturing of ferrite-base abrasives for magnetic-electrolytic polishing and its finishing characteristics.—73-06608
Method for producing monocrystalline alumina grains.—73-03419
Method of producing a composite diamond abrasive compact.—73-00002
Model for three-body abrasion of brittle materials.—73-07052
Modelization of damage by abrasion.—73-09654
Multilayer metal-coated diamond abrasives for sintered metal-bonded tools.—73-03697
Multilayer metal-coated diamond abrasives with an electrolessly deposited metal layer.—73-00003
Polishing material.—73-09772
Polycrystalline sintered abrasive granules based on $\alpha$-$Al_2O_3$.—73-03420
Preparation of nonoxidizing abrasive by sol-gel method.—73-09767
Process for making coated abrasives for grinding wheels.—73-09773
Role of indentation fracture in free abrasive machining of ceramics.—73-06514
Sintered microcrystalline ceramic material.—73-09774
Sintered sol-gel alumina abrasive filaments.—73-00005
Superabrasive wheels in the toolroom.—73-15973
Use of surfactants in processing abrasive pigments.—73-12100
**absorption/absorbents,**
Absorption by bound and free excitons in $ZnP_2$-$D_4^8$.—73-07374
Absorption characteristics of Pr(III) and Tm(III) in germanium-based oxide glass.—73-03773
Absorption edge singularities in highly excited semiconductors.—73-07375
Absorption of ir radiation by an electron plasma in the case of scattering by impurities and plasmon-phonon excitations in semiconductors.—73-14765
Behavior of the absorption coefficient due to valence band transitions in CdTe in the temperature range of 5–400 K.—73-14784
Effect of storage conditions on handling and $SO_2$ reactivity of $Ca(OH)_2$-based sorbents.—73-00078
Effects of uv light on ir absorption in chemically vapor deposited a-$SiN_x$:H films.—73-05552
Electron-phonon mechanism of broadening of optical absorption bands of quasi-zero-dimensional crystals.—73-07495
FTIR spectra of ethylene molecularly adsorbed on metal oxides.—73-12590
Fundamental absorption edge of crystalline and amorphous $SiO_2$.—73-16159
Influence of heat-treatment temperature on microwave absorbing properties of Ni-Zn ferrite.—73-04616
Nonresonant microwave absorption in granulated superconductors.—73-01617
Permittivity adjustment and impedance matching of ferrite composite microwave absorber.—73-04634
Photoinduced short-lived optical absorption in quartz glass.—73-00528
Photoinduced transient optical absorption in vitreous silica.—73-00529
Simultaneous recording of absorption and photorefractive gratings in photorefractive crystals.—73-08967
Two-photon absorption of semiconductor microcrystals under space limitation.—73-15221
Ultraviolet absorbing glasses.—73-10669
Uv-induced 210-nm absorption band in fused silica with different thermal history and stoichiometry.—73-07098
Zeolite-containing adsorptive composition and adsorptive decomposition composition containing such zeolite-containing composition.—73-02079
**acceptor,**
Optical method for evaluation of the net acceptor concentration in *p*-type ZnSe.—73-07704
**acids,**
Acid/base properties of oxide, oxide glass, and glass-ceramic surfaces.—73-02549
Chemomechanical effects of boric acid in core drilling of alumina.—73-05706
Corrosion of silicon nitride ceramics by nitric acid.—73-06306
Determination of the concentration of etching solution components containing nitric and hydrofluoric acids.—73-00947
Effect of electrolyte exposure on silicon dioxide in electrolyte-oxide-semiconductor structures.—73-14694
Extraction of alumina from Egyptian kaolin ore with sulfuric and hydrochloric acids.—73-12270
Formation and dissolution behavior of $ZrO_2$ film in $H_3PO_4$ acid solutions.—73-10231
Interaction between $\alpha$-alumina surface and polyacrylic acid.—73-12820
Methylbutenol: a new and simple diagnostic tool for acidic and basic sites of solids.—73-01915
Protonic conductivity of silicotungstic, phosphotungstic, and phosphomolybdic heteropolyacids adsorbed by porous glass.—73-14263
Solid superacids: the alumina–$ZrCl_4$ system.—73-12684
Stability and processing of aqueous $BaTiO_3$ suspension with polyacrylic acid [PAA]: effect of pH.—73-03026
Structural study of peroxopolytungstic acid prepared from metallic tungsten and [aqueous] hydrogen peroxide.—73-02454
**acoustic emission,**
Acoustic emission [AE] amplitude analysis in crack growth studies during thermal shock of ceramics.—73-05527
Acoustic emission [AE] study of $Si_3N_4$.—73-05351
Acoustic emission characteristics of mortar under compression.—73-09803
Acoustic emission in $BaTiO_3$-type ferroelectric crystals in phase transition region.—73-15247
Acoustic shear wave propagation in paratellurite with reduced spreading.—73-08801
Nondestructive detection of acoustic emission for ceramics.—73-15825
On-line wear monitoring using acoustic emission.—73-08428
Properties of AE signal on machining with a surface grinder in glass and new ceramics.—73-02983
Properties of AE signal on machining with a surface grinder in glass and new ceramics.—73-13221
**activation energy,**
Activating the sintering process of the ceramic bodies based on loess-like loamy clays.—73-00585
Activation barriers for dc conductivity in ionic glasses: classical calculations using the small-cluster approximation.—73-04055
**activation,**
Activation of blast-furnace slag in cement without clinker.—73-06621
Activation of ground blast-furnace slag by alkali-metal and alkaline-earth hydroxides—comment.—73-08545
Activation of ground blast-furnace slag by alkali-metal and alkaline-earth hydroxides—reply.—73-08546
Activators for accelerated calcination.—73-09804
Chemical activating of metallurgical slag in the conditions of granulating.—73-06637
Electronic properties of activated carbon fibers.—73-12796
Luminescence of europium-activated quartz glass irradiated with protons.—73-00510
Mechanoactivation of portland cement raw mixes.—73-10041
Mechanochemical activation of high-alumina cements [HAC]: I, Hydration behavior.—73-00137
Morphology and microstructure of activated Indian fly ash.—73-15907
Neutron activation of bird bowls and related archaic ceramics from Miletus.—73-06617
Optimal operating conditions of MgO thermo- and mechanochemical activation.—73-16887
Pozzolanic activation of metakaolin.—73-10089
Surface-activated bonding [SAB]—an approach to joining at room temperature.—73-03648
Toluene disproportionation over ZSM-5 zeolite: effects of crystal size, silicon-to-aluminum ratio, activation method, and pelletization.—73-03065
Tribochemical activation of polycrystalline alumina and zirconia in aqueous suspensions.—73-03066
**actuator,**
Applications of piezoelectrics in smart actuators.—73-04538
Laminated-type piezoelectric actuator.—73-04579
Metal-electroactive ceramic composite actuators.—73-11633
Method for encapsulating a ceramic device for embedding in composite structures.—73-11634
Miniature actuator.—73-11635
Piezoelectric actuator connected to flexible cables.—73-01444
Rainbow ceramics—a new type of ultra-high-displacement actuator.—73-04569
Rolling friction in a linear microactuator.—73-05632

Smart ceramic materials and systems.—73-09749
Testing apparatus for a multilayer piezoelectric actuator.—73-11643

**additives,**
Anomalous microstructure in $Si_3N_4$ ceramics with $Al_2O_3$-$Y_2O_3$-AlN additives.—73-17108
Cement cake properties in static filtration—influence of polymeric additives on cement filter cake permeability.—73-00031
Cement with interground additives—capabilities and environmental relief: I.—73-09840
Cement with interground additives—capabilities and environmental relief: II.—73-09841
Chemical products and additives for isostatic pressing.—73-10806
Coating additives for improved mechanical reliability of optical fiber.—73-03778
Complex additive-retarder of cement setting mortars.—73-00047
Concrete solutions.—73-03446
Correlation of slip property with additives.—73-08330
Densification process of pottery body for building construction: III, Influence of minor additives on the densification of pottery body.—73-00904
Development of the Minimum Additive Waste Stabilization (MAWS) program for Fernald.—73-09712
Dielectric properties in the $Pb(Fe_{1/2}Nb_{1/2})O_3$-$Pb(Fe_{2/3}W_{1/3})O_3$ system modified with $MnO_2$.—73-02571
Distribution analysis of sinter additives in ceramic powders using scanning electron microscopy and quantitative image analysis.—73-09073
Effect of *d*-elements on the spectroscopic characteristics of thin films.—73-02574
Effect of a small amount of liquid-forming additives on the microstructure of $Al_2O_3$ ceramics.—73-16721
Effect of addition of divalent metal oxides on the crystallization, thermal expansion, and surface roughness of alkali-free porcelain enamel in the MgO-$ZrO_2$-$P_2O_5$-$SiO_2$-$B_2O_3$ system.—73-13823
Effect of additives on the electrostatic force of alumina electrostatic chucks.—73-02779
Effect of additives on the electrostatic force of alumina electrostatic chunks.—73-10934
Effect of additives on the strength characteristics of MDF cement composites.—73-09896
Effect of andalusite, sillimanite, and kyanite on phase composition and thermal shock resistance of refractories.—73-03999
Effect of CaO addition on crystallization processes of $Li_2O$-$Al_2O_3$-$SiO_2$-$TiO_2$ glasses.—73-03721
Effect of combined additions of silica fume, calcium sulfoaluminate, and gypsum on the hydration and strength development of $Ca_2SiO_4$.—73-09900
Effect of polyacrylic hydrazide addition on properties of compact molded gypsum.—73-09914
Effect of $SiO_2$ and $TiO_2$ on the sinterability and microstructure of alumina ceramics.—73-16741
Effect of various oxide additives on sintering of BaO-$SiO_2$ system glass-ceramics.—73-03836
Effects of α-SiC versus ß-SiC starting powders on microstructure and fracture toughness of SiC sintered with $Al_2O_3$-$Y_2O_3$ additives.—73-13024
Effects of additives on magnesia alumina spinel bricks.—73-07208
Effects of additives on properties of basic refractories.—73-10724
Effects of additives on the bending strength and heat shock resistance of sintered bodies of stabilized aluminum titanate.—73-13514
Effects of additives on the stacking fault annihilation in ß-SiC powder compacts.—73-02246
Effects of Al, Si, and $B_4C$ additives on oxidation resistance of $Al_2O_3$-C refractories.—73-07209
Effects of $Li_2O$ and $Na_2O$ addition on growth and electrical properties of $PbTiO_3$ single crystals.—73-00954
Effects of $Li_2O$ and $Na_2O$ addition on growth and electrical properties of $PbTiO_3$ single crystals.—73-12778
Effects of SiC addition on the mechanical properties and sinterability of $TiB_2$-(2 mol% $Y_2O_3$-$ZrO_2$) composite.—73-02807
Effects of ultrafine $SiO_2$, $Al_2O_3$, and $Cr_2O_3$ powders on character of ultralow cement corundum castables.—73-10726
Estimation of properties and results of utilization of a new type of cement SG-45.—73-00084
Ferroelectric aluminotitanobarium materials with modifying additives.—73-01411
Gas-pressure sintering of ß-silicon nitride containing $Y_2O_3$ and $Nd_2O_3$.—73-02838
Glaze additives—30 years ago and today.—73-00909
High-$T_c$ superconducting glass-ceramics prepared by melt-quenching methods in the bismuthate system with additives.—73-15499
High-performance of new ST-type $Si_3N_4$ ceramic inserts with nonoxide additives.—73-08532
High-temperature properties of $Sc_2O_3$-doped $Si_3N_4$.—73-03308
Homogeneous mixing of $Si_3N_4$ with sintering additives by coprecipitation method.—73-16820
Improving the microstructural and physical properties of alumina electrical porcelain with $Cr_2O_3$, $MnO_2$, and ZnO additives.—73-16833
Influence of additives on the expansive stress of quicklime.—73-00110
Influence of different addition on portland cement hydration heat.—73-03485
Interaction of structure and properties of sulfoferritic and sulfoaluminoferritic clinker melts.—73-13744
Intergranular microstructure and oxidation behavior of $Si_3N_4$ ceramics formed with $Y_2O_3$, $Al_2O_3$, and $ZrO_2$.—73-06239
Internal friction and anelastic relaxation of $ZrO_2$ polycrystals containing 2 mol% $Y_2O_3$, 8 mol% $Y_2O_3$, and 12 mol% $CeO_2$.—73-02304
Mechanical properties of HIPed $Si_3N_4$-based materials for high-temperature long-term applications.—73-09638
Mechanical properties of hot-pressed TiN ceramics with various additives.—73-06480
Mechanical properties of hot-pressed TiN ceramics with various additives.—73-17386
Microstructural control of LAS ceramics: II, Influence of $Li_2O$-$4B_2O_3$ *frit addition on the microstructure and thermal expansion of* ß-spodumene.—73-03163
Microstructural control of LAS ceramics: III, Influence of $Li_2O$-$4B_2O_3$ *frit addition on the microstructure and thermal expansion of* ß-spodumene made from kaolinite.—73-06248
Modification of ferrite products using additives derived from aqueous salt solutions.—73-01474
Nonthermal granulation—the effect of additives on granulates and pressed bodies.—73-01805
Oxidation behavior of RE-α-SiAlON ceramics (RE=Nd, Sm, Gd, Dy, Y, Ho, Er, Yb).—73-17228
Physicochemical properties of ferrite powder modified by iron hydroxide.—73-05948
Polysaccharide-based additives in plaster binders.—73-10084
Processing, microstructure, and wear behavior of silicon nitride hot-pressed with alumina and yttria.—73-09501
Production and the properties of low-heat cement using dephosphorized slag.—73-10101
Properties of gypsum-free portland cements with an admixture of ABESON-TEA grinding aid.—73-10111
Resource-saving effect of concrete modifiers.—73-00185
Role of external additives on the surface crystallization of multicomponent nonalkali glasses.—73-00396
Silicon nitride ceramics.—73-16986
Sintering of alumina green sheet with $TiO_2$ and $Cr_2O_3$ in reducing atmosphere.—73-06057
Slip casting of silicon nitride and mechanical properties of sintered body: IV, Compositions of [$Al_2O_3$-$Y_2O_3$] sintering additives and sintering conditions.—73-17002
Slip casting of silicon nitride and mechanical properties of sintered body: IV, Compositions of sintering additives and sintering conditions.—73-09335
Stabilization of perovskite phase and enhanced DPT [diffuse phase transition] characteristics of $Pb(Zn, Mg)_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ ceramics by the addition of excess constituent oxides.—73-16315
Stabilized zirconias prepared by mechanical alloying.—73-03029
Synthesis of AlN powder by carbothermal reduction–nitridation method: effect of additives on reaction rate.—73-06088
Synthesis of $Ba_2Ti_9O_{20}$ by coprecipitation process and the effect of $ZrO_2$ addition.—73-17033
Temperature characteristics of (Pb,Sr,Ba)[(Zr, Ti)(Mn, Sb)]$O_3$ piezoceramics.—73-15292
Tribochemical mechanisms of $Si_3N_4$ with additives.—73-09519
Unexpected effects of alkali hydroxide added to cement mix water.—73-03550
Use of ferrophosphorus [FP] as a heavyweight additive for API oil well cements.—73-06731

**adhesives/adhesion,**
Adherence of enamel to steel.—73-03562
Adhesion of glass to metals as a production problem.—73-14314
Adhesion testing of glass-ceramic thick films on metal substrates.—73-06736
Ceramic adhesive composition and use thereof.—73-04028
Effect of annealing the polymer on the adhesion between carbon fibers and a thermoplastic matrix.—73-03577
Effect on lacquer adhesion of solid-state properties of tin oxides.—73-05549
First-principles study of interfacial adhesion: the Mo/$MoSi_2$ interface with and without impurities.—73-00233
Influence of polymer modifications on the adhesion of cement pastes to aggregates.—73-00121
Metal-ceramic adhesion: quantum mechanical modeling of transition metal–$Al_2O_3$ interfaces.—73-06824
Microindentation adhesion tester and its application to thin films.—73-08416
Sticking coefficient variation during condensation of silver and gold on MgO film.—73-13901
Thermally conducting adhesive containing aluminum nitride.—73-12530
Time-dependent adhesion between glass surfaces in dilute surfactant solutions.—73-06982

**admixture,**
Effects on cement paste of treatment with an extended set control admixture.—73-00082
Extract from endod (Phytolacea dodecandra), a soap berry plant, in the making of concrete.—73-00089
Put to the test.—73-00175

**adsorption/adsorbents,**
Absorption of MFI-type zeolites examined by isothermal microcalorimetry and neutron diffraction: I, Argon, krypton, and methane.—73-08798
Adsorbent with $Li^+$ ion-memory effect.—73-16404
Adsorption by MFI-type zeolites examined by isothermal microcalorimetry and neutron diffraction: II, Nitrogen and carbon monoxide.—73-08804
Adsorption in pores with heterogeneous surfaces.—73-16405
Adsorption of $CO_2$ on nonstoichiometric strontium calcium HAp.—73-12743
Adsorption of $CO_2$ on oxygen-deficient magnetite: adsorption enthalpy and adsorption isotherm.—73-16028
Adsorption of dextrin onto graphite.—73-08805
Adsorption of H, $CH_3$, $CH_2$, and $C_2H_2$ on 2×*1 restructured diamond (100)—theoretical study of structures, bonding, and migration.—73-02142*
Adsorption of perfluoropolyethers on $SiO_2$ surfaces for thin-film magnetic disk overcoats.—73-06883
Adsorption of phosphate on vaterite.—73-05352
Adsorption on fractal structures: applications to cement materials.—73-13673
Adsorption properties of local diatomites.—73-12253
Alumina-based adsorbents for the purification of polyolefins.—73-12338
Benzene adsorption on silica, modified by chromium oxochloride.—73-16414
Calorimetric studies of the surface aggregation of adsorbed molecules in ionic surfactant adsorption onto the heterogeneous oxide surfaces.—73-16418
Ceramics for adsorption and separation of virus and cells.—73-05161
Characterization by physisorption of a new class of microporous adsorbents: pillared clays.—73-16419
Coadsorption of $Mo^{VI}$ species and $Co^{II}$ ions on the surface of γ-alumina.—73-08822
Comparative study of $SO_2$ adsorption on metal oxides.—73-16057
Computer simultion of the adsorption of fluid mixture in zeolite Y.—73-12759
Dynamic adsorption on inorganic membranes.—73-16452
FTIR study of $CO_2$ adsorption on nonstoichiometric Sr-HAp.—73-16158
Heats of hydrocarbon and water adsorption by high-silicon zeolites of ZSM-5 type.—73-16164
In situ surface vibrational spectroscopy of the vapor/solid and liquid/solid interfaces of acetonitrile on $ZrO_2$.—73-09464
Interface chemistry of powders—adsorption, wetting, and dispersion.—73-16522
Microstructural implications by studying water vapor adsorption.—73-03164
Molecular adsorption on silica gel surface from liquid mixtures.—73-16545
Molecular sieve surface-layer adsorbents for gas chromatography—review.—73-12166
Sorption kinetics of $SO_2$ from combustion flue gases at low temperatures.—73-00191
Use of base-treated inorganic porous adsorbents for removal of contaminants.—73-05248

**advanced ceramics,**
*R*-curve behavior and its effect on strength for advanced ceramics.—73-06505
Advanced ceramics as cutting tool materials: I, An overview.—73-12312
Advanced ceramics as cutting tool materials: II, State of the art and developments.—73-12313
Advanced ceramics in The Netherlands.—73-06554
Advanced ceramics—an overview.—73-05153
Advanced ceramics: international trends.—73-03377
Advanced structural and functional ceramics.—73-05257
Advances in Science and Technology, 2: Innovative Materials, Prospects and Problems in a Competitive Industrial Context (Proceedings of the International Conference on "Innovative Materials—Prospects and Problems in a Competitive Industrial Context," June 4-6, 1992, Modena, Italy)—73-17515
Application of advanced ceramics for industrial machines and its problem.—73-02002
Barriers to applying advanced high-temperature materials.—73-09700
Canadian advanced ceramic developments.—73-06559
Case for strategic partners in a high-tech industry.—73-09701
Ceramic activities in Vamas [Versailles Project on Advanced Materials and Standards].—73-06560
Ceramic wear materials—horses for courses.—73-05160
Compressive testing of ceramics.—73-08385
Current U.S. markets for advanced ceramics and projection of future growth.—73-09708
Development of ceramic high-performance materials: I, State of the art and research.—73-12324
Development of ceramic high-performance materials: II, Technical actuality—market introduction.—73-12325
Development trends in advanced ceramics.—73-02009
Developments in the synthesis of advanced ceramic powders.—73-16707
Electrical discharge machining of advanced ceramics.—73-04914
Enrichment of aluminum hydroxides and oxides for the advanced ceramics.—73-08513
Evolution of mechanical seals by the use of advanced ceramics as tribomaterial.—73-02012
Excimer lasers and their treatment of advanced ceramic materials.—73-04919
Extrusion machines for plastic forming of ceramic bodies.—73-01781
Fine ceramics in Japan.—73-05168
Fracture toughness of advanced ceramics at room temperature.—73-17334
Grinding advanced ceramics.—73-15728
High-efficiency grinding of structural ceramics.—73-05840
High-performance/high-temperature materials in Japan.—73-17486
Influence of Japanese/American culture on technological innovation in advanced ceramic materials.—73-03397
Japan's usage of metal alkoxides in advanced ceramics.—73-03400
Know when to use "advanced" materials.—73-15928
Life Prediction Methodologies and Data for Ceramic Materials (ASTM Special Technical Publication 1201).—73-17531
Methodology to predict creep life for advanced ceramics using continuum damage mechanics.—73-17396
Neutron radiography for $Si_3N_4$ fine ceramics.—73-12171
New hardness standard reference materials (SRM's) for advanced ceramics.—73-15824

New test methods for engineering ceramics—in situ microscopy investigation.—73-01920
Ongoing example of advanced ceramics development.—73-12438
Opportunities for advanced materials used in power transmission.—73-12328
Pitch-based advanced carbon materials—resourceful utilization technologies of pitch.—73-12439
Polyethylene glycol [PEG] binders for advanced ceramics.—73-09247
Processing and applications of advanced ceramics.—73-05178
Production-oriented, nondestructive testing of structural advanced ceramics: I, Ultrasonic testing.—73-12182
Selection and application of wear-resistant materials to increase service life of components.—73-08541
Superplasticity in advanced materials.—73-16606
Synergistic effects of coupled combustion synthesis and vapor phase transport in the synthesis of advanced materials.—73-06076
Thermal Shock and Thermal Fatigue Behavior of Advanced Ceramics (NATO Advanced Science Institutes Series E: Applied Sciences 241).—73-17540
Trends in the research of advanced ceramics.—73-09754
U.S. advanced ceramics industry: the growth continues.—73-13647
Worldwide advanced ceramics industry outlook for the '90s.—73-17514

**aerogel,**
Aerocapacitor: an electrochemical double-layer energy storage device.—73-07282
Effect of gel parameters on monolithicity and density of silica aerogels.—73-09078
Evolution of mechanical properties during the alcogel-aerogel-glass process.—73-10440
Hydrophobic silica $CO_2$ aerogels.—73-00641
Preparation and physical properties of $V_2O_5$ aerogel.—73-13176
Structural and mechanical evolution during the aerogel-glass process.—73-14503
Structure and physical properties of $V_2O_5$ aerogels and xerogels.—73-14285
Synthesis and characterization of pure and yttrium-containing alumina aerogels.—73-06079
Ultrasonic evaluation of elastic properties of silica aerogels.—73-12904

**agglomerates,**
Characterization techniques for agglomerate structures.—73-08380
Die pressing test for the estimation of agglomerate strength.—73-05039
Particle agglomerate effect on intermediate/final microstructure.—73-13436
Process for the preparation of alumina agglomerates.—73-02064

**agglomeration/agglomerates,**
Agglomeration property of SiC powders prepared from fine $SiO_2$-C mixed powders.—73-02724
Process for producing agglomerates from dusts.—73-12398

**aggregates,**
Aggregate particles produced during pyrolysis of PTC barium titanate precursor synthesized by the oxalate method.—73-17107
Alkali reactivity of greywacke aggregates in Maentwrog Dam (North Wales).—73-13674
Alkali-silica reaction mechanism of aggregates showing different mortar bar expansion behaviors.—73-09812
All you want to know about lightweight aggregate concrete.—73-09813
Application of the NBRI accelerated mortar bar tests to siliceous carbonate aggregates produced in the St. Lawrence Lowlands (Quebec, Canada): II, Proposed limits, rates of expansion, and microstructure of reaction products.—73-00024
Applications of the NBRI accelerated mortar bar test to siliceous carbonate aggregates produced in the St. Lawrence Lowlands (Quebec, Canada): I, Influence of various parameters on the test results.—73-00025
Are small aggregates really better for making high-strength concrete.—73-06627
Chemical identification of portland cements in New Zealand concretes: II, The Ca-Sr-Mn plot in cement identification and the effect of aggregates.—73-06638
Controllability of expansion of lightweight aggregates with natural zeolites on firing.—73-09870
Critical evaluation of accelerated test methods for detecting the alkali reactivity of aggregates.—73-12123
Crystal growth diagrams as an aid to interpreting the fabrics of calcite aggregates.—73-12558
Effect of aggregate size on transition zone properties at the portland cement paste interface.—73-00070
Effect of treatment of reactive aggregate by $H_2O_2$ on the alkali-silica reaction [ASR].—73-12134
Effects of transition zone microstructure on bond strength of aggregate–portland cement paste interfaces.—73-03461
Flat aggregate–portland cement paste interfaces: I, Electrical conductivity models.—73-00092
Flat aggregate–portland cement paste interfaces: II, Transition zone formation.—73-00093
Influence of polymer modification on the adhesion of cement pastes to aggregates.—73-00119
Influence of polymer modifications on the adhesion of cement pastes to aggregates.—73-00121
Instant-chilled steel slag aggregate in concrete—strength-related properties.—73-00127
Insulating refractory.—73-04032
Interface between polymer-modified cement paste and aggregate.—73-00128
Manufacture of sintered fly ash aggregate using sludge.—73-08497
Method for determining saturated surface dry state of fine aggregate.—73-10043
Method for making lightweight ceramic particles.—73-05149
New method of enhancing cement-aggregate interfaces: I, Ideal aggregate and its effects on interfacial microstructures.—73-10066
Peculiarities of destruction of lightweight concretes of class B15 on mixed fine aggregate.—73-00159
Penetration of cement paste into lightweight aggregate.—73-03514
Properties of high-strength concrete containing light-, normal-, and heavyweight aggregate.—73-06704
Quality of concrete incorporated with two types of ferronickel slag fine aggregates.—73-10119
Sludge ash pellets as coarse aggregates in concrete.—73-06717
Synthesis and characterization of crystalline analogs of alkali-aggregate reaction products.—73-03543
Use of superplasticizers in palm kernel shell aggregate concrete.—73-00203

**aging,**
Influence of the age of concrete on the strength and rigidity of beams.—73-00125
Mechanisms of $YBa_2Cu_3O_{7-y}$ stability enhancement.—73-15553
Monoclinic-to-tetragonal transformation and crack healing by annealing in aged 2Y-TZP ceramics.—73-17176
New technique for monitoring aging in yttria–tetragonal zirconia polycrystals.—73-01919

**air,**
Air classification on an inclined moving grid.—73-01761
Air compressors for the process industries.—73-04899
Application of air as thermal insulating material to kilns.—73-15865
Exhaust/preheat/hot zone air-flow considerations.—73-01949
Is your air power fit to face the competition.—73-04926
Time is now: planning for the Clean Air Act (CAA).—73-09752

**albite,**
Albite-based fine household porcelain.—73-07232
Low-temperature transparent green stock glaze using albite and lipidolite.—73-10864
Pinholes and introduction of albite in double-firing zircon-glazed tiles.—73-10881

**alcohol,**
Alcohol sensor by using a *p-n* semiconductor contact.—73-11063
Etherification of silanol groups of silica surface under interaction with tert-butanol.—73-16142
Preparation and characterization of silica-supported maghemite.—73-02933

**alignment,**
Choice of optimum methodology and procedure for the correct alignment of rotary kilns and parameters influencing such a choice.—73-00040

**alinite,**
Alinite cement, a hydraulic cementitious material made of incinerator wastes.—73-09810
Preparation and hydration study of alinite cement.—73-00169

**alite,**
Characteristics of hydrated alite in hardened cement body.—73-00034
Characteristics of hydrated alite in hardened cement body.—73-09847
Decomposition of alite in portland cement clinker.—73-09880
Heat of hydration and strength development of alite–belite–blast-furnace slag composite.—73-09980
Heat of hydration and strength development of alite–belite–blast-furnace slag composite.—73-09981
Hydration of alite at different pH's.—73-09986
Influence of firing conditions and minor components on the fine textures of alite.—73-10007
Phase composition formation of portland cement clinker and alite formation kinetics.—73-10079
Relationship between zonal structure in alite, lamellar texture in belite, and their production process, composition, and crystal structure.—73-10137
Role of mineralizers in alite formation in a rice husk ash–$CaCO_3$ raw mix.—73-10143

**alkali resistance,**
Critical evaluation of accelerated test methods for detecting the alkali reactivity of aggregates.—73-12123

**alkali-silica reaction,**
$^{29}$Si MAS [magic angle spinning] NMR spectroscopic investigation of alkali-silica [AS] reaction product gels.—73-06967
Alkali reactivity of deformed granitic rocks: a case study.—73-15896
Alkali reactivity of greywacke aggregates in Maentwrog Dam (North Wales).—73-13674
Alkali-aggregate reaction rim: $Na_2O$, $SiO_2$, $K_2O$, and CaO chemical distribution.—73-00020
Alkali-silica reaction [ASR]: VIII, Correlation between mortar-bar expansion and Δ values.—73-00021
Alkali-silica reaction in a monolithic opal.—73-13676
Alkali-silica reaction mechanism of aggregates showing different mortar bar expansion behaviors.—73-09812
Analyses of sodium- and potassium-rich droplets observed on the surface of alkali-silica reactive aggregates and on gel in polished thin sections.—73-09814
Applications of the NBRI accelerated mortar bar test to siliceous carbonate aggregates produced in the St. Lawrence Lowlands (Quebec, Canada): I, Influence of various parameters on the test results.—73-00025
Comparison of different methods of detection of alkali-silica reactivity of aggregates.—73-05029
Detection of ASR [alkali silica reaction] in opened fractures of damaged concrete.—73-09882
Determination of the essential role of $OH^-$ ions in alkali-silica reaction.—73-13703
Effect of treatment of reactive aggregate by $H_2O_2$ on the alkali-silica reaction [ASR].—73-12134
Effects of silica fume on alkali-silica expansion in mortar specimens.—73-03460
Improved control of alkali-silica reaction by combined use of admixtures.—73-06672
Influence of lime on the reaction between alkalis and aluminosilicate aggregates.—73-00116
Mechanism of alkali-silica reaction and the significance of calcium hydroxide.—73-00136
Simultaneous presence of alkali-silica gel and ettringite in concrete.—73-06715
Specific effect of ions on the rate of alkali-silica reaction.—73-10161
Thermodynamic and kinetic approach to the alkali-silica reaction: II, Experiment.—73-08777
Use of dynamic nondestructive test methods to monitor concrete deterioration due to alkali-silica reaction.—73-10185

**alkaline earths,**
Effect of disubstituted oxides of alkaline earth metals on opacified glazes.—73-07247
Electrical conductivity measurements of binary solutions of molten alkaline-earth fluorides.—73-00957
Luminescence of ytterbium(II) in alkaline-earth fluorohalides.—73-02633
Preparation and structures of the alkaline-earth iron oxyhalides.—73-02403
Structural influence of nitrogen in alkaline-earth aluminosilicate glasses: ir absorption spectroscopy.—73-10404

**alkalis,**
Ac complex impedance, dc resistivity, $^7$Li and $^{23}$Na NMR studies of the layered $Li(Na)_2Mo_2O_8$ system.—73-05350
Alkali-activated cementitious systems in China: a review.—73-06623
Alkali-activated ground-granulated blast-furnace slag concrete: preliminary investigation.—73-00018
Alkali-cement system.—73-09811
Alternative model for alkali-borate glass structure.—73-13924
Color center absorption in binary alkali silicate glasses.—73-14145
Composition fluctuation in an alkali silicate glass.—73-06891
Conditions for alkali-borosilicate solution synthesis with europium introduction to manufacture hollow glass microspheres.—73-14342
Connection between the thermal capacity and the structure of alkali borate systems in the glassy, crystalline, and liquid states.—73-00442
Dispersion behavior of alkali-silicate glasses as a function of short-range structural units.—73-00449
Effect of diffusion stresses on the properties of ion-exchanged layers of alkali zirconium silicate glasses.—73-00453
Effect of hydrostatic pressure on screw dislocation annihilation by cross gliding in alkali halide crystals.—73-17123
Elastic modulus, refractive index, and its change during ion exchange in melts of salts for alkali phosphate glasses.—73-14167
Electron spin resonance characterization of nonbridging oxygen-hole centers in alkali silicate glasses.—73-13975
Enthalpy of formation of alkali borosilicate glass.—73-00335
EPR spectra of alkali-metal silicate glasses subjected to ion exchange and γ-irradiation.—73-00336
Further $^{29}$Si MAS NMR study on binary alkali silicate glasses.—73-10378
Grain growth of sintered ZnO with alkali oxide additions.—73-17140
High- and medium-range viscometers and their test with some alkali silicate glasses.—73-01902
Influence of alkali content and alkali mixing on the chemical durability of fluorozirconate glasses.—73-06929
Infrared reflectance investigation of alkali diborate glasses.—73-00351
Interaction of alkali tungsten tellurite glass with aqueous solutions.—73-00355
Internal friction of mixed-alkali aluminogermanate glasses—complexity of mixed-alkali peak.—73-10386
Interrelation of change of heat content and structure of alkali borate systems in vitreous, crystalline, and liquid states.—73-02307
Ionic conductivity of alkali silicate glasses.—73-03795
$L^I(M^{VI})_{2-x}(N^{IV})_x(PO_4)_3$ (L=Li, Na; M, N=Ge, Sn, Ti, Zr, Hf): new solid solutions synthesis, X-ray diffraction analysis, and ionic conductivity.—73-02313
Measures to inhibit alkali-dolomite reaction.—73-13750
Microcharacteristics and properties of hardened alkali-activated cementitious [AAC] materials.—73-10045
Migration of alkali ions in mortar due to several mechanisms.—73-06690
Nature of the linear frequency-dependent alternating current conductivity interpolating between conductivity relaxational and vibrational responses in alkali oxide glasses.—73-03804
Neutron diffraction study of the structure of alkali silicate glasses.—73-03743
Neutron diffraction study of the structure of alkali silicate glasses.—73-14050
Optical spectra of $In^+$ centers in the NaF crystal.—73-02656
Radiation effects on thermal expansion of some ternary alkali silicate glasses.—73-00539
Schottky barrier formation between GaAs(110) and alkali metals.—73-01309
Selection of stimulation agents for alkali-slag cement.—73-13774
Structural relaxations in alkali silicate systems by Brillouin light scattering.—73-00551

Structure and molar volumes of alkali silicate glasses.—73-00414
Structure characteristics of neodymium alkali nitrates.—73-16333
Structure of $B_2O_3$ and alkali borates in vitreous and molten states.—73-14107
Surface-chemical study on stress corrosion of glass in aqueous solutions: II, Influence of alkali metal ions.—73-00419
Synthesis and characterization of crystalline analogs of alkali-aggregate reaction products.—73-03543
Temperature dependence of isostructural viscosity of polyalkali glasses.—73-14517

**alkanes,**
Influence of presorbed molecules on the sorption of *n*-alkanes in zeolite NaCaA.—73-16174

**alkoxide,**
Characterization of hot-pressed silicon nitride ceramics with alkoxide-derived oxide mixtures as the sintering aid.—73-06196
Chemical structure of a complex alkoxide as a precursor of $Pb(Mg_{1/3}Nb_{2/3})O_3$.—73-16054
Interaction of alkali oxide and $SO_3$ on 3CaO·$SiO_2$ *formation and microstructure.—73-13743*
Methanolysis and hydrolysis of magnesium aluminum bimetallic alkoxides.—73-02893
Preparation of seeded alumina from alkoxide: I, Powders.—73-02964
Preparation of seeded alumina from alkoxide: II, Sintering.—73-02965
Processing of ultrafine mullite powder through alkoxide route.—73-03404
Temperature effects on phase composition and properties of aluminum alkoxide hydrolysis products.—73-16361

**alloys,**
Choice of casting alloys for machine elements for equipment in milling and crushing installations.—73-01767
Deformation of A 356-15% $SiC_p$ semisolid alloys during squeezing flow.—73-06765
Hall-Petch relation in nanocrystalline Fe-Mo-Si-B alloys.—73-15496
Improving the technology for making cupelas used in lead-alloy cupellation.—73-00826
Influence of heat treatment on microstructure and tensile properties of GlidCop dispersion-strengthened copper alloy.—73-13846
Process for the preparation of metal carbides.—73-02129
Silicon nitride ceramics—alloy design.—73-06282
Sliding wear of an aluminum-silicon alloy reinforced with nickel-coated carbon fibers.—73-09671

**alumina,**
$K_R$-curve behavior in $Al_2O_3$-Cr ceramic-metal composites.—73-06812
*R*-curve behavior of alumina and PSZ at ambient and high temperatures.—73-06506
*R*-curve properties of alumina measured by stable fracture test in bending.—73-06509
α-$Al_2O_3$ (0001) surfaces: atomic and electronic structures.—73-05349
3-D composite fabrication through matrix slurry pressure infiltration.—73-17059
Abrasive grain and manufacture for the same.—73-09769
Abrasive wear of $Al_2O_3$-SiC composites.—73-03233
Agglomerate characteristics and sintering behavior of alumina powders.—73-12909
$Al_2O_3$ and $ZrO_2$ composites with high-TiC contents fabricated by tailoring oxide powders.—73-09012
$Al_2O_3$ coating on MgO particles.—73-05687
$Al_2O_3$ porous structure and strength.—73-16653
$Al_2O_3$(p)-6061Al composites under dry sliding conditions [studied] using scanning electron microscopy, energy-dispersive spectrometry, and X-ray diffractometry.—73-06737
$Al_2O_3$- and $ZrO_2$-modified dental glass-ceramics.—73-14316
$Al_2O_3$-based ceramic.—73-12337
Alkali metal salts as set accelerators for high-alumina cement.—73-03434
Alkali-free glass.—73-00725
Alumina as a devitrification inhibitor during sintering of borosilicate glass powders—correction.—73-00588
Alumina buildup in submerged entry nozzle.—73-00773
Alumina ceramic-metal articles.—73-03670
Alumina coated with a layer of carbon as an absorbent.—73-05187
Alumina material useful with thin-film heads.—73-05188
Alumina package for hermetically containing an electronic device therein.—73-11000
Alumina slurry.—73-16654
Alumina–chromium carbide composite through an internal synthesis method.—73-02725
Alumina, calcia, yttria sealing composition.—73-13913
Alumina-based adsorbents for the purification of polyolefins.—73-12338
Alumina-spinel castable refractories for steel teeming ladle.—73-14567
Alumina.—73-12254
Alumina/aluminum co-continuous ceramic composite (C4) materials produced by solid/liquid displacement reactions: processing kinetics and microstructures.—73-13797
Alumina/aluminum composites formed by the directed oxidation of aluminum using magnesia as a surface dopant.—73-10197
Alumina/aluminum composites formed by the directed oxidation of aluminum using sodium hydroxide as a surface dopant.—73-10198
Aluminum oxide thin-film deposition by reactive ion plating using the cathode system composed of $LaB_6$ disk and Ta pipe.—73-09013
Aluminum titanate ceramics: I, Influence of $Al_2O_3$ on course of synthesis and on $Al_2TiO_5$ microstructure.—73-05689
Aluminum tungsten oxide ceramics synthesized by a high-power cw $CO_2$ laser.—73-09014
Aluminum-oxide-based sintered object and process for producing the same.—73-12339
Ambient-temperature mechanical response of alumina-fluoromica laminates.—73-13492
Amorphous silica spherical particles.—73-02020
Analysis of the wear behavior of SiC whisker-reinforced alumina from 25° to 1200°C.—73-09544
Analytical electron microscopy [AEM] of $Al_2O_3$ implanted with iron ions.—73-03120
Anisotropic optical spectra of α-$Al_2O_3$ single crystals in the vacuum ultraviolet region: I, Spectra of absorption tail and reflectivity.—73-02551
Anisotropic optical spectra of α-$Al_2O_3$ single crystals in the vacuum ultraviolet region: II, Spectra of optical constants.—73-08809
Apparatus for controlled supply of alumina.—73-15703
Application of microwave heating to combustion synthesis and sintering of $Al_2O_3$-TiC ceramics.—73-05695
ArF excimer laser chemical vapor deposition a-Si:H/a-$Al_2O_{1-x}$ superlattices.—73-12922
Aspects of mullite synthesis in relation to the grain size of $Al_2O_3$ and $SiO_2$.—73-00778
Aspects of the chemical technology of $ZrO_2$-$Y_2O_3$-$Al_2O_3$ powders and testing them in ceramics technology.—73-02729
Bacteria removal by ceramic microfiltration.—73-02021
Bauxite processing.—73-12309
Behavior and test method of subcritical crack growth at elevated temperatures in ceramics.—73-15779
Behavior of alumina particle-reinforced 2618 aluminum.—73-09545
Behavior of basalt fibers in high alumina cement matrix.—73-00028
Behavior of rf sputter-deposited $SiO_2$ and $Al_2O_3$ diffusion barriers on float glass at 300°C in air.—73-10499
Bending strength of SiC/$Al_2O_3$ composite sheet obtained from polycarbosilane/alumina powder/binder mixture.—73-03242
Bi-Sr-Ca-Cu-(Al)-O system; accompanying phases: I.—73-11695
Bioinert $Al_2O_3$ ceramics for medical purposes.—73-05157
Bonding of bodies of refractory hard materials to carbonaceous supports.—73-14634
Bonding strength of alumina joint bonded under the alternating stress.—73-06335
Bonding strength of alumina joint bonded under the alternating stress.—73-13802
Boron nitride-containing bodies and method of making the same.—73-15978
Brinellium—a harder, stronger, and more wettable form of aluminum oxide.—73-15920
Bulk modulus and Young's modulus of nanocrystalline γ-alumina.—73-17242
Burnout of binder and sintering behavior of powder compacts of bimodally distributed alumina powders with stearic acid and polyethylene glycol.—73-02732
Calcium phosphate type glass-ceramic.—73-00727
Calcium sulfoaluminate cements prepared from waterworks slime, a potential alumina resource for the production, and the possibility of lowering firing temperature.—73-09835
Calculated stacking-fault energies in α-$Al_2O_3$.—73-08559
Calculated structures and energies of grain boundaries in α-$Al_2O_3$.—73-05364
Carbon monoxide hydrogenation on cobalt/alumina and cobalt/NaX catalysts.—73-00213
Carboxylic acids as dispersants for alumina slurries.—73-09029
Catalyst carrier.—73-05192
Catalyst for purifying automotive exhaust gas.—73-03673
Catalysts for the high-temperature steam reforming of hydrocarbons.—73-05194
Centrifugal casting of alumina-zirconia mixed powder.—73-16664
Ceramic composite and process for its production.—73-15936
Ceramic composites and process for manufacturing the same.—73-15937
Ceramic compositions for wear-resistant applications.—73-15938
Ceramic green bodies.—73-05200
Ceramic joining: I, Partial transient liquid-phase bonding of alumina via Cu/Pt interlayers.—73-06744
Ceramic products for hydrogen sintering kilns.—73-03993
Ceramic sintered body and process for preparation thereof.—73-02030
Ceramic substrate for sputtered alloy film developed with required as-sintered density for use in construction of video heads.—73-12321
Ceramic whisker-reinforced cutting tool with preformed chipbreakers for machining.—73-02032
Change in pigment color in the system CoO-$Cr_2O_3$-$Al_2O_3$.—73-00899
Change of internal/pore structure in alumina green body during initial sintering.—73-05701
Changes in surface and catalytic properties of the CuO/$Al_2O_3$ system induced by doping with MgO.—73-05535
Changes of microstructure and high-temperature strength of ceramic composite in the mullite-$ZrO_2$-$Al_2O_3$ system using an in situ reaction between synthetic zircon and $Al_2O_3$.—73-17244
Changes of YAP phase content and some properties by the annealing of $Si_3N_4$-$Al_2O_3$-$Y_2O_3$-AlN ceramic.—73-16048
Characteristics of $Al_2O_3$-SiC nanocomposite prepared by sol-gel processing.—73-17113
Characteristics of alumina powders prepared by spray drying of boehmite sol.—73-12937
Characteristics of alumina-supported $TiO_2$ composite ultrafiltration membranes prepared by the sol-gel method.—73-05162
Characterization of cake structure and rheology via pressureless slip casting.—73-09037
Characterization of different conversion coatings on aluminum with spectroscopic ellipsometry.—73-13806
Characterization of dispersions and surface states of NiO/γ-alumina and NiO/$La_2O_3$-γ-alumina catalysts.—73-06141
Characterization of fine particles of ruthenium–alumina composites prepared by different methods.—73-10202
Characterization of fine particles of ruthenium-alumina composites prepared by different methods.—73-03566
Characterization of microporous amorphous alumina–boria.—73-08570
Characterization of the defect structure of polycrystalline Sr-ß-alumina ceramics using high-resolution transmission electron microscopy.—73-06143
Chemical synthesis of metal nanoparticles dispersed in alumina.—73-13807
Chemically vapor deposited alumina coatings on high-speed steel cutting tools.—73-10203
Chemomechanical effects of boric acid in core drilling of alumina.—73-05706
Circuit units, substrates therefor, and method of making.—73-11009
Cluster models of bulk, surface, and impurity structure in α-$Al_2O_3$.—73-05370
Coadsorption of $Mo^{VI}$ species and $Co^{II}$ ions on the surface of γ-alumina.—73-08822
Coal slag corrosion and strength degradation of silicon carbide/alumina composites.—73-17249
Coated glass and method of manufacturing [the] same.—73-03911
Coated refractory composition and method for making the same.—73-00886
Codeposition of α-alumina particles from acid copper sulfate bath.—73-07289
Colored glass.—73-00730
Combination metallic ceramic orthodontic bracket.—73-05209
Compaction and sintering behavior of a high-purity alumina powder treated with coupling agents.—73-05715
Compaction and sintering behavior of a high-purity alumina powder treated with coupling agents.—73-16678
Comparative study of microstructure and fracture behavior in reaction-bonded alumina.—73-03127
Comparison of alumina titanate powders prepared by various technologies.—73-09045
Comparison of the dynamic fatigue behavior of two monolithic SiC and an $Al_2O_3$/SiC composite.—73-17253
Composite dependence of electromotive force of silica-alumina ceramics as oxygen solid electrolyte.—73-14684
Composition and electrical properties of Au-$Al_2O_3$ cermet thin films: a critical study.—73-10209
Composition dependence of superconductivity in $YBa_2(Cu_{4-x}Al_x)O_v$.—73-01509
Compositions of alumina–magnesia spinel synthesized from natural raw materials.—73-10708
Compressibility measurements of ß- and ß´´-alumina.—73-16064
Computational modeling and parametric study of sintering of alumina.—73-09047
Conductive properties in ß´´-alumina ceramics by complex impedance analysis.—73-00941
Conductivity variations in composites of α-zirconium phosphate and alumina.—73-00943
Control of microstructures and properties of composites of the $Al_2O_3$/$ZrO_2$ spinel system: II, $Al_2O_3$/$ZrO_2$ spinel composites prepared by the solution infiltration method.—73-16685
Control of microstructures and properties of composites of the $Al_2O_3$/$ZrO_2$-spinel system: I, Preparation and sintering behavior of $Al_2O_3$-$ZrO_2$ composite powder.—73-12956
Controlled pore size phosphate-alumina material and method for producing [the] same.—73-05210
Cookware coating system.—73-03681
Cordierite–$ZrO_2$ and cordierite–$Al_2O_3$ composites obtained by sonocatalytic methods.—73-12958
Corrections to the phase diagram of the MgO-$Al_2O_3$-$SiO_2$ system.—73-08581
Correlation of green microstructure of $Al_2O_3$ with colloid/interface variables.—73-17121
Corrosion behavior of sliding materials in $NH_3$-$H_2O$ solutions at high temperature.—73-03217
Corrosion behavior of steel in high-alumina cement mortar samples: effect of chloride.—73-00052
Corrosion degradation behavior of [93 wt%] alumina ceramics in hot sulfuric acid.—73-06305
Corrosion degradation behavior of [93 wt%] alumina ceramics in hot sulfuric acid.—73-17219
Corrosion-resistant coatings ($Al_2O_3$) produced by metallorganic chemical vapor deposition using aluminum–tri-sec-butoxide.—73-06762
Corrosion-resistant member for chemical apparatus using halogen series corrosive gas.—73-12359
Crack healing of alumina with a residual glassy phase: strength, fracture toughness, and fatigue.—73-17259
Crack propagation behavior of polycrystalline alumina under static and cyclic load.—73-09554
Crack propagation in alumina during in situ straining by TEM.—73-03251
Crack shielding in Ce-TZP/$Al_2O_3$ composites: comparison of fatigue and sustained load crack growth specimens—correction.—73-09555
Crack shielding in Ce-TZP/$Al_2O_3$ composites: comparison of fatigue and sustained load crack growth specimens.—73-06354
Cracking and delamination of metallorganic vapor-deposited alumina and silica films.—73-09052

Creep behavior of fine-grained two-phase $Al_2O_3$-$Y_3Al_5O_{12}$ materials.—73-17264
Creep deformation of whisker-reinforced alumina.—73-09563
Creep fracture experiments with planar sapphire-copper interfaces stressed in tension.—73-13815
Creep in ($Al_2O_3$+$ZrO_2$) ceramics [investigated] by ultrasonic surface waves.—73-17266
Critical concentration of MgO for the prevention of abnormal grain growth in alumina.—73-16692
Critical stress of microcracking in alumina evaluated by acoustic emission.—73-06362
Crystallization behavior of BaO-$Al_2O_3$-$SiO_2$ intergranular glass compositions in alumina ceramics.—73-08590
Crystallization of B,β″-alumina precursors prepared from metal alkoxides.—73-05378
Crystallization of an $Al_2O_3$-MgO-$SiO_2$ glassy grain-boundary phase.—73-12566
Cutting performance of white ceramic tools having high strength.—73-17269
Cyclic fatigue–crack propagation in a silicon carbide whisker-reinforced alumina composite: role of load ratio.—73-09567
Damage-tolerant laminated composites in thermal shock.—73-13817
DCB methods for examining toughening in alumina reinforced with carbon-coated SiC whiskers.—73-09057
Debinding behavior for injection-molded alumina compacts.—73-02761
Deep cup forming and improvement in dimensional precision of sintered compact from alumina granules.—73-16693
Defect clustering and color in Fe,Ti: α-$Al_2O_3$.—73-05540
Defects in squeeze-cast $Al_2O_3$/Al alloy composites and their effects on mechanical properties.—73-00218
Deformation and microstructure of $Al_2O_3$-particle-reinforced 6061 Al composite.—73-06764
Degradation mechanism of Au/$AlO_x$/Al tunnel junction.—73-07292
Degradation of plasma-sprayed alumina and zirconia coatings on stainless steel during thermal cycling and hot corrosion.—73-00219
Dense $Al_2O_3$/$ZrO_2$ particulate composites by free sintering of coated powders.—73-05730
Densification and grain growth of alumina heated by microwave.—73-05732
Densification behavior of high-purity $Al_2O_3$ and $Al_2O_3$-15 vol% $ZrO_2$.—73-02765
Densification of aggregated alumina powder under cyclic compaction.—73-05733
Dependence of the growth of $Al_2O_3$ films on the growth conditions in the [atomic layer epitaxy] ALE-like process.—73-05735
Dependence of the internal friction and the mechanical properties of ceramics on their grain-boundary structures.—73-03260
Deposition from the vapor phase during induction plasma treatment of alumina powders.—73-09063
Determination of the optical dielectric functions of thin absorbing films from ir reflectivity measurements.—73-08833
Development and application of light-burned MgO-bonded alumina castable.—73-10714
Development of a three-layer laminated composite based on molybdenum disilicide reinforced with alumina platelets.—73-06767
Development of $Al_2O_3$-C refractories for iron-ore smelting reduction furnace.—73-00800
Development of aluminum gate thin-film transistors [TFT's] based on aluminum oxide insulators.—73-04073
Development of ceramic composite membranes for gas separation: IV, Permeation characteristics of γ-alumina membranes.—73-12323
Development of high-alumina brick with good thermal shock resistance.—73-10718
Development of high-performance $Al_2O_3$-C castable.—73-10719
Developments in alumina for ceramic use.—73-05166
Devitrification of the grain boundary glassy phase in a high-alumina ceramic substrate.—73-17122
Dielectric properties of alumina/zirconia composites at millimeter wavelengths.—73-07299
Diffusion bonding behavior of austenitic stainless steel containing titanium and alumina.—73-03575
Diffusion bonding of Inconel 600 to alumina without and with intermediate graded layers.—73-03576
Diffusional crack growth and creep rupture of silicon carbide doped with alumina.—73-06373
Directed oxidation of Al alloy into sintered $Al_2O_3$.—73-06771
Discoloration of alumina ceramics with ultraviolet radiation and elucidation of its mechanism.—73-16449
Dispersion and high-pressure filtration of zircon/alumina composite slurry.—73-05745
Dispersion stability of alumina–wollastonite aqueous suspensions.—73-05746
Durable china.—73-10829
Dynamic compaction of $Al_2O_3$-$ZrO_2$ compositions.—73-12993
Effect of a small amount of liquid-forming additives on the microstructure of $Al_2O_3$ ceramics.—73-16721
Effect of added organics on mechanical properties of alumina green sheets prepared by doctor blade method.—73-05750
Effect of added organics on mechanical properties of alumina green sheets prepared by doctor blade method.—73-12995
Effect of added organics on the fluidity of alumina slurry for doctor blade method.—73-12996
Effect of additives on the electrostatic force of alumina electrostatic chucks.—73-02779
Effect of additives on the electrostatic force of alumina electrostatic chunks.—73-10934
Effect of $Al_2O_3$ and SiC whisker on sintering and mechanical properties of $Si_3N_4$-bonded SiC.—73-13505
Effect of alumina addition on bending fracture behavior in Y-PSZ.—73-13506
Effect of alumina on sintering behavior and electrical conductivity of high-purity yttria-stabilized zirconia.—73-14693
Effect of atmosphere on microstructural evolution of pressureless-sintered $Al_2O_3$/SiC composites.—73-05752
Effect of atmosphere on microstructural evolution of pressureless-sintered $Al_2O_3$/SiC composites.—73-12997
Effect of carbon coating on mechanical strength of SiC whisker-reinforced alumina composites.—73-17281
Effect of chemically added zirconia and yttria on the mechanical properties of zirconia-dispersed alumina.—73-08510
Effect of compaction pressure on the internal structure of sintered alumina.—73-05756
Effect of compaction pressure on the internal structure of sintered alumina.—73-13001
Effect of Cr on interfacial interaction and wetting mechanisms in Ni alloy/alumina systems.—73-13825
Effect of dispersed particle size on mechanical properties of alumina/nonoxide composites.—73-09574
Effect of dispersed particle size on mechanical properties of alumina/nonoxide composites.—73-17283
Effect of functionalities of binders on rheological behavior of alumina suspensions and properties of green sheets.—73-09077
Effect of functionalities of binders on rheological behavior of alumina suspensions and properties of green sheets.—73-16726
Effect of grain size on Hertzian contact damage in alumina.—73-13507
Effect of grain size on strength, fracture toughness, and static fatigue crack growth in alumina.—73-03265
Effect of grain size on the ballistic performance of aluminas.—73-06380
Effect of grain size on the cyclic fatigue behavior of sintered $Al_2O_3$ under rotary bending.—73-06381
Effect of heat treatment on alumina short-fiber-reinforced magnesium composites.—73-16727
Effect of heat treatment on properties of alumina green sheet.—73-02784
Effect of high-temperature exposure on the tensile strength of alumina fiber Nextel 610.—73-17287
Effect of ionizing and displacive radiation on the thermal conductivity of alumina.—73-02582
Effect of liquid-forming additives on low-temperature superplastic deformation of alumina.—73-02583
Effect of MgO on microstructural evolution of alumina prepared from hydrosol-gel process of boehmite in plaster mold.—73-17124
Effect of microstructural scale on thermal shock resistance of aluminum-reinforced alumina.—73-03578
Effect of microstructure on mechanical properties and cutting performance of $Al_2O_3$-Ti(C,N) ceramics.—73-06385
Effect of microstructure on mechanical properties and cutting performance of $Al_2O_3$-Ti(C,N) ceramics.—73-13511
Effect of mixed solvent on the formation of monodispersed $Al_2O_3$ powders by hydrolysis of aluminum sec-butoxide [$ABu^s$].—73-16732
Effect of mixed solvent on the formation of monodispersed $Al_2O_3$ powders by hydrolysis of aluminum sec-butoxide.—73-05763
Effect of moisture content of granules on the properties of green and sintered bodies of alumina ceramics.—73-16733
Effect of nonstoichiometry on the luminescence properties of α-$Al_2O_3$.—73-02585
Effect of notch-root radius on the fracture toughness of a fine-grained alumina.—73-06387
Effect of oxygen partial pressure on tungsten–alumina bonding behavior.—73-03579
Effect of particle size distribution of raw powder on the uniformity of alumina body formed by centrifugal casting.—73-02790
Effect of particle size distribution of raw powder on the uniformity of alumina body formed by centrifugal casting.—73-13013
Effect of paste composition and particle size on the metallizing of alumina ceramics.—73-10222
Effect of pitch and phenolic resin on the mechanical properties of $Al_2O_3$-C nozzle.—73-00804
Effect of preparation conditions on properties of green and sintered body in alumina.—73-16735
Effect of processing parameters on phase and microstructure evolution in RBAO ceramics.—73-16737
Effect of purity on the erosion of sintered alumina.—73-09579
Effect of reaction products on the fracture resistance of a metal/ceramic interface.—73-03581
Effect of seeding on preparation of $ZrO_2$/$Al_2O_3$ composite by sol-gel method.—73-13017
Effect of $SiO_2$ and $TiO_2$ on the sinterability and microstructure of alumina ceramics.—73-16741
Effect of stabilizing agents on synthesis of monodispersed $Al_2O_3$ powders by hydrolysis of aluminum sec-butoxide.—73-02796
Effect of stabilizing agents on synthesis of monodispersed $Al_2O_3$ powders by hydrolysis of aluminum sec-butoxide.—73-13019
Effect of surface aluminum oxide films on thermally induced hillock formation.—73-05772
Effect of surface grinding on flexural strength of alumina.—73-09581
Effect of surface-limited microcracks on the effective Young's modulus of ceramics: III, Experiments.—73-13513
Effect of $Ta_2O_5$ additions on phase formation during synthesis and sintering of β-alumina-based ceramics.—73-02799
Effect of the added seed on phase transformation and powder properties in the fabrication of $Al_2O_3$ powder by sol-gel process.—73-16746
Effect of the processes of thermal cycling on the structure and properties of heat-resistant ceramics.—73-00808
Effect of thermal expansion mismatch between the intergranular glass and crystal phases on the fracture toughness of alumina ceramics.—73-09582
Effect of thermoelastic anisotropy on the *R*-curve behavior of monolithic alumina.—73-17295
Effect of water on the dispersion of colloidal alumina in cyclohexane solutions of aerosol OT.—73-13023
Effect of water vapor on the growth of aluminum oxide films by low-pressure chemical vapor deposition.—73-09101
Effect of whisker orientation on toughening behavior and cutting performance of $SiC_w$-$Al_2O_3$ composite.—73-06391
Effect of zirconia allotropes on fracture toughness of α-alumina.—73-09584
Effect of zirconium on wettability of alumina and zirconia by silver-indium base alloy.—73-00223
Effectiveness of a dispersant for the thickening of alumina slurries while retaining the fluidity.—73-09102
Effects of addition of polyacrylic ammonium [PAN] on colloidal processing of α-alumina.—73-02802
Effects of $Al_2O_3$ addition on the sinterability and ionic conductivity of Nasicon.—73-07308
Effects of $Al_2O_3$ and glass on formation of needlelike mullite from kaolin.—73-02803
Effects of alkali-earth metal ion implantation into alumina surface layer on its acidic-basic properties.—73-16464
Effects of CaO impurity on microstructural evolution during sintering of alumina.—73-02805
Effects of caustic concentration and bauxite composition on economics of Bayer alumina plants.—73-15722
Effects of $Cr_3C_2$ particulate-reinforced alumina composites on microstructure and mechanical properties.—73-16748
Effects of disperse system history on heat compaction of materials containing α-$AlO_{1.5}$ and $TiO_2$.—73-16749
Effects of mineralizer on sintering of alumina.—73-13033
Effects of preparation conditions on properties of green and sintered body in alumina.—73-09107
Effects of solids loading and dispersion schedule on the state of aqueous alumina/zirconia dispersions.—73-17128
Effects of TiC content and grain size on cutting performance of $Al_2O_3$-TiC ceramic tools.—73-08511
Elaboration by acid dispersion of yttria-stabilized zirconia-alumina composites with good mechanical properties.—73-16757
Elastic and dry sliding characteristics of [high-velocity oxyfuel] HVOF-sprayed $Al_2O_3$ and $Al_2O_3$-$TiO_2$ coatings.—73-09588
Elastic moduli of rf-sputtered $Al_2O_3$-$TiO_2$ amorphous films.—73-03279
Electrical conduction in $CaF_2$ and $CaF_2$-$Al_2O_3$ nanocomposite films on $Al_2O_3$ substrates.—73-07313
Electrical conductivity of alumina/aluminum composites synthesized by directed metal oxidation.—73-13830
Electrical properties of MgO-doped β-alumina ceramics prepared from the metal alkoxides.—73-00958
Electrical properties of MgO-doped β-alumina ceramics prepared from the metal alkoxides.—73-12790
Electrochemical behavior of portland-cement/high-alumina-cement systems at early hydration times.—73-13716
Electrochemical element and method of producing [the] same.—73-11014
Electroconductivity of sintered bodies of α-$Al_2O_3$-TiN composite prepared by CVD reaction in a fluidized bed.—73-08859
Electrophoretic deposition and its use to synthesize $ZrO_2$/$Al_2O_3$ microlaminate ceramic/ceramic composites.—73-16760
Electrophoretic deposition of silica/alumina colloids for the manufacture of CMC's.—73-16761
Empirical density estimation of green body formed by uniaxial press.—73-02814
Empirical density estimation of green body formed by uniaxial press.—73-13045
Enrichment of aluminum hydroxides and oxides for the advanced ceramics.—73-08513
Environmental effects on wear behavior of alumina.—73-09592
Erosion of an aligned alumina-stainless steel composite.—73-06782
Etching investigation of $SiC_w$/$Al_2O_3$ and Incusil-ABA joints.—73-03586
Ethylene oxide/propylene oxide block copolymers as green binders for ceramics.—73-15942
Evaluating the mechanical properties of commercial DRA [discontinuously reinforced alumina].—73-06785
Evaluation of adhesion strength in a Ti/$Al_2O_3$ composite.—73-00231
Evaluation of fracture toughness for structural ceramics using SEPB specimens: IV, Fracture behavior of α-alumina polycrystals with different grain sizes.—73-03283
Evaluation of fracture toughness for structural ceramics using SEPB specimens: IV, Fracture behavior of α-alumina polycrystals with different grain sizes.—73-13526
Evaluation of whisker alignment in axisymmetric $SiC_w$-reinforced $Al_2O_3$ composite materials.—73-16766
Evidence for anelastic creep recovery in silicon carbide whisker-reinforced alumina.—73-13528

Exhaust gas disposable catalyst and method of manufacturing the same.—73-02035
Experimental/analytical investigation of plasma-sprayed alumina coatings.—73-09124
Explanation of clogging phenomena of CC [continuous casting] submerged nozzle.—73-00814
Extraction of alumina from Egyptian kaolin ore with sulfuric and hydrochloric acids.—73-12270
Fabrication and characterization of short alumina fiber-reinforced mullite composites.—73-02820
Fabrication and microstructure of $Al_2O_3$-SiC-YAG hybrid composites prepared by particulate dispersion.—73-09125
Fabrication and properties of (Y,Ce)-TZP/$Al_2O_3$ and Y-TZP/$Al_2O_3$ composites from fine powders prepared by a hydrolysis technique.—73-02821
Fabrication and properties of (Y,Ce)-TZP/$Al_2O_3$ substrates.—73-04099
Fabrication and X-ray photoelectron spectroscopy of granular Ge in Al and $Al_2O_3$ matrices.—73-09127
Fabrication of $Al_2O_3$/W nanocomposites.—73-10228
Fabrication of alumina sheets by extrusion.—73-02823
Fabrication of alumina sheets by extrusion.—73-13053
Fabrication of continuous-fiber-reinforced polycrystalline oxide composites via molten salt infiltration.—73-09129
Fabrication of dense ß, ß´´-alumina ceramics by reaction sintering.—73-05802
Fabrication of dense ß, ß´´-alumina ceramics by reaction sintering.—73-16773
Fabrication of engineering ceramics by injection molding a suspension with optimum powder properties: II, Mechanical properties and wear behavior.—73-09595
Fabrication of low-shrinkage reaction-bonded alumina ceramics.—73-02826
Fabrication of transparent γ-$Al_2O_3$ from nanosize particles.—73-16777
Fabrication of zirconia-alumina functionally gradient material by superplastic diffusion bonding.—73-15924
Factors influencing the thermal shock behavior of ceramics.—73-05565
Fatigue behavior of sintered $Al_2O_3$ under rotary bending and static fatigue.—73-17318
Fatigue crack growth behavior of alumina plasma-sprayed stainless steel.—73-03588
Fatigue crack growth behavior of alumina plasma-sprayed stainless steel.—73-10229
Fatigue damage development in $Al_2O_3$/Al composites.—73-03291
Fatigue damage in ceramic materials caused by repeated indentation.—73-03292
Fibrous monolithic ceramics: IV, Mechanical properties and oxidation behavior of the alumina/nickel system.—73-09598
Film blowing of ceramics.—73-16782
Finite element studies of tensile testing on thin-film multilayers.—73-13532
First-principles calculation of electronic, optical, and structural properties of α-$Al_2O_3$.—73-05400
Flame-retaining ceramic burner nozzle.—73-12366
Flat *R*-curve from stable propagation of indentation-cracks in coarse-grained alumina.—73-06422
Flexural strength and surface grinding properties of alumina.—73-09599
Fluorescent lamps having reduced interference colors.—73-03919
Forces between alumina surfaces in salt solutions: non-DLVO forces and the implications for colloidal processing.—73-05809
Formation and sintering of alkoxy-derived $Al_2O_3$-$TiO_2$ composite powders.—73-09136
Formation and sintering of alkoxy-derived $Al_2O_3$-$TiO_2$ composite powders.—73-16785
Formation and sintering of yttria-doped tetragonal zirconia with 50 mol% alumina prepared by the hydrazine method.—73-13063
Formation mechanism of pores in massive $Si_3N_4$-$Al_2O_3$-MgO ceramics during sintering.—73-16786
Formation of $Al_2O_3$ fiber-reinforced AlN/Al matrix composites by Al(Mg) melt nitridation.—73-06793
Formation of alumina/zirconia (3 mol% yttria) composite powders prepared by the hydrazine method.—73-16788
Formation of La-ß-aluminate in α-alumina matrix and its influence on mechanical properties.—73-02833
Formation of macro- and microcracks during machining of ceramics.—73-05814
Formation of needlelike grains in $Al_2O_3$.—73-16792
Formation of surface layers of ceramics during grinding and sharpening.—73-06607
Formation of zirconia solid solutions containing alumina prepared by new preparation method.—73-09142
Forming of alumina insulation layers by double-step electrophoretic deposition.—73-02834
Forming of alumina insulation layers by double-step electrophoretic deposition.—73-10951
Forming of alumina powder by electrophoretic deposition.—73-02835
Fourier transform infrared attenuated total reflection spectroscopy linear dichroism study of sodium dodecyl sulfate adsorption at the $Al_2O_3$/water interface using $Al_2O_3$-coated optics.—73-12141
Fracture origins and evaluation of fracture strength of aluminum oxide ceramic thin coating films.—73-17330
Fracture resistance of silicon-carbide-platelet-reinforced alumina composite.—73-03298
Fracture strength testing of δ-alumina fibers with variable diameters and lengths.—73-09601
Fracture strength-fracture resistance response and damage resistance of sintered $Al_2O_3$-$ZrO_2$ (12 mol% $CeO_2$) composites.—73-17331
Fracture toughening mechanisms in the $SiC_w$/$Al_2O_3$ composite system.—73-06437
Fracture toughness evaluation of 2040-Al/$Al_2O_3$ particulate composites by instrumented impact.—73-03300
Fracture toughness measurements on SiC/$Al_2O_3$ composite.—73-03301
Fracture toughness testing in alumina.—73-06442
Friction and wear thresholds of alumina-chromium steel pairs sliding at high speeds under dry and wet conditions.—73-17337
Friction behavior of ceramic fiber-reinforced aluminum metal-matrix composites against a 440C steel counterface.—73-03591
Friction microprobe investigation of particle layer effects on sliding friction.—73-05049
Friction-chemical activation of polycrystalline aluminum and zirconium oxides in water dispersions.—73-02837
Gas turbine elements bearing coke inhibiting coatings of alumina.—73-03682
Glass composition.—73-14539
Glass-bonded ceramic composites.—73-03417
Glass-ceramics and color methods.—73-03927
Graded casting of materials with continuous gradients.—73-16804
Graded compositions and microstructures by infiltration processing.—73-09149
Grain size dependence of fracture toughness in polycrystalline alumina.—73-03305
Grain size effect on abrasive wear mechanisms in alumina ceramics.—73-06447
Grain size effect on high-temperature fatigue crack growth in polycrystalline $Al_2O_3$.—73-17340
Grain-boundary modification of ceria-stabilized tetragonal zirconia polycrystals by a small amount of alumina addition.—73-09151
Granular abrasive material.—73-03418
Green testing of pressed compacts.—73-09608
Grinding with continuous dressing (CD) for improved performance of ceramic-bonded fused alumina grinding wheels: I.—73-01787
Groove angles and surface mass transport in polycrystalline alumina.—73-09409
Group IVB oxide addition to noble metal on rare-earth-modified silica alumina as hydrocarbon conversion catalyst.—73-05215
Growth and properties of thin $Al_2O_3$ films.—73-05829
Growth mechanism of gold films on alumina.—73-00236
Growth of α-$Al_2O_3$ platelets in the HF-γ-$Al_2O_3$ system.—73-16807
Growth of $Al_2O_3$ single crystals by the Czochralski method.—73-05830
Growth of $Al_2O_3$ single crystals by the Czochralski method.—73-13079
Growth of alumina/metal composites into porous ceramics by the oxidation of aluminum.—73-13844
Growth of gamma-$Al_2O_3$ thin films on silicon by low-pressure metallorganic chemical vapor deposition.—73-09155
Growth of sodium clusters on the surface of Na ß´´-alumina crystals induced by electron bombardment.—73-09157
Heat conductive colored aluminum nitride sintered body.—73-12467
Heat-conductive colored aluminum nitride sintered body and method of preparing the same.—73-12468
Heating conditions to synthesize rod-shaped ß-$LiAlO_2$ crystals.—73-16812
High-density sol-gel alumina-based abrasive vitreous bonded grinding wheel.—73-09771
High-efficiency process for producing high-purity alumina.—73-12369
High-rate aluminum oxide deposition by Meta Mode reactive sputtering.—73-13087
High-resolution transmission electron microscopy studies of a near Σ11 grain boundary in α-alumina.—73-06226
High-speed centrifugal compaction and low-temperature sintering of submicron alumina powder.—73-16819
High-speed sliding of $Al_2O_3$ pins against an En-24 steel disk.—73-06449
High-temperature ceramic nut.—73-15945
High-temperature elasticity of single-crystal $Al_2O_3$ fibers by Brillouin spectroscopy.—73-08881
High-temperature strength and toughness of electrophoretically deposited alumina/lanthanum aluminate laminates.—73-17348
Hot deformation of 6061 alumina composite materials.—73-06801
Hot-grip tensile method for alumina-fiber testing.—73-01903
Hot-pressed $Al_2O_3$/SiC whisker/TiC nanocomposites.—73-05847
Hot-pressed $Al_2O_3$/SiC whisker/TiC nanocomposites.—73-13548
Hot-pressing after cold cyclic compaction of alumina powder matrix mixtures—effects of cold cyclic compaction.—73-09164
Hot-pressing kinetics of alumina composites reinforced with SiC whiskers.—73-02852
Hot-pressing of TiN-alumina composites.—73-16822
Hybrid microwave-assisted chemical vapor infiltration of alumina fiber composites.—73-16823
Hybrid substrate.—73-01054
Hydronium exchange of polycrystalline K-Na ß´´/ß-$Al_2O_3$.—73-04110
Hydroxyapatite/$Al_2O_3$ composite biomaterial implant.—73-05170
ICP sintering of attrition-milled $Al_2O_3$-5 wt% Al precursor: effect of power input and gas pressure.—73-16829
Immersion nozzle for prevention of alumina clogging.—73-00822
Impedance analysis as a tool for designing ß´´-alumina microstructures.—73-00978
Impedance studies of the cell Pt/(Na, Sr)ß´´-alumina/Pt.—73-04111
Impregnation and firing of $Al_2O_3$ compact with $CrO_3$ saturated solution.—73-02857
Improved precursor ceramics for proton-conductive ß/ß´´-aluminas.—73-04113
In situ reacted $TiB_2$-reinforced alumina.—73-03312
In situ TEM observations of the tetragonal-to-monoclinic phase transformation of zirconia in $Al_2O_3$-$ZrO_2$ (2 mol% $Y_2O_3$) composite.—73-09465
In situ transmission electron microscopy study of electron-beam-induced amorphous-to-crystalline transformation of $Al_2O_3$ films on silicon.—73-03153
Inelastic electron tunneling spectra of lubricant oil additives on native aluminum oxide surfaces.—73-09467
Influence of alumina content on homogeneous nucleation in 57.5$SiO_2$-21.25$Na_2O$-21.25CaO (mol%) glass.—73-14006
Influence of alumina on fast-fired porcelain tiles.—73-07262
Influence of alumina porosity in glass-ceramic adhesion.—73-12327
Influence of batch preparation method on the structure and properties of ceramics in the $Al_2O_3$-$ZrO_2$-$Y_2O_3$ system.—73-02865
Influence of coarse particle shape on packing and sintering of bimodal-size-distributed alumina powder mixtures.—73-09172
Influence of coarse particle size on packing and sintering behavior of bimodal size distributed alumina powder mixtures.—73-16834
Influence of coarse particle size on packing and sintering behavior of bimodal-size-distributed alumina powder mixtures.—73-05864
Influence of combination of ball diameters and rotation speed on grinding performance of alumina by ball milling.—73-08345
Influence of combination of ball diameters and rotation speed on grinding performance of alumina by ball milling.—73-16835
Influence of crack propagation path on the fracture toughness of polycrystalline $Al_2O_3$.—73-17356
Influence of deflocculants on the characteristics of alumina bodies obtained by slip casting.—73-05865
Influence of different $Al_2O_3$-containing batch materials on melting, fining, and properties of soda-lime-silica glasses.—73-07145
Influence of grain boundaries on the conductivity and ion-exchange rate of ß´´-alumina polycrystalline isomorphs.—73-04116
Influence of grain size and secondary phase on the fracture toughness of sintered MgO bodies: I, Addition of $Al_2O_3$.—73-03317
Influence of grain size and secondary phase on the fracture toughness of sintered MgO bodies: I, Addition of $Al_2O_3$.—73-13551
Influence of grinding on the surface properties of α-aluminas.—73-02868
Influence of interparticle forces on the rheological behavior of pressure-consolidated alumina particle slurries.—73-05868
Influence of microstructure on grindability of alumina ceramics.—73-06232
Influence of oxide additives, firing temperature, and dispersing media on sintered $Al_2O_3$.—73-05869
Influence of SiC whisker size on the mechanical properties of reinforced alumina.—73-09621
Influence of slip casting and dry pressing on structure evolution of alumina compacts.—73-05874
Influence of the basic compound chemical nature on the kinetics of γ-to-α-alumina conversion and the packaging of α-alumina.—73-16176
Influence of the deposition conditions on the optical, electrical, and magnetic properties of sputtered Fe-$Al_2O_3$ and Ni-$Al_2O_3$ nanocermet films.—73-10239
Influence of the matrix glaze and $Al_2O_3$ substrate on the electrical conduction paths in the $SnO_2$ thick-film resistor system.—73-01211
Influence of yttrium on microstructure and point defects in an α-$Al_2O_3$ in relation to oxidation.—73-17148
Influence of zirconia addition on the sintering behavior of bimodal size distributed alumina powder mixtures.—73-16844
Influencing microstructure and strength of high-alumina porcelain: II, Raw materials and bodies.—73-02874
Influencing microstructure and strength of high-alumina porcelain: III, Properties of porcelain test bodies.—73-02875
Influencing microstructure and strength of high-alumina porcelain: IV, Body porosity and conclusion.—73-02876
Infrared absorption spectra of nano-alumina.—73-05422
Infrared laser-assisted zone refining of inorganic materials.—73-02878
Inhibiting coke formation by coating gas turbine elements with alumina-silica sol-gel.—73-13916
Inhibiting coke formation by coating gas turbine elements with alumina.—73-03686
Initial-stage sintering of ß-alumina.—73-17149
Interaction between α-alumina surface and polyacrylic acid [PAA].—73-02880
Interaction between α-alumina surface and polyacrylic acid.—73-12820
Interaction pathway of chloride ions with γ-$Al_2O_3$: surface acidity and thermal stability of the Cl/γ-$Al_2O_3$ system.—73-08892
Interband electronic structure of α-alumina up to 2167 K.—73-05423
Interface and microstructure development of coated alumina powders during heating.—73-13406
Interface engineering in alumina/glass composites.—73-16846
Interface-controlled phase transformation and abnormal grain growth of alpha-$Al_2O_3$ in thin gamma-alumina films.—73-12610

Interfacial layer formation of the $Al_2O_3$/Si structures grown by low-pressure metallorganic chemical vapor deposition.—73-09187
Interfacial reactions of thin titanium aluminide films with $Al_2O_3$ films and with sapphire.—73-13851
Internal reduction of chromium-doped α-alumina.—73-06240
Ion-beam mixing of iron oxide marker layers in doped and undoped alumina thin films.—73-05173
Ir ellipsometry of the highly anisotropic materials α-$SiO_2$ and α-$Al_2O_3$.—73-12615
Iron–alumina nanocomposites obtained by mechanosynthesis.—73-13854
Isopropylation of dibenzofuran over solid acid catalysts.—73-02625
Isothermal phase transformation behaviors in $Al_2O_3$-coated Y-TZP powders.—73-12618
Kinetics of wetting and spreading of Cu-Ti alloys on alumina and glassy carbon substrates.—73-03613
Kinetics optimization of uv-curable aqueous slurries for applications in ceramic processing.—73-16848
Lanthanide ion exchange in sodium β-alumina.—73-05428
Lapping abrasive of alumina–zirconia system and method for producing the same.—73-00001
Lapping and polishing process to achieve high-quality alumina surfaces for applications in device fabrication.—73-13113
Large surface area of $SiO_2$-coated fibrous crystals of alumina after heating at >1573 K.—73-13114
Laser chemical deposition of aluminum oxide from the gas phase of beta-diketonate complexes.—73-16849
Laser melting of plasma-sprayed alumina coatings.—73-13860
Laser melting of refractory $Al_2O_3$-$ZrO_2$ ceramics.—73-13116
Laser surface modification of $Al_2O_3$-based ceramics.—73-09190
Layered tantalum-aluminum oxide films deposited by atomic layer epitaxy.—73-04126
Leaching of ceramic materials.—73-15946
Lifetime prediction for ceramic materials under constant and cyclic load.—73-17371
Liquation and crystallization in melts of the system $Al_2O_3$-$B_2O_3$.—73-00367
Lithium salts as set accelerators for high alumina cement [HAC].—73-06682
Local repairing of lining glass layers by the alumina powder composite sol-gel method.—73-13863
Local structure around aluminum in glasses of the system $Al_2O_3$-PbO-CdO.—73-06935
Low-expansion USP type I amber glass.—73-03939
Lubricated rolling wear of SiC-whisker-reinforced $Al_2O_3$ composites against M2 tool steel.—73-06470
Machinability of rate-controlled sintered alumina.—73-02888
Machinability of rate-controlled sintered alumina.—73-13125
Macrocrystalline alpha-alumina hexagonal platelets.—73-12311
Magnetic ordering in granular Ni-$Al_2O_3$.—73-04619
Manganese- and tantalum-modified titanium alumina alloys.—73-03688
Martensite transformation behavior during isothermal aging in partially stabilized zirconia with and without alumina addition.—73-03161
Material, structure, filter, and catalytic converter.—73-12375
Mathematical modeling simulation for segregation of PVA during drying.—73-16859
Measurement of diffusion of PVA through pores of an $Al_2O_3$ compact.—73-05909
Measurement of diffusion of PVA through pores of an $Al_2O_3$ compact.—73-12830
Measurements of internal friction coefficient of SiC and $Al_2O_3$ powders.—73-16538
Mechanical and electrical properties of $Al_2O_3$/SiC nanocomposites.—73-05594
Mechanical behavior and microstructural development in phosphate-modified high-alumina cement.—73-10034
Mechanical properties of a laser-cut alumina matrix-silicon carbide whisker composite.—73-09632
Mechanical properties of $Al_2O_3$ and $Al_2O_3$+$ZrO_2$ ceramics reinforced by SiC whiskers.—73-09633
Mechanical properties of $Al_2O_3$ particle–Y-TZP matrix composite and its toughening mechanism.—73-09634
Mechanical properties of alumina-mullite whisker composites.—73-17382
Mechanical properties of composites of alumina and partially stabilized zirconia.—73-09636
Mechanical properties of hot-pressed SiC particulate-reinforced $Al_2O_3$ matrix.—73-03333
Mechanical properties of partially dense alumina produced from powder compacts.—73-17388
Mechanical properties of porous alumina ceramics.—73-17389
Mechanical properties of reaction-bonded $Al_2O_3$/$ZrO_2$ composites.—73-17390
Mechanical properties of squeeze-cast zinc alloy matrix composites containing α-alumina fibers.—73-06820
Mechanical properties of unidirectionally oriented SiC whisker/$Al_2O_3$ composite.—73-06484
Mechanical properties of unidirectionally oriented SiC whisker/$Al_2O_3$ composite.—73-13567
Mechanical properties of zirconia–alumina whisker composite ceramics.—73-13568
Mechanical properties of zirconia-alumina whisker composite ceramics.—73-06485
Mechanically induced zone darkening of alumina/ceria-stabilized zirconia composites.—73-17393
Mechanism of resistance variation of thick-film resistors on commercial 96% alumina substrates.—73-00994
Mechanism of resistance variation of thick-film resistors on commercial 96% alumina substrates.—73-10971
Mechanism on stability of α-alumina suspensions.—73-09202
Mechanochemical activation of high-alumina cements [HAC]: I, Hydration behavior.—73-00137
Mechanochemical effect for some $Al_2O_3$ powders by attrition milling.—73-09203
Metal on rare-earth-modified silica–alumina as hydrocarbon conversion catalyst.—73-02047
Metastable phase selection and partitioning for $Zr_{(1-x)}Al_xO_{(2-x/2)}$ materials synthesized with liquid precursors.—73-16215
Methane dimerization through ion conductors (β-$Al_2O_3$).—73-04138
Method for increasing the wettability of aluminum metal to alumina-containing fibers.—73-10325
Method for preparing molded articles of high-purity alumina fibers.—73-15948
Method for producing interlevel stud vias.—73-04218
Method for producing monocrystalline alumina grains.—73-03419
Method for producing transparent polycrystalline body with high-ultraviolet transmittance.—73-02048
Method for production of needlelike crystalline particles.—73-12382
Method for protecting articles from hydrogen absorption by application of an alumina coating.—73-03692
Method for synthesizing microporous crystalline material.—73-05226
Method for the preparation of alpha-aluminum oxide powder.—73-12384
Method for the reactivation of spent alumina-supported hydrotreating catalysts.—73-05228
Method of making porous alumina.—73-05231
Method of making refractory ceramic products and the products thereof.—73-04036
Method of producing a ceramic fiber-reinforced glass-ceramic matrix composite.—73-10646
MgO-MgO·$Al_2O_3$-C brick.—*73-10743*
Micro- and macrostructural factors in DRA [discontinuously reinforced alumina] fracture resistance.—73-06827
Microhardness anisotropy and the indentation load/size effect in MgO·x$Al_2O_3$ single crystals.—73-02644
Microlaminate ceramic/ceramic composites (YSZ/$Al_2O_3$) by electrophoretic deposition.—73-16867
Microstructural changes and mechanical properties of mullite-$ZrO_2$ and mullite-$ZrO_2$-$Al_2O_3$ composites prepared using in situ reaction between synthetic zircon and alumina.—73-17399
Microstructural investigation of κ-modification layers in CVD α-$Al_2O_3$/κ-$Al_2O_3$ multilayer coatings.—73-03165
Microstructural modifications in Al-5.7 wt% Cu-30 vol% $Al_2O_3$ fibers during isothermal heat treatment.—73-06830
Microstructural observations on constrained densification of alumina powder containing a periodic array of sapphire fibers.—73-13421
Microstructural study of $Al_2O_3$/Ti joints brazed with different Ag-Cu filler metals.—73-03618
Microstructural study of alumina brazed with a copper-nickel-zirconium alloy.—73-03619
Microstructure and fracture behaviors at high temperatures for $Al_2O_3$-SiC nanocomposites.—73-06491
Microstructure and mechanical properties of hybrid sol-gel-processed $Al_2O_3$-$ZrO_2$ composites.—73-09482
Microstructure and mechanical strength of $TiO_2$-doped $Al_2O_3$ ceramics fired in vacuum atmosphere.—73-17160
Microstructure and phase transformation of α-alumina seeded boehmite gel.—73-13425
Microstructure and properties of aluminum tungsten oxide ceramics synthesized by a high-power cw $CO_2$ laser.—73-17162
Microstructure and properties of Nextel 610 fiber-reinforced ceramic and metal matrix composite.—73-17164
Microstructure and properties of the sintered composite prepared by hot-pressing of TiN-coated alumina powder.—73-17165
Microstructure development during sintering in polycrystalline MgO·1.5$Al_2O_3$ spinel.—73-06256
Microstructure development during sintering polycrystalline MgO·1.5$Al_2O_3$ spinel.—73-17166
Microstructure of pressureless-sintered silver-toughened alumina: an in situ TEM study.—73-03173
Microwave hybrid heating of alumina filaments.—73-05918
Microwave processing of Ni-$Al_2O_3$ composites.—73-03622
Microwave sintering of large alumina bodies.—73-05924
Mixed conduction in β-alumina-type materials: a critical review.—73-14719
MOCVD of beta-alumina.—73-16872
Modified powder route for the preparation of sol-gel-process-synthesized magnesia and alumina.—73-09215
Multinuclear high-resolution solid-state nuclear magnetic resonance studies of amorphous silica aluminas.—73-02339
Multipurpose photochromic brown glasses.—73-00750
Na to K vapor-phase exchange in polycrystalline β″-alumina.—73-03104
Nanoparticulate alumina, silica, and aluminosilicate membranes.—73-13145
Nanostructural control of sol-gel-derived porous alumina via modification of sol.—73-02898
Neighbor switching by grain-boundary penetration during diffusional deformation of an alumina/zirconia composite.—73-09494
Neutron diffraction measurements of the residual stresses in $Al_2O_3$-$ZrO_2$ ($CeO_2$) ceramic composites.—73-13574
Ni-$Al_2O_3$ gradient materials by powder metallurgy.—73-03629
Nonexponential fluorescence decay and multiphonon relaxation of the $^4F_{3/2}$ level of $Nd^{3+}$ in sodium β″-alumina.—73-02648
Nonmagnetic substrate material and floating-type magnetic head.—73-12390
Nonplanar $Al_2O_3$/YPSZ laminates by electrophoretic deposition using $Al_2O_3$ fiber electrodes.—73-16883
Novel applications of silver beta-alumina in galvanic cell sensors.—73-07347
Onsager effect in luminescence of $Al_2O_3$ crystals: II, Radiative annihilation of autolocalized excitons.—73-16551
Optical parameters of the film-type reversible recording media Al-$VO_2$-AK-113F and Al-$VO_2$-$Al_2O_3$.—73-05603
Optical properties of $Al_2O_3$ thin films prepared by reactive evaporation.—73-02652
Optimization of an alumina slip for pressure filtration.—73-16888
Optimizing plasma-sprayed alumina titania coatings using statistical methods.—73-09228
Oxidation behavior of the sintered $Si_3N_4$-$Y_2O_3$-$Al_2O_3$ system.—73-03226
Oxide catalyzed reactions of ethylene oxide under conditions relevant to ethylene epoxidation over supported silver.—73-02660
Particle attraction effects on the centrifugal casting and extrusion of alumina.—73-09231
Particle impact damage of engineering ceramics.—73-06498
Permeabilities of unsupported ceramic membranes of alumina.—73-12854
Phase diagram of the subsolidus region of the quasi-binary system $BeAl_2O_4$-($BeFe_2O_3$).—73-16247
Phase equilibria in the CaO-$Me_2O_3$-$CaCl_2$-$H_2O$ system.—73-02378
Phase equilibria, microstructure, and properties of some MgO-$Al_2O_3$ refractories.—73-10755
Phase evolution in $Al_2O_3$ fiber prepared from an oxychloride precursor.—73-02918
Phase identification in calcia–alumina fibers crystallized from amorphous precursors.—73-02384
Phase transformation in chemically vapor deposited κ-alumina.—73-17180
Phase transformations of alumina derived from ammonium aluminum carbonate hydroxide (AACH).—73-05454
Photocatalytic property of $TiO_2$ anchored on porous alumina ceramic support by the alkoxide method.—73-05612
Photocatalytic property of $TiO_2$ anchored on porous alumina ceramic support by the alkoxide method.—73-16564
Photochemical reactions of pyrene on surfaces of γ-alumina and silica–alumina.—73-12856
Photochromic glasses in the system SrO-ZnO-$Al_2O_3$.—73-03750
Photochromism of spiropyran doped in $Al_2O_3$-$SiO_2$ gels prepared by the sol-gel process.—73-12858
Piezospectroscopic determination of residual stresses in polycrystalline alumina.—73-05614
Platey alumina.—73-12393
Polarized absorption spectra and intensities of $Er^{3+}$ in sodium beta-double-prime alumina crystals.—73-12861
Polycrystalline sintered abrasive granules based on α-$Al_2O_3$.—73-03420
Pore size distribution of cast, compressed, and lightly sintered alumina with preliminary mechanical treatments.—73-13438
Pore sizes and filtration rates from two alumina slips.—73-13168
Pore structure of hardened alumina cement paste by water vapor sorption.—73-06696
Porous amorphous silica-alumina.—73-10785
Potential interlayer materials for the microwave joining of alumina.—73-16902
Precious metal catalysts with oxygen-ion conducting support.—73-00294
Prediction of indentation-load dependence of fracture strengths from *R*-curves of toughened ceramics.—73-17413
Preparation and characteristics of ceramic composite powders coated with $Al_2O_3$: III, Composite powders of $Al_2O_3$-$ZrO_2$.—73-05956
Preparation and characterization of a composite palladium ceramic membrane.—73-13883
Preparation and characterization of dispersed cobalt oxide supported on γ-$Al_2O_3$.—73-02675
Preparation and characterization of thin films of MgO, $Al_2O_3$, and $MgAl_2O_4$ by atomic layer deposition [ALD].—73-05959
Preparation and fracture characteristic of laminated alumina/mullite composite.—73-17414
Preparation and permeation characteristics of alumina composite membranes by CVD and evaporation-oxidation process.—73-13175
Preparation and some properties of porous alumina ceramics obtained by the gelatination [by HCl] of ammonium alginate.—73-02937
Preparation of $(Al_2O_3)_x(SiO_2)_y$ thin films using $[Al(OSiEt_3)_3]_2$ as a single-source precursor.—73-09252
Preparation of $Al_2O_3$ powders from various aluminum salts by the spray pyrolysis method.—73-09253
Preparation of $Al_2O_3$-$TiO_2$ coatings by sol-gel method and their nitridation.—73-03868
Preparation of $Al_2O_3$-$TiO_2$ nanocomposite powders.—73-09254
Preparation of $Al_2O_3$-$ZrO_2$ composites by inorganic sol-gel processing.—73-05966
Preparation of alumina ceramics with uniformly dispersed micropores.—73-16913
Preparation of alumina membranes for microfiltration.—73-02942
Preparation of alumina membranes: I.—73-13181
Preparation of alumina powder from aluminum salts by precipitation method.—73-16914
Preparation of alumina powders from bauxite by wet acid process and their utilization: III, Effects of the dispersion of aluminum hydrate gel on the sintering behavior of alumina powder.—73-09255

Preparation of alumina-fiber-type catalyst for methane combustion by sol-gel method.—73-16915
Preparation of alumina/aluminum composites by oxidation of aluminum.—73-00257
Preparation of amorphous silica-alumina particles by acid-treating spherical P-type zeolite particles crystallized from a sodium aluminosilicate gel.—73-02057
Preparation of high-purity, ultrafine $\alpha$-$Al_2O_3$ powders.—73-15930
Preparation of microporous metal membranes by two-step replication of the microstructure of anodic alumina.—73-00258
Preparation of monodispersed hydrous aluminum oxide powders.—73-02957
Preparation of porous alumina ceramics by using the gelation of ammonium alginate.—73-05979
Preparation of porous alumina ceramics by using the gelation of ammonium alginate.—73-13199
Preparation of preforms and optical fibers containing aluminum by solution-doping method.—73-00686
Preparation of seeded alumina from alkoxide: I, Powders.—73-02964
Preparation of seeded alumina from alkoxide: II, Sintering.—73-02965
Preparation of $SiO_2$-$Al_2O_3$ gels from tetraethoxysilane and aluminum chloride—a new sol-gel method using propylene oxide as a gelation promoter.—73-16935
Preparation of spherical $Al_2O_3$ particle-dispersed hydroxyapatite ceramics.—73-09269
Preparation of spherical $Al_2O_3$-particle-dispersed hydroxyapatite ceramics.—73-16936
Preparation of ZrC/$Al_2O_3$ fine composite powders by thermite reaction.—73-16944
Pressure sensitivity for particle packing of aqueous $Al_2O_3$ slurries vs interparticle potential.—73-09274
Pressureless sintering and related reaction phenomena of $Al_2O_3$-doped $B_4C$.—73-05992
Prevention of alumina deposition in submerged nozzles.—73-00840
Prevention of continuous casting submerged nozzle clogging.—73-00841
Process for formation of an aluminum oxide based layer on glass, the product thus obtained, and its use in windows incorporating a conductive layer.—73-00756
Process for preparation of alumina.—73-12396
Process for producing agglomerates from dusts.—73-12398
Process for producing catalyst composition for use in hydrodesulfurization of hydrocarbon oil and process for hydrodesulfurizing hydrocarbon oil.—73-02059
Process for the preparation of alumina agglomerates.—73-02064
Process for the preparation of an ion-conduction ceramic material.—73-01066
Process for the production of sintered material based on alpha-aluminum oxide, especially for abrasives.—73-00004
Processing and characterization of alumina (platelet)-reinforced Y-TZP (matrix) composites.—73-09500
Processing and characterization of precursor hydronium ß/ß˝-alumina ceramics.—73-09277
Processing and mechanical properties of alumina platelet-reinforced zirconia.—73-09278
Processing and microstructure development in alumina-silicon carbide intragranular particulate composites.—73-16949
Processing and properties of Y-TZP/$Al_2O_3$ composites.—73-16951
Processing of tape-cast laminates prepared from fine alumina/zirconia powders.—73-16952
Production of alumina-magnesia spinel powder using a high-frequency plasmatron.—73-16957
Production of spherical granules of alumina with controlled porous structure.—73-02982
Promoted oxidation of aluminum thin films using an alkali metal catalyst.—73-06845
Properties and application of dense silicon carbide.—73-02085
Properties of alumina ceramics having extremely fine grains.—73-09659
Properties of alumina-based coatings deposited by plasma and high-velocity combustion processes.—73-09502
Properties of alumina/Al/alumina joints produced in air atmosphere.—73-03983
Properties of ceramic implants for stomatology.—73-08522
Properties of sodium borosilicate glasses/$Al_2O_3$-sintered composites containing fluorides.—73-16579
Pyrolysis of Si-C-O fiber in alumina powder.—73-16965
Quantitative X-ray diffraction analysis of high-alumina cements.—73-00178
Quantum chemical simulation of the self-trapped hole in $\alpha$-$N_2O_3$ crystals.—73-08716
Radiation damage effects in alumina.—73-05624
Rapid prototyping of structural ceramic parts by laminated object manufacturing.—73-15748
Reaction pathway for the growth of alumina on high surface area alumina and in ultrahigh vacuum by a reaction between trimethyl aluminum and water.—73-02988
Reactive sintering of zircon and alumina/bauxite.—73-09505
Reduction behavior of $Fe^{3+}$/$Al_2O_3$ obtained from the mixed oxalate precursor and the formation of the $Fe^0$-$Al_2O_3$ metal-ceramic composite.—73-05472
Reference electrode assembly and process for constructing.—73-01067
Refractory for gas blowing for molten metal refining vessel.—73-04040
Reinforced alumina ceramic-metal bodies.—73-10345
Resistivity and microstructure of alumina ceramics added with $TiO_2$ fired in reducing atmosphere.—73-16588
Resistivity and microstructure of alumina ceramics added with $TiO_2$ fired in reducing atmosphere.—73-16589
Rheological and electrokinetic properties of $ZrO_2$-$Al_2O_3$ slurry.—73-05630
Rheological behavior of suspension and properties of green sheet—effect of compatibility between dispersant and binder.—73-02998
Rheological characteristics of aqueous alumina slurry for tape casting.—73-16974
Rheology of alumina sols.—73-13238
Role of fiber coating on SiC fiber-reinforced alumina composite.—73-05631
Role of fiber coating on SiC fiber-reinforced alumina composite.—73-13585
Role of grain size in strength variability of alumina.—73-13586
Role of material and grinding parameters in grinding of alumina fiber-reinforced aluminum alloys.—73-06025
Role of oxygen in microstructure development at solid-state diffusion-bonded Cu/$\alpha$-$Al_2O_3$ interfaces.—73-13895
Role of Zener's pinning effect on the grain growth in $Al_2O_3$-$ZrO_2$.—73-06279
Role of Zener's pinning effect on the grain growth in $Al_2O_3$-$ZrO_2$.—73-13242
Sapphire-fiber-reinforced RBAO [reaction-bonded alumina].—73-16978
Scale of microstructure effects on the impact resistance of $Al_2O_3$.—73-09668
Scanning acoustic microscopy observations of high-temperature crack-bridging mechanisms in alumina.—73-03350
Schottky barrier induced injecting contact on wide band gap semiconductors.—73-07788
Sedimentation of flocculated alumina suspensions: $\gamma$-ray measurements and comparison with model predictions.—73-09312
Selective catalytic reduction of nitric oxide with ammonia on vanadium oxide catalysts supported on titania–alumina.—73-02685
SEM studies of material damage in alumina ceramics by angular single and multiple particle impacts.—73-06280
SEM studies on alumina fiber formation through plant fiber substrates.—73-13445
Serial cosputtering of mixed Al/Zr and $Al_2O_3$/$ZrO_2$ films.—73-10274
Shaped bodies of transparent, polycrystalline alumina.—73-02067
Shear bond strength of nickel-alumina interfaces diffusion bonded by HIP.—73-13897
Si-Ti-C-O fiber addition to alumina-graphite refractories.—73-00862
SiC whisker dispersion and mechanical properties of $Al_2O_3$-SiC whisker composite.—73-13588
SiC-platelet-reinforced $Al_2O_3$ composites by free sintering of coated powders.—73-16983
Sigmoidal indentation–strength characteristics of polycrystalline alumina.—73-06517
Silica bayerite/eta alumina.—73-12402
Silica-stabilized alumina.—73-05244
Silicon nitride bodies and a process for producing the same.—73-02137
Silver-alumina solid-state bonding: influence of the work hardening of the metal.—73-03640
Silver-toughened alumina ceramics.—73-06853
Simple fabrication process of intermetallic compounds utilizing low-temperature pressure casting of alumina.—73-03641
Sintered sol-gel alumina abrasive filaments.—73-00005
Sintering and grain growth of ultrapure alumina.—73-09506
Sintering and mechanical properties of SiC-whisker/$Al_2O_3$ composites with two-layered structure.—73-06520
Sintering and mechanical properties of SiC-whisker/$Al_2O_3$ composites with two-layered structure.—73-13589
Sintering and mechanism of crystallization prevention of alumina-filled borosilicate glass.—73-13259
Sintering behavior and consolidation process for $Al_2O_3$/SiC nanocomposites.—73-06051
Sintering behavior and consolidation process for $Al_2O_3$/SiC nanocomposites.—73-13263
Sintering behavior of aluminum oxides derived from aluminum hydroxides with various morphologies.—73-09324
Sintering behavior of ultrafine ceramic particles.—73-06054
Sintering characterization of alumina powders by hot-pressing after cold cyclic compaction—densification, grain growth, and fracture toughness.—73-09326
Sintering of alumina and mullites prepared by slow hydrolysis of alkoxides: the role of the protonic species and pore topology.—73-13265
Sintering of alumina green sheet with $TiO_2$ and $Cr_2O_3$ in reducing atmosphere.—73-06057
Sintering of alumina green sheet with $TiO_2$ and $Cr_2O_3$ in reducing atmosphere.—73-16995
$SiO_2$-$Al_2O_3$ liquids: in situ study by high-temperature $^{27}Al$ NMR spectroscopy and molecular dynamics simulation.—73-02433
Sliding wear of self-mated $Al_2O_3$-SiC whisker-reinforced composites at 23–1200°C.—73-03351
Sliding-wear behavior of ceramic particle-reinforced high-speed steel obtained by powder metallurgy.—73-06855
Slip casting of alumina using porous alumina mold.—73-09331
Slip casting of alumina using porous alumina mold.—73-16998
Slip casting of low-soda alumina: I, Preparation conditions of slurry.—73-09333
Slip casting of low-soda alumina: II, Vacuum-pressure-assisted slip casting and mechanical properties of sintered body.—73-09334
Sol and powder routes to alumina–silicon carbide nanocomposites.—73-17004
Sol-gel method for preparation of specific properties of coatings on alumina alloys with anodic oxidation.—73-03887
Sol-gel-derived alumina microspheres.—73-17006
Solid lubricant for alumina.—73-13900
Solid reaction in the MgO excess regions of the system MgO-$TiO_2$-$Al_2O_3$.—73-13368
Solid superacids: the alumina–$ZrCl_4$ system.—73-12684
Solid-state bonding of single crystals of $Ni_{(111)}$/$Al_2O_{3(0001)}$.—73-10277
Solid-state reaction in the MgO excess region of the system MgO-$TiO_2$-$Al_2O_3$.—73-00866
Solubility of silica–alumina gels in different pH solutions—discussion on the hydration of slags and fly ashes in cement.—73-10158
Solution of MgO, CaO, and $TiO_2$ in $\alpha$-$Al_2O_3$.—73-05481
Sources of sintering inhibition in tape-cast aluminas.—73-09339
Spectroscopic variations of optical constant and emissivity of Pt-$Al_2O_3$ cermet thin films.—73-10278
Stability and surface energies of wetted grain boundaries in aluminum oxide.—73-06284
Stepped cup forming from alumina granula by press powder flow compaction.—73-17009
Strengthening mechanism in $Al_2O_3$/SiC particulate composites.—73-17435
Strengthening of $\alpha$-alumina-containing porcelain bodies by lamination with different compositions.—73-15933
Stress-rupture behavior of small-diameter polycrystalline alumina fibers.—73-09678
Structural change in plasma-sprayed alumina coating by laser melting: II, On pulsed mode treatment.—73-17011
Structural change in plasma-sprayed alumina coatings by laser melting: I, On continuous wave mode treatment.—73-05490
Structural evolution in $ZrO_2$-$Al_2O_3$ gels during sintering.—73-17012
Structure analysis of ß˝-alumina in syntaxy with ß-alumina by two-stage powder XRD.—73-08756
Structure and dispersion of molybdenum oxide supported on alumina and titania.—73-08758
Structure and energetics of alumina surfaces calculated from first principles.—73-05498
Structure and properties of ceramics of the system $Al_2O_3$-$ZrO_2$-$SiO_2$.—73-07224
Structure and properties of plasma-sprayed alumina coatings[—literature review].—73-02693
Structure of $Al_2O_3$-$SiO_2$ gels derived from aluminum nitrate and tetraethylorthosilicate.—73-05500
Structure of $Al_2O_3$-$SiO_2$ gels derived from aluminum nitrate and tetraethylorthosilicate.—73-12703
Structure of barium zinc aluminate glasses.—73-00416
Structure of the $\alpha$-$Al_2O_3$(1$\bar{1}$00) surfaces.—73-16339
Structure of the $Fe_2O_3$-$Al_2O_3$(0001) interface.—73-06292
Structure of the $Fe_2O_3$-$Al_2O_3$(1$\bar{1}$02) interface.—73-06293
Structure of the surface sites of ß-$Al_2O_3$ as determined by HREM, computer modeling, and ir spectroscopy of adsorbed CO.—73-13452
Strut crack formation in open cell alumina ceramics.—73-13288
Subthreshold production of cation Frenkel defects in $\alpha$-$Al_2O_3$.—73-03114
Superaluminous ceramics in the wood industry—possibilities and outlooks.—73-12331
Superconducting fibers made with yttrium and yttrium oxide interlayers and barium cuprate cover layers.—73-04876
Support effects in methanol synthesis over copper-containing catalysts.—73-02698
Supported catalysts.—73-02070
Surface anisotropy in amorphous Tb-Fe/$Al_2O_3$ multilayers.—73-15371
Surface bonding of ceramic bodies.—73-00297
Surface charge density and acidic characteristics of $SO_4^{2-}$/$Al_2O_3$.—73-16607
Surface models for $\gamma$-$Al_2O_3$ from molecular dynamics simulations.—73-12707
Surface modification methodologies for polycrystalline alumina: effects on morphology and frictional coefficients.—73-17204
Surface property and strength of ground alumina ceramics.—73-09682
Surface roughness characterization of three alumina-type fibers by atomic force microscopy [AFM].—73-09515
Surface segregation of PVA during drying of a PVA–water–$Al_2O_3$ slurry.—73-13290
Surface segregation of PVA during drying of a PVA-water-$Al_2O_3$ slurry.—73-03032
Surface-free energy components of $\alpha$-alumina from thin-layer wicking.—73-16609
Synthesis and characteristics of fibrous $3CaO{\cdot}Al_2O_3{\cdot}32CaCO_3{\cdot}3H_2O$.—73-03036
Synthesis and characterization of pure and yttrium-containing alumina aerogels.—73-06079
Synthesis and investigation of aluminum oxide sols on the basis of commercial aluminum hydroxide.—73-17020
Synthesis and mechanical properties of alumina–MgO-stabilized zirconia–zircon composite.—73-06082
Synthesis and mechanical properties of alumina–MgO-stabilized zirconia-zircon composite.—73-17021
Synthesis and optical properties of ß˝-alumina single crystals doped with divalent lanthanide ions.—73-13295
Synthesis and properties of $Al_2O_3$-SiC composites from alkoxides: I, Synthesis of dispersed type $Al_2O_3$-SiC composite powders.—73-09347
Synthesis and properties of $Al_2O_3$-SiC composites from alkoxides: II, Synthesis of coated $Al_2O_3$-SiC composite powders.—73-09348
Synthesis and properties of $Al_2O_3$-SiC composites from alkoxides: III, Effect of composite powder type on the sintering characteristics and properties of $Al_2O_3$-SiC composites.—73-09349
Synthesis of beta-alumina from aluminum hydroxide and oxyhydroxide precursors.—73-03043
Synthesis of highly leachable gel-derived alumina ceramic cores.—73-17038

Synthesis of nanocrystalline alumina and alumina-zirconia composites by a combustion-assisted process.—73-17041
Synthesis of nanophase materials by electron beam evaporation.—73-17043
Taguchi design of experiment study of plasma-sprayed alumina coatings.—73-09368
Tape casting of fine alumina/zirconia powders for composite fabrication.—73-17050
Tape casting of SiC platelet-reinforced alumina.—73-09370
Temperature dependence of the elastic moduli, dilational and shear internal frictions, and acoustic wave velocity for alumina, (Y)TZP, and ß´-SiAlON ceramics.—73-09684
Temperature effects on phase composition and properties of aluminum alkoxide hydrolysis products.—73-16361
Template synthesis and optical properties of small metal particle composite materials: effects of particle shape and orientation on plasmon resonance maxima.—73-06111
Temporal characteristics of gain-switched $Ti^{3+}$:$Al_2O_3$ laser.—73-08981
Tensile creep behavior of alumina under static and cyclic loading.—73-17441
Tensile properties of alumina fibers using hot-grips.—73-17443
Tensile properties of aluminum/alumina multilayered thin films.—73-03650
Test results of alumina-spinel castable for steel ladle.—73-14628
Tetragonal-cubic inversion in unstabilized zirconia dispersed in alumina matrix.—73-16365
Textural stability of titania–alumina composite membranes.—73-09517
Thermal and hydrothermal properties and microstructure of zirconia-alumina-mullite.—73-17445
Thermal and mechanical properties of $SiC_p/Al_2O_3$ composite.—73-03366
Thermal barrier coating system with intermetallic overlay bond coat.—73-00299
Thermal behavior of alumina from aluminum alkoxide reacted with complexing agent.—73-12888
Thermal conductivity of thin amorphous alumina films.—73-05654
Thermal decomposition of hydrotalcites. An ir and NMR spectroscopy study.—73-08775
Thermal fatigue behavior of alumina ceramics by water quenching method.—73-13603
Thermal fatigue life prediction of alumina by finite difference model.—73-08989
Thermal shock and fatigue of mullite and alumina: refined analyses.—73-05663
Thermal shock behavior of Y-TZP/Y-TZP-$Al_2O_3$ composites having dual microstructure.—73-05667
Thermal shock by water quench: numerical simulation.—73-05668
Thermal shock resistance of composites of alumina and partially stabilized zirconia.—73-08990
Thermal shock resistance of high-alumina ceramics.—73-08991
Thermal spalling and resistance to slag attack in porous high-alumina ceramic (according to pore size).—73-12895
Thermal stability of gels and glass-forming regions in the $B_2O_3$-$Na_2O$-$Al_2O_3$ system.—73-12896
Thermodynamic investigation of the CaO-$Al_2O_3$-$CaSO_4$-$H_2O$ system at 50°C and 85°C.—73-10181
Thermodynamic investigation of the CaO-$Al_2O_3$-$CaSO_4$-$K_2O$-$H_2O$ system at 25°C.—73-16376
Thermomechanical and microstructural stability of Nextel 610 polycrystalline alumina fiber.—73-12334
Thermomechanical processing [TMP] and ductility enhancement of a 6061 Al-$Al_2O_3$ metal matrix composite.—73-03655
Thermomechanical properties of $Al_2O_3$-C slide plate brick.—73-10776
Ti:$Al_2O_3$ master-oscillator/power-amplifier system.—73-15210
TiC-strengthened $Al_2O_3$ by powder tailoring and doping procedures.—73-06120
TiC-strengthened $Al_2O_3$ by powder tailoring and doping procedures.—73-09378
Time-dependent strength degradation and reliability of an alumina ceramic subjected to biaxial flexure.—73-17447
Time-temperature-transformation curves [T-T-T curves] for kaolinite–α-alumina.—73-12725
Tin(IV) oxide coating of aluminum borate whiskers and alumina particles by chemical vapor deposition.—73-03062
Toughening alumina ceramic with silver inclusions.—73-03658
Toughening behavior of SiC whisker-reinforced $Al_2O_3$ ceramic tool material and its effect on tool fracture.—73-06540
Toughening of alumina matrices by the inclusion of nickel particles.—73-00272
Transformation kinetics and properties of co-continuous ceramic composites.—73-10292
Transmission electron microscopy of polished AlN with ultrafine alumina abrasive.—73-03210
Transparent glass-ceramics on $Al_2O_3$-$SiO_2$ system.—73-03896
Tribological characterization of alumina and silicon carbide under lubricated sliding.—73-17454
Tribological properties of niobium ion-implanted alumina.—73-17455
Tunable ps pulses below 200 nm by external frequency conversion of cw mode-locked Ti:$Al_2O_3$ laser radiation.—73-09002
Ultrafine alumina powders via a sol-emulsion-gel method.—73-13329
Ultrasonic attenuation study of $NH_4^+$/$H_3O^+$-$Rb^+$-ß´´-alumina.—73-06182
Use of a heated sprue in the injection molding of large ceramic sections.—73-15859
Use of coupling agents as a route to improvement of the compressibility of fine zirconia and alumina powders.—73-09383
Use of ultrasonic wave velocities to characterize $SiC_w/Al_2O_3$ composites.—73-01937
Usefulness of spark plasma sintering on densification and mechanical properties of alumina whisker/zirconia composites.—73-17069
Using diopside in the production of high-alumina ceramics.—73-02019
Variation of optical properties of leucosapphire after high temperature plastic deformation [HTPD].—73-02721
Variations of surface hardness of alumina induced by ion implantation.—73-16647
Viscoelastic effects in testing of an $Al_2O_3$ ceramic containing a glassy phase.—73-09689
Viscoelasticity in alumina ceramics at room temperature.—73-09690
Viscosity and yield stress of alumina slurries containing large concentrations of electrolyte.—73-06132
Viscosity of glasses of the BaO-$P_2O_5$-$Al_2O_3$ system at glass-transition and annealing temperatures.—73-00572
Wettability and interfacial reaction of alumina and zirconia by reactive silver-indium base alloy at mid-temperatures.—73-00276
Whisker-reinforced composites for cutting tools with improved performance.—73-05250
Work hardening behavior of alumina particulate-reinforced 2024 aluminum alloy matrix composites.—73-13911
X-ray measurement of triaxial residual phase stress in zirconia–alumina composite ceramics.—73-13609
X-ray photoelectron spectroscopy study on the electrical double layer at an $Al_2O_3$-Al interface.—73-06881
XPS study of a Cu-Al-O catalyst under $H_2$ or CO atmosphere.—73-12734
XRD, HRTEM, and FTIR study of Ca-doped $Al_2O_3$.—73-12738
Zeolite-$Al_2O_3$ membrane configuration.—73-12335

**aluminates,**
Alkoxide–hydroxide route for the preparation of γ-$LiAlO_2$-based ceramics.—73-05688
Anisotropic oxygen diffusion in hexaaluminate.—73-03075
Barium aluminate cement—its synthesis and formation kinetics.—73-13681
Cement in the $C_{11}A_7$:$CaF_2$-$C_2S$ [11CaO·7$Al_2O_3$·$CaF_2$-2CaO·$SiO_2$] system.—73-13688
Chemical composition and microstructures of sulfoaluminate cement clinker.—73-09851
Chemically induced grain-boundary migration of $MgAl_2O_4$ by ZnO.—73-13381
Cleaning the surface of $SrTiO_3$(100) and $LaAlO_3$(100) under moderate temperature condition by Bi adsorption/desorption treatment.—73-02747
Cluster spin glass ordering in diluted spinel $CoFe_{1-x}Al_{1+x}O_4$.—73-08576
Comparison of threshold energy of selectively excited YAlO$_3$:Er and YAG:Er lasers.—73-08826
Component region for the synthesis of rod-shaped ß-$LiAlO_2$ crystals.—73-02168
Continuous wave, *Q*-switched, and mode-locked operation of a laser-pumped Nd:LNA laser.—73-16428
Creep behavior of fine-grained two-phase $Al_2O_3$-$Y_3Al_5O_{12}$ materials.—73-17264
Crystal structure of holmium aluminate, $HoAlO_3$.—73-16084
Crystal structure of the chloraluminates of titanium(II), $Ti(AlCl_4)_2$, and refinement of the crystal structure of $AlCl_3$.—73-12563
Decomposition of the spinel $CuAl_2O_4$.—73-16102
Distribution of paramagnetic impurity in $LaSrAl_{1-x}Cr_xO_4$ and $YCaAl_{1-x}Cr_xO_4$ ceramics [$x$<0.15].—73-16113
$DyAlO_3$: a more promising refrigerant than $Dy_3Al_5O_{12}$.—73-01455
Electrical conductivity and mixed alkali effect in $K^+$/$Rb^+$ ß´´-$Al_2O_3$ ceramics.—73-00956
Electron nuclear double resonance [ENDOR] study of $LaMgAl_{11}O_{19}$:$Ti^{3+}$.—73-02255
Electron paramagnetic resonance and optical spectra of $Cr^{3+}$-doped YAlO$_3$.—73-16485
Fabrication and mechanical properties of $C_f$/NiAl and $SiC_w$/NiAl composites.—73-03587
Fatigue damage in SiC/CAS composites.—73-03293
Findings on blue-emitting luminophore based on (Ba, $Eu^{2+}$)Mg aluminate.—73-02275
Formation of alkoxy-derived yttrium aluminates in the $Al_2O_3$-rich region.—73-09138
Formation of CaO·10$Al_2O_3$ with the ß-alumina-type structure by means of ion exchange.—73-02277
Heating conditions to synthesize rod-shaped ß-$LiAlO_2$ crystals.—73-05838
Hydration of Sr- and Ba-bearing sulfoaluminates in the presence of sulfates.—73-06666
Influence of the native $BaAl_2O_4$ boundary layer on microstructure and properties of $YBa_2Cu_3O_{7-x}$ thin films grown on sapphire.—73-01579
Internal friction in $MgAl_2O_4$ spinel doped with gallium oxide or alumina.—73-02305
Ionic conduction in partially ion-exchanged Sr ß-alumina; $Sr_{1-x}Na_{2x}MgAl_{10}O_{17}$.—73-00985
Magnetic polaritons of a semiinfinite uniaxial antiferromagnet.—73-15337
Mechanisms at the formation of some unitary strontium and barium sulfoaluminates.—73-16212
Mechanisms at the mixed sulfoaluminate formation in the CaO-$Al_2O_3$-(Sr,Ba)$SO_4$ systems.—73-13754
Melting temperatures of the alkali-earth aluminates and their mixtures with $ZrO_2$ and $Al_2O_3$ in the atmosphere of combustion gases.—73-10741
Microstructure of epitaxial ferroelectric $YBa_2Cu_3O_{7-x}$/$Pb_{0.9}La_{0.1}$·$(Zr_{0.2}Ti_{0.8})_{0.975}O_3$-$YBa_2Cu_3O_{7-x}$ heterostructures on $LaAlO_3$ [LAO].—73-03171
Mode-locking of the 1.66-µm transition of an Er:YAlO$_3$ laser.—73-07676
Mossbauer and magnetization study of cobalt ferrite aluminates.—73-04629
NMR of $^{27}$Al in mixed $Y_xEr_{1-x}AlO_3$ crystals [$x$=1, 0.93, and 0.9].—73-16229
Phase relations in the system $Ce_2O_3$-$Al_2O_3$ in inert and reducing atmospheres.—73-16256
Preliminary study of very early hydration of superplasticized $C_3A$+gypsum by environmental SEM.—73-10090
Preparation of garnet-type $Gd_3Al_5O_{12}$ powders by an amorphous citrate process.—73-13188
Preparation of $Na_{1-x}Ti_{2+x}Al_{5-x}O_{12}$ ($x$=0.2) fiber by precursor method.—73-02959
Preparation of $Na_{1-x}Ti_{2+x}Al_{5-x}O_{12}$ [NTAO] whiskers by calcining with excess $Na_2O$.—73-02960
Preparation of $Na_{1-x}Ti_{2+x}Al_{5-x}O_{12}$ whiskers by calcining with excess $Na_2O$.—73-13196
Quarternary oxide phases $Ln_{4-x}Au_{4+x}Co_{2+x}Al_{2-x}O_{15}$: the structure of $Nd_{3.43}Ba_{4.42}Co_{2.23}Al_{1.77}O_{15}$ and $Y_2Sr_6Co_{2.08}Al_{1.92}O_{15}$.—73-02409
Second harmonic generation and sum frequency mixing of dual wavelength Nd:YAlO$_3$ laser in flux-grown KTiOPO$_4$ crystal.—73-07789
Secondary ion mass spectrometric analysis of anisotropic oxygen self-diffusion in barium hexaaluminate single crystals.—73-13367
Spectroscopic and dynamic characteristics of energy transfer of $Nd^{3+}$→$Yb^{3+}$ and $Yb^{3+}$→$Er^{3+}$ in aluminate glasses.—73-03759
Spectroscopy and scintillation properties of cerium-doped $YAlO_3$ single crystals.—73-16598
State of iron atoms and exchange interactions in solid solutions of $LaSrFe_xAl_{1-x}O_4$ and $YCaFe_xAl_{1-x}O_4$.—73-12691
Stress-induced phase transformation in the systems $(Ho_{1-x}La_x)_4Al_2O_9$ and $(Y_{1-x}La_x)_4Al_2O_9$.—73-16316
Structural evidence of water-induced relaxation of the Frenkel defect in $Na^+$ ß-alumina.—73-06176
Theory and practice of fume silica–aluminous cement interactions.—73-03545
Thermal characteristics of alexandrite fluorescence decay at high temperatures, induced by a visible laser diode emission.—73-02704
Thermoluminescence in $MgAl_2O_4$ X-ray irradiated at 90 K.—73-12723
Ultrasonic attenuation study of hydronium ß´´-alumina.—73-01040
Ultrasonic shear wave attenuation study on $Na^+$, $K^+$ ß´´-alumina.—73-01041
Upconversion and local structure of $Er^{3+}$-doped aluminate glasses.—73-03817
Upconversion dynamics of $Er^{3+}$:YAlO$_3$.—73-08787
Viscosity and elastic properties of glasses of the system BaO-$B_2O_3$-$Al_2O_3$ and CdO-$B_2O_3$-$Al_2O_3$.—73-14309
ZnO-modified high-modulus glass fibers.—73-00723

**aluminides,**
Cavitation-erosion [CE] of plasma-sprayed nickel aluminides.—73-06743
Chemical stability of titanium diboride reinforcement in nickel aluminide matrices.—73-06749
Combined mechanical alloying and thermochemical processing approach to synthesize titanium aluminides.—73-05712
Combustion synthesis of LiAl intermetallics.—73-06754
Consolidation of [SiC] fiber materials with particulate metal aluminide alloys.—73-13915
Development of titanium aluminide composites.—73-10216
Effect of mechanical alloying on γ-TiAl alloys.—73-05762
Effect of processing parameters on mechanical alloying of $Ti_3Al$-base alloys.—73-05769
Effects of reinforcement size and distribution on fracture toughness of composite nickel aluminide intermetallics.—73-00225
Environmentally compatible double coating concepts for sapphire fiber-reinforced γ-TiAl.—73-06781
Equipartition method for the analyses of two nonidentical closely separated rib waveguides.—73-14893
Fine structure analysis of mechanically alloyed titanium aluminides.—73-05808
Glass-ceramic coatings for titanium aluminides.—73-06798
Interfacial reactions of thin titanium aluminide films with $Al_2O_3$ films and with sapphire.—73-13851
Mechanical alloying [MA] of TiAl: preliminary results.—73-06818
Mechanical properties and oxidation resistance of TiC-dispersed titanium aluminide produced by mechanical alloying process.—73-13866
Point-contact spectroscopy of $LaCeAl_2$ and $LaCeB_6$ alloys.—73-08704
Reactive spray forming [REFORM] production of titanium aluminides in the tail flame of a dc plasma torch.—73-06846
Structures and properties of vacuum-plasma-sprayed [VPS] NiAl and NiAl-B.—73-09512
Thermal-fatigue properties of $Ti_3Al$-based intermetallics.—73-10288

**aluminoborate,**
Aluminum borate devitrification inhibitor in low-dielectric borosilicate glass.—73-04186
Crystalline metalloaluminum borates.—73-05211
Experimental study of xenon flash lamp pumped $Nd_xY_{1-x}Al_3(BO_3)_4$ (NYAB) *Q*-switched laser and its characteristics.—73-12801
Formation and properties of neodymium aluminoborate glasses.—73-00484

Formation of cobalt ferrites in glasses based on potassium aluminoborate systems.—73-00344
Ir absorption spectra of lead aluminoborate glasses.—73-00507
Structure of aluminoborate glasses according to Raman spectroscopy data and their properties.—73-14106

**aluminoferrites,**
Barium hexaaluminoferrites with new structural features.—73-01450
Effect of $SO_3$ and MgO on phase relations and crystal chemical state of phases in belite–aluminoferrite clinkers.—73-09917
Kinetics of aluminoferrite formation at different conditions.—73-13746
Kinetics of tricalcium aluminate and tetracalcium aluminoferrite hydration in the presence of calcium sulfate.—73-00130

**aluminophosphate,**
Adsorptive properties and stability of VPI-5, a large-pore molecular sieve.—73-08806
Anionic coordination involvement in solid-state ion-exchanged CuH-SAPO-*n* (*n*=5, 11, and 34) molecular sieves.—73-12535
Consistent molecular mechanics force field for aluminophosphates.—73-16426
Crystallization kinetics of SAPO-37.—73-05722
EPR evidence of the unusual coordinational environment for $Mo^{5+}$ in SAPO-5 molecular sieves.—73-12580
EXAFS of Cs $L_3$-edge in sodium borosilicate and aluminum phosphate glasses.—73-13984
Formation of CoAPSO-44.—73-08626
Framework topology of magnesium aluminophosphate structure type 36.—73-08631
Further studies on aluminophosphate molecular sieves: I, $AlPO_4$-$H_2$: a hydrated aluminophosphate molecular sieve.—73-12593
Hydrothermally synthesized aluminum phosphate cements.—73-06669
Ir and EPR spectra of aluminoborosilicate and aluminophosphate glasses simulating vitrified radioactive wastes.—73-01749
Modeling of structure and vibrational spectra of $AlPO_4$-5 and its silica analog SSZ-24.—73-12631
Network structure of rf-sputtered amorphous $AlPO_4$-MgO and $AlPO_4$-CaO films.—73-05439
Nitrogen incorporation in $AlPO_4$-5 molecular sieves by thermal ammonolysis.—73-08519
Optical second harmonic generation (SHG) on *p*-nitroaniline in large crystals of $AlPO_4$-5.—73-12852
Possibility of incorporating Mn(II) and Cr(III) in SAPO-34 in the presence of isopropylamine as template.—73-08706
Reversible thermal transformation in the molecular sieve $AlPO_4$-5.—73-08726
Reversible thermal transformation in the molecular sieve $AlPO_4$-5.—73-16297
Solid-state NMR and XRD study of the thermal stability of VPI-5: assignment of $^{31}P$ and $^{27}Al$ MAS NMR spectra.—73-05479
Structure and chemistry of Co in CoAPO-5 molecular sieves.—73-08757
Structure and chemistry of Co in CoAPO-5 molecular sieves.—73-16328
Structure of calcined $AlPO_4$-31: a new framework topology containing one-dimensional 12-ring pores.—73-05501
Structure of some lead aluminophosphate glasses.—73-03765
Synthesis and properties of MgAPO-5.—73-13297
Synthesis, characterization, thermal stability, acidity, and catalytic properties of large-pore MAPO-46.—73-12885
Thermal conductivity of aluminofluorophosphate glasses.—73-00555
Viscosity of glasses of the system $K_2O$-$P_2O_5$-$Al_2O_3$ in the temperature region of softening and annealing.—73-14310

**aluminosilicates,**
$^{22}Na^+$ sorption from lithium-aluminosilicate solutions with electrode glass.—73-14046
$^{27}Al$ NMR spectroscopy of CaO-$Al_2O_3$-$SiO_2$ melts and glasses.—73-13923
Aluminosilicate refractories—their quality and resistance to corrosive agents in cement and lime kilns.—73-10695
Barium aluminosilicate glass-ceramics by a sol-gel route.—73-14329
Barium aluminosilicate glasses.—73-14534
Beryllium mineral paragenesis in the beryllia/water chemical potential diagram.—73-16037
Catalyst for purifying exhaust gas.—73-02026
Ceramic container.—73-12012
Characterization and modeling of microcracking and elastic moduli changes in Nicalon/CAS composites.—73-03243
Complex investigation of crystallization of glasses in the system BaO-$Al_2O_3$-$SiO_2$.—73-13947
Computer modeling of structure and thermal expansion of ß-quartz- and keatite-type aluminosilicates.—73-02564
Control of permanent shrinking of recycled castable refractories from waste refractories of $Al_2O_3$-$SiO_2$.—73-00791
Creep anisotropy of a continuous-fiber-reinforced silicon carbide/calcium aluminosilicate composite.—73-13499
Crystal structure features of natural hydroxyl-containing cancrinite.—73-02184
Crystal structure of natural Na,Ca scapolite—intermediate member of the marialite-meyonite family.—73-02202
Crystallization characteristics of certain lithum manganese aluminosilicate glasses and the effect of adding $TiO_2$ or $ZrO_2$.—73-03719
Crystallization in a barium-containing magnesium aluminosilicate glass-ceramic—correction.—73-07113
Crystallization in glasses of the system $Na_2O$-$K_2O$-CaO-$Al_2O_3$-$SiO_2$.—73-06898
Crystallization kinetics of CaO-MgO-$Al_2O_3$-$SiO_2$ glass system using thermal analysis.—73-00314
Crystallization of sol-gel-derived barium aluminosilicate in a 2.45-GHz microwave field.—73-05725
Design of glass-ceramics.—73-03782
Dye laser-pumped $Pr^{3+}$-doped fiber laser's basic parameter investigation, cw operation, and *Q*-switched operation.—73-14159
Effect of crystal phases on the properties of sintered glass-ceramics for CaO-MgO-$Al_2O_3$-$SiO_2$ system.—73-00452
Effect of fluorine on phase separation of CaO-$Al_2O_3$-$SiO_2$ glass.—73-13966
Effect of heat treatment below the glass nucleation temperature on the crystallization of $TiO_2$-containing MgO-$Al_2O_3$-$SiO_2$ glasses.—73-03834
Effect of hydrostatic treatment of greenware and sintering profiles on the properties of ceramics in the tialite-mullite-corundum system.—73-16731
Effect of surface treatment and annealing on the surface crystallization of the MgO-$Al_2O_3$-$SiO_2$ glass.—73-14361
Effect of the addition of $TiO_2$ and $ZrO_2$ on the crystallization of calcium aluminosilicate glasses.—73-14362
Effects of rare-earth oxides and silica on sintering and microstructure of $Al_2O_3$-$ZrO_2$-$SiO_2$ (AZS)-40 brick.—73-10725
Effects of zirconia additions on the crystallization behavior of MgO-$Al_2O_3$-$SiO_2$ glass-ceramics.—73-08608
Evaluation of thermal residual stresses in SiC/MLAS and SiC/SiC composites by the microindentation push-down test.—73-03285
Evolution of interface microstructure in a dual-coated silicon carbide fiber-reinforced BMAS [Ba-Mg aluminosilicate] glass-ceramic composite.—73-09450
Formation and properties of yttrium aluminosilicate glasses.—73-00485
Gas/vapor adsorption in imogolite: a microporous tubular aluminosilicate.—73-09456
Glass-doped ceramic matrix composites.—73-03928
High-temperature behavior of salt-coated Nicalon-fiber-reinforced calcium aluminosilicate composite.—73-17342
High-temperature flexural strength of SrO-$Al_2O_3$-$2SiO_2$ glass-ceramic.—73-17345
High-temperature synthesis of $CsAlSiO_4$-ANA, a new polymorph in the system $Cs_2O$-$Al_2O_3$-$SiO_2$: I, The end member of ANA type of zeolite framework.—73-02284
Highly heat-resistant glass fiber and process for its production.—73-00736
Hot-pressing and high-temperature mechanical properties of $BaAl_2Si_2O_8$ (BAS) and $SrAl_2Si_2O_8$ (SAS).—73-09614
Indentation behavior of continuous fiber-reinforced ceramic matrix composites.—73-00502
Influence of gel formation conditions on phase changes in polymer aluminosilicate gels of mullite composition.—73-02293
Interaction of components in Li-Mg, Al-Si systems.—73-16178
Internal friction in lithium aluminosilicate glass-ceramics.—73-07040
Ir and EPR spectra of aluminoborosilicate and aluminophosphate glasses simulating vitrified radioactive wastes.—73-01749
Kinetic frictional behavior of aluminosilicate ceramics.—73-17368
Kinetics of alkali-silicate and aluminosilicate glass reactions in alkali chloride solutions: influence of surface charge.—73-10387
Low-loss rare-earth-doped single-mode fiber by sol-gel method.—73-07147
Method for treating fluoroaluminosilicate glass.—73-14551
Microporous aluminosilicate ceramic membranes.—73-05234
Microstructure and thermal properties in the RO-MgO-$Al_2O_3$-$SiO_2$ (R=Ca, Sr, Ba, Zn) glass-ceramic systems.—73-14228
Mineral ionic conductor—saponite.—73-04140
Modulated structure of lazurite from Southwestern Pamirs deposits.—73-16220
Molecular modeling of oxygen bridges in amorphous and crystalline silicates and aluminosilicates.—73-00375
New low-heat cement made with CaO-$Al_2O_3$-$SiO_2$ glass.—73-10065
New SiC-whisker-reinforced lithium aluminosilicate composite.—73-02905
Nonaqueous synthesis: iron aluminosilicates with the ZSM-48 structure.—73-13152
Nuclear fuel pellets having an aluminosilicate deposition phase.—73-04897
Nucleation in a $K_2O$-CaO-$Al_2O_3$-$SiO_2$ glass.—73-14445
Optical spectra and structural states of Ni(II) in glass-ceramic-forming glasses of the lithium aluminosilicate system.—73-00381
Particulate reinforcement of a magnesium aluminosilicate glass-ceramic.—73-00677
Phase composition, microstructure, and nucleation temperature range of zinc aluminosilicate glass-ceramics.—73-14455
Phase separation and crystallization of a CaO(MgO)-$Al_2O_3$-$SiO_2$ slag glass-ceramic by DTEM.—73-03749
Phase transformations in $SrAl_2Si_2O_8$ glass.—73-14069
Phonon sideband spectra and local structure around $Eu^{3+}$ ions in aluminosilicate glasses.—73-14070
Pollucite via low-temperature reaction of glassy frits.—73-14461
Predicting the crystallization capability of aluminosilicate glasses.—73-06954
Preparation and thermal expansion behavior of pollucite powders by sol-gel processing.—73-02940
Preparation of the LAS ceramics for heat resistance using metal alkoxide: I.—73-16940
Process for the preparation of LAS ceramic sintered bodies.—73-15955
Raman and infrared spectra of rare-earth aluminosilicate glasses.—73-10395
Raman spectroscopy study of the kinetics of transformations of titanium-containing phases in glass-ceramic-forming lithium aluminosilicate glasses activated by nickel oxide.—73-00392
Refinement of modulated crystals. Structure of kimrite.—73-02423
Resonantly enhanced optical second harmonic generator.—73-00583
Selecting aluminosilicate aggregates added to cordierite.—73-07222
Single-particle jumps and correlated ionic motions in glass-ceramics.—73-00544
Sintering and crystallization behavior of BaO-$Al_2O_3$-$SiO_2$ and BaO-ZnO-$Al_2O_3$-$SiO_2$ xerogel powders.—73-13257
Sintering characteristics in LAS ($Li_2O$-$Al_2O_3$-$SiO_2$) system.—73-06055
Sodium and silver environments and ion-exchange processes in silicate and aluminosilicate glasses.—73-06970
Solid-liquid reaction in the system $Si_3N_4$-$Y_3Al_5O_{12}$-$Y_2Si_2O_7$ under 1 MPa of nitrogen.—73-16307
Stability of interfaces in calcium aluminosilicate matrix/Nicalon SiC fiber composites.—73-09510
Structural influence of nitrogen in alkaline-earth aluminosilicate glasses: ir absorption spectroscopy.—73-10404
Structural investigation of yttrium aluminosilicate glasses using $^{29}Si$ and $^{27}Al$ magic angle spinning nuclear magnetic resonance.—73-00408
Structural transformations in a lithium aluminosilicate glass on thermal gradation crystallization.—73-00413
Structure and optical properties of one-dimensional selenium atom chain in cancrinite channels.—73-16332
Structure and phase transitions in aluminosilicate glasses and melts.—73-00415
Substituted aluminosilicate compositions and process for preparing.—73-05245
Surface modification in a 2.45-GHz microwave field.—73-14118
Surface modification of sodium aluminosilicate glasses using microwave energy: II.—73-03891
Synthesis of Al,Si-MFI-type zeolites in the presence of $F^-$ anions: structural and physicochemical characteristics.—73-08767
Synthesis of zeolite beta from nonalkaline fluoride aqueous aluminosilicate gels.—73-06102
Synthetic imogolite paracrystals.—73-06105
Thermal behavior of blended fiber products of $Al_2O_3$-$SiO_2$ system.—73-16618
Thermal degradation of polycrystalline fibers of $Al_2O_3$-$SiO_2$ system.—73-16625
Thermal expansion characteristics of Li-replaced type pollucite ($Cs_{1-x}Li_xAlSi_2O_6$) powder.—73-02708
Thermal expansion control in metal-cored glass-ceramic substrates.—73-14295
Thermal resistance strength with the formation of the zircon phase in LAS system.—73-12893
Thermomechanical fatigue [TMF] behavior of a silicon carbide fiber-reinforced calcium aluminosilicate composite.—73-03368
Ultrasonic sol/gel processing of aluminoborosilicate glass and its composite with carbon fiber reinforcement.—73-03899
Zeolite LZ-276 and process for preparing [the] same.—73-02077

**aluminum boride,**
Mechanical properties of Mg-based composites reinforced with B, $AlB_2$, and $MgB_2$.—73-13867

**aluminum luminides,**
Tunable generation of microscopic and mesoscopic step arrays on non-(100)-oriented GaAs: a new route to quantum wire structures by epitaxial growth.—73-11489

**aluminum nitride,**
AlN matrix composites fabricated via an infiltration and reaction approach.—73-12910
AlN powders for electronic substrates: relations between properties and synthesis.—73-00934
AlN thin films prepared by plasma-enhanced chemical vapor deposition.—73-12911
Aluminum nitride as a corrosion protection coating for steel: self-scaling porous electrode model.—73-00208
Aluminum nitride deposition using an AlN/Al sputter cycle technique.—73-01043
Aluminum nitride hydrolysis.—73-12913
Aluminum nitride plant to be built by Dow Chemical.—73-03378
Aluminum nitride refractory materials and methods for making the same.—73-15976
Aluminum nitride sintered body and process for preparation thereof.—73-05282
Aluminum nitride sintered body and process for producing the same.—73-05283
Aluminum nitride substrate and method for producing [the] same.—73-04187
Aluminum nitride thin-film sensor for force, acceleration, and acoustic emission sensing.—73-14769
Aluminum nitride.—73-12255
Aluminum nitride: review of synthesis methods.—73-12410
Carbothermal production of aluminum nitride.—73-09026
Carbothermal synthesis of aluminum nitride at elevated nitrogen pressures: I, Effect of process parameters on conversion rate.—73-09027
Carbothermal synthesis of aluminum nitride at elevated nitrogen pressures: II, Effect of process parameters on particle size and morphology.—73-09028
Carbothermal synthesis of aluminum nitride using sucrose.—73-16663
Ceramic-filled thermally conductive composite containing fusible semicrystalline polyamide and/or polybenzocyclobutenes for use in microelectronic applications.—73-01046

Characterization of nitrided high surface gamma-alumina powders.—73-13376
Chemical synthesis of an aluminum nitride/boron nitride nanostructured composite material.—73-16672
Cluster size determination in the chemical vapor deposition of aluminum nitride.—73-17118
Coated aluminum nitride powder and its preparation.—73-05294
Comparison of TiAlN coatings grown by unbalanced magnetron and arc bond sputtering techniques.—73-16681
Composite with anisotropy in thermal conductivity by the combination of aluminum nitride and its polytypoids.—73-14685
Continuous in-line debinding and sintering of aluminum nitride parts.—73-02753
Corrosion-resistant member for chemical apparatus using halogen series corrosive gas.—73-12359
Creep deformation of aluminum nitride at high temperature.—73-13500
Crystal growth and microstructure of polycrystalline $Ti_{1-x}Al_xN$ alloy films deposited by ultrahigh-vacuum dual-target magnetron sputtering.—73-13385
Developing AlN ceramics with high thermal conductivity.—73-12979
Development of as-fired aluminum nitride substrates with smooth surface and high thermal conductivity.—73-14687
Dislocation substructures in plastically deformed AlN.—73-09444
EELS study of oxygen diffusion in aluminum nitride.—73-06155
Effect of aluminum source on synthesis process and properties of AlN powder prepared via carbothermal reduction and nitridation.—73-09076
Effect of ball-milling time for powder mixing of the thermomechanical properties of SiC-AlN system ceramics.—73-05753
Effect of carboxylic acid adsorption on the hydrolysis and sintered properties of aluminum nitride powder.—73-13000
Effect of plasma nitriding on the properties of (Ti, Al)N coatings deposited onto hot-work steel substrates.—73-03580
Effect of polynuclear complex content on the synthesis of aluminum nitride from aluminum polynuclear complex.—73-13014
Effect of powder properties on thermal conductivity of aluminum nitride.—73-03138
Effect of powder properties on thermal conductivity of aluminum nitride.—73-12774
Effect of powder properties on thermal conductivity of aluminum nitride.—73-13016
Effect of rare-earth oxide addition on the thermal conductivity of sintered aluminum nitride.—73-02587
Effect of reactive gas mass flow on the composition and structure of AlN films deposited by reactive sputtering.—73-09093
Effect of yttria on the thermal conductivity of aluminum nitride.—73-12777
Effects of AlN nucleation layer on magnetron-sputtered indium nitride films.—73-08840
Effects of creep at room temperature in ceramics during indentation.—73-09586
Effects of transition-metal additions on the properties of AlN.—73-16469
Electrical and thermal conductivity of AlN ceramics doped with beryllium and oxygen.—73-08851
Electron density distribution in AlN from powder X-ray diffraction data by the maximum-entropy method.—73-05389
Fabrication and characterization of InN and InAlN crystalline thin films by microwave-excited metallorganic vapor phase epitaxy.—73-14904
Fabrication and properties of AlN-SiC whisker composites.—73-09126
Formation of aluminum nitride by intensified plasma ion nitriding.—73-00235
Fracture toughness of ceramics in the AlN-SiC system.—73-17335
FTIR characterization of an AlN surface.—73-13399
Growth of AlN on GaAs(110) by reactive molecular beam deposition.—73-07553
Heat conductive colored aluminum nitride sintered body.—73-12467
Heat-conductive colored aluminum nitride sintered body and method of preparing the same.—73-12468
High-temperature oxidation resistance of SiC whisker-reinforced AlN composite.—73-06308
Hot-pressed BN-AlN ceramic composites with high thermal conductivity: III.—73-16821
In situ measurements of film stress in AlN sputtered onto moving substrates.—73-01906
Increasing AlN thermal conductivity via predensification treatment.—73-12475
Indirect-bonded metallization of aluminum nitride.—73-00979
Influence of carbon source on the synthesis of AlN powder from aluminum polynuclear complexes.—73-02867
Influence of the plasma on substrate heating during low-frequency reactive sputtering of AlN.—73-16843
Infrared and morphological studies of hydrogenated AlN thin films.—73-13403
Joining of AlN plate and composite of the system Al-AlN using all ultrafine particle.—73-03612
Measurement of intrinsic stresses during growth of aluminum nitride thin films by reactive sputter deposition.—73-09200
Mechanical and thermal properties of SiC-AlN ceramics with modulated texture.—73-17377
Mechanical properties of TiN/AlON composites.—73-09643
Mechanical strength of ultrafine Al-AlN composites produced by a combined method of plasma-alloy reaction, spray deposition, and hot-pressing.—73-06821
Metal matrix composite which utilizes a barrier.—73-10322
Method for aqueous processing of AlN and compositions therefrom.—73-02107
Method for fabrication of a carrier body of aluminum nitride.—73-12482
Method for forming metallized layer on an aluminum nitride sintered body.—73-10324
Method of making moisture-resistant aluminum nitride powder and powder produced thereby.—73-02114
Method of manufacturing aluminum nitride structure with anisotropic properties.—73-12496
Method of protecting aluminum nitride circuit substrates during electroless plating using a surface oxidation treatment.—73-11037
Microstructural features related to corrosion initiation in titanium-aluminum nitride coated steel.—73-10254
Microstructure and mechanical properties of SiC-AlN ceramics after phase separation treatment.—73-09483
Microstructure and mechanical properties of SiC-AlN ceramics after phase separation treatment.—73-17158
Minimization of binder content for production of injection-molded aluminum nitride parts.—73-09211
Moisture-resistant aluminum nitride powder and methods of making and using.—73-05320
Morphology and crystallography of aluminum nitride whiskers.—73-08670
Nanocrystalline aluminum nitride: growth by sputter deposition, optical absorption, and corrosion protection behavior.—73-12436
Novel consolidation method for engineered structural materials.—73-05935
Optical characterization of AlGaN-GaN-AlGaN quantum wells.—73-16553
Optical semiconductor device.—73-11537
Oxidation behavior and flexural strength of aluminum nitride exposed to air at elevated temperatures [≤100 h].—73-09531
Oxidation of AlN matrix composites containing discrete SiC whiskers.—73-17232
Oxidation of sintered aluminum nitride by oxygen and water vapor.—73-03228
Oxidation of sintered aluminum nitride by oxygen and water vapor.—73-13485
Oxides as sintering aids in aluminum nitride ceramics.—73-02916
Oxygen and hydrogen effects on the chemical vapor deposition of aluminum nitride films.—73-05942
Oxygen transport in aluminum nitride substrates.—73-17091
Phase separation and toughening of SiC-AlN solid-solution ceramics.—73-09236
Phonon scattering and thermal conduction mechanisms of sintered aluminum nitride ceramics.—73-08949
Photochemical growth of GaN and AlN on sapphire(0001) and GaAs(100).—73-13162
Piezoelectric thin films.—73-01425
Plasma sintering temperature for $Y_2O_3$-doped AlN.—73-02925
Plasma sintering temperature for $Y_2O_3$-doped AlN.—73-13165
Polymer precursors for aluminum nitride.—73-12505
Preparation and properties of polycrystalline SiC-AlN solid solutions.—73-15111
Preparation and sintering of aluminum nitride suitable for electronic substrate purposes.—73-07352
Preparation of aluminum nitride/aluminum composites by nitridation of aluminum.—73-13884
Preparation of AlN powders by nitriding of aluminum chips.—73-16912
Preparation of aluminum nitride from poly(isopropyliminoalane).—73-02943
Preparation of aluminum nitride from poly(isopropyliminoalane).—73-13182
Preparation of aluminum nitride using slightly oxidized Al powders.—73-02944
Preparation of aluminum nitride using slightly oxidized Al powders.—73-13183
Preparation of aluminum nitride/aluminum composites by nitridation of aluminum.—73-06841
Preparation of nonoxidizing abrasive by sol-gel method.—73-09767
Pressure-induced rock salt phase of aluminum nitride: a metastable structure at ambient condition.—73-08713
Pressureless sintering of aluminum nitride in the presence of yttrium-containing additives: relationships between microstructure, thermal conductivity, and oxygen content.—73-13214
Process for depositing aluminum nitride (AlN) using nitrogen plasma sputtering.—73-04228
Process for producing aluminum nitride sintered body.—73-02125
Process for producing an aluminum nitride sintered product.—73-16012
Process for producing small particles of aluminum nitride and particles so introduced.—73-02126
Process for sintering aluminum nitride to a high thermal conductivity and resultant sintered bodies.—73-16014
Properties of aluminum nitride powder synthesized by low-pressure chemical vapor deposition [LPCVD].—73-09283
Properties of reactively dc magnetron-sputtered AlN thin films.—73-05622
Rapid process for manufacturing aluminum nitride powder.—73-06007
Reaction between AlN and metal thin films during high-temperature annealing.—73-13889
Reaction between ruthenium dioxide and aluminum nitride in resistor pastes.—73-14727
Reaction processing of AlN/$B_4C$ composites.—73-05334
Reaction-formed processes for AlN/Al ceramic composites.—73-13892
Reactions between molten aluminum and pyrolytic boron nitride crucibles.—73-11413
Reactive sputtering model applied to AlN.—73-02993
Real-time stress measurements and elastic constant of aluminum nitride thin films on Si(111).—73-08962
Refractory materials consisting of grains bonded by a binding phase based on aluminum nitride containing boron nitride and/or graphite particles and process for their production.—73-10787
Rheological properties of plastic aluminum nitride mixes containing anhydrous binders.—73-02999
Silicon carbide bodies having high toughness and fracture resistance and method of making [the] same.—73-12519
Silicon-filled aluminum polymer precursors to SiC-AlN ceramics.—73-05339
Sintered body of aluminum nitride.—73-04233
Sintered body of aluminum nitride.—73-12526
Sintering and characterization of fully dense aluminum nitride ceramics.—73-09323
Sintering and thermal characterization of cordierite–aluminum nitride composites.—73-13261
Spark plug insulator and a method of sintering.—73-11053
Stability of AlN-SiC whisker composites containing sintering aids.—73-17008
Structural and electrical properties of reactively sputtered InN thin films on AlN-buffered (00.1) sapphire substrates: dependence on buffer and film growth temperatures and thicknesses.—73-08971
Structural characteristics of (AlN+$Y_2O_3$) ceramics.—73-13450
Structure evolution in thermoplastic slips based on aluminum nitride.—73-17014
Surface composition of AlN powders studied by X-ray photoelectron spectroscopy and Bremestrahlung-excited Auger electron spectroscopy.—73-16345
Synthesis of AlN by direct nitridation of Al alloys.—73-17029
Synthesis of AlN powder by carbothermal reduction–nitridation method: effect of additives on reaction rate.—73-06088
Synthesis of AlN powder by carbothermal reduction-nitridation method: effect of additives on reaction rate.—73-17030
Synthesis of AlN powder from $Al_2(SO_4)_3{\cdot}18H_2O$: II, Deoxidation effect.—73-03041
Synthesis of polycrystalline cubic boron nitride.—73-05346
Synthesis of polycrystalline cubic boron nitride.—73-16020
Temperature-programmed desorption (TPD) evaluation of aluminum nitride powder surfaces produced by different manufacturing processes.—73-17054
Thermal conductivity of aluminum nitride ceramics.—73-02706
Thermal properties of AlN sintered at lower temperature with additives.—73-02710
Thermally conducting adhesive containing aluminum nitride.—73-12530
Thermogravimetric determination of carbon, nitrogen, and oxygen in aluminum nitride.—73-15855
Thermoset polymeric precursor for aluminum nitride.—73-05347
Thick-film paste compositions for use with an aluminum nitride substrate.—73-10416
Thin AlN films for piezolayer-field effect transistor applications.—73-04574
Time dependence of AlN densification by plasma sintering.—73-06121
Time dependence of AlN densification by plasma sintering.—73-13325
Titanium and tantalum coatings on aluminum nitride.—73-10289
Transmission electron microscopy of polished AlN with ultrafine alumina abrasive.—73-03210
Transmission electron microscopy of polished AlN with ultrafine alumina abrasive.—73-13462
Transmission electron microscopy of surface damages resulting from wet polishing in a polycrystalline aluminum nitride substrate.—73-03211
Wetting properties of AlN with electrode metals and their interfaces.—73-13909

**aluminum titanate,**
Aluminum titanate as a material in relation to texture problems.—73-10696
Aluminum titanate ceramics: I, Influence of $Al_2O_3$ on course of synthesis and on $Al_2TiO_5$ microstructure.—73-05689
Aluminum titanate ceramics: II, Influence of MgO and its method of introduction on stability and mechanical properties of $Al_2TiO_5$.—73-09542
Ceramic port liners.—73-05204
Ceramics based on aluminum titanate, process for their production, and their use.—73-12351
Cordierite–aluminum titanate honeycomb ceramics.—73-08508
Effect of the microstructural features on the stability of aluminum titanate.—73-03139
Effects of additives on the bending strength and heat shock resistance of sintered bodies of stabilized aluminum titanate.—73-13514
Ferroelectric aluminotitanobarium materials with modifying additives.—73-01411
Formation region of K-Al priderite ($K_xAl_yTi_{8-y}O_{16}$).—73-12587
High-temperature-stabilized mullite-aluminum titanate.—73-12371
Microstructures and mechanical properties of $TiO_2$-doped alumina ceramics owing to decomposition of formed $Al_2TiO_5$.—73-17173
Preparation of $Na_{1-x}Ti_{2+x}Al_{5-x}O_{12}$ (x=0.2) fiber by precursor method.—73-13195
Reduction in thermal conductivity of reaction-bonded $Si_3N_4$

by addition of a binary compound: I, Fabrication and evaluation of $Al_2TiO_5$-added composite.—73-15971
Sinterability of $Al_2TiO_5$ powder synthesized by homogeneous precipitation technique.—73-16990
Thermal and mechanical properties of aluminum titanate–mullite composites: III, Effects of aluminum titanate particle size.—73-06116
Thermal and mechanical properties of aluminum titanate–mullite composites: III, Effects of aluminum titanate particle size.—73-13322

**aluminum zirconium silicate,**
Analysis of gases evolved by AZS refractories and by refractory/glass melt reactions. Techniques and results. Contribution to the bubble-forming mechanism of AZS material.—73-10697
Control of the internal structure of electromelted blocks by ultrasonic test on transmission.—73-12121
Thermal stress analysis of fused-cast AZS refractories during production: I, Industrial study.—73-10774
Thermal stress analysis of fused-cast AZS refractories during production: II, Development of thermoelastic stress model.—73-10775

**aluminum,**
$L_6$-$X_6$ intervalley scattering time and deformation potential for $Al_{0.6}Ga_{0.4}As$ as determined by fs time-resolved ir absorption spectroscopy.—73-11289
Γ-$X_c$ mixing in GaAs/AlAs superlattices of type II.—73-01172
Γ-X mixing effects on photoluminescence intensity in GaAs/AlAs type-II superlattices.—73-14936
Γ-X-Γ electron transfer in mixed type I–type II GaAs/AlAs quantum well structures.—73-01173
2-D nonisothermal finite element simulation of laser diodes.—73-15220
600-mW cw single-mode GaAlAs triple quantum well laser with a new index-guided structure.—73-11447
Abrasive wear of sintered aluminum alloy and its composite containing SiC particles.—73-03559
Al/TiC composites produced by melt infiltration.—73-13796
ALON and its composite ceramics.—73-05258
ALON and its composite ceramics.—73-12912
Alteration of electron-electron interaction effects in metal-insulator-metal trilayers.—73-14679
Alumina/aluminum co-continuous ceramic composite (C4) materials produced by solid/liquid displacement reactions: processing kinetics and microstructures.—73-13797
Alumina/aluminum composites formed by the directed oxidation of aluminum using magnesia as a surface dopant.—73-10197
Alumina/aluminum composites formed by the directed oxidation of aluminum using sodium hydroxide as a surface dopant.—73-10198
Aluminum alloy wetting by lead glasses with additives preventing lead reduction.—73-00434
Aluminum metal matrix composites.—73-10300
Aluminum substitution in the glass system $0.33[(1-x)P_2S_5{:}xAl_2S_3]/0.67Li_2S$ [$0 \le x \le 0.5$].—73-00935
Aluminum zoning in ZSM-5 as revealed by selective silica removal.—73-12914
Analysis of the high-temperature characteristics of InGaAs-AlGaAs strained quantum-well lasers.—73-07379
Analytical solution of subbands and absorption coefficients of AlGaAs-GaAs hyperbolic quantum wells.—73-14771
Angle-resolved photoemission and band structure of the alloy $Al_{0.5}Ga_{0.5}As$ compared to that of the superlattice $[(AlAs)_2/(GaAs)_2]_{10}$.—73-04239
Anomalous Andreev conductance in InAs-AlSb quantum wells with Nb electrodes.—73-07380
Are there Tamm-state donors at the InAs-AlSb quantum well interface.—73-07383
Aspects of interface modes and LO eigenmodes in GaAs/AlAs quantum wells.—73-07384
Atomic layer epitaxy of AlAs and $(AlAs)_n(GaAs)_m$.—73-04246
Atomic layer epitaxy of AlAs and $Al_xGa_{1-x}As$ for device application.—73-04247
Atomic model for hydrogen passivation of DX centers in GaAs and $Al_xGa_{1-x}As$ alloys.—73-11076
Atomic scale survey of III-V epitaxial interfaces.—73-07388
Atomic structure of Al-GaAs(110) interfaces.—73-08554
Ballistic and elastic mean free paths determined by magnetic electron focusing effect in GaAs/AlGaAs.—73-04250
Band offset determination in parabolic and triangular quantum wells of GaAs/AlGaAs and GaInAs/AlInAs.—73-11081
Batch fabrication and operation of GaAs-$Al_xGa_{1-x}As$ FET self-electrooptic effect device (FET-SEED) smart Pixel arrays.—73-14783
Behavior of Al on microstructure and properties of MgO-C-Al refractories.—73-03992
Behavior of Al on microstructure and properties of MgO-C-Al refractories.—73-14573
Behavior of alumina particle-reinforced 2618 aluminum.—73-09545
Binary AlAs/GaAs versus ternary GaAlAs/GaAs interfaces: a dramatic difference of perfection.—73-07393
Binding energies of Wannier excitons in GaAs-$Ga_{1-x}Al_xAs$ quantum well structures.—73-14785
Boron carbide-aluminum cermets having microstructures tailored by a post-densification heat treatment.—73-10301
Bridging THz frequency gaps in the near ir by coherent four-wave mixing in GaAlAs laser diodes.—73-01085
Bulk GaAlAs mirror as a saturable absorber for subpicosecond pulse generation around 835 nm.—73-01086
Buried stripe AlGaAs heterolasers fabricated by one-stage LPE.—73-01087
Calculation of alloy scattering relaxation time for ternary III-V and II-VI semiconductors.—73-14790
Calculation of the Schottky barrier height at the Al/GaAs(001) heterojunction: effect of interfacial atomic relaxations.—73-04256
Calculation of the X-valley intersubband optical transition linewidth in [111] grown AlAs/(GaAl)As quantum wells.—73-04257
Capacitance-voltage characteristics of selectively doped heterostructures containing deep centers.—73-01090
Capacitor discharge and flash welding of SiC-reinforced high-temperature Al alloys.—73-00212
Casting defects and properties of cast A356 aluminum alloy reinforced with SiC particles.—73-06742
Cathodic phenomena in aluminum electrowinning.—73-07285
Characteristics of modulation-doped quantum well lasers grown by molecular beam epitaxy.—73-11099
Characterization of GaAs/$Ga_{1-x}Al_xAs$ multilayer systems by ir spectroscopy at normal incidence.—73-14801
Characterization of the surface-acoustic-wave-induced potential in a GaAs/AlGaAs heterostructure.—73-04267
Chemical states of implanted aluminum ions in silica and silicon ions in alumina.—73-16053
Collective intersubband excitation in a *p*-doped GaAs/AlGaAs multiple quantum well.—73-01105
Coloring aluminum flakes.—73-03678
Comparison of *pnp* and *npn* InGaAlAs/InGaAs heterojunction bipolar transistors [HBT's].—73-11112
Comparison of iron and aluminum silicates with the ton topology.—73-12554
Confined-to-propagating transition of LO phonons in GaAs/$Al_xGa_{1-x}As$ superlattices observed by ps Raman scattering.—73-07422
Correlation of interface chemistry, barrier height, and step density for Al on vicinal GaAs(100) surfaces.—73-01112
Cryogenic and high-temperature operation of $Al_{0.52}In_{0.48}P$/-$In_{0.2}Ga_{0.8}As$ high electron mobility transistors [HEMT's].—73-11127
Crystal structure of α-$Li_2{}_5Al_{0.5}SiO_4$.—73-02185
Crystal structure of aluminum-calcium ferrite phase with variable composition of $CaFe_3AlO_7$ type.—73-02188
Current-induced corrections to the effective dielectric constant of inhomogeneous semiconductor alloys.—73-14821
CVD SiC/Al composites produced by a vacuum suction casting process.—73-00216
Cyclotron-resonance-induced negative photoconductivity in GaAs/$Al_xGa_{1-x}As$ quantum wells.—73-14822
Damage in aligned-fiber SiC/Al quantified using a laboratory X-ray tomographic microscope.—73-00217
Damage mechanisms under tensile and fatigue loading of continuous-fiber-reinforced metal-matrix composites.—73-03259
Deep levels and reduction in the conductance of a direct selectively doped heterostructure on application of a triggering voltage pulse to the gate.—73-14825
Degradation mechanism of GaAs/AlGaAs quantum well lasers.—73-07440
Dental material in powder form, process for its preparation and use.—73-03916
Dependence of the radiation stability of the intensity of luminescence emitted by solid solutions of III-V compounds on their composition.—73-14829
Design of an apparatus for aluminum hydroxide hydraulic separation.—73-15785
Detection of overtone vibration spectrum of water vapor by AlGaAs diode laser.—73-11134
Development of aluminobelitic colored clinkers.—73-09889
Dielectric function of GaAs/AlAs superlattices grown on GaAs substrates with different orientation.—73-14833
Difference frequency Raman scattering and confined optical phonons in ultrashort-period $(GaAs)_n/(AlAs)_n$ superlattices.—73-01126
Differences in Si doping efficiency in tertiarybutylarsine, monoethylarsine, and arsine for GaAs and AlGaAs grown by MOVPE.—73-14834
Direct determination of impact ionization rates near threshold in $Al_{0.9}Ga_{0.1}As$ and GaAs using molecular beam epitaxially grown GaAs/$Al_{0.9}Ga_{0.1}As$ structures and soft X-ray photoemission.—73-07447
Direct mapping [by STM] of electronic structure across $Al_{0.3}Ga_{0.7}As$/GaAs heterojunctions: band offsets, asymmetrical transition widths, and multiple-valley band structures.—73-14836
Direct measurement of heavy-hole exciton transport in type-II GaAs/AlAs superlattices.—73-11142
Direct observation of hot electron distribution function in GaAs/AlGaAs heterostructures.—73-14837
Directed oxidation of Al alloy into sintered $Al_2O_3$.—73-06771
Dislocations in an AlGaAs/GaAs superlattice.—73-04283
Dopant incorporation in GaAs and AlGaAs grown by MOMBE for high-speed devices.—73-14841
Double barrier resonant tunneling device with selectively applied field in the well.—73-06154
Drift leakage current in AlGaInP quantum well lasers.—73-14843
Dry etching of GaAs and AlGaAs by $Cl_2$ in molecular beam epitaxy system.—73-11147
DX centers in $Al_{0.34}Ga_{0.66}As$ amorphous thin films.—73-14845
Dynamics characteristics of high-power pulses generated in GaAs/AlGaAs superluminescent diodes.—73-01132
Effect of Γ-χ mixing on electron tunneling times in GaAs/AlAs double barrier heterostructures.—73-07460
Effect of aluminum addition on the combustion reaction of titanium and carbon to form TiC.—73-16723
Effect of aluminum doping on thermoelectric power of sintered SiC.—73-02576
Effect of electron cyclotron resonance generated hydrogen plasmas on carbon incorporation and interfacial quality of GaAs and AlGaAs grown by metallorganic molecular beam epitaxy.—73-07463
Effect of heat treatment on the microstructure of near-γ-TiAl powder alloys.—73-06773
Effect of interface roughness and scattering on the performance of AlAs/InGaAs resonant tunneling diodes.—73-11157
Effect of interface roughness on nonlinear vertical transport in GaAs/AlAs superlattices.—73-07466
Effect of internal stresses on the first stages of the cyclic deformation of an $SiC_p$/Al-6061 composite.—73-13827
Effect of microstructure on the fracture mechanisms of SiC/Al composites obtained by dynamic compaction.—73-09446
Effect of pore size on the infiltration kinetics of aluminum in titanium carbide preforms.—73-06775
Effect of rare-earth ions on the thermal stability of $AlF_3$-based glasses.—73-07016
Effect of Si delta doping and growth temperature on the *I*(*V*) characteristics of molecular beam epitaxially grown GaAs/(AlGa)As resonant tunneling devices.—73-11162
Effect of SiC particles on age-hardening and mechanical properties of aluminum alloys.—73-09580
Effect of stoichiometry of magnesium aluminum spinel on possibility of hole localization.—73-16123
Effect of temperature on stress-induced open failure in aluminum interconnects of LSI's.—73-10223
Effect of TiN anneal ambient on the microstructure and electromigration performance of Al-based alloys.—73-03583
Effects of Al/P composition ratio on the crystallization of $MgO$-$CaO$-$Al_2O_3$-$SiO_2$-$P_2O_5$ bioglass-ceramic system.—73-13970
Effects of aluminum doping upon color formation in zinc oxide powders.—73-13026
Effects of the substrate misorientation on the excitonic transition properties in GaAs/AlGaAs superlattices.—73-07476
Elastic constant $C_{11}$ of $Al_xGa_{1-x}As$ determined by near-ir Brillouin scattering.—73-14865
Electric-field-induced ultrafast intersubband transitions in large GaAs-AlAs quantum wells via electron-interface-phonon interaction.—73-01142
Electrical and optical properties of ion-beam-sputtered ZnO:Al films as a function of film thickness.—73-08849
Electrical characteristics of low-temperature $Al_{0.3}Ga_{0.7}As$.—73-14867
Electrical conductivity of alumina/aluminum composites synthesized by directed metal oxidation.—73-13830
Electrical properties of DX centers in heavily Se-doped $Al_xGa_{1-x}As$.—73-01147
Electron minibands in $(GaAs)_n(AlAs)_m$ superlattices with even and odd *M*.—73-14880
Energy spectrum of 2-D electrons and doublet structure of cyclotron line in GaAs-GaAlAs heterojunctions in tilted magnetic field.—73-01158
Evidence for substitutional-interstitial defect motion leading to DX behavior by donors in $Al_xGa_{1-x}As$.—73-07512
Evidence of interaction between two DX centers in *n*-type AlGaAs from RDLTS and temperature-dependent pulse-width DLTS measurements.—73-04333
Excess currents as a result of trap-assisted tunneling in double barrier resonant tunneling diodes.—73-07515
Exchange cleavage of excitonic levels in type-I and type-II superlattices.—73-11201
Exciton photoluminescence [PL] of surface quantum wells in a GaAs/AlGaAs.—73-11202
Exciton states in GaAs/AlGaAs Bragg confining structures studied by resonant Raman scattering.—73-14899
Exciton transport and localization in type-II GaAs/AlAs superlattices.—73-11204
Excitons and electron-phonon interaction in $In_{0.52}Ga_{0.18}Al_{0.3}As$.—73-01162
Experimental observation of persistent currents in a GaAs-AlGaAs single loop.—73-14903
Fabrication of nanostructures with multilevel architecture.—73-11209
Fabrication techniques and characteristics of Al-$SiO_2$ laminated optical parameters.—73-13836
Fatigue and fracture toughness of aluminum alloys reinforced with SiC and alumina particles.—73-03286
Fatigue behavior of a Saffil-reinforced aluminum alloy (AA6061).—73-03287
Fatigue damage development in $Al_2O_3$/Al composites.—73-03291
Fe and Ti implants in $In_{0.52}Al_{0.48}As$.—73-11211
Feasibility of formation of $In_{0.52}Al_{0.48}As$ films isoperiodic with the InP substrate by LPE at low temperature (≈650°C).—73-11212
Features of defect formation in active region of GaAlAs/GaAs epitaxial heterostructures for solar cells under alternating heat effects.—73-03094
Features of twinning in berlinite crystals.—73-16151
Field effect on the deep levels and DX centers in $Al_xGa_{1-x}As$/GaAs and $In_xGa_{1-x}As$/GaAs.—73-04343
Finite superlattice with the embedded quantum well.—73-07529
First-principles calculations of many-bond band-gap narrowing at an Al/GaAs(110) interface.—73-14928
Formation of Ti-Al-$ZrO_2$ film on the surface of mechanical alloying ball.—73-06794
Formation of Ti-Al-$ZrO_2$ film on the surface of mechanical alloying ball.—73-16794
Formation region of K-Al priderite ($K_xAl_xTi_{8-x}O_{16}$).—73-05405
Four-channel ridge waveguide quantum well wavelength division demultiplexing detector and its optimization.—73-07538
Fracture toughness evaluation of 2040-Al/$Al_2O_3$ particulate composites by instrumented impact.—73-03300
Fusion of silicon carbide products with aluminum during the siliconizing (firing) process.—73-03593

GaAs/AlGaAs atomic layer epitaxy in a commercial MOCVD reactor.—73-04344

GaAs/AlGaAs first-order gratings fabricated with electron beam lithography and very narrow linewidth long cavity DBR laser diodes.—73-14933

Galling in aluminum alloys and Duralcan aluminum matrix composites.—73-06797

Giant electroleochroism in GaAs-(Al,Ga)As heterostructures: the quantum-well Pockels' effect.—73-07547

Ground-state energy of the shallow bound polaron in ternary mixed crystal.—73-01178

Growth and characterization of $Al_xGa_{1-x}As$ Bragg reflectors by LP-MOCVD.—73-14944

Growth and properties of AlInAs-GaInAs alloys and quantum wells on (110)InP.—73-11227

Growth mechanisms of AlGaAs on terraced substrates by low-pressure MOVPE.—73-14949

Growth of *p*- and *n*-type GaAs/(AlGa)As double barrier resonant tunneling devices on (311)A and (111)B substrate orientations.—73-07551

Growth of $Al_xGa_{1-x}As$ by metallorganic chemical vapor deposition using trimethylgallium and trimethylamine alane.—73-11231

Growth of AlGaAs and AlGaAs/GaAs heterostructures on misoriented (110)GaAs and a normal-incidence type-II AlAs/AlGaAs quantum well infrared photodetector.—73-11232

Growth of high-quality AlGaAs/GaAs heterostructures by molecular beam epitaxy for photonic and electronic device applications.—73-14951

Growth temperature and annealing effects on deep traps of $In_{0.52}Al_{0.48}As$ grown by molecular beam epitaxy.—73-11237

Heat treatment and mechanical properties of aluminum alloy CW67/SiC composites.—73-09609

Heterostructure with 2-D electrons as a Hall sensor.—73-01183

High excitation effects in type II GaAs/AlAs superlattices.—73-01184

High-field filling of deep levels in heterostructure AlGaAs/GaAs FET's with modulated doping.—73-07560

High-performance double pulse doped pseudomorphic AlGaAs/InGaAs transistors grown by molecular beam epitaxy.—73-07563

High-performance heterojunction bipolar transistor [HBT] grown by molecular beam epitaxy using novel growth method.—73-11245

High-power individually addressable monolithic four-beam array of GaAlAs window diffusion stripe lasers.—73-01185

High-speed joining of aluminum metal matrix composites using continuous wave and pulsed lasers.—73-00239

High-thermal-expansion $NaAlSiO_4$ ceramics.—73-13089

High-thermal-expansion sealing glass.—73-03933

Highly conductive and transparent ZnO:Al thin films prepared on high-temperature substrates by dc magnetron sputtering.—73-10956

Hydroabrasive erosion characteristics of 30 vol% $SiC_p$/6061-T6-Al composite at shallow impact angles.—73-06802

Hydrogenation of GaAs covered by GaAlAs and subgrain boundary passivation.—73-11255

ICP sintering of attrition-milled $Al_2O_3$-5 wt% Al precursor: effect of power input and gas pressure.—73-16829

Impact of surface processing on Al/GaAs(100) interface states.—73-04361

Improved optical properties of low-temperature molecular beam epitaxially grown AlGaAs by In incorporation.—73-11258

In-plane transport of excitons in quantum well structures.—73-14976

Influence of heat-treatment conditions on the properties of MgO-C bricks containing aluminum.—73-17359

Influence of the desorption and growth temperatures on the crystalline quality of molecular beam epitaxy InAlAs layers.—73-07603

Influence of the thermally induced plasticity and residual stresses on the deformation of SiC/Al composites.—73-03602

Influence of thermomechanical processing on the tensile and fatigue properties of an SiC-particle-reinforced aluminum alloy.—73-06809

Interacting edge states in quantum wires.—73-14995

Interatomic interactions and electronic properties of NaCl-type $Ti_xAl_{1-x}N_y$.—73-12609

Interface roughness from Γ and χ luminescence in type II GaAs/AlAs superlattices with composition gradient.—73-01220

Interface sharpness during the initial stages of growth of thin, short-period III-V superlattices.—73-04372

Interface states and the transport of two-dimensional interface excitons in AlGaAs/GaAs structures.—73-07614

Interfaces in GaAs/AlAs: perfection and applications.—73-07616

Interfacial atomic composition and Schottky barrier heights at the Al/GaAs(001) interface.—73-11282

Interfacial reactions in epitaxial $Al/Ti_{1-x}Al_xN$ ($0 \le x \le 0.2$) model diffusion-barrier structures.—73-06165

Intervalley scattering in indirect gap $Al_{0.48}Ga_{0.52}As$ alloy.—73-04377

Ion beam etching of GaAs and GaAs/AlGaAs heterostructure probed in real time by spectroscopic ellipsometry.—73-01222

Ir photoconductivity and luminescence of quantum wells in multilayer GaAs/AlGaAs heterostructures.—73-11287

Kinetics of the reduction of carbon/alumina powder mixture in a flowing nitrogen stream.—73-13112

Laser surface treatment of aluminum 2024 with SiC powder injection: microstructural study and wear behavior.—73-13861

Lateral *p-n* junctions between quasi-two-dimensional electron and hole systems at corrugated GaAs/AlGaAs interfaces.—73-07634

Lateral transport in GaAs-(Al,Ga)As superlattices investigated by transient grating measurements.—73-01229

Lattice location and photoluminescence of Er in GaAs and $Al_{0.5}Ga_{0.5}As$.—73-04380

Local mechanical stability of the aluminum/carbon (amorphous) and aluminum/$SiO_2$ (amorphous) interface at extrinsic dislocations.—73-00248

Long-wavelength $GaAs/Al_xGa_{1-x}As$ quantum well infrared photodetectors grown using metallorganic chemical vapor deposition.—73-15014

Low-growth-temperature AlGaAs current blocking layers for use in surface normal optoelectronic devices.—73-11295

Low-temperature growth of AlGaP and GaP on Si substrates by atomic layer epitaxy.—73-11297

Low-temperature preparation of transparent-conducting ZnO:Al thin films by chemical beam deposition.—73-10248

Luminescence study of the intra-4*f* emissions from GaAs:(Er+O) and $Al_xGa_{1-x}As$:(Er+O).—73-04394

Magnetic field enhancement of Raman scattering on folded acoustic phonons in GaAs-AlGaAs superlattice.—73-07648

Magnetic-field-induced saddle points in GaAs/AlAs short period superlattices.—73-07653

Magnetooptical waveguides of aluminum garnet.—73-01490

Magnetotunneling in the *n*-type GaAs/AlGaAs wide-well double barrier structure under transverse high magntic fields.—73-07658

Magnetron-enhanced reactive ion etching of GaAs and AlGaAs using $CH_4/H_2/Ar$.—73-07660

Measurement of AlP/GaP(100) heterojunction band offsets by X-ray photoemission spectroscopy.—73-11307

Mechanical characteristics of aluminum thin films on silicon and gallium arsenide.—73-10249

Mechanical properties of γ-aluminum oxynitride.—73-17381

Mechanical stability of passivation films deposited on aluminum substrates.—73-03614

Mechanical strength of ultrafine Al-AlN composites produced by a combined method of plasma-alloy reaction, spray deposition, and hot-pressing.—73-06821

Mechanisms of optical nonlinearity in waveguide *p-i-n* structures under conditions of electroabsorption of light.—73-15038

Meltback etching and regrowth of GaAs/AlGaAs in liquid phase epitaxy for fabrication of microlens.—73-04401

Memory effect in pressure-induced amorphous $AlPO_4$.—73-12628

Mesa surface recombination current in AlGaAs/GaAs heterojunction bipolar transistors with an emitter-base-emitter structure.—73-07668

Methanolysis and hydrolysis of magnesium aluminum bimetallic alkoxides.—73-02893

Method for preparing a fused silica glass body codoped with a rare-earth element and aluminum.—73-00741

Method for the manufacture of hydrotalcite.—73-05227

Microscopic capacitors and neutral interfaces in III-V/IV/III-V semiconductor heterostructures.—73-07340

Microstructure and room temperature mechanical properties of spray-atomized and codeposited Al-12 wt% Si MMC's.—73-03620

Microstructure-property relations in discontinuous SiC aluminum composites.—73-03621

Minority carrier lifetimes in molecular beam epitaxy grown $Al_xGa_{1-x}As$/GaAs double heterostructures [DH's] doped with aluminum.—73-07673

Model calculations of optical properties for disordered GaAs/AlAs superlattices.—73-04409

Modeling the stirring of Al-SiC composites.—73-06833

Modification of heterojunction band offsets at III-V/IV/III-V interfaces.—73-11320

Modulation spectra of doped $GaAs-Al_{0.3}Ga_{0.7}As$ quantum-well structures.—73-11321

Molecular beam epitaxial growth and characterization of inverted, pulse-doped AlGaAs/InGaAs/GaAs transistor structures.—73-11322

Molecular beam epitaxial growth and optical analysis of InAs/AlSb strained-layer superlattices.—73-11324

Molecular beam epitaxial growth mechanisms of (Al,Ga)As on vicinal GaAs surfaces: self-organization and step bunching.—73-11326

Molecular beam epitaxy growth of semiconductor heterostructure optical converter lasers using the InGaAs/AlGaAs materials system.—73-11333

Monolithic AlGaAs-GaAs single quantum-well ridge lasers fabricated with dry-etched facets and ridges.—73-01253

Mullite whisker-reinforced aluminum: novel metal matrix composites.—73-03625

Narrow-band photoionization resonance transition at 0.65 eV in AlGaAs/GaAs heterostructures.—73-15052

Neutron diffraction of γ-aluminum oxynitride.—73-12635

Neutronographic investigation of the deuteride $Tb_3Ni_6Al_2D_{6.5}$.—73-12637

Nonlinear behavior of the Shubnikov-de Haas oscillations on short-channel $Al_xGa_{1-x}As$/GaAs heterostructures subjected to strong electric fields.—73-11352

Nonlinear surface acoustic waves in GaAs-AlAs superlattices.—73-11353

Optical amplification in quantum superlattices $GaAs/Al_xGa_{1-x}As$ [x=0.35].—73-15068

Optical anisotropy due to exciton polaritons in $Al_{1-x}Ga_xAs$-GaAs quantum wells.—73-04427

Optical characteristics of GaAs/AlGaAs ridge quantum well wires grown by MBE on nonplanar substrates.—73-15071

Optical nonlinearities on GaAs-GaAlAs multiple-quantum-well hetero-*nipi* waveguides.—73-01264

Optical second harmonic generation from unbiased single $Ga_{1-x}Al_xAs$ quantum wells with symmetric structures.—73-01266

Optically detected magnetic resonance excitons and carriers in pseudodirect GaAs/AlGaAs superlattices.—73-15075

Optimization of molecular beam epitaxy grown *p-i-n* multiple quantum well electroabsorption modulators for the 1.5-μm *wavelength region.—73-11364*

Ordering in InGaAs/InAlAs layers.—73-15079

Orientation dependence of normal incidence [ir] absorption in ellipsoidal-valley quantum wells.—73-11367

Oscillatory magnetoabsorption of multilayer quantum well structures.—73-15081

Oxide matrix composite by directional oxidation of a commercial aluminum–magnesium alloy.—73-09535

Phase inversions in Al-Si-Mg gels. Influence of Ti, Ce, and Zr additions.—73-02385

Phonon-assisted resonant magnetotunneling in Al/GaAs-GaAs-AlGaAs heterostructures.—73-15089

Phonon-plasmon modes in the Raman light-scattering spectra of epitaxial *n*-type $Al_xGa_{1-x}As$ films[—review].—73-07712

Photodetector AlGaAs/GaAs structures formed on Si substrates by combining LPE and MBE methods.—73-15091

Photoluminescence and Hall characterization of pseudomorphic GaAs/InGaAs/AlGaAs heterostructures grown by molecular beam epitaxy.—73-11383

Photoluminescence characterization of AlGaN-GaN pseudomorphic quantum wells and calculation of strain-induced band gap shifts.—73-15095

Photoluminescence from a single GaAs/AlGaAs quantum dot.—73-07725

Photoluminescence study of energy transfer processes in erbium-doped $Al_xGa_{1-x}As$ grown by MBE.—73-04441

Photoreflectance and photoluminescence characterizations of $GaAs/Al_xGa_{1-x}As$ single quantum wells with interface structures.—73-15098

Photoreflectance measurements of the $E_1$ and $E_1+\Delta_1$ optical transitions in $In_{1-x}Al_xSb$ epilayers.—73-15099

Piezospectroscopy of a $GaAs/Ga_{0.73}Al_{0.27}As$ single quantum well structure: piezoelectric effects.—73-04566

Plasmon-phonon coupling in GaAs-AlAs superlattices.—73-01285

Polarizability of a donor in a quantum box.—73-04444

Polaronic effects and donor polarizability in a quantum well.—73-01287

Power evolution of an actively mode-locked AlGaAs semiconductor laser.—73-15108

Preparation of Al-C-O-N films by microwave plasma chemical vapor deposition.—73-16911

Preparation of alminum nitride/aluminum composites by nitridation of aluminum.—73-13884

Preparation of alumina/aluminum composites by oxidation of aluminum.—73-00257

Preparation of aluminum nitride/aluminum composites by nitridation of aluminum.—73-06841

Preparation of SiC whisker-reinforced Al alloy composites by compocasting process.—73-03633

Pressure infiltration processing of reinforced aluminum.—73-06843

Process control system for improved run-to-run control of molecular beam epitaxial growth of $GaAs/Al_xGa_{1-x}As$ heterostructures.—73-11404

Process for reducing aqueous nitrate to ammonia.—73-05007

Processing and mechanical properties of laminated metal composites of Al/Al-25 vol% SiC and ultrahigh carbon steel/brass.—73-03634

Processing and reconstruction effects on Al-GaAs(100) barrier heights.—73-04453

Processing of ceramic matrix SiC-Al composites.—73-13885

Properties of alumina/Al/alumina joints produced in air atmosphere.—73-03983

Pyrolytic carbon fiber/aluminum composites.—73-10268

Quantitative oxygen measurements in OMVPE $Al_xGa_{1-x}As$ grown by methyl precursors.—73-15129

Quantum chemical determination of the Al-substituted site in tobermorite.—73-16286

Quantum dot levels produced by strain modulation of GaAs-AlGaAs quantum wells.—73-07753

Quantum well GaAs/AlGaAs shallow-donor far-infrared photoconductors grown by molecular beam epitaxy.—73-11410

Quasi-static and high-frequency *c-v* measurements on $Al/Ta_2O_5/SiO_2/Si$.—73-07354

Radiative recombination in modulation-doped GaAs/AlGaAs heterostructures in the presence of an electric field.—73-15136

Raising transmission in optically transparent lithium aluminum.—73-00695

Raman scattering from $In_{1-x}Al_xSb$ metastable epilayers.—73-11411

Reaction-formed processes for AlN/Al ceramic composites.—73-13892

Reduction of deep levels in MOCVD-regrown $Al_xGa_{1-x}As$ interfaces by $(NH_4)_2S$ passivation and in situ HCl etching.—73-11416

Relaxation oscillation in an AlGaAs laser.—73-01304

Reliability study of TiN/AlCu/TiN interconnect in submicron CMOS process.—73-04469

Reproducible growth and application of AlAs/GaAs double barrier resonant tunneling diodes.—73-11419

Resonant nonlinear optical properties of GaAs-GaAlAs single quantum-well waveguide and an integrated asymmetric Mach-Zehnder interferometer.—73-01305

Resonant one-acoustic-phonon Raman scattering in multiple quantum wells.—73-11421

Scattering of electrons in multibarrier $GaAs/Al_xGa_{1-x}As$ structures.—73-07786

Schottky barrier height [SBH] control at epitaxial NiAl/GaAs(001) interfaces by means of variable band gap interlayers.—73-04473
Selective exciton formation in thin GaAs/$Al_xGa_{1-x}As$ quantum wells.—73-11439
Selective growth of GaAs and GaAlAs by Cl-assisted OMVPE at atmospheric pressure.—73-15156
Selective photosensitivity formation in graded-gap injection photodiode prepared from electron irradiation compensated $Al_xGa_{1-x}As$.—73-01311
Selective reaction ion etching [SRIE] in $SiCl_4/SiF_4$ plasmas for gate recess in GaAs/AlGaAs modulation-doped field effect transistors.—73-11440
Self-aligned bend waveguide AlGaInP visible laser diode with small beam astigmatism.—73-11441
Serpentine superlattice quantum-wire arrays of (Al,Ga)As grown on vicinal GaAs substrates.—73-07795
Space group symmetry of the conduction band minimum in very short period GaAs/AlAs superlattices.—73-07802
Spatially indirect intersubband transitions of localized electrons and holes at the staggered band lineup $In_{0.52}Al_{0.48}As/InP$ interface.—73-11450
Specific heat and characteristic temperature of yttrium- and gadolinium-aluminum borates.—73-02438
Spectral and electrical characteristics of *n*-GaAs-(*n*-*p*)-$Al_xGa_{1-x}As$ *p*-$Al_{0.62}Ga_{1-x}As$-*p*$^+$-GaAs heterostructures with ultrathin surface layers.—73-15167
Spectral characteristics of variable-gap structures with a nonlinear composition profile.—73-01316
Spectrophotometric method for the determination of hafnium and aluminum in zirconia and zircon sand after separation of zirconium with the tri-*n*-butyl phosphate.—73-05087
Spectroscopic transmission ellipsometry studies of intersubband transitions in *n*-GaAs/$Al_{0.3}Ga_{0.7}As$ quantum wells.—73-15173
Spectroscopy of gallium and aluminum orthophosphate single crystals.—73-16310
Spontaneous emission of highly excited GaAs/(Ga,Al)As quantum wells.—73-01319
Stability criteria for buckling of thin anodic films on aluminum.—73-03643
Static *I-V* characteristics of resonant tunnel diodes based on GaAs/AlAs heterostructures.—73-11453
Steady-state carrier escape from single quantum wells.—73-15177
Stress and anisotropy effects in the interfacial reactions of Al and $TiN_x$.—73-03645
Structural refinements on a sodium ß-aluminogallate crystal and a parent $Nd^{3+}$-exchanged crystal.—73-02452
Structure and properties of $(Ti_{1-x}Al_x)N$ films prepared by reactive sputtering.—73-05499
Submilliampere-threshold multi-quantum-well AlGaAs laser without facet coating using single-step MOCVD.—73-01329
Superplastic behavior in a high strain rate range of 6061 aluminum composites reinforced with $Si_3N_4$ whiskers or particulates.—73-10280
Surface polaritons due to the folded optical phonons in GaAs/AlAs superlattices.—73-01336
Syntheses and crystal structures of two novel aluminum selenites, $Al_2(SeO_3)_3{\cdot}6H_2O$ and $AlH(SeO_3)_2{\cdot}2H_2O$.—73-02475
Synthesis and characteristics of $Al^{3+}$-substituted tobermorite by alkoxide method.—73-03035
Synthesis of laminar silicates of magnesium and aluminum in molten salts.—73-12713
TEM investigation of microwave-joined Si-SiC/Si-SiC and α-SiC/Al/α-SiC.—73-00270
Temperature dependence of Raman scattering by acoustic phonons in a superlattice GaAs/AlGaAs in strong magnetic fields.—73-01343
Temperature dependence of the dielectric function and interband critical points of AlAs obtained on an MBE-grown layer.—73-16612
Temperature- and size-dependent excitonic relaxation process in GaAs/AlGaAs quantum wells.—73-04496
Tensile and fatigue fracture behavior and water–environment effects in an SiC-whisker/7075-aluminum composite.—73-03361
Tensile behavior of phosphate-coated aluminum.—73-10283
Tensile properties of 2080/SiC/10–12w aluminum matrix composites.—73-06862
Tensile properties of 6061 Al/SiC composite manufactured by powder metallurgy.—73-03649
Tensile properties of aluminum/alumina multilayered thin films.—73-03650
Terahertz emission in single quantum wells after coherent optical excitation of light hole and heavy hole excitons.—73-07832
Theory of Zn-enhanced disordering in GaAs/AlAs superlattices.—73-07836
Thermal analysis of GaAs-AlGaAs etched-well surface-emitting double heterostructure lasers with dielectric mirrors.—73-15205
Thermal expansion of aluminum borate.—73-16627
Thermal oxidation of AlGaAs.—73-01351
Thermal stability of Mo-Al Schottky metallizations on *n*-GaAs.—73-10286
Thermal stability of pyrolytic tin oxide films on aluminum.—73-10287
Thermodynamic analysis of Al-Mg-Si-C-O interactions in aluminum matrix composites.—73-06865
Thermomechanical processing [TMP] and ductility enhancement of a 6061 Al-$Al_2O_3$ metal matrix composite.—73-03655
Transformation kinetics and properties of co-continuous ceramic composites.—73-10292
Transient photoconductivity in Si-doped $Al_{0.26}Ga_{0.74}As$.—73-07841
Transmission electron microscopy of annealed a-$Si_{1-x}C_x$:H/Al films with different Al grain sizes.—73-09518
Transport in strained relaxed $In_{0.15}Al_{0.85}As/In_{0.17}Ga_{0.83}As$ heterojunctions.—73-06180
Transport phenomena in spaced doped GaAs/$Al_xGa_{1-x}As$ superlattices.—73-11487
Tunneling in Al–silicon oxynitride–Si structures.—73-07372
Turning of fiber- and particle-reinforced aluminum.—73-03662
Ultrafast electron tunneling in reverse-biased, high-efficiency quantum-well laser structure.—73-07849
Vacancy at the DX center [observed] in Si- and Sn-doped AlGaAs.—73-11500
Vacancy titanates intercalated with cationic hydroxy aluminum complexes.—73-03704
Variations of aluminum concentration in ß′-SiAlON grains formed during liquid-phase sintering of $Si_3N_4$-$Al_2O_3$-$Nd_2O_3$.—73-06872
Well width dependence of the exciton lifetime in narrow GaAs/GaAlAs quantum wells.—73-15228
Wet and dry etching characteristics of $Al_{0.5}In_{0.5}P$.—73-07861
Wettability of silicon carbide by liquid aluminum: the effect of free silicon in the carbide and of magnesium, silicon, and copper alloy additions to the aluminum.—73-06879
Wetting behavior of aluminum and aluminum alloys on $Al_2O_3$ and CaO.—73-13908
Whisker-matrix interfacial reactions in SiC, $Si_3N_4$, and $Al_{18}B_4O_{33}$ whisker-reinforced aluminum-matrix composites.—73-13910
X-ray photoelectron spectroscopy study on the electrical double layer at an $Al_2O_3$-Al interface.—73-06881

**amines,**
Optimization of properties of lightweight concrete by polymer admixtures containing amine.—73-00156
Quantitative determination of triethanolamine [TEA] in cements.—73-06710

**ammonia,**
Ammonia plasma passivation of GaAs in downstream microwave and radio-frequency parallel-plate plasma reactors.—73-11064
Dynamics of $NH_3$ photodesorption from GaAs(100): role of electronic quenching.—73-07457
Iron-cobalt catalysts for ammonia synthesis with ceria additives.—73-16526
$NO_x$ reduction by injecting ammonia into cement kiln systems.—73-03506
Orientational disorder in $Ni(NH_3)_6I_2$. Evidence for rotation-translation coupling.—73-05444
Process for reducing aqueous nitrate to ammonia.—73-05007

**ammonium,**
Thermal decomposition process of ammonium paratungstate.—73-06297

**amorphous solid,**
Amorphous silicon, amorphous carbon, and amorphous silicon carbide deposited by remote plasma chemical vapor deposition.—73-09017
Ceramic materials based on amorphous silicon oxide.—73-07111
Densification and crystallization of amorphous $SiO_2$ by neutral beam bombardment.—73-05731
Electronic structure of defects in amorphous silicon nitride.—73-06158
Influence of an electron beam on the energy distribution of localized states in amorphous $Si_3N_4$.—73-11269
Instability in amorphous silicon dioxide/amorphous silicon structures.—73-04120
Local mechanical stability of the aluminum/carbon (amorphous) and aluminum/$SiO_2$ (amorphous) interface at extrinsic dislocations.—73-00248
Mechanism of interaction of amorphous silica with diluted solutions of hydrofluoric acids.—73-14033
Preparation of amorphous $NiPS_3$ by a sol-gel-type method.—73-03869
Pressure-amorphized $SiO_2$ α-quartz: an anisotropic amorphous solid.—73-08959
Production of amorphous silicon dioxide from hexafluorosilicic acid.—73-14481
Structural change due to thermal treatment and dielectric properties of anodic oxide films of bismuth.—73-08747
Structure of amorphous silicon nitride.—73-16334
Use of the ESR signal-saturation method in an experimental study of hydrogenated amorphous variable-composition SiC.—73-07855
Wide-band-gap hydrogenated amorphous silicon carbide prepared from a liquid aromatic carbon source.—73-13335
X-ray photoelectron spectroscopy and X-ray-excited Auger electron spectroscopy studies of the initial deposition of hydrogenated amorphous carbon.—73-05523

**amplifiers,**
Noise reduction in photorefractive image amplifiers and applications.—73-07902
Progress in optical function devices using two-section laser diodes/amplifiers.—73-15122
Ti:$Al_2O_3$ master-oscillator/power-amplifier system.—73-15210

**analysis/analyzers,**
Advances of boron analysis in glass and ceramics.—73-00303
American Vacuum Society Recommended Practice: recommended practice for the calibration of mass spectrometers for partial pressure analysis.—73-05018
Analysis and measurements in ceramic laboratories.—73-12105
Analysis and study of some bone china.—73-10791
Analysis of effects of elastic inhomogeneity and residual thermal stress on fracture toughness by the equivalent inclusion method.—73-06323
Analysis of high-purity ceramic powders and sinters by optical emission (OES) and atomic absorption (AAS) spectrometry.—73-01882
Analysis of Y-Ba-Cu-O films by differential dissolution.—73-04668
Analytical methods for high-temperature superconducting materials.—73-11686
Automated analytical systems are the focus of a government/industry consortium.—73-03381
Ceramic materials: microstructural and interface analysis as a prerequisite for the optimization of microstructure: II, High-voltage and high-resolution electron microscopy (HVEM and HREM) for ceramic materials.—73-06191
Ceramic materials: microstructural and interface analysis as a prerequisite for the optimization of microstructures: I, Introduction and microstructural systems.—73-06192
Characterization of Ceramics.—73-13653
Chemical analysis of strontium lanthanum manganite.—73-05027
Critical behavior of specific heat in ferroelectric $K_2ZnCl_4$ and $(NH_4)_2BeF_4$ at normal-incommensurate phase transition.—73-07875
Current technologies of particle size analysis.—73-12124
Deposition and analysis of lithium niobate and other lithium niobium oxides by rf magnetron sputtering.—73-11559
Diffusion of technological knowledge: a case study in North American ceramic analysis.—73-09779
Emissivity as a method of surfaces and thin-film analysis.—73-03142
Evaluation of concrete properties by use of elastic waves due to Schmidt hammer impact.—73-09950
Evaluation of fracture toughness by a single-edge V-notched beam method.—73-03282
Experimental study in distinguishing grog (chamotte) from argillaceous inclusions in ceramic thin sections.—73-09783
Fragmentary approach in searching for new compounds.—73-08630
Mechanical Behavior of Materials: Engineering Methods for Deformation, Fracture, and Fatigue.—73-13655
Microstructural analysis using image analysis.—73-09476
Monitoring and analyzing waste glass compositions.—73-12209
Multiclient study project comparison of the particle size analyzers and establishment of its techniques.—73-01918
Nanocomposites: retrospect and prospect.—73-06582
New methodology for furnace monitoring, analysis, and control.—73-12232
New, simple, rapid, and reliable method for determining sulfur trioxide and phosphorus pentoxide in portland cement and classes C and F fly ash.—73-06693
Particle size analysis.—73-08429
Progress in sampling and on-stream analysis.—73-10105
Qualitative X-ray phase analysis based on calculated standards.—73-15834
Rapid analysis of cement to ASTM: C-114.—73-03525
Rapid immunoassay field screening methods for the detection of PCB's, pentachlorophenol, and petroleum fuels in soil.—73-12183
V-notched technique for single-edge notched-beam and chevron notch methods.—73-03375
Why study artifacts—an interdisciplinary approach.—73-09798

**anatase,**
Ir spectroscopic study of $H_2O$ influence on $SO_2$ adsorption on $TiO_2$ surface.—73-13412
Nitrogen dioxide adsorption of deuteroxylated titania (anatase).—73-08927
Photoluminescence in $TiO_2$ anatase single crystals.—73-16565
Rapid-rate sintering of anatase-type $TiO_2$ by microwave heating.—73-09292

**andalusite,**
Andalusite—the Hillsborough deposit.—73-08490
Thermoremanent magnetization of Fe-Ge andalusite spin glass.—73-15372

**anhydride,**
Features of low-temperature relaxation transition in vitreous boric anhydride.—73-13988

**anhydrite,**
Anhydrite binders activated with portland cement and potassium sulfate with addition of fly ash filler.—73-09816
Examination of the durability of anhydrite binder activated with portland cement and potassium sulfate.—73-09954
Halite pseudomorphs after gypsum in bedded anhydrite—clue to gypsum-anhydrite relationships.—73-15905
Reexamination of dissolution heat of gypsum and anhydrite in water at 25°C.—73-13773

**anions,**
Dynamics of an anion subsystem in new olivofluorozirconate glasses by the method of $^{19}F$ nuclear magnetic resonance.—73-00328

**anisotropy,**
$^{89}Y$ NMR study of the anisotropy of the static and dynamic susceptibility in $YBa_2Cu_3O_{6+x}$.—73-15671
Anisotropy of deposition rate in magnetron sputtering of $CeO_2$.—73-02726
Anisotropy of the magnetization of isolated $Fe^{2+}$ ions in II-VI compounds.—73-01075
Anisotropy of the optical reflection of GaAs in the region of its fundamental absorption edge.—73-01076
Anomalously large gap anisotropy in the *a-b* plane of $Bi_2Sr_2CaCu_2O_{8+\delta}$.—73-15393
Coherence length and penetration depth in high-$T_c$ superconductors.—73-04680
Effective electron mass anisotropy in silicon carbide.—73-16125
Electronic conduction in highly anisotropic systems.—73-07320

Hardness anisotropy in $Bi_2Sr_2CaCu_2O_8$.—73-15497
Knoop hardness anisotropy of $YBa_2Cu_3O_{7-\delta}$ single crystals.—73-08120
Measurements of anisotropic characteristic lengths in YBCO films at microwave frequencies.—73-04768
Pore preference in elastically anisotropic cubic crystals.—73-17095
Structural anisotropy and birefringence in porous glass plates.—73-00405
Temperature-dependent anisotropy of normal-state magnetic susceptibility of metallic copper oxides.—73-08979

**annealing,**
Annealing effects on (Ln, Ce)$_2$CuO$_4$ system.—73-15388
Annealing response of disordered sputter-deposited vanadium pentoxide ($V_2O_5$).—73-02727
Anomalies in annealed LT [low-temperature] GaAs samples.—73-14775
Contribution to the axial annealing of molds.—73-14343
Crystallization of grain-boundary phases in silicon nitride with low additive contents by microwave annealing.—73-05724
Effect of annealing of vials on glass-dust contamination of medical preparations.—73-07123
Effect of postannealing on electrical properties of $Ta_2O_5$ thin film deposited by PECVD using $TaCl_5$ and $N_2O$.—73-04080
Effect of postdeposition annealing on structure and chemistry of the TiN film/steel substrate interfaces.—73-00222
Effects of annealing on properties of MgO-$ZrO_2$ composite ceramics.—73-02804
Effects of rapid recurrent annealing on structure and magnetooptical properties of garnet films.—73-04607
Effects of rapid thermal annealing on both the stress and the bonding states of a-SiC:H films.—73-09108
Ellipsometric study of rapid thermal annealed [RTA] PECVD SiN films.—73-05559
EPR and magnetostatic studies of low-temperature annealing of ceramics.—73-07252
Evidence for low-temperature uv annealing of uv CVD, PECVD, and [spin-on-glass] SOG-based $SiO_2$ films.—73-04098
Gas composition in the annealing zone and glass-working properties.—73-00635
Improved control of momentary rapid thermal annealing for silicidation.—73-04112
Laser annealing of high-$T_c$ superconductors.—73-15532
Low-temperature annealing of *p*-cadmium telluride in gallium bath.—73-07645
Process of low-temperature annealing of ceramics [studied] by the method of electron paramagnetic resonance and magnetostatics.—73-05994
Rapid pulsed $CO_2$ laser annealing of silicon nitride/silicon interface states.—73-06008
Rapid thermal annealing [RTA] of spin-on-glass [SOG] films.—73-03881
Rapid thermal annealing of semiconductors by microwave energy.—73-09291
Spatial nonuniformity in Cd-annealed CdTe crystals.—73-11449
Superconductivity at 77 K in (Pb,Cu)$Sr_2$(Ca,Y)$Cu_2O_7$ by postannealing.—73-04813
Thermophysical properties controlling annealing and tempering.—73-07090
Wall thickness determination for glass hollowware in annealing calculations.—73-00720

**anodes,**
Anode arc attachment control using boundary layer bleed holes.—73-08317
Anodic oxidation of tungsten in nonaqueous electrolyte: II, Electrochemical coloring and bleaching of the oxide film.—73-13466

**anorthite,**
Anorthite and thermal expansion of CaO-$Al_2O_3$-$SiO_2$-$B_2O_3$ ceramics.—73-05532
Anorthite and thermal expansion of CaO-$Al_2O_3$-$SiO_2$-$B_2O_3$ ceramics.—73-12746
Glass-ceramic biomaterials based on the fluorapatite-anorthite and fluorapatite-diopside systems.—73-02013
Incorporation of $Gd^{3+}$, $Eu^{3+}$, and $Eu^{2+}$ ions in anorthite and related glasses.—73-14005
Influence of viscosity on the crystallization of some anorthite-diopside glass precursors.—73-00647
Low-temperature fabrication of anorthite ceramics.—73-05899
Matte glaze of anorthite.—73-10866
Sol-gel synthesis of $B_2O_3$-doped anorthite and its characteristics.—73-03023
Sol-gel synthesis of $B_2O_3$-doped anorthite and its characteristics.—73-13280

**antennas,**
Ferrite microstrip antenna.—73-15378

**antiferromagnetism,**
Acoustics of magnetoelectric antiferromagnetics: rhombohedral crystals.—73-11645
Cohesive energy of NiO: a quantum Monte Carlo approach.—73-08823
Effect of longitudinal relaxation on dynamic [magnetic] susceptibility of antiferromagnets.—73-15318
Electron magnetic resonance in a series of antiferromagnetic molecular perovskites.—73-05557
Magnetization and spin correlation of two-dimensional triangular antiferromagnet $LuFe_2O_4$.—73-07961
Nanophase molecular antiferromagnets.—73-04632
Universal magnetic properties of $La_{2-x}Sr_xCuO_4$ at intermediate temperatures.—73-15374

**antimonia,**
$Bi_2O_3$-$Sb_2O_3$ binary system.—73-11694
Effect of antimony oxide on phase separation in sodium borosilicate glass.—73-00329
Mechanistic study of the synergism between $Sb_2O_3$ and $MoS_2$ lubricant systems using Raman spectroscopy.—73-06938
Structure of glasses of the $B_2O_3$-$Sb_2O_3$ system using small-angle X-ray scattering data.—73-01029

**antimonides,**
Advanced dielectrics for passivation of InSb.—73-04056
Anomalies in the structural and electrophysical properties of the amorphous semiconductor a-GaSb:Ge.—73-11069
Anomalous Andreev conductance in InAs-AlSb quantum wells with Nb electrodes.—73-07380
Band structure and optical characteristics of thullium monoantimonide.—73-16413
Characterization below threshold of GaInAsSb/GaAlAsSb double-heterostructure lasers emitting near 2.37 μm.—73-14797
Crystallization of metastable phases and superconductivity in amorphous GaSb.—73-14820
DX-like center in bulk GaSb:S.—73-04285
Effect of interfacial bond type on the electronic and structural properties of GaSb/InAs superlattices.—73-11158
Electrical properties and photoluminescence of epitaxial GaSb:Bi and GaSb:Bi:Sn films formed from Bi solutions.—73-01145
Electronic properties of strained heterostructures.—73-14883
Growth of InAs-AlSb quantum wells having both high mobilities and high concentrations.—73-04353
High-temperature superconductivity on $YBa_2Cu_3O_{7-\delta}$-$YBa_2SbO_6$ system by rapid quenching in air.—73-04736
Hume-Rothery rule in V-VI compounds.—73-04356
Impurity distribution near *p*-GaInAsSb/*p*-GaAlAsSb heterojunctions.—73-11260
Interface structure in InAs/AlSb quantum wells grown by molecular beam epitaxy.—73-11280
Intrinsic point defects and microdefects in GaSb single crystals doped by electrically active impurities (Si, Ge, Te).—73-17082
Long-wavelength low-threshold lasers based on III-V compounds.—73-15015
Low noise ohmic contacts on *n*- and *p*-type GaSb.—73-07642
Low-noise ohmic contacts on *n*- and *p*-type GaSb.—73-15020
Metal-insulator transition in a-GaSb:Cu.—73-04135
Molecular beam epitaxial growth of high-mobility *n*-GaSb.—73-11329
Molecular beam epitaxial growth of InSb on GaAs and Si for infrared detector applications.—73-11330
Natural aging changes in galvanomagnetic properties of undoped CdSb.—73-11343
Nonstoichiometry and intrinsic point defects [and microdefects] in GaSb.—73-17089
Phase equilibrium melt-solid in the system Pb-InSb-GaSb and Pb-InAs-GaAs.—73-11373
Preparation of Sb/GaSb(111)-oriented multilayer structures using molecular beam epitaxy and migration-enhanced epitaxy.—73-07745
Radiation recombination in type-II *n*-GaInAsSb/*n*-GaSb heterojunctions.—73-15133
Raman light scattering in a-GaSb.—73-15137
Role of defects in the passivation of III-V semiconductor surfaces modified by alkali metals: $O_2$/Rb/*p*- and *n*-type GaSb(110).—73-07776
Self-consistent tight-binding calculations of band offsets in GaAs/$Al_xGa_{1-x}As$-(110) and GaSb/$Al_xGa_{1-x}Sb$-(110) heterojunctions. Theoretical evidence for a new common-anion rule.—73-07792
Spectral responses in near-infrared of the mixed compounds III-V, ternary and quaternary, based on GaSb.—73-07803
Spectral responses in near-infrared of the mixed compounds III-V, ternary and quaternary, based on GaSb.—73-15169
Structure of an Mn impurity center in GaSb.—73-07817
Surface-layer modulation of electron concentrations in InAs-AlSb quantum wells.—73-11470
Synthesis and physical properties of antimonides of $Me_3Sb_2O_{12}$ group (Me=In, Sc, La, Pr, Tb, Yb).—73-17022
X-ray electronic investigation of $Hg_2Sb_2O_7$.—73-08792
X-ray photoelectron spectroscopy investigation of the mixed anion GaSb/InAs heterointerface.—73-11510

**antimony oxide,**
Antimony(V) oxide grafted onto a silica gel surface: acidic properties and thermal stability.—73-05533
Comparative model study of antimony and cerium oxide refining.—73-00599
Composition and structure of phases formed in the process of hydrated antimony pentoxide [HAP] thermolysis.—73-02170
Crystal structure, short-range and long-range magnetic ordering in $CuSb_2O_6$.—73-02218
Effect of $Sb_2O_3$ addition on water durability of $V_2O_5$-$P_2O_5$ glass.—73-00333
Electrical properties of $Sb_2O_3$-SrO-$V_2O_5$ glasses and crystallized ones.—73-00477
Refinement of crystal structure of $LiSbO_3$.—73-16290
Sol-gel preparation of M-Sb oxides from Sb(OBu$^n$)$_3$-M-acetate precursors with M=Mn, Co, Ni.—73-06063
Synthesis and characterization of perovskite-type $BaTl_{0.5}Sb_{0.5}O_3$ and $BaTl_{0.5+x}Sb_{0.5-x}O_{3-x}$.—73-01340
Synthesis, structural characterization, and two-dimensional antiferromagnetic ordering for the oxides $Ti_{3(1-x)}Ni_xSb_{2+x}O_6$ [1≥x≥0.6].—73-02504
Twinning in ZnO ceramics with $Sb_2O_3$ additions.—73-02532

**antimony,**
Alteration of electron-electron interaction effects in metal-insulator-metal trilayers.—73-14679
Are there Tamm-state donors at the InAs-AlSb quantum well interface.—73-07383
Blackening of tin oxide thin films heavily doped with antimony.—73-08814
Crystal structure of α-TlSbOGeO$_4$—high-temperature modification of KTiOPO$_4$.—73-12560
Crystal structures of $Hg_4Sb_2I_8$ and $Cd_4Sb_2I_8$.—73-02220
Effect of antimony addition on electrical and optical properties of tin oxide film.—73-08837
Effect of dopant incorporation on structural and electrical properties of sprayed $SnO_2$:Sb films.—73-08838
Effect of interface composition on the band offsets at InAs/AlSb(001) heterojunctions.—73-07465
Effect of Sb additions on the formation of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O superconducting thick films.—73-08038
Effect of Sb doping on point defect ensemble in MOVPE GaAs.—73-14855
Electrical and optical properties of Sb-doped $SnO_2$ films prepared by chemical vapor deposition.—73-05555
Electronic properties of Sb monolayers on III-V(110) surfaces determined by resonance Raman scattering.—73-11189
Electronic surface state resonant Raman scattering from vibrational modes of adsorbed monolayers: Sb on III-V semiconductors.—73-04315
Fermi-level variation on GaAs(110) surface with Sb overlayer studies with a photoelectron microscope.—73-11213
Grain growth during liquid-phase sintering of Sb-doped $BaTiO_3$.—73-09150
Growth mode of Bi and Sb layers on GaAs(110) and InP(110).—73-01179
High gain AlInAs/GaAsSb/AlInAs NpN HBT's on InP.—73-11243
In overlayers on Sb-passivated GaAs.—73-07577
In situ observation of crystallization from a superconductor melt of composition $Bi_{1.6}Sb_{0.1}Sr_2Ca_2Cu_3O_x$.—73-08102
Interactions in the system $SnO_2$-$GaSbO_4$.—73-12608
Kinetic study of refining by antimony.—73-14414
Liquidus of the system Sm-Sb-Se.—73-12622
Noncrystalline BiPbSbSrCaCuO and its heat-treatment effect.—73-11845
Optimum growth temperature determination for GaInSb/InAs strained-layer superlattices.—73-11366
Oxide superconducting compositions containing antimony.—73-01623
Preparation and crystal structure of $Na_3SbO(PO_4)_2$.—73-02399
Reflection high-energy electron diffraction studies of the growth of InAs/$Ga_{1-x}In_xSb$ strained-layer superlattices.—73-07767
Sb-induced optical transitions of the Sb/GaAs(110) interface.—73-01308
Sb-induced surface stabilization of InP(100) wafer beyond 500°C.—73-11428
Synthesis and crystal structure of a new antimony(III) molybdate: $LiSbMo_2O_8$.—73-02479
Synthesis and crystal structure of a novel zintl phase: $K_3SbTe_3$.—73-02481
Synthesis and unit cell data of a new cadmium antimonate electronic ceramic.—73-08766
Threshold behavior in the nonisothermal properties of Ge-Sb-Se glasses.—73-03770
X-ray standing wave study of the Sb/GaAs(110) interface structure.—73-07866
X-ray structural study of consecutive phase transitions in potassium pentafluoroantimonate(III) in the 323–98 K range: I, Dynamics, symmetry, and lattice parameters.—73-16397
X-ray structural study of consecutive phase transitions in potassium pentafluoroantimonate(III) in the 323–98 K range: II, Crystal structure.—73-16398
X-ray structural study of consecutive phase transitions in potassium pentafluoroantimonate(III) in the 323–98 K range: III, Structural modulation.—73-16399
Zero resistance of quenched $Bi_{1.5}Pb_{0.4}Sb_{0.1}Sr_2Ca_2Cu_3O_x$ at 140 K.—73-04828

**apatite,**
Apatite coating on organic polymers by a biomimetic process.—73-16656
Apatite coating on yttria-doped partially stabilized zirconia plate in the presence of water vapor.—73-05693
Apatite coating on yttria-doped partially stabilized zirconia plate in the presence of water vapor.—73-12920
Apatite glass ceramic.—73-14533
Apatite in feldspars may be critical for glass quality.—73-14322
Biological and physical properties of apatite coatings.—73-08503
Coating of apatite layer on surfaces of organic polymers by a biomimetic process.—73-09043
Coating of apatite layer on surfaces of organic polymers by a biomimetic process.—73-16676
Crystal growth of apatite on seeds of calcium salts.—73-12559
Effect of modifiers in bioglass on the glass properties and the formation of apatite.—73-03724
Effect of residual glassy phase in a bioactive glass-ceramic on the formation of its surface apatite layer in vitro.—73-00332
Effects of manganese(II) and iron(II) on the cathodoluminescence signal in synthetic apatite.—73-12779
Electrochemical deposition of calcium-deficient apatite on stainless steel substrate.—73-06778
Electrochemical deposition of calcium-deficient apatite on stainless steel substrate.—73-13831
Fabrication and properties of $Si_3N_4$ with rare-earth apatite grain-boundary phases.—73-05799
Influence of octacalcium phosphate [OCP] addition on hydraulic properties of apatitic cement.—73-13739

Magnesium content effects on the crystallization behavior of bioactive glasses in the system $CaO$-$MgO$-$SiO_2$-$P_2O_5$-$CaF_2$.—73-14031
Preparation of apatite thin films through rf sputtering from calcium phosphate [CP] glasses.—73-16916
Process of formation of bonelike apatite layer on silica gel.—73-06270
Properties of apatite cement composed of α-tricalcium phosphate and tetracalcium phosphate.—73-10106
Structure of $CO_3^{3-}$ center in tooth enamel.—73-16335
Synthesis of glass-ceramics in the wollastonite–apatite–celsian system.—73-07182

**apparatus,**
Apparatus for continuous growth of SiC single crystal from SiC synthesized in a vapor phase without using graphite crucible.—73-12071
Apparatus for controlled supply of alumina.—73-15703
Apparatus for depositing of a material on a substrate by chemical vapor deposition.—73-15706
Cosputtering and serial cosputtering using cylindrical rotatable magnetrons.—73-09051
Microgravimetric plasmochemical apparatus.—73-01916
Modular IBAD apparatus for continuous coating.—73-01870
Sample tilting mechanism and transfer system for high-temperature thin-film deposition and ultrahigh vacuum photoelectron emission microscopy [PEEM].—73-05085

**applications,**
Advanced ceramic application in the ceramic industry.—73-05152
Advanced ceramics—an overview.—73-05153
Application of engineering ceramics to the mechanical parts.—73-12314
Applications for ceramic coatings.—73-05155
Applications of silicon-nitride-based ceramics in the U.S.—73-05259
Barium carbonate.—73-12257
Boron.—73-12262
Carbon-carbon: bringing it to the marketplace.—73-05260
Ceramic raw materials and their uses.—73-00895
Ceramic Transactions, Volume 36: Microwaves: Theory and Application in Materials Processing II.—73-17519
Composite materials: new opportunities for industrial applications in construction and transportation.—73-09705
Comprehensive utilization of fly ash.—73-08496
EDM in new places.—73-15719
Future of fly ash in the ceramic industry.—73-12273
Ground floor.—73-00097
Know when to use "advanced" materials.—73-15928
Laser-assisted hot machining of ceramics and composite materials.—73-05891
Model of hydrogen behavior in enameling-grade steels: II, Application.—73-03624
New developments in hydroxyapatite ceramics.—73-05176
New kinds of refractories for ferrous metallurgy.—73-10746
Present and future applications of superconductivity.—73-08180
Research on and applications of new glasses.—73-09746
South African ceramic developments.—73-05181
Star war materials launch commercial products.—73-06595
Superplastic-like flow in ceramics: recent developments and potential applications.—73-08525
Tile applications in public buildings.—73-07276

**aragonite,**
Experimental and natural mimetic dolomitization of aragonite.—73-15902

**archeology,**
Ancient flat glass unearthed from China.—73-13660
Archaeometric investigation of ancient glasses from the Balearic Islands.—73-13662
Archaic imported fine wares from the Acropolis, Mytilene.—73-09775
Archaic plastic vases from Isthmia.—73-09776
Bellows' nozzles, tuyeres, and kiln firing supports.—73-09777
Bodies and glazes of Jingdezhen porcelain in ancientry.—73-06609
Ceramic chronology and chronometric dating: stratigraphy and seriation at La Blanca, Guatemala.—73-06610
Ceramic folklore of Iwami-Yaki porcelain wares.—73-06611
Ceramic sequence at Nakbe, Guatemala.—73-06612
Chemical compositions of ancient Central Asian glasses and the results of the restoration of lost schicht recipes.—73-13664
Diffusion of technological knowledge: a case study in North American ceramic analysis.—73-09779
Direct dating and identity of fiber temper in precontact Bushman (Basarwa) pottery.—73-03422
Drilling method of glass bead making.—73-09780
Early Bronze Age III pottery from Bahcehisar: the significance of the Pre-Hittite sequence in the Eskisehir Plain, northwestern Australia.—73-09781
European ceramics and the elusive "Cittie of Raleigh."—73-06615
European protoporcelain: the social context of the history of a sixteenth century ceramic technology known as Saint-Porchaire.—73-00007
Faience beads of the Irish Bronze Age.—73-09784
From pots to people: ceramic production in the ancient Mediterranean.—73-09785
Intensive ceramic production and Classic period political economy in the Sierra de los Tuxtlas, Veracruz, Mexico.—73-09786
It was the turning wheel, and not the lathe—mold pressing and mold turning of hot glass in ancient glass vessel production.—73-09787
Izumo-Yaki ceramic wares—historical survey.—73-00009
Kalinga ceramics and new technologies: social and cultural contexts of ceramic change.—73-00010
Laboratory profile: Museum Applied Science Center for Archaeology (MASCA), The University Museum, The University of Pennsylvania, Philadelphia, Pennsylvania.—73-03423
Late Woodland miniature pottery vessels from the Delaware Valley.—73-09788
Microstructural investigation of renaissance mortar from Montreal, Quebec, Canada.—73-10048
Mineralogy and micromorphology of Chalcolithic and Early Bronze Age Ikiztepe ceramics.—73-09789
Models for technological innovation: an ethnoarchaeological project in Pino Suarez, Mexico.—73-00011
Mycenaean pictorial pottery from the Argive Heraion.—73-09790
Neutron activation of bird bowls and related archaic ceramics from Miletus.—73-06617
New wine in ancient wineskins: the evidence from Attic vases.—73-09791
Physical chemistry analysis of Jun glaze.—73-10880
Politics, economics, and ceramic continuity at Gordion in the late second and first millennia B.C.—73-00013
Pottery from Archaic building Q at Kommos[, Crete].—73-09792
Red-figured pottery from Samothrace.—73-09793
Regional studies and ceramic production areas: an example from La Mixtequilla, Veracruz, Mexico.—73-09794
Science and the art museum: the analysis of archaeological materials.—73-09795
Scientific analysis of ancient Jun wares in China.—73-09796
Scientific analysis of Roman glass from Augusta Praetoria.—73-06618
Spanish colonial kiln tradition of Moquequa, Peru.—73-13672
Teisias and Theodoros: East Boiotian potters.—73-10178
Why study artifacts—an interdisciplinary approach.—73-09798
X-ray fluorescence-pattern recognition analysis of pottery from an early historic Hispanic settlement near Santa Fe, New Mexico.—73-09799

**architecture,**
Architectural glasses produced by surface-treatment processes.—73-03821
Current situation and development of architectural pottery in China.—73-10811

**argon,**
Computer simulation of the adsorption of argon on the surface of titanium dioxide: I, Crystalline rutile.—73-12757
Computer simulation of the adsorption of argon on the surface of titanium dioxide: II, Amorphous surface.—73-12758
Effect of argon addition on the microstructure, texture, and phases of silicon carbide prepared by chemical vapor deposition.—73-02780
Role of the buffer gas in the ArF laser chemical vapor deposition of silicon oxide.—73-09310

**armor,**
Composite tactical hard body armor.—73-10308
Deformation energy of Kelvar backing plates for ceramic armors.—73-12763

**arrestors,**
How to beat lightning bolts.—73-07571

**arsenate,**
Compounds containing layers of composition $[(Sb^{III}F)PO_4]$, $[(Sb^{III}F)As_4]$—crystal structures of $Na(SbF)PO_4{\cdot}1.5H_2O$, $Na(SbF)AsO_4$, $NH_4(SbF)PO_4{\cdot}H_2O$, and $NH_4(SbF)AsO_4{\cdot}3H_2O$.—73-02171
Laser damage formation in $KTiOPO_4$ and $KTiOAsO_4$ crystals: grey tracks.—73-12825

**arsenic,**
Ambipolar photoconductivity of amorphous $As_2Se_3$ films.—73-01072
Anisotropy induced by photoinduced alloying of vitreous $As_2Se_3$ by silver.—73-16409
Arsenic cluster engineering for excitonic electrooptics.—73-11072
Arsenic reflection from GaAs and AlGaAs surface during molecular beam epitaxy.—73-11073
Composition of the vapor phase in the ternary system In-As-P.—73-16061
Compositional dependence of crystallization of As-Te glasses.—73-03826
Crystallization of glasses in the As-Se and Tl-As-Se system during heating.—73-00605
Crystallization processes and glass-forming ability of a set of glassy alloys in the As-Se-Te system.—73-06899
Determining the refractive index and absorption coefficient of Ag-photodoped amorphous As-S films.—73-14153
Effect of annealing on the properties of conductivity and diffusional mass transport in $As_2S_3$ films photodoped with silver.—73-00451
Effects of As flux on Si delta-doped GaAs.—73-11170
Electrical conductivity and Seebeck coefficient of smithite under pressure above 20 GPA.—73-16477
Electrical properties of a contact between modified and unmodified glassy $As_2Se_3$.—73-01146
Electromodulation study of GaAs with excess arsenic.—73-07490
Equilibrium phase diagram of the system In-As-Pb.—73-12581
Features of electroconductivity of films of $As_2S_3$ photoalloyed with silver.—73-14918
Influence of halogen impurities of charge transport in glassy Se-As semiconductors.—73-14981
Kinetics of dissolution of $AgAsS_2$ glass in acid oxidizing media.—73-00363
Magnetic spin effects in the photoconductivity of amorphous $As_2Se_3$.—73-07651
Negative photoacoustic effect in glassy arsenic selenide.—73-01257
Nonlinearity and photostructural changes in glassy $As_2S_3$ thin films.—73-14237
Projection of the liquidus surface of the ternary system Nd-As-Se.—73-12662
Raman scattering in amorphous $As_xSe_{100-x}$ layers. Anomaly of concentration dependence.—73-15138
Structural changes in thin As-Se films: DSC and EXAFS studies.—73-14090
Structural transformation in thin films of the system As-Se investigated by the method of differential scanning calorimetry.—73-16327
Ternary system Tm-As-Se.—73-12717
Thermal and electrical properties of new glasses in the binary system $Li_2S$-$As_2S_3$.—73-08983
Thermal behavior of arsenopyrite.—73-02522
Thermooptic properties of glasses of the system Ge-As-S.—73-00566
Transformation of the vibrational spectrum and structure of glasses after quenching.—73-03771

**arsenide,**
Anisotropy of surface energy of monocrystals of cadmium diarsenide.—73-10917
Atomic layer epitaxy of AlAs and $(AlAs)_n(GaAs)_n$.—73-04246
Comparison of As- and P-based semiconductors grown at low temperatures by MBE and GSMBE.—73-14812
De Haas-van Alphen [dHvA] studies of YbAs above and below Neel temperature.—73-08831
Interband transitions in $Zn_3As_2$.—73-08893
Magnetic properties of diluted $(Zn_{1-x}Mn_x)_3As_2$ solutions.—73-02638
Molecular beam epitaxial growth of arsenide/phosphide heterostructures using valved, solid group V sources.—73-11327
Novel electronics enabled by rare-earth arsenides buried in III-V semiconductors.—73-04421
Optimization of interfaces in arsenide-phosphide compounds grown by gas-source [GS] molecular beam epitaxy.—73-11363
Oriented films of semiconductor compounds $Zn_3As_2$ and $Cd_3As_2$ on sapphire substrates.—73-15080
Phase equilibrium melt-solid in the system Pb-InSb-GaSb and Pb-InAs-GaAs.—73-11373
Spectroscopic ellipsometry: a useful tool to determine the refractive indices and interfaces of $In_{0.52}Al_{0.48}As$ and $In_{0.53}Al_xGa_{0.47-x}As$ on InP in the wavelength range from 280 to 1900 nm.—73-15172
Synthesis and structure of $ZnMn_2As_2$.—73-02495
Temperature dependence of the dielectric function and interband critical points of AlAs obtained on an MBE-grown layer.—73-16612

**art/artware,**
Chihuly, the virtuoso of glass.—73-13665
Contemporary ceramics in South Africa: an overview.—73-09778
Izumo-Yaki ceramic wares—historical survey.—73-00009

**artificial intelligence,**
Artificial olfactory sensor on plural quartz crystals.—73-03776

**asbestos,**
Asbestos cement products with protective and decorative coatings based on waste-diluted painting compositions.—73-13679
Cryogenic salt resistance of asbestos cement pile pipes.—73-13699
Design of a vitrification process for the destruction of asbestos wastes.—73-09710
Improving the technology of manufacturing asbestos cement products using polyacrylamide.—73-13736
Method of operative control by drying asbestos ore in shaft furnaces.—73-01798

**ash,**
Binder-enhanced refuse-derived fuel ash: a study of hydrolysis.—73-13682
Glass forms for incinerator ash immobilization.—73-13998
Hydration of brick kiln ash blended white portland cement.—73-09987
Possibility of making hydraulic binder by chemical activation of domestic ash and mixture of slag and domestic ash.—73-13761
Relationship between the strength and nondestructive parameters of rice husk ash [RHA] concrete.—73-03528
Small wall blocks of nonautoclave gas-ash concrete.—73-00189
Structural model and hydraulic activity of granulated cinder in electric factories.—73-00194
Suitability of rice husk ash obtained by fluidized-bed combustion for blended cement.—73-06724

**aspect ratio,**
Equation which relates the real three-dimensional aspect ratio to the apparent cross-sectional aspect ratio.—73-03281

**asphalt,**
Reclaimed ceramic material for use in road construction.—73-09743

**atmosphere,**
Behavior of the 123 superconductor system during changes in atmospheric condition.—73-01495
Composition of a protective atmosphere on water-resistant surfaces of silicate glass.—73-00312
Effect of carbonization atmospheres on yields and tensile strength of phenolic resin-based carbon fibers.—73-02781

**atomization,**
Controlled aspiration—a new thermal spray process.—73-08329

**atoms,**
Atomic arrangement at grain boundaries and interfaces [observed] by high-resolution electron microscopy.—73-06187
Atomic radii of the elements.—73-01886
Foreign atom implantation by high-energy electron irradiation.—73-16784

In situ observation of atomic movement at surface by scanning tunneling microscope—high-temperature STM.—73-05418
Plasma diagnostic studies of the influence of process variables upon the atomic and molecular species ejected from (1−*x*)$Li_4SiO_4$:*x*$Li_3PO_4$ targets during radio frequency magnetron sputtering.—73-02924

**attenuation,**
Features of acoustic wave attenuation in polycrystalline YIG.—73-01460
Ultrasonic attenuation study of hydronium ß˝-alumina.—73-01040
Ultrasonic characterization of green and sintered ceramics: II, Frequency domain.—73-15858
Ultrasonic shear wave attenuation study on $Na^+$, $K^+$ ß˝-alumina.—73-01041

**Auger electron spectroscopy,**
Instrumental considerations for acquiring quantitative Auger electron spectra.—73-01908
Limitations on AES quantitative analyses of plasma-deposited ceramics.—73-08408
Quantitative analysis of alkali silicate solutions by ICP AES.—73-06959

**autoclaves,**
Mechanical property evolution during autoclaving process of aerated concrete using slag: I, Tobermorite formation and reaction behavior of slag.—73-13752
Mechanical property evolution during autoclaving process of aerated concrete using slag: II, Fracture toughness and microstructure.—73-13753
Properties of autoclaved calcium silicate materials using waste tile: influence of $SiO_2$ sources.—73-10107

**automation,**
Advances in pressed ware manufacture.—73-10494
Automated analytical systems are the focus of a government/industry consortium.—73-03381
Automation goal for MaasGlas [Holland].—73-14326
Automation in glass recycling: a Dutch perspective.—73-14327
Changing user demands drive T&I (test and inspection) technology improvements.—73-12115
Evolution of thermal spray automation.—73-08335
How to implement microingredient batching.—73-08342
Laboratory automation in a cement plant.—73-10025
Method for flexible continuous production.—73-01797
Operational experiences of Skloobal, Ltd., Nemsova, with BDF equipment.—73-00674
POLAB laboratory automation system.—73-03518
Set of standardized units for mechanism control systems.—73-01929
State of the art of fully automatic valve-bag filling technology.—73-12065
Structure of manufacturing systems for the automation of a glass container line.—73-14505
Vetropack profits from automatic drift control.—73-10616

**automobiles,**
Automobile glasses with heat-shielding surface coating.—73-03822
Automotive design glazing and new glasses.—73-14328
Functional automotive glass. The formulation of colorants.—73-14386
Functional ceramics for automobiles.—73-01170
Glass panes for vehicles.—73-03923
Metal matrix composites in the automotive industry: opportunities and challenges.—73-06823
Metals and ceramics boost auto performance.—73-06578

**bacteria,**
Bacteriostatic and fungistatic glass powders.—73-00435

**baddeleyite,**
Baddeleyitic-corundum ramming refractories made from waste raw materials.—73-10702
Comparative quality characteristics of fused cast baddeleyite-corundum and corundum refractories.—73-14579
Controlling the solidification process of baddeleyite-corundum products.—73-03995
Effect of microcoolers on the structure and properties of melt-cast baddeleyite-corundum refractories.—73-00802
Effect of microcoolers on the structure and properties of melt-cast baddeleyite-corundum refractories.—73-00803

**balances,**
Modified STA-409/3/6 thermobalance for digital processing of T, DTA, and TG curves.—73-01917

**ball bearing,**
Ball and roller bearings and bearing components.—73-12447
Development of fracture-resistant, multilayer films for precision ball bearings.—73-06768

**ball clay,**
Benefits of Dorset ball clay in traditional whiteware applications.—73-10801

**ball mills,**
Ball milling at varied rotating speed and its optimization of process parameters—ball milling of luster tile bodies.—73-14646
Effect of ball-milling time for powder mixing of the thermomechanical properties of SiC-AlN system ceramics.—73-05753
Influence of combination of ball diameters and rotation speed on grinding performance of alumina by ball milling.—73-08345
Influence of combination of ball diameters and rotation speed on grinding performance of alumina by ball milling.—73-16835
Milling kinetics of glass-ceramic–cement in a ball mill.—73-01799
New generation of high efficiency separators for ball mills and roller presses.—73-01803
Optimum rotating speed of wet ball mills.—73-12053
Planning the work of periodic ball mills in continuous ceramic production.—73-01810
Proper techniques for the ball milling of ceramic glazes.—73-04944
Wear of media balls during the ball milling of $Si_3N_4$ powder.—73-17456

**band gap,**
Resonant nonlinear susceptibility near the GaAs band gap.—73-07773

**band structure,**
Ab initio calculation of band structure, X-ray emission, quantum yield, and electron-energy-loss spectra of hexagonal boron nitride.—73-07281
Band parameters of $Hg_{1-x-y}Cd_xMn_yTe$.—73-14781
Band structure of superlattices of semiconductors with degenerate valence band.—73-04255
Band structure of ZnO using the LMTO method.—73-16036
Electron-phonon mechanism of broadening of optical absorption bands of quasi-zero-dimensional crystals.—73-07495
Empirical pseudopotential band structure calculation for $Zn_{1-x}Cd_xS_ySe_{1-y}$ quaternary alloy.—73-07503
Energy band structure of $La_2O_3$ crystal and $F^+$, $F$ centers.—73-02265
High-$T_c$ superconductivity as consequence of overlap nondegenerate and plane bands.—73-15501
How does the chemical nature of the interface modify the band offset.—73-07570
Key features in the measured band structure of $Bi_2Sr_2CaCu_2O_{8+\delta}$: flat bands and Fermi surface nesting.—73-15527
Valence band structure of $CuInS_2$ by soft X-ray spectroscopy.—73-04507

**baria,**
BaO-1/2$Y_2O_3$-$CuO_x$ eutectic melting in air.—73-12540
Thermal stability of gels and glass-forming regions in the $B_2O_3$-$Na_2O$-$Al_2O_3$ system.—73-12896
Viscosity of glasses of the BaO-$P_2O_5$-$Al_2O_3$ system at glass-transition and annealing temperatures.—73-00572

**barite,**
Burning cement clinker from the raw meal using barite and fluorspar as a combined additive.—73-09834

**barium carbonate,**
Barium carbonate.—73-12257

**barium oxide,**
Barium neodymium titanates: stoichiometry and phase equilibria.—73-02150
Crystallographic study by Rietveld's method of barium-magnesium-tantalum-oxide-based ceramics for use as dielectric resonator. X-ray dilatometry at low temperature.—73-08593
Effect of fabrication conditions on microwave dielectric properties of BaO-$RE_2O_3$-$TiO_2$ ceramics.—73-14696
Effect of various oxide additives on sintering of BaO-$SiO_2$ system glass-ceramics.—73-03836
Electron spin resonance and Mossbauer studies on crystallization process of $BaFe_{12}O_{19}$ from barium iron borate glass.—73-13974
ESR of vanadyl ions in $Li_2O$-BaO-$B_2O_3$ glasses.—73-06914
Improvement of sinterability of $Ba(Mg_{1/3}Ta_{2/3})O_3$ [BMT] powder compacts by $BaTa_2O_6$ additions.—73-02860
Nonreducible dielectric ceramic composition.—73-01062
Structure of barium zinc aluminate glasses.—73-00416

**barium titanate,**
*c*-axis perovskite thin films grown on silicon dioxide.—73-01849
90° wall in the tetragonal phase of $BaTiO_3$-type ferroelectrics.—73-07901
Acoustic emission in $BaTiO_3$-type ferroelectric crystals in phase transition region.—73-15247
Aggregate particles produced during pyrolysis of PTC barium titanate precursor synthesized by the oxalate method.—73-17107
Analysis of irregular fluctuations in a self-pumped $BaTiO_3$ phase-conjugate mirror.—73-01073
BaO-*x*-$TiO_2$ dielectric ceramic composition.—73-04188
Barium strontium titanate photorefractive device and method for making the same.—73-11631
Ceramic capacitor with a grain-boundary-insulated structure.—73-04189
Changes in the crystal structure of rf magnetron-sputtered $BaTiO_3$ thin films.—73-02158
Changes in the crystal structure of rf magnetron-sputtered $BaTiO_3$ thin films.—73-12546
Characterization of PTCR barium titanate by impedance spectroscopy.—73-01102
Characterization of the growth of sol-gel-derived Ba-Ti-O thin films by laser Raman spectroscopy.—73-13379
Cofiring of semiconducting $(Ba,Sr)TiO_3$ and $(Ba,Pb)TiO_3$ ceramics.—73-14809
Comparison of $BaTiO_3$ optical novelty filter and photothermal lensing configurations in photothermal experiments.—73-12756
Comparison of the electrical and mechanical strengths of conventional and flux-sintered barium-titanate-based dielectrics.—73-00939
Dc electrical resistivity of Nb-doped $BaTiO_3$ and EPR measurements.—73-12762
Determination of the *c*/*a* ratio of a submicrometer-sized crystal of tetragonal barium titanate by synchrotron radiation.—73-16109
Development and fabrication of thin film $BaTiO_3$ capacitors using radio-frequency magnetron sputtering.—73-07297
Development in submicron grinding of $BaTiO_3$ powder by ball milling and its applications.—73-16700
Dielectric and ferroelectric properties of $BaTiO_3$ thin films grown by the sol-gel process.—73-11561
Dielectric and piezoelectric properties of sol-gel-derived barium titanate ceramics.—73-16443
Dielectric ceramic composition.—73-11012
Dielectric ceramic of the $Ba_{1-x}M^*_xTi_{1-y}M^{**}_yO_3$ type.—73-10931
Dielectric properties and microstructural behavior of B-site calcium-doped barium titanate ceramics.—73-02570
Dielectric properties of (Ba, Sr)O-(Sm, $La)_2O_3$-$TiO_2$ ceramics at microwave frequencies.—73-02572
Dielectric properties of Ni-doped (Ba, Sr)$TiO_3$ ceramics at very low frequencies.—73-04078
Dielectric properties of oxide-doped Ba(Ti,Sn)$O_3$ ceramics prepared from ultrafine powder.—73-16447
Dielectric relaxation in $Ba(Ti_{0.8}Zr_{0.2})O_3$ ceramics prepared from sol-gel and solid-state reaction powders.—73-01401
Effect of BN addition on the sintering and electrical properties of Y-doped $BaTiO_3$ ceramics.—73-12998
Effect of counterpropagating beams on beam fanning in $BaTiO_3$.—73-02577
Effect of crystal-axis orientation on dielectric properties of ceramics prepared from fibrous barium titanate.—73-16457
Effect of manganese addition on phase stability of hexagonal $BaTiO_3$.—73-16117
Effect of processing variables on the mechanical and electrical properties of barium titanate positive temperature coefficient of resistance ceramics: I, Additives and processing prior to sintering.—73-09091
Effect of processing variables on the mechanical and electrical properties of barium titanate positive temperature coefficient of resistance ceramics: II, Sintering atmosphere.—73-09092
Effect of soaking time on the temperature coefficient of resistivity [TCR] of semiconducting barium titanate PTCR ceramics.—73-14856
Effect of substrate temperature on the orientations of radio-frequency-sputtered $Ba_2Si_2TiO_8$ thin films.—73-16743
Effect of various dopants on the dielectric properties of barium strontium titanate.—73-04081
Effects of cerium doping on the resistivity of PTCR barium lead titanate.—73-07468
Effects of crystallization on structural and dielectric properties of thin amorphous films of (1−*x*)$BaTiO_3$:*x*$SrTiO_3$ (*x*=0–0.5, 1).—73-02591
Effects of grain-boundary structure on the resistivity phenomenon in doped $BaTiO_3$.—73-11565
Effects of isovalent and nonisovalent impurities on the ferroelectric phase transition in barium titanate.—73-07883
Effects of Mn dopant and Mn-La codopant on the sintering behavior and electrical properties of barium titanate.—73-04294
Elastic anomalies of barium titanate.—73-08609
Electric and dielectric properties of barium titanate Schottky barrier diodes.—73-07311
Electrical and microstructural properties of $BaTiO_3$ thin films on *p*-Si substrates grown by MOCVD.—73-08847
Electrical characteristics of barium titanate films prepared by laser ablation.—73-07885
Electrical properties and film structures of $(Ba_xSr_{1-x})TiO_3$ [BST] thin films by rf sputtering.—73-04085
Electrical properties of ferroelectric thin-film capacitors with different structures.—73-04549
Electronic and ionic trapping at domain walls in $BaTiO_3$.—73-17078
Evolution of interfacial microstructure between barium titanate and binary glasses.—73-06218
Fabrication of barium titanate single crystals by solid-state grain growth.—73-09128
Ferroelectric phase transition in $BaTiO_3$ films.—73-07888
Fidelity of optical phase conjugation by photorefractive degenerate four-wave mixing in barium titanate.—73-12802
Field-dependent changeover from current-to-voltage-limiting characteristics by nonlinear *n*-type $BaTiO_3$ ceramics.—73-14926
Fine-grain barium titanate for dielectric application.—73-10948
Fine-grained $BaTiO_3$ powder mixture and method for making.—73-04209
Generation of metal titanate powders by spray pyrolysis using single-source precursors.—73-09148
Grain core–grain shell structure and domain of $BaTiO_3$ ceramics.—73-05411
Grain core–grain shell structure in Nb-doped $BaTiO_3$ capacitor ceramics.—73-10952
Grain growth during liquid-phase sintering of Sb-doped $BaTiO_3$.—73-09150
Grain growth during liquid-phase sintering of Sb-doped $BaTiO_3$.—73-17138
Grain-boundary properties of oxygen hot isostatically pressed barium strontium titanate with positive temperature coefficient of resistivity.—73-01175
Grain-boundary structure of $Bi_2O_3$-diffused $BaTiO_3$ BL capacitor.—73-00974
Growth and characterization of photorefractive $BaTiO_3$ single crystal.—73-05828
Heat-generating ceramic materials of $(Ba_{0.65}Pb_{0.35})TiO_3$ semiconductors.—73-11239
High-dielectric ceramic composition.—73-04210
High-frequency dielectric constant of barium titanate.—73-16504
Humidity sensitivity of $La^{3+}$-doped $BaTiO_3$ semiconductor thin film deposited by pulsed excimer laser ablation.—73-01190
Hydrothermal $BaTiO_3$ films on silicon: morphological and chemical characterization.—73-10958
Impedance analyses of cooling-rate effects on the depletion layer of PTCR materials.—73-14972
Improvement of response speed of a $BaTiO_3$ self-pumped phase-conjugate mirror by crystal heating and beam focusing.—73-02618
Impurity-enhanced self-pumped phase conjugation in the near ir in "blue" $BaTiO_3$.—73-16513
Induced self-pumping phase conjugation in $BaTiO_3$.—73-08886

Influence on the grain-boundary interfacial trap levels in $(Ba_{0.76}Sr_{0.24})TiO_3$-based PTCR ceramics by oxidative annealing.—73-11275
Infrared reflectance spectra of doped $BaTi_4O_9$.—73-02296
Interaction between barium titanate and binary glasses.—73-05880
Joining of semiconductive $BaTiO_3$ with YBCO thick film and their interfaces.—73-15526
Junctions of Pr-Co-O thin films and semiconductive $BaTiO_3$ and their electrical properties.—73-15004
Low-fire X7R compositions.—73-11024
Measurement of charge transport parameter of photorefractive crystal barium strontium titanate $(Ba_{1-x}Sr_xTiO_3$, BST).—73-02642
Measurement of intensity-dependent absorption coefficient and transport parameter $\sigma\mu\tau$ in BST.—73-01240
Measurement of photorefractive coupling constant of $BaTiO_3$ using the varying interaction length method.—73-05064
Metallorganic resin derived barium titanate: II, Kinetics of $BaTiO_3$ formation.—73-16214
Microstructure and properties of $BaTiO_3$-Ni composite dielectrics.—73-07342
Noise reduction in image amplification in photorefractive $BaTiO_3$.—73-08928
Nonreducible dielectric ceramic composition.—73-04226
Nonreducing dielectric ceramic composition.—73-04858
Nonsteady-state photocurrent technique for the characterization of photorefractive $BaTiO_3$.—73-06265
Novel reaction path to $BaTiO_3$ by the oxidation of a solid metallic precursor.—73-04146
Optical study of domains in $Ba(Ti,Sn)O_3$ ceramics.—73-15273
Oriented barium titanate ceramics made from fiber-state powder.—73-16889
Parametric polarization of light in photorefractive $BaTiO_3$.—73-08943
Particle size effect of conductivity enhancement in $BaTiO_3$-dispersed AgI.—73-01006
Particle size effect on the room temperature structure of barium titanate.—73-12646
Perturbed-angular-correlation spectroscopy: evidence for probe-dopant interactions in Ca-doped barium titanate.—73-12648
Phase formation of $BaTiO_3$ thin films by sputtering.—73-13161
Photoelectrochemical effects of $BaTiO_3$ thin-film electrodes prepared by the sol-gel method.—73-10981
Photorefractive performances of 45°-cut $BaTiO_3$ crystals.—73-08953
Photorefractivity and related properties of $Ba_{0.984}Sr_{0.016}TiO_3$.—73-16567
Physicochemical control of $BaTiO_3$ powders and incidence on the quality of ceramic capacitors.—73-10982
Polyvinyl butyral [PVB] as a dispersant for barium titanate in a nonaqueous suspension.—73-16900
Preparation and dielectric properties of $BaTiO_3$-$Pb(Mg_{1/3}Nb_{2/3})O_3$ solid solutions.—73-16573
Preparation and dielectric properties of $BaTiO_3$-$Pb(Mg_{1/3}Nb_{2/3})O_3$.—73-05616
Preparation and optical properties of gold-dispersed $BaTiO_3$ thin films.—73-16574
Preparation and optical properties of transparent $TeO_2$-based glasses containing $BaTiO_3$ crystals.—73-03865
Preparation and optical properties of transparent $TeO_2$-based glasses containing $BaTiO_3$ crystals.—73-10472
Preparation of barium titanate particles by crystallization of glass.—73-02945
Preparation of $BaTiO_3$ films by CVD.—73-05969
Preparation of $BaTiO_3$ films by icp flash evaporation.—73-05970
Preparation of $BaTiO_3$ films by ICP flash evaporation.—73-16917
Preparation of monodispersed $BaTiO_3$ powders by hydrolysis of Ba/Ti bimetallic alkoxide.—73-02956
Preparation of monodispersed $BaTiO_3$ powders by hydrolysis of Ba/Ti bimetallic alkoxide.—73-13194
Preparation of porous $BaTiO_3$ PTC thermistors by adding graphite porosifiers.—73-15113
Preparation, microstructure, and ferroelectric properties of laser-deposited thin $BaTiO_3$ and lead zirconate titanate films.—73-11603
Production of barium titanate thin films.—73-15957
Production processes of positive temperature coefficient [PTC] $BaTiO_3$ ceramics.—73-15118
PTCR characteristics of semiconducting (Ba, Ca)$TiO_3$ ceramics fired in reducing-reoxidizing atmospheres.—73-15127
Raman spectroscopy of PTC $(Ba_{1-x}Sr_x)TiO_3$ ceramics.—73-05469
Reaction kinetics and grain growth behavior in $BaTiO_3$-$SrTiO_3$-$CaTiO_3$ ceramics.—73-17189
Reaction sintering and dielectric properties in the $BaTiO_3$-$CaZrO_3$-$TiO_2$ system.—73-13229
Recent developments in understanding grain-boundary electric and dielectric properties of PTCR barium titanate ceramics.—73-01298
Resistivity and permittivity for (Ba,Pb)$TiO_3$ PTCR ceramics.—73-15285
Role of porosity on PTCR characteristics of semiconducting [Y-doped] $BaTiO_3$ ceramics.—73-11425
Rotational invariant pattern recognition with the method of circular harmonics using a $BaTiO_3$ crystal.—73-08965
Semiconducting barium titanate ceramics prepared by boron-containing liquid-phase sintering.—73-04477
Sintering and dielectric properties of $BaTiO_3$-Ni composite ceramics.—73-04168
Sintering and dielectric properties of $BaTiO_3$-Ni composite ceramics.—73-10988
Sol-gel synthesis of barium titanate powders of various compositions.—73-13281
Solubility of lanthanum oxide in barium titanate.—73-02435
Stability and processing of aqueous $BaTiO_3$ suspension with polyacrylic acid [PAA]: effect of pH.—73-03026
Strength and fracture toughness of barium titanate ceramics.—73-13591
Structural change and sintering behavior of $BaTi_5O_{11}$ coating film derived from metal alkoxide.—73-09342
Structural change and sintering behavior of $BaTi_5O_{11}$ coating film derived from metal alkoxide.—73-17010
Structural properties of $BaTiO_3$ thin films on Si grown by metallorganic chemical vapor deposition.—73-01668
Structural study of epitaxial $BaTiO_3$ crystals.—73-08755
Structure of organometallic chemical vapor deposited $BaTiO_3$ thin films on $LaAlO_3$.—73-06291
Structures of the ferroelectric phases of barium titanate.—73-01435
Synthesis of $Ba_2Ti_9O_{20}$ by coprecipitation process and the effect of $ZrO_2$ addition.—73-17033
Synthesis of $BaTiO_3$ and ZnO varistor precursor powders by reaction spray pyrolysis.—73-11473
Synthesis of nanocrystalline materials of composite oxides based on $BaTiO_3$ by using stearic acid-sol method.—73-17042
Synthesis of single-crystal barium titanium isopropoxide complex to form barium titanate.—73-06097
Thickness of cubic surface phase on barium titanate single-crystalline grains.—73-12724
Transition of compensating defect mode in niobium-doped barium titanate.—73-06179
Transmissive effect in $BaTiO_3$ self-pumped phase conjugators.—73-09001
Two-wave coupling and self-pumped phase conjugation at near-ir wavelengths in $BaTiO_3$.—73-09003
Varistors based on *n*-$BaTiO_3$ ceramics.—73-07857
Wetting behavior of fresnoite and sphene on $BaTiO_3$ ceramics.—73-13464

**barium,**
Adsorption of sulfonic acid doped poly(vinyl chloride) on barium ferrite particles.—73-01448
Anion transport in $Ba_{0.5}Ce_{0.5}F_{2.5}$ single crystal with spatially oriented fluctuations of composition.—73-17072
Anionic vacancy distribution in reduced barium-lanthanum ferrites: $Ba_xLa_{1-x}FeO_{3-x/2}$ $(1/2 \le x \le 2/3)$.—73-03121
Anisotropy of thermopower and electric conductivity in single-crystal $EuBa_2Cu_3O$ at hydrostatic pressures up to 12 kbar.—73-07985
$BaBiO_{2.5}$: a new bismuth oxide with a layered structure.—73-02147
Bandwidth and beam quality of barium borate parametric oscillator synchronously pumped by an active-passive mode-locked Nd:YAG laser.—73-08812
Barium aluminosilicate glass-ceramics by a sol-gel route.—73-14329
Barium aluminosilicate glasses.—73-14534
Barium hexaaluminoferrites with new structural features.—73-01450
CDW suppression and photoinduced gap states in $BaBiO_3$.—73-02156
Coated metal article.—73-03676
Composition dependence of carrier concentration and conductivity in $(Ba_{1-x}Sr_x)PbO_{3-\delta}$ system.—73-08827
Content of oxygen and bismuth(V) in the double oxides of barium and bismuth.—73-01511
Continuous-wave sum-frequency generation near 194 nm with a collinear double enhancement cavity.—73-08830
Contributions to the dielectric constant of the system $BaLn_2Ti_4O_{12}$ from packing fraction and nephelauxetic ratio.—73-07290
Crystal chemistry and phase equilibrium studies of the $BaO(BaCO_3)\cdot 0.5R_2O_3$-$CuO_x$ systems in air: VI, R=neodymium.—73-16076
Crystal structure of $BaCuO_2$.—73-02190
Crystal-field phonon interaction and in-plane charge transfer in $NdBa_2Cu_3O_{7-\delta}$.—73-04691
Crystallization and formation of pressure-induced amorphous barium metaborate.—73-08589
Crystallization in a barium-containing magnesium aluminosilicate glass-ceramic—correction.—73-07113
Crystallization of sol-gel-derived barium aluminosilicate in a 2.45-GHz microwave field.—73-05725
Delta-H plot evaluation of remanence behavior in barium ferrite tapes and disks.—73-04603
Effect of $Al_2O_3$ and $Bi_2O_3$ on the formation mechanism of Sn-doped $Ba_2Ti_9O_{20}$.—73-08603
Effect of $BaWO_4$ on the microwave dielectric properties of $Ba(Mg_{1/3}Ta_{2/3})O_3$ ceramics.—73-07303
Effects of oxygen partial pressure and substrate temperature on the in situ growth of the $Ba_{1-x}Rb_xBiO_3$ films by laser ablation.—73-08046
Electrical conduction in $BaBiO_{3-x}$ at high temperatures.—73-02596
Electronic structures of $BaB_2O_4$ and $LiB_3O_5$.—73-02609
Emission life and surface analysis of barium-impregnated thermionic cathodes.—73-10945
Energy distribution of gaps in $GdBa_2Cu_3O_7$.—73-08057
Enhanced surface crystallization of ß-barium borate [BBO] on glass due to ultrasonic treatment.—73-03839
Erasure and noise study in barium ferrite tape media.—73-04610
Evaluation of strength and edge flaw severity of barium borosilicate glass substrate by thermal downshock testing.—73-03788
Evaluation of strength and edge flaw severity of barium borosilicate glass substrate by thermal downshock testing.—73-14183
Evidence for new phases in Ln-doped $La_{1.875}Ba_{0.125}CuO_4$ (Ln=Nd, Sm).—73-08620
Fabrication of $Ba_{1-x}K_xBiO_3$ superconductors [$T_c$=28.5 K] prepared by the plasma-arch melting and rapid quenching method.—73-01548
Features of cation distribution in aluminum-substituted barium hexaferrites.—73-16147
Ferroelectric aluminotitanobarium materials with modifying additives.—73-01411
Ferroelectricity in barium sodium tantalate [BNT], $Ba_2NaTa_5O_{15}$.—73-07890
Formation and decomposition of $BaCuO_{2.5}$ prepared from a mixture of nitrates.—73-02831
Formation of solid solutions of $Bi_2Sr_{2-x}Ba_xCa_{1-y}Nd_yCu_2O_{8+\delta}$.—73-15481
Frequency dependence of the ferromagnetic resonance linewidth and effective linewidth in manganese-substituted single-crystal barium ferrite.—73-01463
Giant suppression of flux-flow resistivity in heavy-ion-irradiated $Tl_2Ba_2Ca_2Cu_3O_{10}$ films: influence of linear defects on vortex transport.—73-09408
Granulation of barium ferrite in the fluidized bed.—73-11656
Growth and characterization of ferroelectric $BaMgF_4$ films.—73-01416
Growth of $DyBa_2Cu_3O_{7-x}$ thin films on vicinal (100)$SrTiO_3$ substrates.—73-06224
High-efficiency, high-power-difference frequency generation of 0.9–1.5-µm light in BBO (ß-$BaB_2O_4$).—73-08879
High-field effective linewidth and eddy current losses in moderate conductivity single-crystal M-type barium hexagonal ferrite disks at 10–60 GHz.—73-07938
Hot-pressing and high-temperature mechanical properties of $BaAl_2Si_2O_8$ (BAS) and $SrAl_2Si_2O_8$ (SAS).—73-09614
Incommensurate-commensurate phase transition of $BaZnGeO_4$ studied by electron microscopy and diffraction.—73-12601
Influence of $Nd_2O_3$ doping on the reaction process and sintering behavior of $BaCeO_3$ ceramics.—73-16837
Irreversible phenomena in the absorption of electromagnetic field in HTSC plates.—73-08117
Long-wavelength infrared spectra of $Bi_2Sr_2Ca_{0.6}Ba_{0.4}Cu_1{}_9O_x$ in the glassy and crystalline (superconducting) states.—73-01588
Luminescence and nonlinear optical properties of barium fluoromolybdate $(Ba_2MoO_3F_4)$.—73-05589
Luminescence in the pentaborate $LiBa_2B_5O_{10}$.—73-02630
Magnesium location in the barium-magnesium-iron Y-type hexagonal ferrite.—73-07947
Magnetic encoder having a magnetic recording medium containing barium ferrite.—73-11675
Magnetic ordering of $Dy^{3+}$ sublattice in tetragonal single crystal $DyBa_2Cu_3O_{6.2}$.—73-16206
Magnetic structure of $Ho_2BaNiO_5$.—73-07957
Mechanical properties of barium-mica-containing glass-ceramics.—73-00513
Mechanism of introduction of yttrium ions into barium cuprates, $Ba_2Cu_3O_x$.—73-01602
Method for investigating the reversal properties of isolated barium ferrite fine particles utilizing magnetic force microscopy (MFM).—73-05066
Microstructure and microwave characteristics of $Ba\{(Mg,Co)_{1/3}Nb_{2/3}\}O_3$-based dielectrics.—73-00995
Modulation structures and new type of twin boundary in Bi-Sr-Cu-O system doped with Ba.—73-11840
Mossbauer spectroscopic studies of glass-ceramics with hexagonal barium and strontium ferrites.—73-00669
New barium titanium(III) pyrophosphate: $BaTi_2(P_2O_7)_2$.—73-02349
Novel $R_2Ba_{1.25}NiO_{5.25}$ (R=Tm, Yb, Lu) structure type.—73-02363
Oxide superconductor Bi-Sr-Ca-Mg-Ba-Cu-O.—73-01727
Oxide superconductor comprising $BaBO_3$ (where B is Zr, Sn, Ce, or Ti).—73-01728
Physical properties of a new barium niobium sulfide, $BaNb_2S_5$.—73-02668
Polar-oriented crystallization of fresnoite $(Ba_2TiSi_2O_8)$ on glass surface due to ultrasonic treatment with suspensions.—73-14072
Powerful femtosecond pulse generation by chirped and stretched pulse parametric amplification in BBO crystals.—73-08956
Preparation and characterization of radio-frequency-sputtered $Ba_2Si_2TiO_8$ thin films.—73-07911
Preparation and characterization of thin films of M-type barium ferrite on microcrystalline carbon substrates with diffusion barrier sublayers.—73-04636
Preparation and crystal structures of new barium zirconium sulfides, $Ba_2ZrS_4$ and $Ba_4Zr_2S_7$.—73-02400
Preparation of metal-substituted hexagonal barium ferrite with organic precipitant method.—73-05975
Principles involved in the formation of solid solutions of glass-ceramics in the strontium-barium system.—73-09275
Processes of magnetron dusting of films of yttrium-barium ceramics of composition 123, 247, and 124.—73-11875
Properties of epitaxial Ba hexaferrite thin films on *A*-, *R*-, and *C*-plane-oriented sapphire substrates.—73-04642
Properties of large area $ErBa_2Cu_3O_{7-x}$ thin films deposited by ionized cluster beams.—73-01642
Protonic and oxide ionic conduction in $BaCeO_3$-based ceramics: effect of partial substitution for Ba in $BaCe_{0.9}Nd_{0.1}O_{3-\alpha}$ with Ca.—73-04156
Radiation defects and thermoluminescence of barium fluoride.—73-16582
Raman spectroscopy of $BaRuO_3$.—73-05468
Raman study of both phases of $BaB_2O_4$.—73-08719
Recording characteristics of acicular barium ferrite particulate medium with perpendicular magnetic anisotropy.—73-04645
Rubidium beam flux dependence of film properties of $Ba_{1-x}Rb_xBiO_3$ deposited by molecular beam epitaxy using distilled ozone.—73-13243
Secondary ion mass spectrometric analysis of anisotropic oxygen self-diffusion in barium hexaaluminate single crystals.—73-13367
Signature of linear (Bulaevskii-Ginzburg) domain walls near $T_c$ of Ba hexaferrite.—73-04650

Stable three-frequency quasi-periodicity in conductivity oscillations of BSN crystals.—73-16600
Structural and magnetic studies on $PrBa_2Cu_2NbO_{8-y}$.—73-08745
Structural properties of rf-magnetron-sputtered $Ba_{1-x}Sr_xTiO_3$ thin film.—73-13451
Structure and chemistry of $Ba_{0.6}K_{0.4}BiO_y$ at high temperatures.—73-02458
Superconducting properties of Ba-doped (Bi,Pb) 2223 tapes.—73-01675
Superconductivity of the Ba-doped $Bi_2Pb_2Sr_2Ca_2Cu_3O_y$ system.—73-04816
Synthesis and characterization of perovskite-type $BaTl_{0.5}Sb_{0.5}O_3$ and $BaTl_{0.5+x}Sb_{0.5-x}O_{3-x}$.—73-01340
Synthesis of barium hexaferrite superfine powder by means of the glass crystallization technique.—73-03042
Synthesis of nanosized barium ferrite particles using an inorganic dispersing phase.—73-04659
Temperature dependence of corrosion of refractories in barium borosilicate glass melts.—73-07225
Terrace structures in $DyBa_2Cu_3O_{7-x}$ grown in a magnetic field.—73-03208
Thin films of barium ferrite with perpendicular magnetic anisotropy produced by laser ablation deposition.—73-01483
Transport properties of $Ba_{1-x}K_xBiO_3$ single crystals.—73-09425
Tunneling studies of $BaPb_{0.75}Bi_{0.25}O_3$.—73-12903
Vibrational study of $R_3BaNiO_5$ (R=Y, Ho, Er, or Tm), $NiO_6$ 1-D chains, and $Tm_2BaNiO_5$ pyramids.—73-08790
Weak ferromagnetism in $BaIrO_3$.—73-07982

**barriers,**
Compatibility of cathodic protection systems with bentonite containment barriers.—73-17217
Diffusion barrier properties of TiN films for submicron silicon bipolar technologies.—73-11140
Effect of interface states on applied voltage dependence of double Schottky barrier: I, Theoretical calculation.—73-16460
Photosensitivity of surface-barrier InP structures with microrelief interface.—73-15101
Superposed multiquantum barriers for InGaAlP heterojunctions.—73-01332

**basalt,**
Application of basalts in ceramic glazes: III, Influence of addition of $B_2O_3$/sodium feldspar mixtures.—73-14643
Basalt-block heat-storage plant.—73-12315
Behavior of basalt fibers in high alumina cement matrix.—73-00028
Characterization and electrical properties of some materials obtained from natural beach sand of the Canary Islands.—73-15897
Effect of chlorides and fluorides on leaching of basalt fibers. Features of formation of porous structure in hydrothermal conditions.—73-16455
Features of leaching and sorption-structural properties of basalt fibers.—73-16497
Glass-ceramics from altered basalt-clay mixtures.—73-14396
Immobilization of simulated high level nuclear wastes with tholeiite-type basalt.—73-04891
Immobilization of simulated high-level nuclear wastes [HLNW's] with tholeiite-type basalt.—73-15701
Nucleation and crystallization mechanism of glasses obtained from Canarian basaltic rocks.—73-14444
Strength properties of basalt fibers.—73-00548
Volume stability of escolaite materials corroded by basalt melt.—73-04026

**basic,**
Acid/base properties of oxide, oxide glass, and glass-ceramic surfaces.—73-02549
Methylbutenol: a new and simple diagnostic tool for acidic and basic sites of solids.—73-01915

**batch,**
Batch composition for unfired bricks.—73-09826
Batch formula for saving energy and increasing production of tunnel kiln.—73-10800
Batch handling for glass furnaces.—73-14330
Batch treatment plant for container glass.—73-07109
Chemical, phase, and enthalpy balance of changes in the preheated batch for Eutal glass: I, Determination of the mass balance of the escape of gas reaction products.—73-00595
Chemical, phase, and enthalpy balance of changes in the preheated batch for Eutal glass: II, Determination of phase and enthalpy changes.—73-00596
Complete [glass] batch house concept.—73-00600
General algorithm for calculating batches in the ceramic industry.—73-08339
Glass batch charger having seals which prevents accumulation of batch.—73-04973
Heating process of glass batch.—73-14402
How to implement microingredient batching.—73-08342
In situ replaceable pusher bar for a batch charger pan.—73-01857
Melting behavior of batch blanket in glass-melting tanks.—73-14424
Method of feeding glass batch to a glass-melting furnace.—73-00745
Minimizing glass batch costs through linear programming.—73-07152
Nested process controls for a critical process with large batch size.—73-08352
Physicochemical characteristics of the hydroxopolymer method of synthesizing glass batches of multicomponent compositions.—73-00679
Problem-free batch plant for Finnish fibermaker.—73-14479
Programmable logic takes control [for glass batch plant].—73-01822
South Korean installation.—73-14499
Spanish batch plant success.—73-00704
Step-by-step approach to batch house automation.—73-01831
Thermal behavior of glass batch on batch heating.—73-03895

**batteries,**
Characteristics of heat-treated polyparaphenylene (PPP) at 973 K as an anode of lithium battery.—73-10920
Ion-conducting glasses—potential solid electrolytes for dry cell batteries.—73-00983
Materials for electrochemical energy conversion and storage systems.—73-07337
Performance characteristics of silver cerium vanadate batteries.—73-07349
Recharging ceramics.—73-10986
Safe, economic lithium metal-free rechargeable batteries.—73-14729

**bauxite,**
Bauxite processing.—73-12309
Bauxite.—73-12258
Development of reinforced porcelain using high-alumina bauxite.—73-07244
Effects of caustic concentration and bauxite composition on economics of Bayer alumina plants.—73-15722
Introduction of bauxite into batch formula of porcelain body.—73-10860
Method of making ceramic microspheres.—73-02051
New high-quality Chinese bauxite.—73-12289
Reactive sintering of zircon and alumina/bauxite.—73-09505
Strength development of bauxite-based ultralow-cement castables.—73-10771

**bearings,**
Comet-shaped carbides in the uppermost surface layer of bearings.—73-05372
Composite bearing structure.—73-12452
Crack detection in ceramic bearings by acoustic emission [AE] signals.—73-09553
Improved superconducting magnetic rotary bearings.—73-11795
Levitation pressure and stiffness of a high-$T_c$ superconducting bearing in field-cooling process.—73-01586
Method for manufacturing a diamond thrust bearing.—73-05312
Proof about molecular bearings.—73-16575
Roller body, method of its manufacture, and of [coated ceramic] roller or plain bearings.—73-16015
Superconducting coil bearings for rotor load.—73-04873

**belite,**
Active belite cement.—73-09805
Belite cement from barium-containing byproduct.—73-09830
Crystal structure and hydration of belite.—73-09876
Development of aluminobelitic colored clinkers.—73-09889
Effect of Al/Fe ratio in belite on the microtexture induced by the remelting reaction.—73-16115
Effect of $SO_3$ and MgO on phase relations and crystal chemical state of phases in belite–aluminoferrite clinkers.—73-09917
Heat of hydration and strength development of alite–belite–blast-furnace slag composite.—73-09980
Heat of hydration and strength development of alite–belite–blast-furnace slag composite.—73-09981
Industrial tests of belite clinker production and evaluation of properties of cements obtained with this clinker.—73-10000
Kinetics of the radiation-thermal $C_2S$ [dicalcium silicate] synthesis.—73-10024
Microtextures formed by the remelting reaction in belite crystals.—73-03178
Orientation of coherent interphase boundaries formed by the $\alpha$-to-$\alpha'_H$ phase transition in belite crystals.—73-08683
Properties of concrete using low-heat cement containing large amount of belite.—73-10110
Relationship between zonal structure in alite, lamellar texture in belite, and their production process, composition, and crystal structure.—73-10137
White belitic portland cements.—73-06732

**belt,**
New developments in belt conveyor systems.—73-12048

**bending,**
Alternating bending load behavior of unidirectionally fiber-reinforced glasses.—73-03774
Anomalous band bending in metal/InP interface formation.—73-01077
Behavior of mirrorlike region of sintered $Si_3N_4$ under rotary bending and static fatigue.—73-06328
Bending glass sheets.—73-04959
Continuous furnace for heating glass panes to bending and/or toughening temperature.—73-12248
Device for bending glass sheets using fluid barrier.—73-12075
Effects of edge effects on sheet glass bending strength.—73-00470
Making bent chilled items.—73-00655
Method and apparatus for controlling the temperature of glass sheets in press bending.—73-10641
Method for bending and tempering a glass sheet.—73-00740
Process and device for the production of curved glass sheets.—73-00755

**beneficiation,**
Beneficiation of calcium borate minerals.—73-01847
Ceramics from wastes of fluorite beneficiation mills.—73-00898
Introducing separate beneficiation technology for magnesites at the Magnezit Combine.—73-01794
Testing the beneficiation capacity of Vietnam sillimanite-kyanite ores.—73-01998

**bentonite,**
Application of bentonite to building paint.—73-12256
Compatibility of cathodic protection systems with bentonite containment barriers.—73-17217
Modified bentonite.—73-05150
Setting of spheres in clay suspensions.—73-13251

**beryllia,**
Beryllia.—73-12259
Beryllium mineral paragenesis in the beryllia/water chemical potential diagram.—73-16037
Diamond grown on single-crystal beryllium oxide.—73-03129
Ground state parameters of *F* center in BeO.—73-16162
Influence of manufacturing conditions on the characteristics of SiC ceramics with addition of BeO.—73-02869
Raman scattering [RS] of light by surface polaritons [SP's] coherently excited on a rippled BeO crystal.—73-12667
Using SPC for the dry pressing of beryllia parts.—73-04183

**beryllium,**
Be diffusion at the emitter-base junction of graded AlInAs/GaInAs heterojunction bipolar transistors.—73-07389
Characteristics of heavily Be-doped GaAs layers grown by molecular beam epitaxy.—73-11098
Distributions of the concentrations of shallow and deep charged centers in the InP layers doped by implantation of Be ions.—73-04284
Electrical and thermal conductivity of AlN ceramics doped with beryllium and oxygen.—73-08851
Enhanced radiative adsorption of thin, heavily beryllium-doped GaAs films.—73-04319
Infrared studies of Be-doped GaAs grown by molecular beam epitaxy at low temperatures [LT].—73-14991
Phase diagram of the subsolidus region of the quasi-binary system $BeAl_2O_4$-($BeFe_2O_3$).—73-16247
Scintillation and thermoluminescence properties of beryllium phosphate glasses containing cerium.—73-00543
Thermal characteristics of alexandrite fluorescence decay at high temperatures, induced by a visible laser diode emission.—73-02704

**binders/binding,**
Binder degradation and redistribution during pyrolysis of ceramic injection moldings.—73-09023
Binder distribution in macro-defect-free cements: relation between percolative properties and moisture absorption kinetics—correction.—73-06628
Binders for forming a ceramic sheet and applications thereof.—73-01848
Binding and plasticizing agent for preparing carbon-containing, refractory, ceramic materials, and material prepared therewith.—73-14633
Ceramic binder and use thereof.—73-04961
Ceramic/distillable binder compositions.—73-12350
Chloride binding capacity [CBC] and binding isotherms of OPC [ordinary portland cement] pastes and mortars.—73-00037
Debinding of ceramics.—73-02762
Development and evaluation of binders for high-strength concrete.—73-09887
Direct observation of preceramic and organic binder decomposition in 2-D model microstructure.—73-13388
Effect of functionalities of binders on rheological behavior of alumina suspensions and properties of green sheets.—73-16726
Ethylene oxide/propylene oxide block copolymers as green binders for ceramics.—73-15942
Examination of the durability of anhydrite binder activated with portland cement and potassium sulfate.—73-09954
Features of the preparation and transport of concrete mixes in modern binders.—73-13723
Fibrous glass binders.—73-14537
Gas concrete products with lime-containing binder based on solid wastes of soda industry.—73-00096
Guanidine-based vehicle/binders for use with oxides, metals, and ceramics.—73-04978
Hardening processes for some refractory binding systems—kinetic considerations and mechanisms.—73-14593
Heat treatment of resin-bonded refractories in an atmosphere of volatilization and decomposition products of the binder.—73-04006
Heat-resistant compositions based on a three-component binder suspension.—73-10733
High-efficiency cementless binders made of ash and slag wastes of thermal power stations and concretes based on them.—73-00100
High-strength alkali-steel–iron-slag binder.—73-13729
Hydraulic binders based on condensed silica fume and slaked lime.—73-13732
Hydromechanical activation of binder hardening.—73-13733
Influence of various hydraulic binders on performance of very low porosity cementitious systems.—73-03490
Intensive separating technology for the production of concretes with a filled lime binder.—73-13742
Method of extracting binders by rubber pressing method.—73-02894
Method of extracting binders by rubber pressing method.—73-13134
Minimization of binder content for production of injection-molded aluminum nitride parts.—73-09211
New binder program for spray-dried and pressed technical ceramics.—73-04931
New technique for economical manufacture of cement-based binders.—73-13757
Polyethylene glycol [PEG] binders for advanced ceramics.—73-09247
Polysaccharide-based additives in plaster binders.—73-10084
Preliminary organic binder removal from castings.—73-01817
Principles of the determination of concrete composition based on binders with low water consumption.—73-13766

Production of binding materials using coal gangue.—73-10102
Production technology of binders made of phosphogypsum.—73-13768
Progress in the development of binders: I, The process.—73-13220
Removal of polymethyl methacrylate binder from alumina using conventional and/or microwave heating.—73-06019
Rheological properties of plastic aluminum nitride mixes containing anhydrous binders.—73-02999
Tribochemical aspects of producing binders for refractory coatings.—73-00881
Using sulfite waste lye as binder for architectural pottery.—73-09797

**bioceramics,**
Antimicrobial ceramics.—73-05154
Apatite coating on organic polymers by a biomimetic process.—73-16656
Applications of ion-implanted glasses for biomedical uses.—73-03708
Applications of porous bioceramics in surgery.—73-15918
Bioactive glass-ceramic containing anothite and diopside crystals.—73-13929
Bioactive glasses.—73-03709
Bioactivity of $Fe_2O_3$-containing CaO-$SiO_2$ glasses: in vitro evaluation.—73-14136
Bioceramics: elaboration and properties.—73-12541
Bioglass-ceramics in medicine.—73-14331
Bioinert $Al_2O_3$ ceramics for medical purposes.—73-05157
Bone induction method.—73-12341
Calcium phosphate ceramics as biomaterials.—73-12316
Carbofilm: present and future applications in biomedical devices.—73-08526
Carbon materials in medicine.—73-08527
Ceramic filter: synthesis and applications for bioseparation.—73-12319
Ceramics for cancer treatments.—73-03710
Chemical interaction of bioactive glass-ceramics with a simulated body fluid.—73-03713
Clinical applications of calcium phosphate biomaterials: a review.—73-08507
Composite materials in medicine.—73-05164
Controlling bioactive glass-ceramic crystal structure by thermal radiation.—73-07112
Development of artificial biological glass-ceramic bones.—73-14348
Development of new biomagnetic materials.—73-15313
Drug-impregnated ceramic.—73-15941
Dynamic fatigue of beta tricalcium phosphate bioceramics.—73-09572
Effect of annealing of vials on glass-dust contamination of medical preparations.—73-07123
Effects of Al/P composition ratio on the crystallization of MgO-CaO-$Al_2O_3$-$SiO_2$-$P_2O_5$ bioglass-ceramic system—[comment].—73-14366
Effects of Al/P composition ratio on the crystallization of MgO-CaO-$Al_2O_3$-$SiO_2$-$P_2O_5$ bioglass-ceramic system—[reply to comment].—73-14367
Effects of Al/P composition ratio on the crystallization of MgO-CaO-$Al_2O_3$-$SiO_2$-$P_2O_5$ bioglass-ceramic system.—73-13970
ESCA study of the surface layers on bioactive glass after the interaction with simulated body fluid.—73-13980
Evolution of total hip prostheses.—73-09715
General aspects of biotechnological ceramics.—73-05169
Glass fibers with improved biological compatibility.—73-14540
Implant tracking, surveillance, and retrieval.—73-03396
In vitro investigations of implant material solubility.—73-17224
Influence of modifying additions on the crystallization of bioactive glasses containing apatite, wollastonite, and $AlPO_4$.—73-14411
Insert for identifying an implantable ceramic joint head.—73-02045
Ion implantation for biomaterials.—73-10244
Medical applications of calcium phosphate bioceramics.—73-02015
Medical ceramics based on hydroxyapatite.—73-02016
Nanoparticulate drug delivery system.—73-16546
New developments in bioceramics.—73-05175
Novel bioactive materials derived from glasses.—73-14443
Phosphate glass cement.—73-12392
Porous glass carrier for DNA synthesis.—73-03752
Porous glass carrier for immobilization of brewer's yeast.—73-03753
Preparation and magnetic properties of Ca-P-Si-FeO-O glass-ceramics.—73-15359
Preparation of calcium phosphate fibers for applications to biomedical fields.—73-10577
Properties of ceramic implants for stomatology.—73-08522
Recent progress in glass-based materials for biomedical applications.—73-00540
Resorbable bioactive phosphate-containing cements.—73-05243
Wear and friction properties of prosthetic joint materials evaluated on a reciprocating pin-on-flat apparatus.—73-09692
Zeolite compositions.—73-05253

**birefringence,**
Characterization of stress in semiconductor wafers using birefringence measurements.—73-07411
Circular birefringence in zinc-blende-type semiconductors.—73-14808
Magnetoreflection of birefringent crystals.—73-16534
Nature of the birefringence of microporous glasses.—73-00520

**bismuth oxide,**
$BaBiO_{2.5}$: a new bismuth oxide with a layered structure.—73-02147
$Bi_2O_3$-$Sb_2O_3$ binary system.—73-11694
Characterization of insulating boundary layers of BL [barrier layer] capacitors.—73-07287
Composition for metallizing ceramics.—73-03680
Conduction properties of grain boundary in $SrTiO_3$-$Bi_2O_3$ capacitors.—73-00940
Conduction properties of grain boundary in $SrTiO_3$-$Bi_2O_3$ capacitors.—73-10926
Correlation of the electrical and optical properties of thin films of $V_2O_5$-$Bi_2O_3$.—73-12761
Crystal chemistry underlying ferroelectricity in $Bi_4Ti_3O_{12}$, $Bi_3TiNbO_9$, and $Bi_2WO_6$.—73-01397
Dc conductivity and hopping mechanism in $Bi_2O_3$-$B_2O_3$ glasses.—73-10427
Determination of crystal structure of $Bi_2Cd_4O_7$ by powder roentgenography technique.—73-16107
Dielectric properties of some compounds with mixed bismuth oxide layer structure derived from $Bi_7Ti_4NbO_{21}$.—73-12766
Effect of $Bi_2O_3$ on dielectric properties and temperature characteristics of $[BaTiO_3]_{0.9}$+[$BaZrO_3$, $SnO_2$, $La_2O_3$, $ZrO_2$]$_{0.1}$.—73-10935
Effect of bismuth oxide addition on the electrical properties of zirconia magnesia solid electrolytes.—73-07304
Effect of heat treatment on the magnetic properties of a rapidly quenched ZnO-$Bi_2O_3$-$Fe_2O_3$ system.—73-15316
Electrical behavior of the $MnO_2$-doped ZnO-$Bi_2O_3$ system.—73-16473
Electrical conduction in $BaBiO_{3-x}$ at high temperatures.—73-02596
Electrical conductivity of $V_2O_5$-$Bi_2O_3$-$TeO_2$ glasses.—73-04305
Electrical conductivity of $V_2O_5$-$Bi_2O_3$-$TeO_2$ glasses.—73-14173
EXAFS investigation of the coordination state of germanium in $xBi_2O_3$-(100–$x$)$GeO_2$ glasses.—73-06915
Experimental effects of light intensity modulation on the recording and erasure of holographic gratings in BSO crystals.—73-16495
Fabrication of $Ba_{1-x}K_xBiO_3$ superconductors [$T_c$=28.5 K] prepared by the plasma-arch melting and rapid quenching method.—73-01548
Fracture toughness of doped bismuth oxide electrolytes.—73-09602
High-frequency terminal resonance in ZnO-$Bi_2O_3$-based varistors.—73-11244
High-temperature superconductivity in $BaPb_{1-x}Bi_xO_3$ system.—73-15503
Holographic characteristics of doped BTO crystals.—73-16508
Low-fire Bi-based dielectric ceramics for microwave use.—73-07334
Low-temperature [20-K] ir reflection spectra of $Bi_{12}SiO_{20}$ crystals.—73-16201
Massive transformation in the $Y_2O_3$-$Bi_2O_3$ system.—73-12625
Method for forming a Bi-containing superconducting oxide film on a substrate with a buffer layer of $Bi_2O_3$.—73-04844
Method of preparing bismuth oxide superconductor comprising heating under a reduced pressure.—73-01721
Microanalytical determination of ZnO solidus and liquidus boundaries in the ZnO-$Bi_2O_3$ system.—73-12630
Phase equilibria and crystal chemistry in portions of the system SrO-CaO-1/2$Bi_2O_3$-CuO: V, The system SrO-CaO-1/2$Bi_2O_3$.—73-16248
Polarization state evolution and eigenmode switching in photorefractive BSO.—73-16571
Real-time holographic photoelasticity using BSO.—73-05082
Reflection holographic gratings in [111] but $Bi_{12}TiO_{20}$ crystal for real-time interferometry.—73-12875
Rubidium beam flux dependence of film properties of $Ba_{1-x}Rb_xBiO_3$ deposited by molecular beam epitaxy using distilled ozone.—73-13243
Series of "infinitely adaptive phases" in the $Bi_2O_3$-$TeO_2$ system.—73-02427
Stable and metastable phase relations in the system $Bi_2O_3$-$SiO_2$.—73-02445
Structural change due to thermal treatment and dielectric properties of anodic oxide films of bismuth.—73-08747
Superconducting $Ba_{1-x}K_xBiO_3$ thin films and junctions.—73-11913
Thermoelectric power studies of bismuth oxides and mixed oxides based on bismuth oxides.—73-12898
Thresholding of two facing double phase conjugate mirror and semilinear phase conjugate mirror with fanning in BTO [$Bi_{12}TiO_{20}$].—73-08999
Traps and recombination centers in pure and Co-doped $Bi_{12}SiO_{20}$ crystals.—73-16643
Using internal friction technique to study defects in [pure and] Cr- and Al-doped $Bi_{12}SiO_{20}$ [single crystals].—73-17106

**bismuth strontium calcium copper oxide (Bi-Sr-Ca-Cu-O),**
$J_c$ and flux pinning of Ag-sheathed Bi(2223) tape at 15–77 K.—73-04750
(Nb,Ti)$_3$Sn superconducting magnet operated at 11 K in vacuum using high-$T_c$ (Bi, Pb)$_2Sr_2Ca_2Cu_3O_{10}$ current leads.—73-15562
110-K $Bi_2Sr_2Ca_2Cu_3O_x$ superconductors by Pb and Sb doping.—73-04780
45° grain-boundary junctions in (001)-oriented BiSrCaCuO films.—73-15483
Ac conductivity in $Bi_4Sr_3Ca_3Cu_4O_x$ (y=0–5) and $Bi_4Sr_3Ca_{3-z}Li_zCu_4O_x$ (z=0.1–1) semiconducting oxide glasses.—73-07984
Alternating current susceptibility of $Bi_2Sr_2CaCu_2O_x$ single crystal in dc magnetic field up to 4 T.—73-11684
Anisotropic changes induced by ion irradiation on Bi-based high-$T_c$ superconductors.—73-15386
Anisotropy of the electronic states around Cu in $Bi_2Sr_2CaCu_2O_{8+y}$.—73-05356
Annealing effect on critical temperature and resistivity of (Bi,Pb)$_2Sr_2Ca_2Cu_3O_x$ superconductor irradiated by Co-60 gamma rays.—73-11689
Annealing effects on $T_c$ in $Bi_2Sr_2Ca_{0.9}Y_{0.1}Cu_2O_{8+\delta}$ system.—73-01493
Anomalous behavior of the flux line lattice of vibrating high-$T_c$ superconductors at 30 K in magnetic fields parallel to the $CuO_2$ planes.—73-15389
Anomalous voltage drop on the *V-I* characteristics of Bi(2223)/Ag-sheathed tapes.—73-15392
Anomalously large gap anisotropy in the *a-b* plane of $Bi_2Sr_2CaCu_2O_{8+\delta}$.—73-15393
Atomic layer control of the growth of oxide superconductors using laser molecular beam epitaxy.—73-04674
Atomic resolution scanning tunneling spectroscopic studies of $Bi_2Sr_2CaCu_2O_y$ single crystals.—73-05361
Behavior of ac susceptibility of YBCO and BSCCO superconductors in dc magnetic fields.—73-11693
Bi-Sr-Ca-Cu-(Al)-O system; accompanying phases: I.—73-11695
Bi-Sr-Ca-Cu-O superconducting films by plasma sputtering of nanocrystalline compound targets.—73-04676
Bismuth-containing superconducting material and process for producing it.—73-04831
Brownian motion of vortex-antivortex excitations in very thin films of $Bi_2Sr_2CaCu_2O_8$.—73-07994
Changes in diamagnetic susceptibility and critical current of $Bi_{1.6}Pb_{0.4}Sr_2Ca_2Cu_3O_x$ caused by mechanical stresses.—73-07995
Characteristics of the bulk made of the Ag-coated powders of Bi systems.—73-01500
Characterization of lead-free 2212 phase of Bi superconductor with $T_c$ of 93 K.—73-04679
Chemical and mechanical stability of the Ba-added high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O system.—73-01504
Chemical and mechanical stability of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O system: IV, Formation of the high-$T_c$ phase in amorphous powder prepared by mechanical grinding.—73-01505
Chemical reactivity of YBCO and Bi(Pb)SrCaCuO superconductors in water.—73-15399
Circular dichroism microspectroscopy: evidence of broken symmetries in high-$T_c$ superconducting films.—73-08000
Comparative study of the synthesis techniques to obtain high-$T_c$ single phase in bismuth-based superconductors.—73-01508
Contact resistance and *I-V* characteristics in an Ag-doped Bi-Sr-Ca-Cu-O superconductor.—73-01510
Coordination and the bond valence sums in modulated $Bi_2(Sr,Ca)_2Cu_2O_{8+y}$.—73-01512
Critical current density of high-quality $Bi_2Sr_2Ca_2Cu_3O_x$ thin films prepared by metallorganic chemical vapor deposition.—73-11711
Critical fluctuations in the thermodynamics of quasi-2-D type II superconductors.—73-08012
Critical state of the weakly coupled 2-D superconductor $Bi_2Sr_2CaCu_2O_8$.—73-11714
Crystallization and stability of the $Bi_2Sr_2CaCu_2O_x$ superconductor.—73-11718
Current and angular-dependent transport in the mixed state of $Bi_2Sr_2Ca-Cu_2O_{8+\delta}$.—73-15409
CVD method for forming Bi-containing oxide superconducting films.—73-11950
Delamination and oriented molding of the Bi(Pb)-Sr-Ca-Cu-O system for higher critical current density.—73-08016
Densification of $Bi_{1.8}(Pb)_{0.35}$ $Sr_{1.9}Ca_{2.1}Cu_3O_x$ and texture development through sinter-forging.—73-11722
Densification of Bi-Pb-Sr-Ca-Cu-O bulk superconductor by hot-press sintering and critical current density.—73-11723
Densification of Bi-Pb-Sr-Ca-Cu-O bulk superconductors by hot-press sintering and critical current density.—73-01516
Depinning of flux lines in $Bi_2Sr_2CaCu_2O_{8+y}$.—73-04694
Detection of optical radiation with bismuth-containing high-$T_c$ films.—73-01518
Determination of Cu(II) and Bi(III) in oxide systems based on Bi, Cu, Ca, and Sr by photometric titration by EDTA with pyrocatechol violet.—73-11724
Differential resistance and critical current distribution in Ag-clad (BiPb)$_2Sr_2Ca_2Cu_3O_{10+y}$ tape.—73-15418
Diffusion of sulfur, selenium, and bismuth in HTSC $YBa_2Cu_3O_{7-\delta}$ and ($Pb_xBi_{1-x}$)$_2Ca_2Sr_2Cu_3O_y$ ceramics.—73-03092
Dislocations in the Monte Carlo simulation of flux lattice melting in high-$T_c$ superconductors.—73-08022
Dissipation mechanisms at the resistivity transition of HTSC in a magnetic field.—73-08023
Dopants in high-$T_c$ superconductors from rapidly quenched $Bi_{1.6}Pb_{0.4}Ca_2Sr_2Cu_3O_x$ glasses.—73-08025
Early-stage microstructure development in Bi-Sr-Ca-Cu-O glasses.—73-01525
Effect of $^{58}$Ni ion irradiation on the resistivity of $Bi_{1.7}Pb_{0.35}Sr_2Ca_2Cu_3O_{10+x}$ at low ion fluence.—73-11728
Effect of $Ar_2$ annealing on properties of $Bi_2Sr_2CaCu_{1.2}Li_{0.8}O_x$.—73-11730
Effect of $Ca_2CuO_3$ on the formation of (2223) phase in the Bi-Pb-Sr-Ca-Cu-O system.—73-01526
Effect of $Ca_2PbO_4$ on the formation of the (2223) phase in the Bi-Pb-Sr-Ca-CuO system.—73-08028
Effect of Cu$^+$ content on properties of $Bi_2Sr_2CaCu_2O_x$ glass.—73-07015
Effect of $Cu^+/Cu^{2+}$ ratio on the thermal stability and crystallization in $Bi_2Sr_2CaCu_2O_x$ glass.—73-01527
Effect of fluorine doping on the electrical properties of $Bi_2Sr_2CaCu_2O_y$.—73-08031
Effect of $Ga_2O_3$ substitution on Bi-2212 superconductor.—73-01528
Effect of heat treatment conditions on $T_c$ and phase structure of 110-K superconductor in BiPbSrCaCuO system.—73-11732

Effect of high-energy ion irradiation and electron irradiation on textured $Bi_2Sr_2CaCu_2O_x$.—180-MeV $Cu^{11+}$ and $B^{11+}$ irradiations and 3-MeV electron irradiation.—73-08032

Effect of hydrogen on the electric resistivity of Bi-Sr-Ca-Cu-O superconductors at high temperature.—73-01530

Effect of impregnation of $ZrO_2$ on the chemical stability and the superconductivity of Y and Bi systems.—73-11733

Effect of irradiation with neutrons of low fluence on $T_c$ of $Bi_2Sr_2CaCu_2O_y$.—73-11734

Effect of Li addition to the low-$T_c$ phase in the Bi-Sr-Ca-Cu-O system: II.—73-01531

Effect of lithium oxide upon high-$T_c$ bismuth system superconductor (2223 phase).—73-08033

Effect of Sb additions on the formation of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O superconducting thick films.—73-08038

Effect of silver addition to the bismuth-lead-strontium-calcium-copper-oxygen superconductor: enhancement in critical current density.—73-08039

Effect of sintering time on the stabilization of the Bi-Pb-Sr-Ca-Cu-O superconducting phase.—73-04705

Effect of the cooling rate on superconductivity of Bi-system superconductor.—73-15435

Effect of thermal cycling on two-step enhanced superconducting transition in $Bi_{1.6}Pb_{0.4}Sr_2Ca_1Cu_2O_{8+x}$.—73-15436

Effect of water or organic solvent on $J_c$ or repress-formed superconductors in Bi(Pb) system.—73-15440

Effect of Y on the Ca and Sr planes in Y-doped $Bi_2Sr_2CaCu_2O_8$.—73-15441

Effects of carbon impurities in high-$T_c$ superconducting tapes using Auger electron spectroscopy.—73-04707

Effects of electron irradiation on the local structural change in oriented $Bi_2Sr_2CaCu_2O_x$ superconductors.—73-15443

Effects of oxygen on the melting and freezing of $Bi_2Sr_2Ca_1Cu_2O_{8+\delta}$.—73-11739

Effects of oxygen pressure and substrate temperature on the in situ grown BiSrCaCuO films by laser ablation.—73-11740

Effects of reducing and oxidizing thermal treatments on the transport critical current density in epitaxial $Bi_2Sr_{3-x}Ca_xCu_2O_{8+y}$ films.—73-01537

Effects of rolling process on the microstructural and superconducting properties of [Ag-sheathed] Bi-Pb-Sr-Ca-Cu-O tape.—73-11742

Effects of silver and lead on the phase stability of $Bi_2Sr_2Ca_1Cu_2O_{8+x}$ [Bi-2212] and $Bi_2Sr_2Ca_2Cu_3O_{10+x}$ [Bi-2223] above and below the solidus temperature.—73-15445

Effects of substitution of tin for copper in Bi-based compound.—73-04711

Effects of target presputtering on stoichiometry of sputtered Bi-Sr-Ca-Cu-O thin films.—73-09110

Electron scattering by $Bi_2Sr_2CaCu_2O_x$ single crystals.—73-15451

Electron-phonon coupling mechanism in $Bi_2Sr_2CaCu_2O_x$ by tunneling.—73-08053

Electronic band structure of $Bi_2Sr_2Ca_{1-x}Y_xCu_2O_x$ ($x$=0.4–1) determined by ir-induced intersite transition.—73-15452

Electronic properties of high-$T_c$ superconductors below and above the Fermi energy.—73-01540

Electronic structure of Bi-Sr-(Ca)-Cu-O systems.—73-05392

Enhanced flux-line pinning in $Bi_2Sr_2CaCu_2O_x$ by neutron irradiation and Li($n$, $^3T$)$\alpha$ reaction-induced charged-particle defects.—73-01543

Entropy of mixed state of the superconducting ceramic $Bi_2Sr_2Ca_2Cu_3O_x$.—73-15460

Evidence for flux-lattice melting and a dimensional crossover in single-crystal $Bi_{2.15}Sr_{1.85}CaCu_2O_{8+\delta}$ from muon spin rotation studies.—73-11751

Evidence in the elastic properties for a stress-related phase transition in the high-$T_c$ material: $Bi_2Sr_2CaCu_2O_x$.—73-08068

Excess conductivity studies in pure and Ag-doped 85-K phase in Bi-Sr-Ca-Cu-O system.—73-04719

Extra-Drude absorption and $T_c$ in superconducting cuprates.—73-08071

Fabrication and properties of superconducting wire formed by extruding method.—73-04722

Fabrication and properties of superconducting wire formed by extruding method.—73-11756

Fabrication of Bi (2223)/Ag tapes.—73-11758

Fabrication of $Bi_{1.7}Pb_{0.4}Sr_{1.6}Ca_{2.4}Cu_{3.6}O_y$ superconducting films on silver substrates by the electrophoretic deposition technique.—73-15467

Fabrication of Bi(Pb)-Sr-Ca-Cu-O superconducting thin films by rapid thermal annealing.—73-11759

Feasibility of a high-temperature bolometer based on $Bi_2Sr_2CaCu_2O_{8+x}$ superconducting films.—73-08078

Features of synthesis of Bi(Pb)-Sr-Ca-Cu-O superconductors via precursors.—73-01550

Field-induced 3-D to 2-D crossover of shield current path in $Bi_2Sr_2CaCu_2O_8$.—73-15472

FIM [field ion microscopy] investigation of high-temperature superconducting $Bi_2(Sr, Ca)_3Cu_2O_y$.—73-01552

Fluctuation conductivity and magnetoconductivity in 2/2/1/2-phase $Bi_2Sr_2CaCu_2O_{8+\delta}$ epitaxial films.—73-15473

Flux penetration in Bi(Pb)-Sr-Ca-Cu-O superconductor.—73-15476

Flux pinning characteristics in Bi-2212 single crystal.—73-15477

Flux-creep crossover and relaxation over surface barriers in $Bi_2Sr_2CaCu_2O_8$ crystals.—73-08871

Flux-line pinning of $Bi_2Sr_2Ca_1Cu_2O_x$ crystals: interplay of intrinsic 2-D behavior and irradiation-induced columnar defects.—73-08085

Formation and properties of copper film on Tl-(Pb, Bi)-Sr-Ca-Cu-O superconductor by electrodeposition from aqueous solution.—73-01555

Formation mechanism of superconducting crystals in Bi-Sr-Ca-Cu-O glasses.—73-15479

Formation of 2223 high-$T_c$ superconducting phase in the Bi-Sr-Ca-Cu-O system.—73-04728

Formation of 2223 phase in Bi-system superconductor containing Pb.—73-11767

Formation of Bi-Pb-Sr-Ca-Cu-O superconductor from precursors prepared by the citrate method.—73-15480

Formation of high-$T_c$ $Bi_{1.6}Pb_{0.4}Sr_2Ca_2(Cu_{0.9}Ti_{0.1})_3O_x$.—73-11770

Formation of solid solutions of $Bi_2Sr_{2-x}Ba_xCa_{1-y}Nd_yCu_2O_{8+\delta}$.—73-15481

Formation of the high-$T_c$ 2223 phase in Bi-Sr-Ca-Cu-O by seeding.—73-15677

Formation of the high-$T_c$ phase in Bi-2223 system in various atmospheres—effect of $O_2$ partial pressure.—73-15482

Formation of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O in samples enclosed in silver pipe.—73-01557

Formation of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O system in various atmospheres.—73-01558

Gapless superconductivity in $Bi_2Sr_2CaCu_2O_8$.—73-15489

Giant magnetostriction in $Bi_2Sr_2CaCu_2O_8$ single crystal in the superconducting state and its mechanism.—73-15492

Grain-boundary effect in Bi-system superconductors.—73-11775

Growth and characterization of laser-deposited superconducting Bi-Sr-Ca-Cu-O thin films.—73-08090

Growth by self-flux method and postannealing effect of $Bi_2Sr_2Ca_1Cu_2O_x$ single crystals.—73-01562

Growth of Bi-Sr-Ca-Cu-O-based superconducting whiskers.—73-01563

Growth of superconducting $Bi_2Sr_2Ca_{n-1}Cu_nO_x$ thin films by atomically layered epitaxy.—73-01564

Growth of superconductive $Bi_2Sr_2CaCu_2O_x$ film by liquid phase epitaxy.—73-15494

Hardness anisotropy in $Bi_2Sr_2CaCu_2O_8$.—73-15497

High Temperature Superconductors: Processing and Science.—73-17530

High-$T_c$ superconducting glass-ceramics prepared by melt-quenching methods in the bismuthate system with additives.—73-15499

High-$T_c$ superconducting phases in the system $^{57}Fe_{0.05}$:$Bi_{1.7}$-$Pb_{0.4}Sr_{1.5}Ca_{2.5}Cu_{3.6}O_x$ studied by Mossbauer spectroscopy.—73-15500

High-$T_c$ superconductor $Bi_2Sr_2CaCu_2O_x$ as a superconducting superlattice.—73-08094

High-temperature superconducting BSCCO thin films from sol-gel process and properties.—73-11786

High-temperature X-ray diffraction of the PbBi-2223 phase superconductor in different atmospheres.—73-08096

Homogeneity of $Bi_2Sr_2Ca_1Cu_2O_{8+\delta}$ crystal boules grown by the traveling solvent floating zone method [TSFZ].—73-15504

Identification of the interface between $SrTiO_3$(001) substrate and a $Bi_2Sr_2CaCu_2$ superconducting thin film.—73-08099

Improvement in the magnetic shielding property of Bi(Pb)-Sr-Ca-Cu-O superconducting tubes.—73-04738

Improvement of $J_c$ of Ag-sheathed Bi-2212 tapes using melt-growth technique under reduced oxygen partial pressure [0.01 atm].—73-11796

In situ growth of superconducting Bi-Sr-Ca-Cu-O thin films by a high-pressure sputtering process.—73-01573

In situ observation of crystallization from a superconductor melt of composition $Bi_{1.9}Sb_{0.1}Sr_2Ca_2Cu_3O_x$.—73-08102

Increase in $T_c$ of $Bi_2Sr_2CaCu_2O_x$ due to alpha particle irradiation.—73-08103

Indirect coulomb effect: a new coupling mechanism between vortex pancakes in neighboring superconducting layers.—73-15512

Influence of Ag doping, composition, and structure in $J_c$ of Ag-sheathed Bi-2212 tapes.—73-15513

Influence of annealing on the properties of Ca-rich Bi-Pb-Sr-Ca-Cu-O superconducting thin films.—73-01574

Influence of oxygen deficiency on electrical properties in the superconductor (Bi, Pb)$_2Sr_2Ca_2Cu_3O_x$ phase.—73-15514

Influence of oxygen partial pressure and temperature on Bi-Pb-Sr-Ca-Cu-O 110-K superconductor phase formation and its stability.—73-08107

Influence of Pb on structural properties of 2212 single crystal in Bi-Sr-Ca-Cu-O system.—73-08108

Influence of technical process on characteristic of Bi2223 thick-film tape.—73-04745

Influence of the phase equilibria on the critical temperatures $T_c$'s of the high-$T_c$ Bi-Sr-Ca-Cu-O and Y-Ba-Cu-O compounds.—73-11804

Influences of the precursor powder on the microstructure of HTSC tapes.—73-11806

Initial growth mechanism of Bi-Sr-Ca-Cu-O thin films on $SrTiO_3$(110) surfaces studied by in situ reflection high energy electron diffraction observation.—73-04746

Interface effects in Bi-2212/Ag and Bi-2223/Ag superconductors.—73-11809

Interlayer Josephson coupling of thermally excited vortices in $Bi_2Sr_2CaCu_2O_{8-y}$.—73-15521

Interlayer tunneling model for the $c$-axis resistivity in high-temperature superconductors.—73-15522

Intermediate phase in the formation of superconductive phase in the Bi-Sr-Ca-Cu-O system.—73-04749

Intrinsic Josephson effects in $Bi_2Sr_2CaCu_2O_8$ single crystals.—73-08113

Irreversibility line [IL] in $Bi_2Sr_2CaCu_2O_8$ single crystals.—73-15523

Irreversibility line of monocrystalline $Bi_2Sr_2CaCu_2O_8$: experimental evidence for a dimensional crossover of the vortex ensemble.—73-15524

Key features in the measured band structure of $Bi_2Sr_2CaCu_2O_{8+\delta}$: flat bands and Fermi surface nesting.—73-15527

Kinetics of nonisothermal crystallization of $Bi_2Sr_2CaCu_2O_x$ glasses with different copper valence states.—73-00365

$1/f$ noise in $Bi_2Sr_2Ca_2Cu_3$-$O$ and its impact on bolometer performance.—73-08153

Lattice softening on Bi system superconductor [studied] by means of $^{119}$Sn Mossbauer spectroscopy.—73-08123

Layer-by-layer growth of oxide superconductor thin films by laser MBE and their superconducting characteristics.—73-15533

Li-doping effect on Bi-Sr-Ca-Cu-O superconductor prepared by arc-melting method.—73-15534

Long-wavelength infrared spectra of $Bi_2Sr_2Ca_{0.6}Ba_{0.4}Cu_{1.9}O_x$ in the glassy and crystalline (superconducting) states.—73-01588

Lorentz-force-independent dissipation and vortex glass phase in single-crystal $Bi_2Sr_2Ca_1Cu_2O_x$.—73-11816

Low-resistivity contacts to high-$T_c$ superconducting materials.—73-01592

Magnetic field dependence of microwave absorption through $H$-$T$ irreversibility line in $Bi_{2-x}Pb_xSr_2Ca_{n-1}Cu_nO_{4+2n}$.—73-02637

Magnetic field dependences of ultrasound velocity in $YBa_2Cu_3O_7$ and $Bi_2Sr_2CaCu_2O_8$.—73-04759

Magnetism and superconductivity in $Bi_2Sr_2Ca_{1-x}Dy_xCu_2O_{8+\delta}$.—73-04763

Magnetization and flux pinning in recold-pressed Bi-based bulk materials.—73-11824

Manifestation of a superconducting gap in the optical absorption of $YBa_2Cu_3O_{7-\delta}$ and $Bi_2Sr_2CaCu_2O_8$ in the visible spectral range.—73-08128

Manifestation of Josephson medium in tunneling in Bi-Sr-Ca-Cu-O: experiment and model.—73-15549

Manifestation of superconducting transition in Raman spectra of bismuth-based (4413) crystals.—73-15550

Manifestation of the proximity effect in break junctions based on Bi-Sr-Ca-Cu-O:Pb.—73-08129

MBE or MO-MBE process for forming Bi-Sr-Ca-Cu-O superconducting thin films.—73-11961

Measurement of laser ablation threshold on doped BiSrCaCuO high-temperature superconductors by the pulsed photothermal deflection technique.—73-08130

Measurement of the spontaneous polar Kerr effect in $YBa_2Cu_3O_7$ and $Bi_2Sr_2CaCu_2O_8$.—73-08131

Mechanical and superconducting properties of an Ag-sheathed Bi-Pb-Sr-Ca-Cu-O tape.—73-04769

Mechanical grinding and reforming process of the Bi-2201 phase.—73-01600

Mechanical grinding and reforming process of the Bi-2201 phase: II. Comparing the various Bi-2201 solid solutions.—73-15551

Mechanical processing of high-$J_c$ BSCCO superconductors.—73-01601

Mechanical properties of (Bi,Pb)-Sr-Ca-Cu-O/Ag superconducting composite.—73-03329

Mechanochemical effects of high-energy attrition milling on the $Bi_2Sr_2CaCu_2O_x$ superconductor.—73-04771

Metallization of the resistivity tensor in $Bi_2Sr_2CaCuO_x$ through epitaxial intercalation.—73-11830

Method for determining the texture of Y and Bi high-temperature superconducting materials.—73-08133

Method for forming aligned superconducting Bi-Sr-Ca-Cu-O.—73-04845

Method of preparing 2223 phase (Bi,Pb)-Sr-Ca-Cu-O superconducting films.—73-15688

Microstructural and magnetic studies of sinter-forged (Bi, Pb)$_2Sr_2Ca_2Cu_3O_x$ superconductor.—73-15554

Microstructure and properties of melt-processed Bi-2212 ($Bi_2Sr_2CaCu_2O_x$).—73-11835

Microstructures and the role of Pb in doped Bi-Sr-Ca-Cu-O superconductor.—73-04773

Microwave joining of Bi-based 2223 superconductor and its microstructure features.—73-04774

Microwave penetration depth measurements in $Bi_2Sr_2CaCu_2O_{7-\delta}$ single crystals and $YBa_2Cu_3O_8$ thin films.—73-15556

MOCVD of $a$-axis or $b$-axis-oriented superconducting Bi-Sr-Ca-Cu-O films.—73-04856

Model of the microwave response in granular Bi-Sr-Ca-Cu-O thin films.—73-11839

Modulated structures of bismuth-based superconductors.—73-04776

Mossbauer study of the 2212 phase of the bismuth superconductor.—73-08139

Mossbauer study of the high-temperature BiPbSrCaCuSnO superconductor.—73-02336

New aspects of the mixed states from six-terminal measurements on $Bi_2Sr_2CaCu_2O_x$ single crystals.—73-08142

No far-ir spectroscopic gap in clean and dirty high-$T_c$ superconductors.—73-15567

Noncrystalline BiPbSbSrCaCuO and its heat-treatment effect.—73-11845

Nonlinear pressure dependence of the transport $J_c$ in BSCCO 2223 tapes.—73-04778

Normal state and superconducting properties of $Bi_2Sr_2Ca_{1-x}Ho_xCu_2O_x$ compounds.—73-11847

Normal-state uniform magnetic susceptibility and superconductivity in $Bi_2Sr_zCa_{3-z}Cu_2O_x$ [$z$=1–2].—73-08151

Optical absorption of the high-$T_c$ superconductors $Y_1Ba_2Cu_3O_{7-\delta}$, $LaCuO_{4+\delta}$, and $Bi_2Sr_2Ca_{1-x}Y_xCu_2O_{8+\delta}$.—73-04781

Optical study of the doping effect of oxygen in $YBa_2Cu_3O_y$ and $Bi_2Sr_2CaCu_2O_{8+\delta}$ single crystals.—73-11851

Optical vibrations in $Bi_{1-x}(Sr_{1-y}Ca_y)_xO_{1.5-x/2}$ crystals.—73-16240

Oxide glass to high-temperature ceramic superconductors—a novel route.—73-11856

Oxide superconducting materials at JFCC—sample preparation by floating melting zone method and their microstructural analysis.—73-11857

Oxide superconductor $Bi_{1.6}Pb_{0.4}Sr_{2-x}M_xCa_2Cu_3O_y$ (M=Mg, Ba).—73-11858

Oxide superconductor Bi-Sr-Ca-Mg-Ba-Cu-O.—73-01727
Oxidizing-reducing effects in yttrium-doped $Bi_2Sr_2CaCu_2O_{8+\delta}$ (Bi-2212) superconductor.—73-01624
Oxygen sorption-desorption behavior and superconductivity of Bi-based oxide superconductor (2212 phase).—73-01626
Pair breaking effect in the substitution for Cu in high-$T_c$ copper oxides.—73-08159
Paramagnetic Meissner effect in Bi high-temperature superconductors.—73-08160
Parametric study of the phase formation of in situ BiSrCaCuO thin films by laser ablation.—73-11859
Phase decomposition and superconductivity in $Bi_2Sr_2CaCu_2O_x$ single crystals.—73-11860
Phase transition toughening of high-$T_c$ superconducting ceramics.—73-15579
Phases and their relation in $BiO_{1.5}$-SrO($SrCO_3$)-CuO system at 720°C.—73-16270
Phenomenology of the ir properties of the CuO superconductors.—73-08163
Phonons and superconductivity in $Bi_2Sr_2CaCu_2O_8$.—73-08164
Photoresponse of granular (Pb)BiSrCaCuO films to millimeter-wavelength radiation.—73-11862
Preferential crystallographic site substitution and oxygen migration in $Bi_2(Sr, Ca, La)_3Cu_2O_8$, $Bi_2(Sr, Ca, Yb)_3Cu_2O_8$ related to rare-earth ion size.—73-03109
Preparation and characterization of interface morphologies of silver-sheathed superconducting Bi-Sr-Ca-Cu-O ribbons.—73-08172
Preparation and transport properties of superconducting BPSCCO thin films.—73-15590
Preparation of (Bi, Pb)-Sr-Ca-Cu-O superconducting thin films by the mist microwave-plasma chemical vapor deposition method.—73-11869
Preparation of Ag-I intercalated $Bi_2Sr_2CaCu_2O_y$ superconductor.—73-15593
Preparation of an Ag-doped Bi-Sr-Ca-Cu-O bulk sample by the floating zone method.—73-01637
Preparation of $Bi_2Sr_2CaCu_2O_x$ films on alumina substrates with a $CuAl_2O_x$ buffer layer.—73-08176
Preparation of Bi-Pb-Sr-Ca-Cu-O superconductor by the citrate method.—73-15594
Preparation of Bi-Pb-Sr-Ca-Cu-O superconductor using $Bi(Sr_{0.5}Ca_{0.5})O_x$ as a starting material.—73-15595
Preparation of Bi-Sr-Ca-Cu-O high-$T_c$ superconducting ceramics with fine monophase.—73-11871
Presintering processing of a Bi-based bulk superconductor by slurry pressing.—73-11874
Process for preparing a superconducting thin oxide film.—73-01731
Process for preparing a thin film of Bi-type oxide superconductor.—73-01732
Process for preparing superconductor of compound oxide of Bi-Sr-Ca-Cu system.—73-11993
Process for producing a high-temperature superconductor containing bismuth, strontium, calcium, and copper.—73-01733
Process for producing Bi-Pb-Sr-Ca-Cu-O superconducting films.—73-11995
Process for producing molded bodies from precursors of high-temperature superconductors.—73-15693
Processing and characterization of high-temperature superconductor films formed by spin-on coating and rapid thermal annealing.—73-11876
Processing and transport properties of high-$J_c$ silver-clad Bi-2223 tapes and coils.—73-11877
Processing of thin films of the three-layer superconducting phase in the Pb-doped Bi-Sr-Ca-Cu-O system by metallorganic deposition.—73-04795
Processing-microstructure-property relationships of $Al_2O_3$-fiber-reinforced high-temperature superconducting $(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ composite.—73-15601
Pure and lithium-doped $Bi_2Sr_2CaCu_2O_x$ silver-clad tapes.—73-11883
Putting a chill into the new HTS application.—73-15605
Quasi-2-D nature of the phonon subsystem of Bi superconductors.—73-08182
Quasi-particle damping in $Bi_2Sr_2CaCu_2O_8$ and $Bi_2Sr_2CuO_6$.—73-08183
Raman spectra of iodide species in intercalated $[Bi_2Sr_2CaCu_2O_{8+\delta}$.—73-11885
RBS study of in situ grown BiSrCaCuO films.—73-08184
Reaction process of Bi-Sr-Ca-Cu-O system and the formation mechanism of 2212 superconducting phase.—73-04798
Reactions between $Bi_2Sr_2CaCu_2O_x$ superconducting oxide and metallic copper and their prevention.—73-04799
Reactions between $Bi_2Sr_2CaCu_2O_x$ superconducting oxide and metallic copper and their preventions.—73-11887
Remanent magnetization of $Bi_2Sr_2CaCu_2O_8$ single crystals [studied] by means of a Hall probe.—73-08188
Resistive transition of Bi(2223) silver-clamped thick film.—73-11892
Resonance structure in *I-V* characteristics of break junctions based on Bi-Sr-Ca-Cu-O:Pb.—73-08190
Resonance-type internal friction of 1:1:1:2 Bi-Sr-Ca-Cu-O superconductor at very low frequencies.—73-01650
Role of 2-D electron-hole lattice system in modulated structure of high-$T_c$ superconductor $Bi_{2-x}Pb_xSr_2CaCu_2O_{8+\delta}$.—73-15614
Scaling of the flux pinning force in epitaxial $Bi_2Sr_2Ca_2Cu_3O_x$ thin films.—73-15615
Scanning electron acoustic microscopy [SEAM] of $Bi_2Sr_2CaCu_2O_8$.—73-15616
Self-energy effects of the $B_{1g}$ phonon in $Bi_2Sr_2CaCu_2O_8$.—73-15617
Self-heating vs quantum creep in bulk superconductors.—73-15618
Sensibility of the Bi-Pb-Sr-Ca-Cu-O superconductive films in weak magnetic field.—73-01657
Shear modulus and Poisson's ratio of $Bi_{1.6}Pb_{0.4}Sr_2Ca_{2.5}Cu_{3.5}O_x$.—73-15619
Simplified method of synthesis for Bi-Pb-Sr-Ca-Cu-O superconductors via solid-state reaction.—73-04805
Simplified method of synthesis for Bi-Pb-Sr-Ca-Cu-O superconductors via solid-state reaction.—73-15620
Single-crystal EPR and thermal expansion studies of the high-$T_c$ superconductor $Bi_2Sr_2CaCu_2O_{8+\delta}$.—73-01658
Single-electron charging effect in BiSrCaCuO granular thin films.—73-11898
Single-particle tunneling in BiPbSrCaCuO (2:2:1:2 and 2:2:2:3 phases).—73-08197
Single-particle tunneling studies on $Bi_2Sr_2Ca_1Cu_2O_y$.—73-01659
Solid-phase epitaxy of $Bi_2Sr_2CaCu_2O_x$ superconducting thin films.—73-01660
SQUID picovoltametry of single-crystal $Bi_2Sr_2CaCu_2O_{8+\delta}$: an observation of the crossover from high-temperature Arrhenius to low-temperature vortex glass behavior.—73-08203
$Sr_{1-x}Ca_xCuO_2$ [SCCO] solid solution in Bi(Pb)-Sr-Ca-Cu-O superconductors.—73-08204
Stability of high-$T_c$ phase in $Bi_{1.6}Pb_{0.4}Sr_2Ca_2Cu_3O_x$ compounds prepared by hot isostatic pressing.—73-01662
Stability range and $T_c$ variation of superconducting $Bi_{1.92}Sr_{1.89}Ca_{0.04}Cu_2O_y$.—73-08206
STM study of the electronic density of states in the superconducting phase of $Bi_2Sr_2CaCu_2O_8$.—73-08207
Structural and electrical properties of glassy analogs to bismuth-cuprate-based superconductors.—73-01321
Structural and electrical resistivity studies on $Bi_{1.6}Pb_{0.4}Sr_2Ca_xCu_3O_y$ composition synthesized by different routes.—73-08208
Structural and magnetic properties of $Bi_2Sr_2Ca$-$Cu_{2(1-x)}Fe_2O_{8+\delta}$.—73-04656
Structural study on fluorine-doped Bi(Pb)-Sr-Ca-Cu-O superconductor.—73-01669
Structural study on fluorine-doped Bi(Pb)-Sr-Ca-Cu-O superconductors.—73-11906
Structure and crystallization behavior of amorphous $Bi_{0.96}Pb_{0.24}SrCaCu_{1.6}O_{5+y}$ high-temperature superconductor material.—73-08212
Structures and properties of F-doped Bi-system superconductors.—73-11910
Superconducting and structural properties of homogeneous BiSrCaCuO (2212) single crystals prepared by solution growth.—73-08215
Superconducting $Bi_2Sr_2Ca_1Cu_2O_x$ ceramics prepared via melt quenching.—73-15633
Superconducting Bi(Pb)-Sr-Ca-Cu-O fibers drawn from melt-quenched glasses.—73-04811
Superconducting ceramics: preparation, XRD, SEM, and EPR measurements to study the influence of compositional variations on superconductivity of La-(Ba/Sr/Ca)-CuO ceramic systems.—73-08216
Superconducting energy gap in $Bi_2Sr_2CaCu_2O_8$ observed by high-resolution photoemission spectroscopy.—73-15634
Superconducting fluctuation study above $T_c$ of Bi(Pb)-Sr-Ca-Cu-O thin films made by sputtering.—73-08218
Superconducting fluctuations in the thermoelectric power and resistivity of Bi-based polycrystalline cuprates.—73-01674
Superconducting glass-ceramics in the Bi-Sr-Ca-Cu-O system[—review].—73-08219
Superconducting order parameter on $Bi_2Sr_2CaCu_2O_8$ single crystals.—73-11916
Superconducting properties of Ba-doped (Bi,Pb) 2223 tapes.—73-01675
Superconductivity of the Ba-doped $Bi_2Pb_2Sr_2Ca_2Cu_3O_y$ system.—73-04816
Superconductor crystal and process for preparing the same.—73-01742
Superconductors are still hot.—73-11919
Surface phase decomposition in $Bi_2Sr_2CaCu_2O_x$ single crystals.—73-08234
Symmetry of the superconducting order parameter in $Bi_2Sr_2CaCu_2O_x$.—73-11921
Synthesis and $^{17}O$ NMR characterization of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O superconductor.—73-11922
Synthesis and characterization of $Bi_2Sr_2Ca_{n-1}Cu_nO_y$ ($n$=1–7) thin films grown by off-axis, three-target magnetron sputtering.—73-11923
Synthesis of BiPbSrCaCuO superconductor.—73-12006
Synthesis of bismuth-based superconductors using poly(acrylic acid).—73-08237
Team sport of technology transfer: spectators welcome.—73-15649
Techniques for texturing ceramic superconductors from an amorphous precursor.—73-11931
Temperature dependence of electric quadrupole interaction in high-$T_c$ superconductor $Bi_{1.7}Pb_{0.7}Sr_2CaCu_2O_{8+\delta}$.—73-08245
Temperature dependence of the energy gap in $Bi_2Sr_2CaCu_2O_8$ superconductors by high-resolution EELS.—73-08247
Temperature-dependent point-contact characteristics of some granular high-$T_c$ superconductors.—73-08249
Textured Bi-Sr-Ca-Cu-O bulk sample.—73-15651
Textured growth and orientation dependence of hardness measurement on superconducting $Bi_2Sr_2CaCu_2O_y$.—73-04820
Theory of superconductivity of $Bi_2Sr_2Ca_2Cu_3O_{10}$.—73-11933
Thermal conductivity of $TmBa_2Cu_3O_x$ and $Bi_2Sr_2CaCu_2O_x$ single crystals in the vicinity of $T_c$.—73-08253
Thermally activated flux creep in a bismuth-based bulk material.—73-11934
Thermodynamic study of high-temperature superconductors $YBa_2Cu_3O_x$ and $Bi_2Sr_2CaCu_2O_y$.—73-01691
Thermoelectric power and percolation in BSCCO system.—73-08994
Thermoelectric power of bulk and thin-film Bi high-$T_c$ superconductors.—73-11935
Thermopower and fluctuation effects in bismuth cuprate high-$T_c$ crystals.—73-08256
Thin-film BiPbSrCaCuO dc SQUID's operating at liquid nitrogen temperature.—73-11936
Transport critical current properties of $Bi_2Sr_2CaCu_2O_x$/Ag tapes.—73-04822
Tunneling investigations of Bi-Pb-Sr-Ca-C-O films with $T_c$=100 K.—73-08266
Tunneling measurements of BSCCO single crystals.—73-08267
Twin-roller quenching of $Bi_2Sr_2Ca_2Cu_3O_{10}$ melts.—73-07185
Universal behavior of the Hall resistivity of single-crystalline $Bi_2Sr_2CaCu_2O_x$ in a thermally activated flux flow regime.—73-15661
Vortex configuration and dynamics in $Bi_2Sr_{1.8}CaCu_2O_x$ thin films by Lorentz microscopy.—73-11940
Vortex fluctuations in the cuprate superconductor $Bi_2Sr_2CaCu_2O_8$.—73-15665
Weak links and critical current density in $Bi_2Sr_2CaCu_2O_x$ thin films.—73-01703
XAS study of hole density and symmetry in a $Bi_2Sr_2CaCu_2O_{8+\delta}$ single crystal.—73-05526
Zero resistance of quenched $Bi_{1.5}Pb_{0.4}Sb_{0.1}Sr_2Ca_2Cu_3O_x$ at 140 K.—73-04828

**bismuth titanates,**
Double-phase conjugation in $Bi_{12}TiO_{20}$ photorefractive fiberlike crystal.—73-12770
Electrical characteristics of excimer laser-ablated bismuth titanate films on silicon.—73-12786
Extended defects in ZnO ceramics containing $Bi_4Ti_3O_{12}$ additive.—73-09404
Ferroelectric bismuth titanate films by hot wall metallorganic chemical vapor deposition.—73-04552
Growth and optical properties of doped bismuth titanate.—73-02613
Nonstoichiometry and the long-range cation ordering in crystals of $(Na_{1/2}Bi_{1/2})TiO_3$.—73-16232
Optical transmission spectra of doped $Bi_{12}TiO_{20}$ photorefractive crystals with antireflection coatings.—73-16560
Preparation and properties of $Bi_4Ti_3O_{12}$ single-crystal thin films by atmospheric pressure metallorganic chemical vapor deposition.—73-04567
Preparation of $Bi_4Ti_3O_{12}$ thin films with *c*-axis orientation by MOCVD using $Bi(o\text{-}C_7H_7)_3$ and $Ti(i\text{-}OC_3H_7)_2(DPM)_2$.—73-16918
Preparation of epitaxial $Bi_4Ti_3O_{12}$ films on sapphire substrates by chemical vapor deposition.—73-09261
Process-property correlations of excimer laser-ablated bismuth titanate films on silicon.—73-11605
Pulsed laser deposition (PLD) of oriented bismuth titanate films for integrated electronic applications.—73-11608
Recording of higher spatial harmonics of a photorefractive grating through the phase-locked detection mechanism.—73-08963
Simultaneous recording of absorption and photorefractive gratings in photorefractive crystals.—73-08967
Structural and electrical studies on rapid thermally processed ferroelectric $Bi_4Ti_3O_{12}$ thin films by metallorganic solution deposition.—73-11621

**bismuth,**
1-D "dislocation"-related electronic states in GaAs(110)×Bi(1×1) interface.—73-07701
$A_x^{III}B_{2-x}^{V}C_3^{VI}$ crystals of tetradymite structure.—73-03074
Activation energy and pinning potential in Bi-based tapes.—73-11682
Anharmonic phonon structure in the tunneling conductance of Bi cuprates.—73-15385
Anomalous temperature dependence of $H_{c2}$ in Bi-Sr-Cu-O.—73-15391
Anomalous thermoelectric power of $Bi_{1.6}Pb_{0.5}Sr_{1.9-y}La_yCu_{1.05}O_x$.—73-02553
Bi thin-film growth structures prepared at 30 K on GaAs(110) and InP(110).—73-07390
Bi-implanted $SiO_2$: a potential optical device material.—73-14135
Bismuth-containing lead-free glass enamels and glazes of low silica content.—73-03672
Content of oxygen and bismuth(V) in the double oxides of barium and bismuth.—73-01511
Crystal structure of $Bi_2Sr_2CuO_6$: a structure based on periodic crystallographic shear planes in the "2201" structure.—73-08587
Description of experimental *I-V* characteristics of $Bi_{12}SiO_{20}$ crystals using analytical approximations of theory of space-charge-limited currents.—73-16439
Determination of the basic composition of microsamples of $Bi_{12}GeO_{20}$ crystals.—73-02235
Determination of the geometrical configuration of Bi on GaAs(110) by X-ray standing wave triangulation.—73-07441
Diffusion and clustering in the $Cd_{1-x}Bi_xF_{2+x}$ solid solution: a fluorine NMR study.—73-03090
Domain wall of ferroelastic $BiVO_4$ studied by TEM.—73-03133
Effect of electric field stimulation on the optical and photoelectric properties of $Bi_{12}SiO_{20}$.—73-02579
Effect of intercalation by metal atoms on energy spectrum of $Bi_2Te_3$.—73-01134
Effect of optical bias on grating formation dynamics in photorefractive BSO.—73-02586
Elastic constants of bismuth-containing gallate glasses.—73-07022
Electrical and optical studies in some Bi-doped amorphous chalcogenide thin films.—73-07482
Electrical properties and photoluminescence of epitaxial

GaSb:Bi and GaSb:Bi:Sn films formed from Bi solutions.—73-01145
Electrical properties of $Bi_2Se_3$ thin films prepared by reactive evaporation.—73-08856
Electrooptic and photoelectric effects of $Bi_{12}SiO_{20}$ (BSO) crystals.—73-11190
EPR and AFMR of $Bi_2CuO_4$ in submillimeter wave region.—73-08864
EPR characterization of Co impurities doping $Bi_4Ge_3O_{12}$ single crystals.—73-05394
Evidence for oxygen nonstoichiometry in a stabilized Bi-Ca-Pb-O fluorite-type phase.—73-08621
Features of photoluminescence of glasses of the system $(GeS_2)_{100-x}Bi_x$ and $(As_2S_3)_{100-x}Bi_x$.—73-14186
Growth mode of Bi and Sb layers on GaAs(110) and InP(110).—73-01179
Heat capacity measurements on $Ge_{20}Se_{80-x}Bi_x$ glasses.—73-14200
Hopping conduction in $NaBi(MoO_4)_2$ crystals.—73-02617
Identification of $Cr^{3+}$ impurities in heavily Cr-doped $Bi_4Ge_3O_{12}$ single crystals.—73-05417
Impedance spectroscopy study of sintering in Bi-doped ZnO.—73-12600
Improvement of FMR linewidth in Bi-substituted lutetium iron garnet thin films for the MSW-optical-mode interaction.—73-04615
Influence of preparation procedure on some physical properties of BICUVOX $[Bi_2V_{0.9}Cu_{0.1}O_{5.35}]$.—73-13099
Ionic skin-effect in copper-doped $Bi_2Te_3$ single crystals.—73-16525
Isothermal capacitance transient spectroscopy of grain-boundary interfacial states in Bi-doped $SrTiO_3$ ceramics.—73-07331
Magnetic neutron scattering in single-crystal $Bi_2CuO_4$.—73-05432
Mechanism of photorefractive enhancement of photochromic gratings in $Bi_{12}SiO_{20}$—experimental results and phenomenological modeling.—73-05595
Microstrains and domain sizes in Bi-Cu-O superconductors: an X-ray diffraction peak-broadening study.—73-01605
Modulation structures and new type of twin boundary in Bi-Sr-Cu-O system doped with Ba.—73-11840
Multiple forward phase conjugation in a photorefractive bismuth silicate crystal.—73-08921
Nonlinear absorption of laser light in $Bi_2TeO_5$ single crystals.—73-16549
Numerical analysis of photorefractive grating formation dynamics at large modulations in BSO ($Bi_{12}SiO_{20}$).—73-08930
Onset of crystal growth of bismuth on graphite: an atomic force microscopy study.—73-09497
Optical constants of bismuth gallate glasses.—73-07058
Optical, magnetooptical, and EPR study of chromium impurities in $Bi_4Ge_3O_{12}$ single crystals.—73-16241
Optically induced gratings in Fe- and Mn-doped $Bi_4Ge_3O_{12}$ single crystals.—73-02658
Phase transitions and dielectric properties in some compounds with bismuth oxide layer structure.—73-04563
Phonon and electronic properties of $TlBiSe_2$ thin films.—73-08948
Photocatalytic deposition of Bi(III) ions onto $TiO_2$ powder.—73-12855
Photoconductivity of bismuth tellurite.—73-15278
Photoelastic constants of bismuth-containing gallate glasses.—73-07063
Photoluminescence in $Ge_{25}Se_{75-x}Bi_x$ sputtered films.—73-08951
Plastic deformation of bismuth-containing glass-ceramics.—73-14254
Polycrystalline $Bi_2S_3$ thin films prepared by reactive evaporation.—73-04446
Positron annihilation study of $SrTiO_3$-based ceramics.—73-03108
Preparation and electrical properties of bismuth strontium dimanganese hexoxide $[BiSrMn_2O_6]$.—73-15110
Preparation of pyrochlore-type $Na_{0.39}Bi_{1.47}O_7$ containing $Bi^{5+}$ by low-temperature hydrothermal reaction.—73-08712
Process for producing Bi-Ca-Sr-Cu-O, Tl-Ca-Sr-Cu-O, and Tl-Ba-Ca-Cu-O superconducting ceramics.—73-01736
Process for producing bismuth-based oxide superconducting films.—73-11996
Refraction and molar volume of bismuth-containing gallate glasses.—73-07069
Role of electron injection in formation electret state in $Bi_{12}SiO_{20}$ crystals.—73-16590
Spectral orgins of giant Faraday rotation and ellipticity in Bi-substituted magnetic garnets.—73-04653
Spin waves in single-crystal $Bi_2CuO_4$ [investigated] by inelastic neutron scattering.—73-08737
Spin-glass behavior in amorphous $BiFeO_3$.—73-11674
Spin-glass state in amorphous $Bi_2CuO_4$.—73-16311
Strain and the two-dimensional electronic structure of monolayers of Bi/InAs(110) and Bi/GaAs(110).—73-07813
Structural relaxation of bismuth germanate glasses.—73-03762
Subharmonics in photorefractive $Bi_{12}TiO_{20}$ crystals.—73-02695
Surface atomic structure and bonding of GaAs(110)-$p(1\times1)$-Bi (1 ML).—73-07822
Surface stability of bismuth-ruthenium oxide electrodes.—73-07363
System $Bi_2O_3$-SrO-CuO—73-11929
System $Bi_2Se_3$-InSe.—73-12714
Temperature sensitvity of the optical constants of $BiVO_4$.—73-02703
Tentative phase diagram of the system $PbF_2$-$BiF_3$.—73-02516
Theoretical analysis of mechanism of photorefractive enhancement of photochromic gratings in bismuth silicon oxide.—73-05650
Thermal anomalies in $Bi_2WO_6$ and EPR of doped $Gd^{3+}$ ions.—73-08984
Transient response of a photorefractive grating produced in a $Bi_{12}SiO_{20}$ (BSO) crystal by a short light pulse.—73-05682
Transport properties of $Ba_{1-x}K_xBiO_3$ single crystals.—73-09425
Tunneling into BiSrCuO superconductor up to the critical magnetic field.—73-08265
Vanadium(V) environments in bismuth vanadates: a structural investigation using Raman spectroscopy and solid-state $^{51}V$ NMR.—73-02536

**bismuthates,**
CDW suppression and photoinduced gap states in $BaBiO_3$.—73-02156
Effect of [irradiation] by subthreshold energy electrons on microwave absorption and luminescence of copper-free $Ba_{1-x}K_xBiO_3$ superconductors.—73-15424
Effect of oxygen deficiency on the structure and conduction behavior of $BaPb_{0.75}Bi_{0.25}O_{3-\delta}$.—73-16120
Effects of oxidation and air exposure on $Rb_xBa_{1-x}BiO_3$ superconducting thin films.—73-01535
Effects of oxygen partial pressure and substrate temperature on the in situ growth of the $Ba_{1-x}Rb_xBiO_3$ films by laser ablation.—73-08046
Electrical responses of Ln-Ba-Cu-O (Ln=Eu, Y), Ba-K-Bi-O, and Ba-Pb-Bi-O superconducting thin films to pulsed infrared radiation.—73-15449
Fabrication of $Ba_{1-x}K_xBiO_3$ superconductors prepared by the plasma-arc melting and rapid quenching method.—73-11757
Infrared spectral investigation of bismuthate glasses.—73-14011
Magnetic penetration depth in KBaBiO from measurements of the dynamic susceptibility of powder in an alternating magnetic field.—73-05593
Metal-insulator transition in doped bismuthate superconductors.—73-08132
Multicritical phase diagram and random field effects in superconducting bismuthates.—73-15560
Properties of $BaPb_{1-x}Bi_xO_3$ as observed in single-crystal thin films.—73-16576
Property control for high-quality $Ba_{1-x}K_xBiO_3$ [BKBO] epitaxial thin films prepared by high-pressure reactive rf magnetron sputtering.—73-15604
Rotational vortex-flux properties of $Ba_{0.575}K_{0.425}BiO_3$.—73-04802
Specific heat of copperless oxide $Ba_{0.6}K_{0.4}BiO_3$ superconductor.—73-15624
Structure and chemistry of $Ba_{0.6}K_{0.4}BiO_y$ at high temperatures.—73-02458
Superconductors with quasi-localized pairs: bismuthates and $A^{IV}B^{VI}$ semiconductors doped by $III^B$ metals.—73-01681
Synthesis of superconducting epitaxial films of $Ba_{1-x}K_xBiO_3$ [x=0.4] by laser ablation.—73-11927
Tunneling studies of $BaPb_{0.75}Bi_{0.25}O_3$.—73-12903
Ultraviolet photoluminescence [UVPL] of high-$T_c$ superconductors.—73-01701
YBCO-BiO composite superconductor for granular-type Josephson microwave detector.—73-15674

**bisque,**
Glazing an inertized bisque.—73-14658

**bistability,**
RT optical bistability in hydrogenated a-$SiC_x$:H alloys.—73-16591

**blast-furnace slag,**
$^{29}Si$ and $^{27}Al$ MAS-NMR of NaOH-activated blast-furnace slag.—73-16301
Activation of blast-furnace slag in cement without clinker.—73-06621
Activation of ground blast-furnace slag by alkali-metal and alkaline-earth hydroxides—comment.—73-08545
Activation of ground blast-furnace slag by alkali-metal and alkaline-earth hydroxides—reply.—73-08546
Alkali-activated ground-granulated blast-furnace slag concrete: preliminary investigation.—73-00018
Assessment of the chemical and mineralogical composition of air-cooled blast-furnace slag for its use as concrete aggregate.—73-08491
Blast-furnace slag processing for blended cements.—73-09831
Consistency of high-strength concrete with high fineness granulated blast-furnace slag.—73-09867
Controlled crystallization of some rectified slag-based glasses.—73-14345
Durability of 34–31 year aged RC structures using Class-B portland blast-furnace slag cement.—73-09894
Effect of various factors on the compressive strength and frost resistance of mortar using blast-furnace slag.—73-09925
Effect on compressive strength of the glass content of blast-furnace slag when used as a cementitious constituent.—73-09928
Effects of the ground granulated blast-furnace slag and fly ash on the low-heat-generating concrete.—73-09939
Evaluation of granulated blast-furnace slag as a cementitious admixture—a case study.—73-06652
Heat of hydration and strength development of alite–belite–blast-furnace slag composite.—73-09980
Heat of hydration and strength development of alite–belite–blast-furnace slag composite.—73-09981
Ion-exchange reaction of granulated blast-furnace slag in acid solution.—73-08648
Microstructure and mechanical properties of hardened cement paste incorporating ground granulated blast-furnace slag.—73-10050
Microstructure and microanalysis of hardened cement pastes involving ground granulated blast-furnace slag.—73-00143
Modern plant configurations for grinding granulated blast-furnace slag.—73-12047
Neutralization of portland blast-furnace slag cement concrete subjected to atmospheric exposure for 30 years and effects of finishing materials.—73-10061
Process and properties of ceramic tile prepared from blast-furnace slag [BFS] raw materials.—73-04046
Process and properties of ceramic tile prepared from blast-furnace slag raw materials.—73-14665
Production of nonfired and nonsteam-cured brick with blast-furnace slags.—73-06701
Production parameters for ceramics based on waste at the Zaporozhe refractories factory.—73-01821
Properties of concrete incorporating low quantity of cement and high volumes of ground granulated slag.—73-00173
Properties of very fine blast-furnace slags manufactured by jet mill.—73-06707
Resistance of blast-furnace refractories to the action of aggressive reactants under conditions of oxidizing gaseous atmosphere.—73-14621
Strength development of high-strength mortar using ground granulated blast-furnace slag of different finenesses.—73-10166
Utilization of granulated blast-furnace slag.—73-00204

**blending,**
Advances in portland and blended cements.—73-09807
Alternative blending systems in the cement industry.—73-00023
Blended cement according to ENV 197 and experiences in Germany.—73-09832
Blended cements.—73-09833
Effect of admixture on hydration of cement, adsorptive behavior of admixture, and fluidity and setting of fresh cement paste.—73-09897
Portland and blended cement.—73-10086

**boehmite,**
Characterization of nitrided high surface gamma-alumina powders.—73-13376
Drying of boehmite gel fibers.—73-03833
Ir study of some surface properties of boehmite ($\gamma$-$AlO_2H$).—73-08652
Low-temperature sintering of $\alpha$-alumina-seeded boehmite gels.—73-16854

**bonds/bonding,**
Application of tellurite bonding glasses to magnetic heads.—73-03775
Articles including a ceramic member and a metal member bonded together.—73-03671
Bond length–Raman frequency correlations in borate crystals.—73-02152
Bonding and valence states in $YBa_2Cu_3O_{7-\delta}$ through secondary ion mass spectrometry.—73-01496
Bonding diamond to metal in electronic circuits.—73-13801
Bonding glass for assembling a magnetic head, and a magnetic head.—73-03906
Bonding strength of alumina joint bonded under the alternating stress.—73-13802
Bonding, structure, and properties of metal/ceramic interfaces.—73-00211
Ceramic bonding method.—73-00279
Ceramic bracket with coated base.—73-05197
Change in S–O bonding states of calcium sulfite hemihydrate during thermal reactions in air.—73-09844
Clusters in the model of glass based on soft three-center bonds in a rigid covalent network.—73-13943
Consideration of bond between RCC [roller-compacted concrete] and cement-treated basecourse.—73-09865
Constitution and electronic structure of Si–H and N–H bonds in amorphous $SiN_x$:H.—73-16067
Dangling bonds in amorphous silicon nitride alloys: predictions of the free energy model [FEM].—73-06147
Dangling bonds in nanometer-sized granulet silicon nitride [studied] by electron spin resonance.—73-12570
Determination of $sp^2/sp^3$ carbon bonding ratio in a-C:H including irradiation damage by factor analysis of Auger electron spectra.—73-16106
Determination of niobium–oxygen bond distances and bond orders by Raman spectroscopy.—73-02233
Development of chemically bonded ceramics in the CaO-$SiO_2$-$P_2O_5$-$H_2O$ system.—73-00060
Diffusion bonding behavior of austenitic stainless steel containing titanium and alumina.—73-03575
Diffusion bonding of a nickel (chromium) alloy to zirconia: mechanical properties and interface microstructures.—73-06770
Diffusion bonding of Inconel 600 to alumina without and with intermediate graded layers.—73-03576
Direct bonding of zirconia system without any fillers—basic research for self-healing.—73-05167
Effect of oxygen partial pressure on tungsten–alumina bonding behavior.—73-03579
Enamel–metal bonding strength with different firing cycles.—73-00227
Energy approach to bond strength determinations in cement systems.—73-09945
Formation of bonds in tricalcium silicate pastes as observed by scanning electron microscopy.—73-03470
Formation of Si–C bonds at the surface of silica and glass fibers.—73-03844
Fundamentals of bonding ceramic materials to metals.—73-13840
Identification of N dangling bonds in SiN films using X-ray absorption studies.—73-03095
Indirect-bonded metallization of aluminum nitride.—73-00979
Linear relation between transition temperature and H-bond distance in $M_3S(SeO_4)_2$ type crystals (M=K, Rb, Cs) with O–D H-bond network.—73-16196
Mechanical properties of the ceramic-metal bonding of a gold-platinum dental alloy and chemical characterization of the interface.—73-13869

Method for surface bonding of ceramic bodies.—73-01867
Microanalytical investigation of bonded ceramic materials.—73-03162
New-to-old concrete bonding: influence of sulfate type of new concrete on interface microstructure.—73-03505
Nondestructive TAB bond testing for multichip modules.—73-05075
Preparation and properties of bonding glass for amorphous magnetic head.—73-00533
Preparation and properties of bonding glass for amorphous magnetic head.—73-10473
Preparations and characteristics of chemically bonded ceramics.—73-05988
Properties of alumina/Al/alumina joints produced in air atmosphere.—73-03983
Reduction of residual stress on bonding interface for dissimilar materials.—73-03638
Silicate bonding of laterites: an ancient process for construction components.—73-00014
Silver paste sintering method for bonding ceramic surfaces.—73-10349
Silver-alumina solid-state bonding: influence of the work hardening of the metal.—73-03640
Solid-state bonding of $Si_3N_4$ ceramics with Fe-Cr alloy interlayers.—73-03642
Strong polarity and bond characterization of nanostructured silicon nitride solids.—73-05645
Structure and bonding of highly stressed vitrified bonded cutting tools.—73-13657
Superplastic diffusion bonding in ceramics.—73-06072
Superplastic diffusion bonding in ceramics.—73-13289
Surface bonding of ceramic bodies.—73-00297
Transient liquid phase ceramic bonding.—73-00302
Wafer bonding for hybrid circuit technology using solid-state reactions.—73-01363

**bone china,**
Analysis and study of some bone china.—73-10791
Bone china, a high-quality soft porcelain.—73-10802
Firing techniques to improve the quality of bone china.—73-10847
Glazing of bone china.—73-14659
Isostatic pressing of bone china.—73-10861

**borates,**
$^{155}Gd$ Mossbauer spectra of $Gd^{3+}$ in borate glasses.—73-13991
Acoustic emission [and sound velocity and absorption] in ionic conductor $Li_2B_4O_7$.—73-14676
Acoustic mechanism of sound absorption in $Li_2B_4O_7$.—73-01390
Alternative model for alkali-borate glass structure.—73-13924
Anomalous behavior of ultrasonic velocity in cesium borate glasses.—73-10418
Anomalous expansion of sodium triborate melt and its effect on glass properties.—73-06996
Bandwidth and beam quality of barium borate parametric oscillator synchronously pumped by an active-passive mode-locked Nd:YAG laser.—73-08812
Beneficiation of calcium borate minerals.—73-01847
Blue-violet tunable $LiB_3O_5$ single-pulse ps laser.—73-11556
Bond length–Raman frequency correlations in borate crystals.—73-02152
Borate glass containing boron carbide burnable poison coating.—73-02023
Borate glasses with the $nd^{10}$ $(n+1)$ $S^2$-shell activators.—73-14138
Chemical strengthening of some silicate- and borate-based glasses.—73-13941
Combined thermodynamic and neutron scattering investigation of glasses in the system $PbO-B_2O_3$.—73-13945
Comparative study of the efficiency of various borate compounds as set-retarders of Class G oilwell cement.—73-00044
Complex heat capacity of borate glasses.—73-14146
Compound $Li_3Ln_2(BO_3)_3$ in the systems $Li_2O-Ln_2O_3-B_2O_3$.—73-16063
Connection between the thermal capacity and the structure of alkali borate systems in the glassy, crystalline, and liquid states.—73-00442
Continuous-wave sum-frequency generation near 194 nm with a collinear double enhancement cavity.—73-08830
$Cr^{4+}/Cr^{3+}$ equilibrium in mixed alkali borate melts.—73-13949
Crystal structure of high-pressure $SrB_2O_4$(IV).—73-02195
Crystal structure of new natural borate tusionite, $MnSn[BO_3]_2$.—73-16087
Crystal structure of volkovskite, $KCa_4B_{22}O_{32}(OH)_{10}Cl{\cdot}4H_2O$, from Nepsky deposit in Eastern Siberia.—73-16097
Crystallization and formation of pressure-induced amorphous barium metaborate.—73-08589
$CuInS_2$ effect on spectral characteristics of borate and tellurite glasses.—73-14150
Deformation electron density map in $LiB_3O_5$.—73-02228
Densities and structural models resulting from extremely modified cesium and rubidium borate glasses.—73-10430
Difference-frequency generation of near-infrared picosecond pulses by noncritical temperature twinning of $LiB_3O_5$.—73-12768
Domain wall [DW] interaction with elastic waves in $FeBO_3$.—73-01453
DSC and Raman studies of lead borate and lead silicate glasses.—73-00327
Dynamics of spontaneous spin reorientation in $Fe_3BO_6$.—73-16114
Effect of uv irradiation on luminescence of sodium borate glasses activated by indium.—73-00468
Effect of water on the volatilization of sodium borate melts.—73-14364
Electric conduction of single-crystal and glass of $Li_2B_4O_7$.—73-11569
Electrical and optical properties of thermally evaporated $LiBO_2$ films.—73-12784
Electrical conductivity of sodium borate glasses containing fluorine and chlorine.—73-14172
Electron paramagnetic resonance of X-irradiated lithium thioborate glasses.—73-03726
Electron spin resonance and Mossbauer studies on crystallization process of $BaFe_{12}O_{19}$ from barium iron borate.—73-03727
Electronic structures of $BaB_2O_4$ and $LiB_3O_5$.—73-02609
Enhanced surface crystallization of ß-barium borate [BBO] on glass due to ultrasonic treatment.—73-03839
ESR [electron spin resonance] centers in thioborate and oxyborate glasses.—73-13981
Evidence of plastic deformation on slow crack growth of borate glass.—73-06410
Experimental determination of the binodal temperature in the lead borate system.—73-08623
Fluorine-containing lanthanum borate glasses colored by oxides of the *d* and *f* elements.—73-07130
Forehearth colorant.—73-03920
Formation of cobalt ferrites in glasses based on potassium aluminoborate systems.—73-00345
Generation of tunable coherent vacuum uv radiation in $LiB_3O_5$ crystals.—73-01415
Glass crystallization of $Zn_{0.5}Cd_{0.5}B_2O_4$-$La(BO_2)_3$-$VF_3$ system.—73-13993
Growth of $Li_2B_4O_7$ single crystal.—73-05831
Growth of lithium triborate (LBO) single-crystal fiber by the laser-heated pedestal growth method.—73-02847
Growth of $NdAl_3(BO_3)_4$ single crystal for miniature solid-state laser.—73-10548
High-efficiency, high-power-difference frequency generation of 0.9–1.5-*µm light in BBO* (*ß*-$BaB_2O_4$).—73-08879
Hydrolysis of borate glass surfaces.—73-07036
Hydrothermal synthesis and morphology of lithium tetraborate crystals.—73-09463
Infrared reflectance investigation of alkali diborate glasses.—73-00351
Infrared structural studies of silver ion-conducting glasses $x$AgI-$(1-x)(Ag_2O{\cdot}nB_2O_3)$.—73-14709
Intensities of Raman bands in borate glasses.—73-10383
Interfacial reactions between titanium and borate glass.—73-00245
Interrelation of change of heat content and structure of alkali borate systems in vitreous, crystalline, and liquid states.—73-02307
Intracavity frequency doubling effect of ß-$BaB_2O_4$ (BBO) in colliding pulse mode-lock (CPM) unstable resonator Nd:YAG laser.—73-08894
Lithium triborate picosecond optical parametric oscillator.—73-05588
Luminescence in the pentaborate $LiBa_3B_5O_{10}$.—73-02630
Luminescence of $Ag^+$ in crystalline and glassy $SnB_4O_7$.—73-12827
Luminescence of $Bi^{3+}$ and the energy transfer from $Bi^{3+}$ to $R^{3+}$ (R=Eu, Dy, Sm, Tb) in alkaline-earth borates.—73-05590
Luminescence of Cu(I) in strontium tetraborate.—73-02631
Magnetic susceptibility and aspects of magnetic interaction in Gd, Fe, and mixed Gd-Fe lead borate glasses.—73-03798
Magnetoelastic channel for nuclear-spin excitation in $FeBO_3$.—73-15348
Manifestation of $FeBO_3$ domain structure in [NMR] signals in strong rf fields.—73-01473
Mechanical properties and fracture behavior of some chemically strengthened silicate and borate glasses.—73-10452
Metallorganic decomposition method for preparing a metal borate.—73-12376
Mixed orthoborate pyroborates $Sr_2Sc_2B_4O_{11}$ and $Ba_2Sc_2B_4O_{11}$: pyroborate geometry.—73-02329
Molybdenum disilicide interaction with barium borate glass in air.—73-00377
Mossbauer effect and electron paramagnetic resonance studies on zinc borate glasses containing transition metal oxides.—73-03741
Mossbauer investigation of the surface and volume spin-reorientation phase transition in $Fe_3BO_6$.—73-12634
Mossbauer spectroscopic study of densified sodium borate glasses containing iron.—73-10389
$Na^+$ coordination in sodium diborate and triborate glasses by X-ray diffraction.—73-06939
Nature of paramagnetic centers in cadmium borate glasses.—73-00378
Nature of paramagnetic centers in cadmium borate glasses.—73-00379
Neutron diffraction study of excitation and damping of magnetoelastic vibrations in $FeBO_3$ crystal.—73-01476
Nonlinear optical materials based on $MBe_2BO_3F_2$ (M=Na,K).—73-12841
Paramagnetic centers in lithium thioborate glasses.—73-03748
Peculiarities of ultrasonic propagation in piezoactive superionic conductors.—73-01422
Phase matching retracing behavior for second harmonic generation in $LiB_3O_5$ crystal.—73-02662
Point defects in lithium triborate ($LiB_3O_5$) crystals.—73-03107
Powerful femtosecond pulse generation by chirped and stretched pulse parametric amplification in BBO crystals.—73-08956
Preparing granular borates.—73-05003
Raman scattering in $FeBO_3$ at high pressures: phonon coupled to spin-pair fluctuations and magnetodeformation potentials.—73-07973
Raman scattering study of lithium borate glasses.—73-03755
Raman spectral studies of borate glasses.—73-06961
Raman spectroscopy of oxide glass system $(1-x)(yB_2O_3{\cdot}zLi_2O){\cdot}xMO$ (MO=CuO, $V_2O_5$).—73-10397
Raman study of both phases of $BaB_2O_4$.—73-08719
Reactive vaporization of sodium tetraborate with water vapor.—73-06962
Retarded acid-soluble well cement compositions and methods.—73-10196
Solid solutions of ettringites: II, Incorporation of $B(OH)^{4-}$ and $CrO_4^{2-}$ in $3CaO{\cdot}Al_2O_3{\cdot}3CaSO_4{\cdot}32H_2O$.—73-10155
Specific heat and characteristic temperature of yttrium- and gadolinium-aluminum borates.—73-02438
Spectra and intensity parameters of $Li_6Y(BO_3)_3$:$Nd^{3+}$ laser crystal.—73-02689
Structural transformations in some oxyborates observed by high-resolution transmission electron microscopy.—73-03201
Structure of lithium borate glasses according to data of X-ray scattering at small angles.—73-14111
Structure-dependent effects on the magnetic behavior of Fe ions in borate and silicate glasses.—73-15369
Structure-transport relationships in lead borate glasses containing $V_2O_5$.—73-03813
Synthesis, structure, and properties of the orthoborate $SrCu_2(BO_3)_2$.—73-02508
Temperature dependence of equatorial Kerr effect in $FeBO_3$.—73-16360
Temperature dependence of SHG in NYAB crystals.—73-08771
Temperature-tuned phase-matching properties of $LiB_3O_5$ for Ti:sapphire laser frequency doubling.—73-16614
Thermal expansion and glass transition of borate melts.—73-00556
Thermal expansion and vitrification of borate melts.—73-00557
Thermal expansion of aluminum borate.—73-16627
Thermal stability of radiation defects in lithium tetraborate from EPR and optical spectroscopy data.—73-16634
Tin(IV) oxide coating of aluminum borate whiskers and alumina particles by chemical vapor deposition.—73-03062
Trends in local optical basicity in sodium borate glasses and relation to ionic mobility.—73-10492
Type-I and type-II noncritical phase matching of $LiB_3O_5$ crystal.—73-08785
Ultrasonic velocity in cesium borate glasses.—73-00571

**boria,**
$^{11}B$ MAS NMR spectra of $BO_{3/2}$-$TeO_2$ glasses.—73-06884
Ac conductivity in $B_2O_3$-$Li_2O$ films.—73-00930
Alkali-free glass.—73-00725
Characterization of microporous amorphous alumina–boria.—73-08570
Colored glass.—73-00730
Dc conductivity and hopping mechanism in $Bi_2O_3$-$B_2O_3$ glasses.—73-10427
Effect of $B_2O_3$ on viscosity and durability of glass wool.—73-14357
Electron paramagnetic resonance and optical absorption spectra of $Cu^{2+}$ ions in alkali cadmium borosulfate glasses.—73-10369
ESR of vanadyl ions in $Li_2O$-BaO-$B_2O_3$ glasses.—73-06914
Features of low-temperature relaxation transition in vitreous boric anhydride.—73-13988
Gel region and gelation behavior of alkoxide solutions in the $B_2O_3$-$Na_2O$ system.—73-05824
Glass formation and crystallization of $Y_2O_3$-BaO-CuO-$B_2O_3$ glass-ceramics.—73-08089
Glasses with very high index of refraction and low density.—73-10634
Liquation and crystallization in melts of the system $Al_2O_3$-$B_2O_3$.—73-00367
Magnetic properties of $x$$CeO_2$–$(1-x)(3B_2O_3{\cdot}PbO)$ glasses.—73-00512
Mass spectrometric study of the thermodynamic properties of melts of the $B_2O_3$-$GeO_2$-$SiO_2$ system at 1373–1453 K.—73-00371
Mass spectrometric study of the thermodynamic properties of melts of the system $B_2O_3$-$GeO_2$-$SiO_2$ at temperatures 1373–1453 K.—73-00372
Method for production of nonreducible dielectric ceramic composition.—73-01057
Method of producing low-temperature-firing dielectric ceramic composition containing $B_2O_3$.—73-11036
Microstructure of glass and crystalline phases in the system PbO-$TeO_2$-$B_2O_3$.—73-14036
Multipurpose photochromic brown glasses.—73-00750
Optical crown glass having negative anomalous partial dispersion and high uv transmission.—73-10652
Phase equilibria in the system CdO-ZnO-$B_2O_3$ at 850°C.—73-02380
Phase equilibria in the system $Na_2O$-$B_2O_3$-$Ga_2O_3$ at 600°C.—73-02382
Phase relations in the system CaO-$B_2O_3$-$SiO_2$.—73-08695
Phase relations in the system $Y_2O_3$-$B_2O_3$-$V_2O_5$ in the subsolidus region.—73-16258
Phase relations in the systems $Ln_2O_3$-$B_2O_3$-$Ta_2O_5$, where Ln=Sm, Eu, in the subsolidus region.—73-16259
Phase transformation and mechanical properties of $B_2O_3$-doped cordierite derived from complex alkoxide.—73-09237
Quantitative analysis of $B_2O_3$ in E-glass by using X-ray fluorescence spectrometer.—73-14075
Quantitative analysis of boric oxide in borosilicate glasses by electron probe microanalysis [EPMA].—73-15835
Quantum chemical computations of interparticle interactions in the structural groupings of boron oxide.—73-02408
Raman spectra of $BO_{3/2}$-$TeO_2$ glasses.—73-10396
Structure of $B_2O_3$ and alkali borates in vitreous and molten states.—73-14107
Structure of glasses of the $B_2O_3$-$Sb_2O_3$ system using small-angle X-ray scattering data.—73-01029

Thermodynamic activities in $B_2O_3$-$SiO_2$ melts at 1475 K.—73-00420
Third harmonic generation in PbO-$SiO_2$ and PbO-$B_2O_3$ glasses.—73-03816
Tick-proof ceramics.—73-05183
Viscosity of molten $Na_2O$-$B_2O_3$ slags.—73-09008
Vitreous $B_2O_3$: a geometrical study.—73-06304

**borides,**
$^{59}$Co NMR from magnetic domains in $Y_2Co_{14}B$ and $Gd_2Co_{14}B$.—73-11648
Carbothermal synthesis of binary (MX) and ternary ($M^1$, $M^2$X) carbides, nitrides, and borides from polymeric precursors.—73-12934
Characterization and oxidation resistance of hot-pressed chromium diboride.—73-17245
Comparative study of FMR [ferromagnetic resonance] and Brillouin light scattering on FeNiB alloys.—73-11649
Crystal structure of new $HoNi_2B_2$ boride.—73-02204
CVD method for forming metal boride films using metal borane cluster compounds.—73-12460
Effect of high pressure on electrical properties of europium and ytterbium hexaborides.—73-02580
Effects of carbide addition on the mechanical properties of the $Ti(C_{0.5},N_{0.5})$-30 wt% $TiB_2$-carbide sintered compacts.—73-03274
Effects of metallic boride dispersion on fracture toughness and oxidation resistance in SiC ceramics.—73-03275
Effects of metallic boride dispersion on fracture toughness and oxidation resistance in SiC ceramics.—73-13518
Electronic structure and the Fermi surfaces of antiferromagnetic $NdB_6$.—73-02259
Friction and wear characteristics of $B_4C$-$TiB_2$ ceramics and $Mo_2FeB_2$-Fe-type cermets.—73-13839
Heat-resistant sintered hard alloy.—73-00281
Influence of milling atmosphere on the magnetic properties of Nd-Fe-B alloy powders produced by mechanical grinding.—73-04617
Injection sleeve for die casting and a method of casting an aluminum or an aluminum alloy part.—73-13917
Intake or exhaust valve actuator.—73-00284
Interaction of magnesium polyboride and zinc chloride.—73-16179
Lanthanum boride type single crystal and method for growing the same.—73-02101
Low-temperature resistivity of valence fluctuation compound $SmB_6$.—73-16531
Magnetic properties of $Y_{1-x}Gd_xCo_4B$ compounds.—73-07956
Magnetic properties of $Y_2Fe_{14}B$ and $Nd_2Fe_{14}B$ single crystals.—73-15343
Material response of diboride matrix composites to low-pressure-simulated hypersonic flows.—73-12435
Mechanism of reaction sintering of iron–iron boride cermets.—73-06822
Microstructure and properties of niobium diboride particulate-reinforced silicon carbide composites.—73-09485
Mossbauer study of spin-reorientation in $YCo_4B$.—73-02334
Neutron scattering study of the intermediate-valent ground state in $SmB_6$.—73-08677
New type of $Ho_2Ni_{10}B_5$ boride structure.—73-02355
Origin of the anomalous temperature dependence of the Nd sublattice magnetization in $Nd_2Fe_{14}B$.—73-01478
Point-contact spectroscopy of $La_{1-x}Ce_xB_6$.—73-08703
Point-contact spectroscopy of $LaCeAl_2$ and $LaCeB_6$ alloys.—73-08704
Preparation and formation process of $HfB_2$ fine powders by Mg thermite method.—73-05961
Preparation and formation process of $HfB_2$ fine powders by Mg thermite method.—73-16908
Processing TiZrC and $TiZrB_2$.—73-08538
Refinement of structural type of $Mo_2B_5$.—73-16291
Stress dependence of magnetic properties of an Fe-Ni-B alloy.—73-04654
Structural evolution of nanocrystalline $Fe_{73.5}Cu_1Nb_3Si_{13.5}B_9$.—73-15366
Structure modification of radio frequency sputtered $LaB_6$ thin films by internal stress.—73-03030
Superconductivity at 12 K in $YNi_4B$ system.—73-15637
Synthesis of Fe-B system thin films from powder mixtures under the influence of laser radiation.—73-09355
Thermal expansion anomalies of $YCo_4B$ compounds.—73-05656
Thermodynamic properties of vanadium diboride in wide temperature ranges.—73-16378

**boron carbide,**
Borate glass containing boron carbide burnable poison coating.—73-02023
Boron carbide-aluminum cermets having microstructures tailored by a post-densification heat treatment.—73-10301
Boron carbide.—73-12260
Characterization of boron carbide thin films fabricated by plasma-enhanced chemical vapor deposition from boranes.—73-12751
Corrosion resistance of boron carbide powders.—73-16434
Cubic boron nitride carbide films.—73-15986
CVD synthesis and thermoelectric properties of boron carbide.—73-02760
CVD synthesis and thermoelectric properties of boron carbide.—73-12966
Determination of $B_4C$ in refractories containing graphite.—73-00797
Mechanical properties of reaction-sintered materials based on boron carbide.—73-03336
Method for reducing metal content of self-supporting composite bodies and articles formed thereby.—73-00288
Microstructure and thermal stability of coatings obtained by interaction of SiC and $B_4C$ with Cr and Ti powders.—73-13874
Microstructure of $B_4C/TiB_2$ composite fabricated by reaction sintering of $B_4C$ and TiC.—73-17168
Microstructure of boron carbide.—73-06257
Oxidation of $TiB_2$-20 vol% $B_4$ composite.—73-09534
Plasma spraying of boron carbide using pressures up to two bar.—73-09245
Plasma-sprayed $B_4C$ coatings in controlled fusion reactors.—73-09246
Plasma-sprayed $B_4C$ coatings in controlled fusion reactors.—73-13879
Preparation of nanophase SiC/$Si_3N_4$, SiC/$B_4C$, and stoichiometric SiC from mixtures of a vinylic polysilane [VPS] and metal powders.—73-05977
Pressure-assisted technique for forming self-supporting composite bodies and articles formed thereby.—73-05004
Pressureless sintering and related reaction phenomena of $Al_2O_3$-doped $B_4C$.—73-05992
Process for microwave sintering boron carbide.—73-05328
Reaction processes in the interior of an MgO-carbon brick with boron carbide additive.—73-13891
Reaction processing of AlN/$B_4C$ composites.—73-05334
Self-supporting bodies.—73-10347
Structural homogeneity of boron carbide thin films fabricated using plasma-enhanced chemical vapor deposition from $B_5H_9$+$CH_4$.—73-12698
Synthesis and mechanical properties of $B_4C$ by self-propagating high-temperature synthesis chemical furnace.—73-13294
Thermoelectric properties of CVD boron carbide.—73-16637
$TiB_2$-$B_4C$ composites pressureless sintered using Ni and C as densification aids.—73-17060
$TiB_2$-$B_4C$ composites pressureless-sintered [at 1600°C] using Ni and C as densification aids.—73-06119

**boron nitride,**
Ab initio calculation of band structure, X-ray emission, quantum yield, and electron-energy-loss spectra of hexagonal boron nitride.—73-07281
Abrasive compact of cubic boron nitride and method of making [the] same.—73-09768
Application of a polymeric boron nitride precursor as a matrix in carbon fibers.—73-09019
Boron nitride membrane in wafer structure.—73-05287
Boron nitride system including an hBN starting material with a catalyst and a sintered cBN body having a high heat conductivity based on the catalyst.—73-15977
Boron nitride thin films by microwave ECR plasma chemical vapor deposition.—73-12927
Boron nitride thin films on Si(100) by MOCVD.—73-14786
Boron nitride thin-film deposition using electron cyclotron resonance microwave plasmas.—73-09024
Boron nitride-containing bodies and method of making the same.—73-15978
Boron nitride.—73-12261
Boron-nitride-coated microcutting device.—73-10302
Brazing of cubic boron nitride abrasive crystals to steel substrate with alloys containing Cr or Ti.—73-13803
Ceramic-filled thermally conductive composite containing fusible semicrystalline polyamide and/or polybenzocyclobutenes for use in microelectronic applications.—73-01046
Characterization of dip-coated boron nitride on silicon carbide fibers.—73-08568
Chemical synthesis of an aluminum nitride/boron nitride nanostructured composite material.—73-16672
Chemical vapor infiltration of boron nitride interphase in ceramic fiber preforms: discussion of some aspects of the fundamentals of the isothermal chemical vapor infiltration process.—73-02746
Coating for improved retention of cBN in vitreous bond matrices.—73-09770
Composite tactical hard body armor.—73-10308
Cubic boron nitride carbide films.—73-15986
Cubic boron nitride crystallites grown by laser-induced plasma CVD.—73-02758
Cubic boron nitride phosphide films.—73-15987
Cubic boron nitride-base sintered ceramics for cutting tool.—73-15988
Current research problems and opportunities in the vapor phase synthesis of diamond and cubic boron nitride.—73-02759
Defect-induced control of the structure of boron nitride.—73-12461
Deposition of wear-resistant BN coatings by rf plasma-assisted chemical vapor deposition.—73-03573
Diamond semiconductor device having a non-doped diamond layer formed between a BN substrate and an active diamond layer.—73-11521
ECR CVD method for forming BN films.—73-12464
Effect of BN addition on the sintering and electrical properties of Y-doped $BaTiO_3$ ceramics.—73-12998
Effects of self-bias voltage on formation of cBN film.—73-16126
Evaluation of the interfacial mechanical properties of fiber-reinforced boron nitride matrix composites.—73-17311
Fabrication of carbon-fiber-reinforced hBN composites.—73-16771
Fibrous monolithic ceramics: III. Mechanical properties and oxidation behavior of the silicon carbide/boron nitride system.—73-09597
Fundamental research on the deposition of cubic boron nitride films on curved substrates by ion-beam-assisted vapor deposition.—73-05820
Growth of BN by hot-filament-assisted electron beam deposition.—73-16808
Helix-type traveling wave tube structure with supporting rods covered with boron nitride or artificial diamond.—73-05302
Helix-type traveling wave tube structure with supporting rods covered with boron nitride or artificial diamond.—73-10316
Hexagonal boron nitride synthesis by nitrogen ion implantation of boron films.—73-16814
High-pressure/high-temperature piston-cylinder apparatus.—73-00282
Hot filament activated chemical vapor deposition of boron nitride.—73-02851
Hot-pressed BN-AlN ceramic composites with high thermal conductivity: III.—73-16821
Hydrothermal corrosion of hexagonal boron nitride.—73-09527
Hydrothermal corrosion of hexagonal boron nitride.—73-17223
In situ formation of boron nitride interfaces on Nextel 312 continuous ceramic fiber: I, Nitriding process and Blackglas ceramic matrix composite properties.—73-17353
In situ formation of boron nitride interfaces on Nextel 312 continuous ceramic fiber: II, Oxidation of Blackglas ceramic matrix composites.—73-17354
Industrial diamonds, diamond and cBN products, diamond and diamondlike films—emerging applications and markets.—73-09721
Influence of the B/N ratio on the elaboration of cubic boron nitride.—73-16175
Interface characterization by TEM, AES, and SIMS in tough SiC (ex-PCS) fiber–SiC (CVI) matrix composites with a BN interphase.—73-09470
Interfacial microstructure and chemistry of SiC/BN dual-coated Nicalon fiber-reinforced glass-ceramic matrix composites.—73-09471
Interfacial shear strength evaluation of ceramic-coated carbon fibers.—73-13556
Ion plating deposits of boron nitride, an FTIR structural characterization.—73-13106
Ir spectroscopy characterization of various types of structural irregularities in pyrolytic boron nitride.—73-12616
Kinetics of deoxidizing of hexagonal boron nitride preparations.—73-09415
Laser deposition of crystalline boron nitride films.—73-05306
Low-dielectric-constant interlayer insulation for multilevel metallization.—73-04129
Mechanism of oxidation and nonstoichiometry of cBN.—73-06310
Mechanism of oxidation of ß-BN.—73-13478
Metallurgy of cBN and its wear in high-speed machining of ferrous materials.—73-05268
Method for manufacturing rings or disks having a blade or vane rim.—73-01865
Method for reducing metal content of self-supporting composite bodies and articles formed thereby.—73-00288
Method of chemical vapor deposition of boron nitride using polymeric cyanoborane.—73-16004
Method of fabricating a transistor having a cubic boron nitride layer.—73-01376
Method of forming ohmic contact electrodes for *n*-type semiconductor cubic boron nitride.—73-11531
Method of making hard boron nitride by a plasma CVD method employing beam irradiation.—73-12494
Microstructure of pressureless-sintered hBN.—73-06259
MINDO molecular orbit description of three phases of BN.—73-08668
Modeling and computer simulation of ion-beam- and plasma-assisted film growth.—73-05929
Multistepped submerged nozzle for continuous casting.—73-14605
Neutron diffraction study of $Y_2Fe_{14}BN_{1-\delta}$.—73-02347
New technique for material synthesis by utilizing shock wave interaction and its application to the synthesis of B-C-N system.—73-16879
Novel phases in shock-compacted mixtures of diamond and boron nitride.—73-16234
Ohmic contact electrodes for *n*-type semiconductor cubic boron nitride.—73-11536
Optical properties of cubic boron nitride films made by a reactive ion plating method.—73-05604
Oxidation kinetics of hexagonal boron nitride powder.—73-17231
Oxidation of a composite material based on cubic boron nitride.—73-13484
Palladium thick-film resistor containing boron nitride.—73-04227
Photoinduced phase inhibition during growth of boron nitride thin films.—73-05946
Plasma deposition of BN, BCN:H, and Me-BCN:H films using N-trimethylborazine (M=Ti, Nb).—73-09241
Postradiation defects in neutron-irradiated pyrolytic boron nitride.—73-13364
Preparation and mechanical properties of SiC/BN/SiC composites using different BN coating methods.—73-09658
Pressure-assisted technique for forming self-supporting composite bodies and articles formed thereby.—73-05004
Process for forming a crack-free boron nitride coating on a carbon structure.—73-12509
Process for making coated abrasives for grinding wheels.—73-09773
Process for preparing polycrystalline cBN ceramic masses and resulting product.—73-16011
Properties of mixed-phase BN films deposited by rf PECVD.—73-12870
Reaction sintering of cubic boron nitride using volatile catalysts.—73-02990
Reactions between molten aluminum and pyrolytic boron nitride crucibles.—73-11413
Reactivity between BN composite ceramics and molten stainless steel.—73-00848

Regularities of pyrolytic boron nitride coating formation on a graphite matrix.—73-13442
Role of gas-phase reactions in boron nitride growth by chemical vapor deposition.—73-09308
Self-supporting composite bodies.—73-10348
Semiconductor device having a ternary boron nitride film and a method for forming the same.—73-15242
Shape resonance in the X-ray absorption spectra of hexagonal boron nitride crystal.—73-02428
Shock compressibility of the sphalerite modification of boron nitride.—73-06036
Shock-induced mechanisms of phase transformation from rhombohedral BN to cubic BN.—73-08730
Silicon boron nitride ceramic and precursor compounds, a process for their preparation and their use.—73-02135
Silicon nitride/boron nitride composite with enhanced fracture toughness.—73-16017
Structural aspect of wurtzite boron nitride phase stabilization.—73-12694
Structural characterization of preferentially oriented cubic BN films grown on Si(001) substrates.—73-06288
Structural features of boron nitride dense phase formation from rhombohedral modification under high static pressure.—73-17200
Submillimeter optical properties of hexagonal boron nitride.—73-02696
Superabrasives for grinding alloys.—73-03416
Surface activity of a boron nitride powder: a vibrational study.—73-09513
Surface species on a submicronic boron nitride powder—a starting FTIR characterization.—73-13456
Synthesis of cubic boron nitride using Mg and pure or M′-doped $Li_3N$, $Ca_3N_2$, and $Mg_3N_2$ with M′=Al, B, Si, Ti.—73-09354
Synthesis of $Fe_xN$/BN [$x$=3 or 4] magnetic nanocomposite via chemical processing.—73-07979
Synthesis of polycrystalline cubic boron nitride.—73-05346
Synthesis of polycrystalline cubic boron nitride.—73-16020
Synthesis of translucent sintered cubic boron nitride.—73-17048
Thermal decomposition of borazane $BH_3NH_3$ under HIP conditions and of the structural evolution of the products of pyrolysis.—73-13323
True vit: vitrified-bond cBN grinding wheels offer unique benefits.—73-05280
Try hard turning.—73-05281
Wear mechanisms of ultrahard, nonmetallic cutting materials.—73-06551
Wear-resistant [BN] coating films and their coated articles.—73-16023
X-ray photoelectron spectroscopy and secondary ion mass spectrometry of boron nitride thin films on austenitic stainless steel.—73-03668

**boron,**
Advances of boron analysis in glass and ceramics.—73-00303
Atomic and electronic structure of B/Si(100).—73-12539
Boron and its "hazy behavior."—73-00306
Boron diffusion through thin gate oxides: influence of nitridation and effect on the $Si/SiO_2$ interface electrical characteristics.—73-07394
Boron slurry as a magnesia raw material.—73-10704
Boron.—73-12262
Characterization of the B/Si surface electronic structures.—73-09438
Effect of boron doping on the surfaces of diamond thin films.—73-05754
Effects of charge preparation technique and type of boron raw material on the working properties of molten glasses.—73-00618
Evaluation of ohmic contacts formed by $B^+$ implantation and Ti-Au metallization on diamond.—73-06786
Features of manifestation of giant $\Delta E$-effect in amorphous Fe-B-P alloys.—73-02274
Ferroelectricity and phase transitions in stilwellite, $LaBGeO_5$.—73-15265
Gel region and gelation behavior of alkoxide solutions in the $B_2O_3$-$Na_2O$ system.—73-16801
Hot-pressing of SiC/B ultrafine composite powders and microstructure of sintered body.—73-09165
Hydroboration of polymethylvinyl silane—a novel route to silicon boron carbide ceramics.—73-09166
Inexpensive method for making ceramic composites.—73-02864
Ir spectra of iron-containing borophosphate glasses.—73-00359
Low-temperature magnetic state of amorphous invarous iron-boron alloys.—73-15331
Molecular beam epitaxial growth of boron-doped GaAs films.—73-11328
Potentiometric determination of boron in borophosphosilicate glasses.—73-00391
Powder neutron diffraction of α-$UB_2$ (α-$UB_2C$-type).—73-01756
Process for preparing self-supporting bodies and products produced thereby.—73-00296
Processing-structure properties' relations in titanium boron carbon ceramic-ceramic composites produced by transient plastic phase processing.—73-16954
Properties and structure of boron molybdate glasses.—73-14258
Rapid method for boron determination in glass by means of inductively coupled plasma emission spectrometry (ICP-AES).—73-15836
Reliability issues of a crack-resistant passivation layer process for submicron nonvolatile memory technology.—73-03883
Short-range order in dilute Ni-P, Ni-B alloys.—73-16300
Strength of Bronsted acid sites in boralites.—73-12692
Supersaturated solid solutions of boron in SiC by SHS.—73-09344
Surface charge screening and Fermi level pinning on a synthetic, boron-doped diamond.—73-07823
Synthesis and characterization of Ti-B-C system ceramics prepared by self-propagating high-temperature synthesis method.—73-06080
Transport studies on silver borotungstate glasses.—73-00570
Ultrahigh vacuum microscopy of the Si(111) boron $\sqrt{3}X\sqrt{3}R30°$ surface.—73-06302
Use of boron phosphate in the solid-state preparation of crystalline iron(III) phosphate and manganese(II) diphosphate.—73-08788

**borophosphates,**
Structural study of borophosphate glasses by Raman and infrared spectroscopy.—73-10405

**borophosphosilicate,**
Determination of boron and phosphorus in boron phosphosilicate thin films on silicon substrates by capillary electrophoresis.—73-12127
Potentiometric determination of boron in borophosphosilicate glasses.—73-00391
Ti/borophosphosilicate glass interfacial reactions and their effects on adhesion.—73-06866
Variations of the stress of silicon glass during annealing.—73-07099

**borosilicate glass,**
Acoustic microscopy of ceramic fiber composites: I, Glass-matrix composites.—73-09431
All-electric melting furnace with prolonged durability.—73-15864
Alternating bending load behavior of unidirectionally fiber-reinforced glasses.—73-03774
Alumina as a devitrification inhibitor during sintering of borosilicate glass powders—correction.—73-00588
Aluminum borate devitrification inhibitor in low-dielectric borosilicate glass.—73-04186
Anisotropic densification during sintering of glass powder compacts.—73-09018
Behavior of the platinum group metals in a borosilicate waste glass and their effects on the operation of a joule heated ceramic melter.—73-08284
BSG-doped CMC's for thermal durability.—73-10500
Chemical vapor deposition of borophosphosilicate glass initiated by high-frequency discharge plasma.—73-00594
Coloring and refining of heat-resisting glasses.—73-10509
Comparative study of simultaneous implant activation and borophosphosilicate glass (BPSG) reflow during rapid thermal processing [RTP] and furnace annealing on complex topographies.—73-03824
Crystal growth inhibitor for glassy low-dielectric inorganic composition.—73-04196
Defect reduction in semiconductor manufacturing: a case study of $BPO_4$ elimination in BPSG films.—73-04279
Dielectric relaxation of Vycor-type borosilicate glass.—73-03785
Dielectric relaxation of Vycor-type borosilicate glass.—73-14156
Effect of additives on the properties of the lead borosilicate glasses and the thin-film coatings based on them.—73-07302
Effect of antimony oxide on phase separation in sodium borosilicate glass.—73-00329
Effect of antimony oxide on phase separation in sodium borosilicate glass.—73-00330
Effect of composition and temperature on viscosity and electrical conductivity of borosilicate glasses for Hanford nuclear waste immobilization.—73-08294
Effect of heat treatment on the infrared absorption spectra of Sr-Na borosilicate glass.—73-03723
Effect of nonexchange processes on electrode characteristics of lithium borosilicate glasses.—73-14163
Effect of the two-stage thermal treatment of two-phase sodium borosilicate glasses on the structure of the porous glass obtained thereby.—73-00334
Enthalpy of formation of alkali borosilicate glass.—73-00335
Evaluation of strength and edge flaw severity of barium borosilicate glass substrate by thermal downshock testing.—73-03788
Evaluation of strength and edge flaw severity of barium borosilicate glass substrate by thermal downshock testing.—73-14183
EXAFS of Cs $L_3$-edge in sodium borosilicate and aluminum phosphate glasses.—73-13984
Excimer laser processing of BK7 and BGG31 glasses.—73-10530
Fatigue behavior of borosilicate glass-ceramic matrix, Nicalon (silicon carbide) fiber composites.—73-13530
Glass composition.—73-14539
Glass powders for circuit boards.—73-00492
Growth kinetics study of $CdTe_xS_{1-x}$ quantum dots in a borosilicate glass.—73-14948
High-performance liquid chromatography packing materials made of porous glass.—73-03733
Inductively coupled plasma for glass analysis: results from a practical experience.—73-15806
Internal friction and oxygen diffusion in $x(Na_2O)(1-x)B_2O_3{\cdot}2SiO_2$ glasses: II, Oxygen diffusion.—73-10384
Internal friction and oxygen diffusion in $x(Na_2O)(1-x)B_2O_3{\cdot}2SiO_2$ glasses: I, Internal friction.—73-10385
Internal friction and oxygen diffusion in $x(Na_2O)(1-x)B_2O_3{\cdot}2SiO_2$ [$x$=0.3–1] glasses: I, Internal friction.—73-00356
Internal friction and oxygen diffusion in $x(Na_2O)(1-x)B_2O_3{\cdot}2SiO_2$ glasses: II, Oxygen diffusion.—73-00357
Issues related to volatilization, phase alteration, and presence of unreacted feed in the borosilicate glass waste form.—73-06933
Kinetic peculiarity of isothermal particle growth of dispersed phase in phase-separated sodium borosilicate glass.—73-14023
Light transmission of porous plates obtained from two-phase sodium borosilicate glasses of various structures.—73-00509
Local environment of cobalt atoms in borosilicate glasses.—73-00368
Local surroundings of cobalt atoms in borosilicate glasses.—73-00369
Long-term alteration of borosilicate waste glasses.—73-06936
Method of joining corrugated glass plates of borosilicate glass.—73-03947
Micro-glass-balloon "CEL-STAR."—73-00515
Middle- and small-scale electric glass-melting furnaces.—73-05121
Modification of the pore structure and surface properties of controlled pore glasses.—73-00668
Nature of double refraction of microporous glasses.—73-00519
Nitridation of silicate and borosilicate glasses prepared by sol-gel process.—73-06943
Novel porous glass with chemical resistance and good shaping ability prepared from borosilicate glass containing ZnO.—73-00672
Otto Schott and the invention of borosilicate glass.—73-09735
Peculiarities in the kinetics of isothermal growth of particle size of the dispersed phase in liquifying sodium borosilicate glass.—73-00384
Phase separation in sodium borosilicate glass with additions of the oxides $ZrO_2$ and CaO.—73-00386
Phase separation in sodium borosilicate glass with $ZrO_2$ and CaO additives.—73-00387
Phase separation of halogen-containing sodium borosilicate glasses.—73-00388
Phase separation of halogen-containing sodium borosilicate glasses.—73-10392
Photoconductivity of PbO-doped borosilicate glass prepared by the sol-gel process.—73-10469
Polyselenide formation in borosilicate glasses.—73-03751
Preparation and properties of bonding glass for amorphous magnetic head.—73-10473
Preparation by a sol-gel process of borosilicate glasses containing microcrystals of tellurium and zinc telluride.—73-14473
Preparation of PbS quantum dot materials by the sol-gel process.—73-03873
Preparation of PbS quantum dot materials by the sol-gel process.—73-11402
Preparation of quantum-size CdS-doped $Na_2O$-$B_2O_3$-$SiO_2$ glasses with high nonlinearity.—73-10584
Properties of sodium borosilicate glasses/$Al_2O_3$-sintered composites containing fluorides.—73-16579
Quantitative analysis of boric oxide in borosilicate glasses by electron probe microanalysis [EPMA].—73-15835
Quantitative chemical analysis of borosilicate glasses by the inductively coupled plasma-atomic emission spectroscopy method.—73-03754
Radioactive demonstration of DWPF [Defense Waste Processing Facility] product control strategy.—73-08307
Raman study of sodium borosilicate glass containing cobalt oxide.—73-00393
Relationship between borosilicate glass composition, structure, and durability test response.—73-06965
Shape of complex impedance arcs for alkali ion conducting glasses.—73-04165
Sintering and mechanism of crystallization prevention of alumina-filled borosilicate glass.—73-13259
Sintering behavior of arranged ceramic short-fiber-reinforced glass matrix composites.—73-14492
Sol-gel processing of an entirely new family of mixed valence glasses.—73-10604
Structure of sodium borosilicate glass with additions of cobalt oxide studied by Raman spectroscopy.—73-00417
TEM observation of submicrocrystals in borosilicate glass.—73-03769
Temperature dependence of corrosion of refractories in barium borosilicate glass melts.—73-07225
Thermal expansion of potassium borosilicate glasses.—73-00559
Thermal expansion of potassium borosilicate glasses.—73-00560
Thermal expansion of sodium borosilicate glasses.—73-00561
Thermal expansion of sodium borosilicate glasses.—73-00562
Thermal fatigue of glass.—73-03815
Ultrasonic sol/gel processing of aluminoborosilicate glass and its composite with carbon fiber reinforcement.—73-03899
Ultraviolet absorbing [borosilicate] glasses.—73-14561
Use of rasorite as a source of boron in borosilicate glasses.—73-00717
Viscosity of potassium borosilicate glasses in the glass transition region.—73-00574
Viscosity of potassium borosilicate glasses in the vitrification interval.—73-00575
Viscosity of sodium borosilicate glasses in the glass transition range.—73-00576
Viscosity of sodium borosilicate glasses in the vitrification range.—73-00577
Viscous sintering of nonspherical borosilicate glass powder.—73-10617
Volatilization of type E borosilicate glass.—73-00426

**borosilicates,**
Anorthite and thermal expansion of CaO-$Al_2O_3$-$SiO_2$-$B_2O_3$ ceramics.—73-12746
Ceramic composite of aluminoborosilicate fibers coated with several layers.—73-05290

Conditions for alkali-borosilicate solution synthesis with europium introduction to manufacture hollow glass microspheres.—73-14342
Conductivity enhancement mechanism of interstitial-type $Li^+$ conductor, $Li_{4+x}B_xSi_{1-x}O_4$ ($0 \le x \le 0.7$).—73-04068
Glasses made of pink borosilicates, their manufacture, and articles made of such glasses.—73-10633
Melting properties of $PbO$-$B_2O_3$-$SiO_2$ system flux.—73-10564
Rare-earth-containing frits having a high glass transition temperature and their use for the production of enamels having improved heat resistance.—73-03965
Sulfate as a selective redox buffer for borosilicate melts.—73-10409
Synthesis of a new porous borosilicate with the levyne structure.—73-06087

**boundary layer,**
Characterization of insulating boundary layers of BL [boundary layer] capacitors.—73-14682
Evolution process of antiphase boundaries in GaAs on Si.—73-04335
Grain-boundary structure of $Bi_2O_3$-diffused BL capacitor.—73-10953
Twin boundaries' role in superconducting properties' formation of single-crystal $YBa_2Cu_3O_{7-x}$.—73-04823

**brazing,**
Brazing of cubic boron nitride abrasive crystals to steel substrate with alloys containing Cr or Ti.—73-13803
Brazing titanium vapor-coated zirconia.—73-10199
Effect of surface preparation on strength of ceramic joints brazed with active filler metal.—73-03582
Interfacial structure of $Si_3N_4$ brazed with an Ag-Cu-Ti alloy.—73-03610
Joining ceramics by brazing.—73-13108
Metallurgical behavior during brazing of Ni-base alloy Inconel 600 to $Si_3N_4$ with Ag71Cu27Ti2 filler metal.—73-06826
Method of forming tappet of the kind having ceramic seat plate.—73-03694
Microstructural study of $Al_2O_3$/Ti joints brazed with different Ag-Cu filler metals.—73-03618
Microstructural study of alumina brazed with a copper-nickel-zirconium alloy.—73-03619
Promoting the wetting and brazing of ceramics.—73-03635
Segregation of chromium at the interface between Ni-Cr-Si-Ti brazing filler metal and $Si_3N_4$ ceramics.—73-00265

**breakdown,**
Breakdown mechanism in buried silicon oxide films.—73-07284
Models for breakdown-resistant dielectric and ferroelectric ceramics.—73-07900
New theory for the dielectric breakdown of solid dielectrics.—73-01000

**brick industry,**
Building a brickworks from scratch.—73-10674
Ceramic brick production making use of coal mining wastes of Ekibastuzsky basin.—73-00766
Development and trends in the erection of heavy clay works.—73-04910
Development of the brick and roofing tile industry.—73-10675
Effect of the Heat Utilization Order on production processes in the brick and tile industry.—73-05111
Energy savings in the brick and tile industry.—73-04916
Export successes for Australian brick plant manufacturer.—73-10680
Fast firing technology in the brick and tile industry—economic considerations.—73-05116
New generation in ceramic manufacture.—73-10685
Situation of the brick and tile industry in Greece.—73-03406

**brick,**
200 years of industrial and commercial building with bricks.—73-00015
Application of $Cr_2O_3$-bearing–magnesia raw materials to magnesia-carbon bricks.—73-00776
Batch composition for unfired bricks.—73-09826
Behavior of boric compounds added in MgO-C bricks.—73-00779
Brick made from iron ore tails without pressing, firing, and steam curing.—73-06629
Bricks containing electric arc furnace dust.—73-03987
Bricks fired from mixture of coal spoil and fly ash.—73-10673
Brickwork products.—73-03988
Building material based on the wastes of tungsten and molybdenum integrated works.—73-03976
Dependence of mechanical properties of MgO-C bricks on graphite content.—73-17273
Development of bricks using fluidized bed slag and their production.—73-06646
Development of corundum brick with low $SiO_2$ content and its applications.—73-14585
Development of imitation granite porcelain brick.—73-10820
Developments in forming machine for silicate brick in China.—73-12131
Dynamic simulation of drying process of perforated clay brick.—73-07190
Effect of aging on properties of brickmaking raw materials: I.—73-10676
Effect of aging on properties of brickmaking raw materials: II.—73-10677
Effect of particle size distribution of coal gangue on properties of fired products.—73-09082
Effects of coal gangue additives on quality of clay brick.—73-10678
Evaluation of strength testing results of wall bricks.—73-10679
Fabrication of nonfired brick using lead-zinc tails.—73-06653
Further development of magnesia spinel bricks with their own specific properties for lining the transition and sintering zones of rotary cement kilns.—73-04005
Influence of heat-treatment conditions on the properties of MgO-C bricks containing aluminum.—73-17359
Limiting efflorescence and leaching in facing brick masonry—causes, reduction through technological measures, additives, and posttreatment.—73-07192
Lining of the oblique movement zone of a unit for dry quenching of coke after service.—73-00830
Lodge Lane Brickworks: a breakthrough in the reduction firing of bricks.—73-00770
Low-temperature rapid burning of bricks.—73-00771
Manufacture of cement–unused fly ash bricks without firing or steam curing.—73-06683
Methods of reducing overburnt specks in internal-fired bricks.—73-10684
New ceramic brick production technologies.—73-14564
Nonfired and nonautoclaved fly ash bricks.—73-10070
Once firing of wet green bricks in annular kilns.—73-07193
Once setting-firing of surplus heat firing perforated brick of coal gangue.—73-08354
Oxidizing prevention of MgO-C bricks for converter.—73-00833
Permeability of MgO-C bricks.—73-00837
Problems in production of autoclaved lime–fly ash bricks and their preventive measures.—73-10096
Production of foam glass brick with phlogopite.—73-10586
Production of nonfired and nonsteam-cured brick with blast-furnace slags.—73-06701
Production of perforated bricks using architectural discard residues.—73-07194
Production processes of semidry pressed bricks.—73-07195
Production technology for color glass face brick.—73-10588
Rapid drying of non-load-bearing perforated bricks.—73-10688
Removal of explosive crack of lime in coal gangue brick by dripping water.—73-10690
Reparation of large area setting slump in annular kiln preheat zone during firing.—73-12239
Research and modeling of carbon combustion diffusion kinetics during burning of fuel-containing ceramics under commercial production conditions.—73-15753
Resisting the heat.—73-04947
Semidry pressing process for calcium silicate bricks.—73-10147
Soft mud method of brickmaking—an overview of the essential aspects of the process.—73-03985
Technological lines for small capacity plants.—73-14566
Unfired bricks from colliery spoil.—73-06729

**brickmaking equipment,**
Brickworks with sea view.—73-03975
Comparison and selection of two kinds of pneumatic clutches.—73-12119
Hammer crusher of automatic spray discharge.—73-12032
Lodge Lane Brickworks: a breakthrough in the reduction firing of bricks.—73-00770
New type [of] hydraulic pusher.—73-12173
Reforming common clay–brick production line into perforated brick one.—73-10689
Relations between worm rotating speeds and relative parameters of extruders.—73-08361
Shuang Ya Shan brick plant.—73-10691

**bridging,**
Connected cadmium selenide nanocrystallite networks.—73-04275
Instability of polycrystalline bridges that span cracks in powder films densified on a substrate.—73-06235
Microwave properties of high-$T_c$ $Y_1Ba_2Cu_3O_x$ superconducting bridges on $Y_2BaCuO_5$ substrates.—73-08136
Molecular modeling of oxygen bridges in amorphous and crystalline silicates and aluminosilicates.—73-00375

**brittle materials,**
Actual contribution of crack deflection in toughening platelet-reinforced brittle-matrix composites.—73-06322
Advances in the design of toughened ceramics.—73-03234
Contact damage submitted to thermal shock: a method to evaluate and simulate thermal shock resistance of brittle materials.—73-08829
Controlled crack growth testing of brittle materials.—73-15784
Cracking of brittle films on elastic substrates.—73-17263
Debond coating requirements for brittle matrix composites.—73-13501
Design of ultraprecision grinding machines for ductile mode grinding of brittle materials.—73-06371
Discriminating between fracture criteria in the prediction of failure probability of brittle materials.—73-13503
Effect of chemical interaction on Barenblatt crack profiles in brittle solids.—73-16454
Effect of fiber orientation on the fracture toughness of brittle matrix composites.—73-17286
Elastic stress fields caused by sliding microindentation of brittle materials.—73-06402
Engineering ductile fracture in brittle matrix composites.—73-09590
Estimating lower-bound fracture parameters for brittle materials.—73-13524
Flexural properties of brittle multilayer materials: I, Modeling.—73-06424
Flexural properties of brittle multilayer materials: II, Experiments.—73-17321
Fracture mechanics and mechanisms of fiber-reinforced brittle matrix composites.—73-03297
Fracture of brittle spheres under compression and impact loading: I, Elastic stress distributions.—73-08873
Full-cell cracking mode in unidirectional brittle matrix composites.—73-03304
Griffith criteria for brittle fracture in compression.—73-13544
Measurement of properties of brittle matrix composites.—73-03323
Mechanics of toughness development in ductile phase-reinforced brittle matrix composites.—73-17394
Mechanistically based fatigue-damage evolution model for brittle matrix fiber-reinforced composites.—73-13570
Microcrack toughening mechanism in brittle matrix composites.—73-06489
Microcrack tunneling in brittle matrix composites driven by thermal expansion mismatch.—73-17397
Multiple cracking and interface debonding in a brittle film on a ductile rod.—73-08423
New method for evaluating fracture toughness of brittle materials.—73-13575
New method to compute size-independent fracture toughness values for brittle materials.—73-13576
Numerical evaluation of failure theories for brittle materials.—73-17407
Predicting the shock [impact] strength of targets made of brittle materials.—73-06502
Quantification of microcracking in brittle matrix composites.—73-05081
Relationship between Weibull moduli for tensile and bonding fracture strength of brittle solids (the case of a three-parameter Weibull distribution).—73-13583
Statistics of brittle failure in multiaxial stress states.—73-03355
Strength and toughness measurement of thin brittle coatings on substrates: I, Theory and measurement.—73-13592
Strength and toughness measurement of thin brittle coatings on substrates: II, Experimental determination.—73-13593
Strength variability in brittle materials with stabilizing and destabilizing resistance fields.—73-06530
Three-body abrasion of brittle materials as studied by lapping.—73-07092
Toughening and crack tip shielding in brittle materials by residually stressed thin films.—73-03369
Toughening in brittle systems by ductile bridging ligaments.—73-17448
Work-of-fracture determination for brittle materials.—73-06552

**brittleness,**
Brittleness of mineral wool fibers.—73-02731
Kinetics of brittle fracture and possibilities of its prediction.—73-17369

**bromides,**
Anomalous paraelectric behavior of hydroxyl ion in a cesium bromide crystal.—73-08552
Crystal structure of $Cs_3CdBr_5$ and $(NH_4)_{2.34}Rb_{0.66}ZnBr_5$.—73-16083
Growth of high-quality *p*-type GaAs epitaxial layers using carbon tetrabromide by gas-source molecular beam epitaxy [GSMBE] and molecular beam epitaxy.—73-11236
Phase *p*-*T* diagrams of $Cs_2RbDyF_6$ and $Cs_2NaTmBr_6$ elpasolites.—73-16245
Phase diagram and enhanced electrical transport in KBr-NaBr mixed crystals.—73-02375
Solution flow rate effects on the response time of selective electrodes having iodide and bromide functions.—73-14732
X-ray diffraction study of high-temperature modification of $Rb_2ZnBr_4$, *T*=368 K.—73-02543

**bromine,**
Thermal expansion coefficient of glass and melts of the system Te-Br.—73-00558
Vitrification and structure of glasses of the $GeSe_2$-$GeBr_4$ system.—73-00424

**bronze,**
Crystal structure of the cesium bronze $Cs(Mo_{0.95}W_{0.05})_2O_{21}$.—73-02215
Electronic properties of $Na_{0.33}V_2O_5$ bronze obtained by the sol-gel process.—73-02608
Magnetic and electronic transport properties of the monophosphate tungsten bronze $(PO_2)_4(WO_3)_{2m}$, $m$=2.—73-03101
New oxidation process of potassium titanium dioxide bronze with the hollandite structure.—73-02901
Niobium phosphate bronze $\beta$-$K_2Nb_8P_4O_{25}$, second form of the first member of the series $(K_3Nb_6P_4O_{26})_xKNb_2PO_9$.—73-02358
Niobium phosphate bronze closely related to the $Ba_3Nb_6Si_4O_{26}$ structure: $Na_6Nb_8P_5O_{35}$.—73-02359
Raman spectroscopic study of $K_{0.3}MoO_3$ in charge density wave (CDW) states.—73-05467
Thermodynamic and structural considerations of insertion reactions in lithium vanadium bronze structures.—73-02524

**bubbles,**
Approach to formation procedure of glaze bubble.—73-10797
Automated mass spectrometer for analysis of gas bubbles in glass.—73-08376
Bubble generation at glass/refractory interfaces: a review of fundamental mechanisms and practical considerations.—73-10705
Bubbler systems can abet melting operations.—73-10501
Bubbling in glass furnaces.—73-00591
Bubbling in the three-dimensional flow-temperature model.—73-14332
Computer-aided tracing of bubbles—glass quality control.—73-14341
Glass composition for glass bubbles with increased compressive strength.—73-10628
Homogenization of glass melts by bubbling.—73-14405
Magnetic bubble in light wave field.—73-15334
Micro-glass-balloon "CEL-STAR."—73-00515
Origin of pinholes in porcelain glazes.—73-00920
Refractory-glass outgassing—a test procedure evaluation.—73-14619

**building materials,**
200 years of industrial and commercial building with bricks.—73-00015
Babcock-BSH supplies for new plasterboard works.—73-13680
Building materials based on industrial wastes.—73-01978
Ceramic building block.—73-15935
Glass-ceramic marble of MgO-$Al_2O_3$-$SiO_2$ system.—73-10545
Manufacture of fired hollow blocks of fly ash.—73-08350
Modern state of technology of glass-ceramic for construction.—73-10459
New applications for glass in the modern building industry.—73-09731
New architectural glass.—73-10460
Physical properties of the glass used for comfort in buildings.—73-14251
Possibilities of utilization of wastes from desulfurization in building materials manufacturing.—73-10088
Prevention of cracking in self-leveling flooring material (SL) by adding silicone.—73-13765
Quality assurance of building materials [in Hungary].—73-13638
Quantitative analysis of pore structure on frost durability of inorganic building materials.—73-03188
Situation of new types of Chinese building material and proposals for it.—73-13645
Technology and application of BauMix cellular concrete.—73-00196
Thermal expansion of ceramic for building materials.—73-04050
Thermal expansion of ceramic for building materials.—73-14670
Trends in cellular concrete application for construction.—73-13791
**bulk modulus,**
Piezoelectric measurement of bulk modulus.—73-11598
**burners/burning,**
Characterization of burning condition of cement clinker by X-ray diffractometry.—73-00035
Development of AB series of burners on horizontal ampoule production line.—73-05109
Gas-distributing and infrared-radiating block assembly.—73-04031
Industrial experience with oxyfuel-fired glass melters.—73-15880
Influence of burning atmosphere on distribution of minor and trace element in clinker and formation of brown color clinker.—73-10005
Influence of raw mix burnability on cement clinker.—73-03487
Low-$NO_x$ staged air-recirculating burner undergoing field trials after excellent test performance.—73-08479
Low-temperature rapid burning of bricks.—73-00771
Method of making a ceramic burner head.—73-10783
Mexican success with regenerative ceramic burners.—73-12230
Photochemical hole burning in optical materials.—73-02919
Precessing jet [P.J.] gas burner—a low $NO_x$ burner providing process efficiency and product quality improvements.—73-05129
Regenerative burners and the glass industry.—73-08484
Safe burning of cement raw mixes.—73-03534
Safety and ecological problems in burning energy-saving raw materials.—73-10145
Thermal treatment of cement raw materials through intensive heat exchange.—73-10180
Waste burning and thermal destruction of organic compounds in kilns.—73-03557
**cable,**
Method of manufacturing a superconductive cable.—73-15687
**cadmium oxide,**
Determination of crystal structure of $Bi_2Cd_4O_7$ by powder roentgenography technique.—73-16107
Influence of oxygen partial pressure on the physical behavior of CdO films prepared by activated reactive evaporation.—73-05584
Local structure around aluminum in glasses of the system $Al_2O_3$-PbO-CdO.—73-06935
Phase equilibria in the system CdO-ZnO-$B_2O_3$ at 850°C.—73-02380
Schottky diodes on *n*-type InP with $CdO_x$ interfacial layers grown by the adsorption and oxidation method.—73-11438
Structure of CdO-$SiO_2$ low-silica-content inverted glasses.—73-14108
**cadmium selenide,**
Characteristics of the diffusion and drift of nonequilibrium carriers in $CdCr_2Se_4$.—73-03080
Composition control by photoirradiation in MOVPE of ZnCdSe and ZnCdS alloy layers and multilayered structures.—73-04273
Connected cadmium selenide nanocrystallite networks.—73-04275
Depolarization of vibrational modes in $CdGa_2Se_4$ crystals.—73-01123
Effect of frit compositions on the glass transition temperature, water durability, and coloring of the CdS-CdSe pigment containing low-temperature porcelain red enamel in the system $SiO_2$-$B_2O_3$-$Na_2O$-$K_2O$-$Li_2O$-ZnO-$Al_2O_3$-$ZrO_2$-F.—73-14358
Enhancement of photosensitivity in chemically deposited CdSe thin films by air annealing.—73-07504
Epitaxial electrodeposition of CdSe nanocrystals on gold.—73-14891
Exciton piezospectroscopy of semiconductor solid solutions [SS] with sphalerite wurtzite structural phase transition.—73-01160
Exciton properties of $Zn_{1-x}Cd_xSe$/ZnSe quantum well structures grown by metallorganic vapor phase epitaxy.—73-04340
Exciton-La and -Ta phonon couplings in spherical semiconductor microcrystallite.—73-07520
Experimental and theoretical investigation of femtosecond carrier relaxation in CdSe.—73-07521
Femtosecond dephasing in $CdS_xSe_{1-x}$ mixed crystals: the role of localized biexcitons.—73-14921
Growth of Cd(S,Se) nanocrystals in silicate glasses: high-resolution electron microscopy and small-angle X-ray scattering.—73-00350
Growth of HgSe and $Hg_{1-x}Cd_xSe$ thin films by molecular beam epitaxy.—73-11234
Hall effect and resistivity characterization of doped, electrodeposited CdSe.—73-01181
Influence of heat treatment on structure and properties of electrodeposited CdSe or Cd(Te, Se) semiconductor coatings.—73-07593
Ir nonlinearity of commercial Cd(S,Se) glass composites.—73-01224
Magnetization step of isolated $Co^{2+}$ ions in hexagonal $Cd_{1-x}Co_xS$ and $Cd_{1-x}Co_xSe$.—73-15031
Magnetooptical effects in $CdS_xSe_{1-x}$ microcrystallites.—73-15032
Magnetooptical properties of $Cd_{1-x}Mn_xSe$ microcrystallites in $SiO_2$ glass prepared by rf sputtering.—73-02641
Masses of quantum-size hole subbands of semiconductor heterostructures with different orientations.—73-15037
Microstructure and optical properties of CdSe-microcrystal-doped $SiO_2$ glass thin films prepared by rf sputtering.—73-03802
Microstructure and optical properties of CdSe-microcrystal-doped $SiO_2$ glass thin films prepared by rf sputtering.—73-14227
Nonlinear switching in semiconductor (CdSSe) doped glass.—73-15062
Observation of the 1*P* excitonic states in Cd(S,Se) glass quantum dots.—73-06947
Optical bistability and nonlinear switching in CdSSe microcrystallite doped glass.—73-10463
Optical constants of vacuum-evaporated polycrystalline cadmium selenide thin films.—73-12847
Optical gain in CdSe epitaxial layers on GaAs.—73-04429
Optical properties of $CdGa_2S_{4x}Se_{4(1-x)}$ solid solutions.—73-11360
Optical properties of highly strained CdSe/ZnSe quantum wells.—73-11361
Optical spectra of ultrathin II-VI quantum wells.—73-15074
Phase studies of the Cd-Fe-Se system in the Cd-rich region.—73-05453
Photodarkening mechanism in colored filter glasses.—73-00389
Quasi-bound states in semiconductor single quantum barriers.—73-15132
Transient response of amorphous CdSe and glow-discharge amorphous Si to mode-locked laser pulses.—73-11486
Two-photon absorption coefficient spectrum in CdSSe nanocrystals by nonlinear luminescence technique.—73-07848
Unusual photoluminescence of porous CdS (CdSe) crystals.—73-11495
**cadmium sulfide,**
Analysis of photocurrent in screen-printed CdS/CdTe solar cells.—73-01074
Asymmetry of the screw dislocation core structure in cadmium sulfide crystals.—73-11075
Cathodoluminescence wavelength imaging for spatial mapping of excitons bound to dislocations and structure defects in CdS.—73-09436
Characterization of *n*-CdS/*p*-$CuGa_xIn_{1-x}Se_2$ thin-film heterojunctions.—73-11100
Continuous wave Nd:YAG laser deposition of CdS thin films.—73-11119
Dynamic spectral study of CdS in room temperature thermooptical nonlinearity.—73-11150
Effect of frit compositions on the glass transition temperature, water durability, and coloring of the CdS-CdSe pigment containing low-temperature porcelain red enamel in the system $SiO_2$-$B_2O_3$-$Na_2O$-$K_2O$-$Li_2O$-ZnO-$Al_2O_3$-$ZrO_2$-F.—73-14358
Effect of matrix glass composition on the oxidation of small-sized CdS crystal doped glasses.—73-11159
Effect of postdeposition treatments on morphology, structure, and optoelectronic properties of chemically deposited CdS thin films.—73-05765
Effects of heat treatment in $H_2$-$N_2$ atmosphere on the performance of screen-printed CdS/CdTe solar cells.—73-01139
Electromodulation spectroscopy of CdS microcrystallites embedded in polymer films.—73-04309
Emission spectra of microcrystalline CdS doped in sol-gel-derived glasses.—73-10370
Features of temperature dependence of 1*A*-exciton decay constant in CdS crystal.—73-01164
Femtosecond dephasing in $CdS_xSe_{1-x}$ mixed crystals: the role of localized biexcitons.—73-14921
Formation of CdS crystals in small-sized CdS-doped glasses prepared by the sol-gel process.—73-00630
Formation of thin CdS films by laser sputtering.—73-01168
Growth of Cd(S,Se) nanocrystals in silicate glasses: high-resolution electron microscopy and small-angle X-ray scattering.—73-00350
Influence of bath composition on the photocurrent response and morphology of chemically deposited CdS thin films.—73-07591
Influence of low-temperature annealing on the defect structure of CdS:Li crystals.—73-01206
Influence of mobile defects on the characteristics of a metal-semiconductor contact in the case of CdS crystals.—73-14983
Influence of the excess pressure of the vapors of the components on the ensemble of point defects in CdS crystals.—73-06162
Instability of the conductivity due to electric disturbance of the electron-molecular equilibrium in the surface layers of CdS films.—73-01216
Interference effects at initial stages of recrystallization under laser irradiation of cadmium sulfide films on substrates with artificial microrelief.—73-14997
Ir nonlinearity of commercial Cd(S,Se) glass composites.—73-01224
Junction formation and characteristics of CdS/$CuInSe_2$/metal interfaces.—73-05586
Luminescence properties of Yb- and Nd-implanted CdS.—73-04392
Magnetic susceptibility and Mossbauer effect in Fe-doped CdS.—73-16208
Magnetization step of isolated $Co^{2+}$ ions in hexagonal $Cd_{1-x}Co_xS$ and $Cd_{1-x}Co_xSe$.—73-15031
Magnetooptical effects in $CdS_xSe_{1-x}$ microcrystallites.—73-15032
Methods of making *pn* CdTe/CdS thin film solar cells.—73-11534
Nonlinear switching in semiconductor (CdSSe) doped glass.—73-15062
Observation of the 1*P* excitonic states in Cd(S,Se) glass quantum dots.—73-06947
Optical absorption and size effect in CdS and ZnS microcrystallites.—73-11357
Optical bistability and nonlinear switching in CdSSe microcrystallite doped glass.—73-10463
Optical properties of $CdGa_2S_{4x}Se_{4(1-x)}$ solid solutions.—73-11360
Photodarkening mechanism in colored filter glasses.—73-00389
Photoelectric properties of *n*-CdS:In-*p*-$CuInSe_2$ heterojunctions.—73-15092
Photoemission investigation of the $SnO_2$/CdS interface: a front contact interface study of CdS/CdTe solar cells.—73-02664
Photoluminescence excitation spectroscopy study of CdS nanocrystals in ormosils.—73-15096
Piezospectroscopy of screw dislocation emission in CdS.—73-17094
Polariton solitons in semiconductors.—73-15105
Polarization photosensitivity of thin-film *p*-$CuInSe_2$-*n*-CdS structures.—73-07740
Preparation and investigation of $SiO_2$ films activated by CdS semiconductor nanocrystals.—73-07744
Preparation and optical properties of CdS microcrystallites deposited in porous Vycor glass.—73-07064
Preparation and optical properties of CdS microcrystallites deposited in porous Vycor glass.—73-14468
Preparation and properties of electrodeposited ternary $CdS_xSe_{1-x}$ and $Zn_xCd_{1-x}S$ films.—73-05618
Preparation of CdS semiconductor thin films by a solution growth technique.—73-11401
Properties of CdS films prepared by the chemical mist deposition process.—73-15123
Properties of compensated lead cadmium sulfide films.—73-15124
Raman spectroscopy in $Cd_{1-x}Fe_xS$—iron energy levels and spin-flip Raman scattering.—73-08718
Reversal of magnetic anisotropy of $Cd_{1-x}Fe_xS$ at high magnetic fields.—73-07974
Semiconductor photocatalysts: X, Visible-light-induced photoreduction or aromatic ketons and electron-deficient alkenes catalyzed by quantized CdS.—73-07793
Shift of exciton resonances in the intense pulsed excitation of a CdS crystal.—73-15160
Single-wavelength pulsed optical logic based on dichroism in CdS.—73-01315
Sol-gel preparation of $CdS_xSe_{1-x}$ solid solution microcrystal-doped glasses.—73-07173
Structural, electrical, and optical properties of In-doped CdS thin films prepared by vacuum coevaporation.—73-07816
Surface recombination of nonequilibrium electron-hole plasma in laser-modified semiconductor-doped glasses.—73-15194
Time-and-spectral studies of fluctuation surface luminescence in CdS crystals.—73-16382
Transverse Faraday effect in crystal with birefringence inversion (CdS).—73-02718
Two-photon absorption coefficient spectrum in CdSSe nanocrystals by nonlinear luminescence technique.—73-07848
Unusual photoluminescence of porous CdS (CdSe) crystals.—73-11495
Vibrational mode softening in thin-film CdS.—73-01362
**cadmium telluride,**
1992 U.S. Workshop on the Physics and Chemistry of Mercury Cadmium Telluride and Other Ir Materials.—73-11351
Analysis of photocurrent in screen-printed CdS/CdTe solar cells.—73-01074
Annealing effect on the *p*-type carrier concentration in low-temperature-processed arsenic-doped HgCdTe [MCT].—73-11068
Assessment of electrical inhomogeneity of undoped and doped $Hg_{1-x}Cd_xTe$ MOVPE (IMP) [interdiffusion multilayer process] layers by variable magnetic field Hall profile measurements.—73-11074
Au interfaces with epitaxially grown CdTe(111): chemistry and barrier heights.—73-01080
Band gap uniformity and layer stability of HgTe-CdTe superlattices grown by photon-assisted molecular beam epitaxy.—73-11080
Band tails and insulator-metal transition in the persistent photoconductor $Cd_{1-x}Mn_xTe$:In.—73-01083
Band-edge magnetoreflectance and magnetization of $Cd_{1-x}Co_xTe$ [x=0.00383].—73-01084
Behavior of the absorption coefficient due to valence band transitions in CdTe in the temperature range of 5–400 K.—73-14784

Bias-switched dual-band HgCdTe infrared photodetector.—73-07391

Bulk and surface transport properties of *n*-type $Hg_{1-x}Cd_xTe$ crystals in the temperature range $0.5<T<50$ K.—73-07395

$Cd_xHg_{1-x}Te$ phonon spectra research by means of magnetophonon resonance.—73-04261

CdTe and CdMnTe quasi-phase-matched optical parametric oscillator and amplifier—[analysis].—73-11092

CdTe and HgTe surface growth kinetics for molecular and metallorganic molecular beam epitaxy.—73-11093

CdTe epitaxial growth on (211)B GaAs by molecular beam epitaxy.—73-07400

CdTe(111) growth on sapphire(0001) substrates by hot wall epitaxy.—73-07401

Chaotic spontaneous oscillations in variable-gap semiconductor structures.—73-01094

Characteristic features of magnetic-field dependences of the transport coefficients of two-layer $Cd_xHg_{1-x}Te$ structures.—73-04262

Characteristic features of the temperature and spectral dependences of the photoconductivity and photomagnetic effect in *p*-type $Cd_xHg_{1-x}Te$ at low temperatures.—73-11096

Characteristics of the tunneling across Schottky barriers made of narrow-gap semiconductor *p*-type $Hg_{1-x}Cd_xTe$.—73-01098

Characterization of $Hg_{1-x}Cd_xTe$ [MCT] heterostructures by thermoelectric measurements.—73-11102

Comparison of $In_{1-x}Tl_xSb$ [ITA] and $Hg_{1-x}Ce_xTe$ [MCT] as long-wavelength infrared materials.—73-11113

Comparison of spatial compositional uniformity and dislocation density for organometallic vapor phase epitaxial $Hg_{1-x}Cd_xTe$ grown by the direct alloy and interdiffused growth processes.—73-11115

Compensation defects in CdTe:Cl samples grown by different techniques.—73-11116

Compositional analysis of HgCdTe epitaxial layers using secondary ion mass spectrometry.—73-07419

Controlled *p*-type Sb doping in LPE-grown $Hg_{1-x}Cd_xTe$ epilayers.—73-11121

Covered electrode HgCdTe photoconductor under high illumination levels.—73-07424

Critical stress of $Hg_{1-x}Cd_xTe$ solid solutions.—73-07427

Current status of direct growth of CdTe and HgCdTe on silicon by molecular beam epitaxy.—73-07430

Dark current and noise factor of "staircase" avalanche photodiodes.—73-01118

Defect noise in reverse-biased $p$-$n^+$ junctions made of $Cd_xHg_{1-x}Te$.—73-07437

Diffusion model for indium in $Hg_{1-x}CdTe$.—73-01127

Dislocation reduction in HgCdTe on GaAs and Si.—73-07449

Distribution of Hg in $Cd_xHg_{1-x}Te$ by pulsed laser annealing.—73-14840

Dopant diffusion in HgCdTe grown by photon-assisted molecular beam epitaxy.—73-07453

Dry etching of CdTe/GaAs epilayers using $CH_4/H_2$ gas mixtures.—73-11146

Effect of dislocations on the electrical and optical properties of long-wavelength infrared HgCdTe photovoltaic detectors.—73-07462

Effect of Peierls relief on the low-temperature plasticity of pure CdTe crystals.—73-07467

Effect of substrate tilt on MOCVD growth of (100)CdTe on (100)GaAs.—73-11166

Effect of the layer composition on the band spectrum of $Cd_xHg_{1-x}Te$-$Cd_xHg_{1-x}Te$ superlattices.—73-14858

Effects of cluster ionization and acceleration on photoluminescence spectra of CdTe films grown by ionized cluster beam deposition.—73-07469

Effects of growth conditions on the composition of CVT and PVT [chemical and physical vapor transport] grown $Hg_{1-x}Cd_xTe$ epitaxial layers.—73-14862

Effects of growth rate and mercury partial pressure on twin formation in HgCdTe(111) layers grown by metallorganic chemical vapor deposition.—73-11172

Effects of heat treatment in $H_2$-$N_2$ atmosphere on the performance of screen-printed CdS/CdTe solar cells.—73-01139

Effects of mixed-valence mercury and indium on the electrical properties of $Hg_{1-x}Cd_xTe$.—73-07473

Elastic strain effect dependence on the energy band gaps and the lattice parameters in CdTe epitaxial layers on GaAs(100) substrates grown by hot-wall epitaxy.—73-04300

Electrical conductivity of tellurium-deficient cadmium telluride.—73-11179

Electrical effects of dislocations and other crystallographic defects in $Hg_{0.78}Cd_{0.22}Te$ *n*-on-*p* photodiodes.—73-13350

Electrical properties of vacuum-evaporated stoichiometric and nonstoichiometric CdTe thin films for optoelectronic applications.—73-11182

Electron microscope investigation of surface features of (100)$Cd_{1-x}Zn_xTe$ grown by metallorganic chemical vapor deposition.—73-09448

EPR study of $Mn^{2+}$ ions implanted in CdTe single crystals.—73-14892

Evidence for 1/*f* noise in diffusion current due to insulator trapping and surface recombination velocity fluctuations.—73-11200

Ex situ variable angle spectroscopic ellipsometry studies of electron cyclotron resonance etching of $Hg_{1-x}Cd_xTe$.—73-14896

Excess carrier lifetime in *p*-type HgCdTe [analyzed] using a three-level Shockley-Read model.—73-07514

Excited quantum states in CdTe-$Cd_{1-x}Mn_xTe$ multiple quantum wells and superlattices grown by pulsed laser evaporation and epitaxy.—73-07516

Exciton localization in $Cd_{1-x}Mn_xTe$ and its dependence on the strong magnetic field.—73-04339

Excitonic luminescence of CdTe and $Cd_{0.87}Zn_{0.13}$ submonolayers in ZnTe films grown by MBE.—73-11205

Excitonic quantum beats in CdTe/$Cd_{1-x}Mn_xTe$ quantum wells.—73-14900

Fabrication of *p*-*n* junctions from CdTe:In by laser annealing.—73-14906

Fast growth of $Cd_{1-x}Zn_xTe$ single crystals by physical vapor transport.—73-14917

Fast vapor growth of cadmium telluride single crystals.—73-11210

Features of vibrational spectrum rearrangement in semiconductor-semimetal CdTe-HgTe alloys. Lattice modes of Cd-Te and Hg-Te vibrations.—73-14919

Features of vibrational spectrum rearrangement in semiconductor-semimetal CdTe-HgTe alloys. Two-mode approximation.—73-14920

Femtosecond dynamics of resonantly excited RT excitons in II-III CdZnTe/ZnTe quantum wells.—73-07527

Ferroelectric properties of $Cd_{1-x}Zn_xTe$ solid solutions.—73-07889

Formation and electrical effects of process-induced dislocations in HgCdTe.—73-07533

Gas source iodine doping and characterization of molecular beam epitaxially grown CdTe.—73-07544

Generation-recombination currents in HgCdTe midwavelength infrared photodiodes.—73-07546

Giant exciton Faraday rotation in $Cd_{1-x}Mn_xTe$ mixed crystals.—73-14942

Growth and characterization of CdTe, HgTe, and HgCdTe by atomic layer epitaxy.—73-04346

Growth and characterization of CdTe-ZnTe short-period superlattices.—73-04347

Growth and characterization of hot-wall epitaxial CdTe on (111)HgCdTe and CdZnTe substrates.—73-11224

Growth by CVT [chemical vapor transport] and characterization of $Hg_{1-x}Cd_xTe$ epitaxial layers.—73-14946

Growth kinetics and properties of heteroepitaxial (Cd,Zn)Te films prepared by metallorganic molecular beam epitaxy [MOMBE].—73-11228

Growth method, composition, and defect structure dependence of mercury diffusion in $Cd_xHg_{1-x}Te$.—73-13351

Growth of (111)CdTe on GaAs/Si and Si substrates for HgCdTe epitaxy.—73-07552

Growth of uniform HgCdTe by metallorganic chemical vapor deposition system.—73-07555

Hall effect characterization of LPE HgCdTe *p*/*n* heterojunctions.—73-11238

Heavily accumulated surfaces of mercury cadmium telluride detectors: theory and experiment.—73-11240

$Hg_{0.8}Cd_{0.2}Te$ native defects: densities and dopant properties.—73-13352

HgCdTe double heterostructure diode lasers grown by molecular beam epitaxy.—73-07557

HgTe contacts to *p*-HgCdTe.—73-07558

High-spatial-resolution resistivity mapping applied to mercury cadmium telluride.—73-07565

Hydrogen-acceptor pairing in CdTe epitaxial layers grown by OMVPE.—73-04358

Implantation-enhanced interdiffusion of CdTe-ZnTe heterostructures.—73-07574

Improved CdTe layers on GaAs and Si using atomic layer epitaxy [ALE].—73-11257

Impurity structural defects in CdTe single crystals.—73-03096

In situ ellipsometric measurements of the MBE growth of CdTe/HgTe and CdTe/ZnTe superlattices.—73-11263

In situ studies of the effect of various gaseous species and ultraviolet illumination on the dark currents of HgMnCdTe and HgCdTe short-wavelength infrared diodes.—73-07585

Indium doping of HgCdTe grown by metallorganic chemical vapor deposition–direct alloy growth using triisopropylindium and diisopropyltellurium-triisopropylindium adduct.—73-11267

Indium-vacancy and indium-hydrogen interactions in $Hg_{1-x}Cd_xTe$ [MCT].—73-13353

Influence of annealing under anodic oxide on changes in the composition of the surface and conversion of the type of conduction of *p*-type $Cd_xHg_{1-x}Te$ ($x\approx0.2$) single crystals.—73-07590

Influence of compensating annealing on the 1/*f* noise in $Cd_xHg_{1-x}Te$.—73-07592

Influence of dislocations generated by laser radiation on electrophysical properties and luminescence of *p*-type CdTe.—73-01201

Influence of growth and microstructure of electrodeposited cadmium telluride films on the properties of *n*-CdS/*p*-CdTe thin-film solar cells.—73-11272

Influence of growth dislocations on the electron lifetime in *n*-type $Cd_xHg_{1-x}Te$.—73-01204

Influence of heat treatment on structure and properties of electrodeposited CdSe or Cd(Te, Se) semiconductor coatings.—73-07593

Influence of Hg pressure on diffusion coefficient of As in HgCdTe [MCT].—73-13354

Influence of resonant defect states on subband structures in $Hg_{1-x}Cd_xTe$.—73-07600

Integrated heterostructure devices based on II-VI compound semiconductors.—73-11277

Intersubband absorption in (Hg,Cd)Te quantum wells.—73-07619

Intersubband transition of CdTe/$Cd_{0.94}Zn_{0.06}Te$ strained single quantum wells grown by hot-wall epitaxy.—73-14998

Intersubband-transition studies of $Cd_{0.936}Zn_{0.064}Te$/CdTe superlattices grown by double-well temperature gradient vapor transport deposition.—73-14999

Intraband optical Stark effect in CdTe.—73-07621

Inversion of the conduction of $Cd_xHg_{1-x}Te$ films subjected to a plasma treatment.—73-15000

Ion mill damage in *n*-HgCdTe.—73-07623

Key issues in HgCdTe-based focal plane arrays: an industry perspective.—73-07627

Kinetic characteristics of the cadmium telluride single-crystal chemical polishing process in a bromine-hydrobromic acid solution.—73-15005

1/*f* noise in $Hg_{1-x}Cd_xTe$ converted from *n*- to *p*-type by narrative doping.—73-07631

Langmuir-Blodgett film as an insulator in an MIS transistor made from $Cd_xHg_{1-x}Te$.—73-07632

Large improvement in HgCdTe photovoltaic detector performances at LETI.—73-11290

Laser-induced change in the optical properties of CdTe-doped glasses.—73-15008

Low-temperature annealing of *p*-cadmium telluride in gallium bath.—73-07645

Low-temperature epitaxy of HgTe, CdTe, and HgCdTe using flow modulation techniques.—73-07646

Low-temperature magnetic properties of pure and In-doped $Cd_{0.2}Hg_{0.8}Te$ [CMT] single crystals.—73-11298

Low-temperature photoluminescence of single-crystal $Zn_xCd_{1-x}Te$ films grown by solid-phase substitution.—73-04388

Low-temperature transport properties of $Cd_{0.91}Mn_{0.09}Te$:In and evidence for a magnetic hard gap in the density of states.—73-09416

Low-threshold injection laser in HgCdTe.—73-11300

Luminescence profiling investigation of the transformation of defects in CdTe crystals by brief annealing.—73-04391

Magnetic and optical properties of $Cd_{1-x}Gd_xTe$ diluted magnetic semiconductor.—73-04395

Magnetic field dependence of polaron mass in CdTe.—73-01235

Magnetic generation of electrons and holes in semimetallic HgTe-CdTe superlattices.—73-07649

Magnetic polaron effect in diluted magnetic semiconductor $Cd_{1-x}Mn_xTe$ [$0.25<x<0.36$] with high Mn concentrations.—73-07650

Magnetic-field-induced unbinding effects in CdTe-$Cd_{1-x}Mn_xTe$ quantum wells.—73-04396

Magnetophotoluminescence of a narrow-gap semiconductor $Hg_{0.77}Cd_{0.23}Te$.—73-07656

MBE HgCdTe heterostructure *p*-on-*n* planar infrared photodiodes.—73-11306

Mechanisms of ultrasound-induced changes in electrical and photoelectric properties of single crystals of $Zn_xCd_{1-x}Te$ solid solutions.—73-01242

Mercury cadmium telluride material requirements for infrared systems.—73-07666

Mercury interstitials in $Hg_{1-x}Cd_xTe$ alloys [investigated] using resonant impact-ionization spectroscopy.—73-07667

Metal-semiconductor work function differences with HgCdTe and their effect on radiation-induced flatband voltage shifts.—73-07669

Metal/*p*-*n*-CdTe Schottky barrier solar cell: photoelectrochemical generation of a shallow *p*-type region in *n*-CdTe.—73-07670

Methods of making *pn* CdTe/CdS thin film solar cells.—73-11534

Microinhomogeneities in midwave infrared mercury cadmium telluride grown by metallorganic chemical vapor deposition–interdiffused multilayer process onto GaAs and GaAs/Si substrates.—73-07671

MOCVD-grown CdZnTe/GaAs/Si substrates for large-area HgCdTe IRFPAs.—73-11317

Modeling of in situ monitored laser reflectance during MOCVD growth of HgCdTe.—73-11318

Modulation of the reflectivity in amorphous semiconductors.—73-04410

Molecular beam epitaxy investigation of interface disorder effects in magnetic II-VI quantum wells.—73-11335

Nanometer fabrication in mercury cadmium telluride [MCT] by electron cyclotron resonance microwave plasma reactive ion etching.—73-11342

Neutron irradiation of $Cd_xHg_{1-x}Te$.—73-07691

New *n*-type doping precursor for MOCVD-IMP [interdiffusion multilayer process] growth of detector quality MCT [HgCdTe].—73-11347

Noise (1/*f*) and dark currents in midwavelength infrared PACE-I HgCdTe photodiodes.—73-07694

Nonlinear optical effects in rotationally twinned CdTe and CdMnTe crystals.—73-07696

Nonparabolicity in the conduction band of II-VI semiconductors.—73-15063

Occurrence of a miscibility gap in thin surface layers of $Hg_{1-x}Cd_xTe$.—73-07698

Optical nonlinearities of ZnCdTe at RT.—73-05602

Optical properties of CdTe: experiment and modeling.—73-08932

Optical properties of new diluted magnetic semiconductor $Cd_{1-x-y}Mn_xMg_yTe$.—73-15073

Ordered phase in (Hg, Cd)Te grown by liquid phase epitaxy on CdTe(111)B substrate.—73-08681

Orientation dependence of arsenic incorporation in metallorganic chemical vapor deposition grown HgCdTe.—73-07706

Oscillator strength study of the 2-D–3-D exciton transition in CdTe/(Cd,Mn)Te quantum wells and superlattices.—73-08942

Para-type doping of metallorganic chemical vapor deposition grown HgCdTe by arsenic and antimony.—73-07708

Parameters of the energy band structure of surface layers of zero-gap semiconductors (CdHg)Te and HgTe by the field effect method in electrolytes.—73-01271

Photoassisted organometallic vapor phase epitaxy of CdTe.—73-07713

Photoelectric properties of CdTe films subjected to laser radiation.—73-15093
Photoemission investigation of the $SuO_2$/CdS interface: a front contact interface study of CdS/CdTe solar cells.—73-02664
Photoemission spectroscopic techniques to assess physical and chemical properties of mercury cadmium telluride.—73-07720
Photoexcitation of shallow acceptors in $Cd_xHg_{1-x}Te$.—73-15094
Photoinduced excess low-frequency noise in HgCdTe photodiodes.—73-11379
Photoluminescence from heteroepitaxial (211)B CdTe grown on (211)B GaAs by molecular beam epitaxy.—73-11384
Photoluminescence of *n*-type CdTe:I grown by molecular beam epitaxy.—73-02666
Photoluminescence of epitaxial $Zn_xCd_yHg_{1-x-y}Te$ films.—73-01280
Photomagnetic effect and photoconductivity of thin epitaxial $Cd_xHg_{1-x}Te$/CdTe films.—73-11389
Picosecond dynamics of absorption bleaching in polycrystalline ZnCdTe films.—73-11394
Picosecond investigation of photorefractive and free carrier gratings in GaAs:EL2 and CdTe:V.—73-07735
Point defects and defect-impurity interaction in $Cd_xHg_{1-x}Te$ and other II-VI semiconductors: facts and conjectures.—73-07739
Pressure dependence of the luminescence of $Cd_xHg_{1-x}Te$/CdTe heterostructures.—73-15116
Problem of the intrinsic carrier density in $Cd_xHg_{1-x}Te$ solid solutions.—73-01289
Process modeling of point defect effects in $Hg_{1-x}Cd_xTe$.—73-13365
Properties of $n^+p$ junctions made of $Cd_xHg_{1-x}Te$ subjected to local deformation.—73-04454
Properties of (211)B HgCd-CdTe superlattices grown by photon-assisted molecular beam epitaxy.—73-07746
Properties of CdTe/InSb heterostructures grown by temperature gradient vapor transport deposition.—73-04455
Properties of CdZnTe crystals grown by a high-pressure Bridgman method.—73-07747
Quantum Hall effect and setback modulation doping in HgTe-CdTe heterostructures.—73-07754
Quantum well width dependence of exciton-phonon interaction in $Cd_{0.33}Zn_{0.67}Te$/ZnTe single quantum wells.—73-07756
Radiation swelling and sputtering of $Cd_xHg_{1-x}Te$ as a result of a large-dose ion implantation.—73-15134
Raman scattering study of CdTe/*p*(111)InSb heterointerfaces grown by rf sputtering in high vacuum.—73-04460
Real-time control of the molecular beam epitaxial growth of CdHgTe and CdTe/HgTe superlattices using ellipsometry.—73-07764
Real-time monitoring and control during MOVPE growth of CdTe using multiwavelength ellipsometry.—73-15839
Recipe to minimize Te precipitation in CdTe and (Cd, Zn)Te crystals.—73-07765
Recombination mechanisms and transport phenomena in uniaxially compressed $Cd_xHg_{1-x}Te$.—73-11415
Reduced metal-insulator semiconductor tunneling in metallorganic chemical vapor deposition HgCdTe(111)Te films.—73-07766
Relations between structure and photoelectric properties of CdTe films with anomalous impurity photovoltage.—73-16585
Relaxation processes and in-plane electron mobility limited by interface defects in CdTe-$Cd_{1-x}M_xTe$ quantum wells.—73-04468
Resonance Raman scattering in Cd/Te/CdMnTe superlattice under magnetic field.—73-04470
Role of the insulator in determining $1/f$ noise in $Hg_{1-x}Cd_xTe$ integrating MIS devices.—73-11426
Selected-area epitaxy of CdTe.—73-07790
Self-recovery of implanted semiconductors.—73-11442
Solid-phase laser doping of $Cd_xHg_{1-x}Te$ single crystals.—73-04484
Space-charge-field feedback effect on carrier transport in photorefractive CdTe:V.—73-09422
Spatial nonuniformity in Cd-annealed CdTe crystals.—73-11449
Spectral dependence of the photoconductivity and photomagnetic effect in epitaxial $Cd_xHg_{1-x}Te$/CdTe films with an anodically oxidized free surface.—73-01317
Spin-flip Raman scattering from electrons bound to donors in both wells and barriers of CdTe/$Cd_{0.3}Mn_{0.7}Te$ heterostructures.—73-05485
Stability of single free particles against spatial localization through magnetic polaron formation.—73-05489
Stress confined in the barriers of type-III HgTe/CdTe superlattices.—73-11457
Structural and optical properties of $CdIn_2Te_4$ films on *p*-InSb(111) grown by temperature gradient vapor transport deposition.—73-01322
Structural and optical studies of oxygenated amorphous CdTe films.—73-15183
Structural properties and low-temperature photoluminescence of cadmium telluride films produced by liquid phase epitaxy.—73-05646
Structure and optical characterization of $Zn_xCd_{1-x}Te$ thin films prepared by the close-spaced vapor transport method.—73-01324
Structure of CdTe(111)B grown by MBE on misoriented Si(001).—73-11461
Substrate heating effect on the growth of a CdTe film on an InSb substrate by vacuum evaporation.—73-01330
Substrate issues for the growth of mercury cadmium telluride.—73-11464
Surface effects on the properties of cadmium selenide quantum dots.—73-04492
Surface morphology study on CdZnTe single crystals by atomic force microscopy.—73-11467
Synchrotron white beam X-ray topography [SWBXT] analysis of MBE-grown CdTe/CdTe(111)B.—73-11471
Tails of the density of states in $Zn_xCd_yHg_{1-x-y}Te$ solid solutions.—73-15198
Temperature dependence of Auger lifetime in heavily doped $Hg_{1-x}Cd_xTe$.—73-11475
Temperature dependence of the absorptive edge in CdTe:O amorphous thin films.—73-02701
Temperature dependence of the relaxation time of the photoconductivity of *n*-type $Cd_xHg_{1-x}Te$ in a microwave field.—73-07830
Thermodynamic description of metal Hg(Cd)Te systems.—73-08778
Thermomigration of Te precipitates and improvement of (Cd, Zn)Te substrate characteristics for the fabrication of LWIR [long-wavelength infrared] (Hg, Cd)Te photodiodes.—73-11482
Time-resolved photoluminescence studies of perpendicular transport in CdTe/$Cd_{1-x}Mn_xTe$ short-period superlattices.—73-11484
$TiN_xO_y$ transparent electrode material for HgCdTe infrared devices.—73-07370
Transformation of the crystal structure of $Cd_xHg_{1-x}Te$ due to ion implantation.—73-11485
Transient photoconductivity in CdTe films grown by the hot wall flash evaporation technique.—73-04501
Transient photocurrents in CdTe and CdTe:O sputtered films.—73-15214
Tunneling and $1/f$ noise currents in HgCdTe photodiodes.—73-07844
Two-dimensional exciton magnetic polaron in CdTe/$Cd_{1-x}Mn_xTe$ quantum-well structures.—73-07846
Ultrahigh vacuum atomic layer epitaxy of CdTe.—73-04503
Use of ellipsometry to characterize the surface of HgCdTe.—73-11496
Uv photon-assisted control of interface charge between CdTe substrates and metallorganic chemical vapor deposition CdTe epilayers.—73-11497
Vapor phase equilibria in the $Cd_{1-x}Zn_xTe$ alloy system.—73-12729
X-ray absorption near-edge structure analysis of CdFeTe: XANES experiment and theoretical LMTO calculations.—73-01365
X-ray characterization of (Zn, Cd)Te/CdTe strained layer superlattices.—73-01366
X-ray diffraction characterization of LPE HgCdTe heterojunction photodiode material.—73-11509
X-ray diffraction study of the interfaces between $Hg_{1-x}Cd_xTe$ crystals and anodic films.—73-15230

**cadmium,**
Absorption edge structure of cubic cadmium and zinc chalcogenides.—73-14764
Anisotropy of surface energy of monocrystals of cadmium diarsenide.—73-10917
Cadmium-containing fluoride glasses.—73-06886
Closed-ampoule diffusion of sulfur into Cd-doped InP substrates: dependence of S profiles on diffusion temperature and time.—73-07415
Crystal structure of $Rb_4CdBr_6$ and $Rb_4CdCl_6$.—73-16093
Diffusion and clustering in the $Cd_{1-x}Bi_xF_{2+x}$ solid solution: a fluorine NMR study.—73-03090
Effect of irradiation on the luminescence of $CdP_2$ crystals.—73-14851
Electron and hole energy spectrum parameters of cubic cadmium and zinc chalcogenides.—73-14878
Electronic conductivity and chemical diffusion coefficient of cadmium-doped cuprous iodide.—73-03093
Improper ferroelectric phase transition in cadmium pyroniobate.—73-15268
Influence of the absorption edge on dispersion nonlinearity of $CdS_xSe_{1-x}$ microcrystals in glasses and its appearance in self-diffraction experiments.—73-14986
Isostructural phase transition in semiconducting $CdIn_2S_4$ spinel.—73-15003
Lattice reflection spectrum of $Cd_{1-x}Hg_xTe$ alloys [0≤*x*≤0.8].—73-15012
Luminescence of the cadmium oxyfluoromolybdate, $CdMoO_3F_2$.—73-08906
Natural aging changes in galvanomagnetic properties of undoped CdSb.—73-11343
Nature of paramagnetic centers in cadmium borate glasses.—73-00378
Nature of paramagnetic centers in cadmium borate glasses.—73-00379
Obtaining meta- and pyrovanadates of cadmium from an unusual low energy process: II, Pyrovanadate.—73-02364
Obtaining meta- and pyrovanadates of cadmium from an unusual low-energy process: I, α-metavanadate.—73-02365
Optical properties of transparent and conductive $Cd_2SnO_4$ films.—73-08934
Oriented films of semiconductor compounds $Zn_3As_2$ and $Cd_3As_2$ on sapphire substrates.—73-15080
Phase equilibria in the system Cd-Si-Se and the properties of the compound $Cd_4SiSe_6$.—73-02379
Phase transition and optical properties of thin films of $Ag_2CdI_4$ superionics.—73-02390
Properties of mixed cadmium halide glasses.—73-14260
Rare-earth-doped, stabilized cadmium halide glasses.—73-00761
Rearrangement of vibrational spectra of $Cd_{1-x}Zn_xTe$ semiconductor alloys [0≤*x*≤0.5].—73-15141
Size-quantized semiconductor cadmium chalcogenide particles in Langmuir-Blodgett films.—73-07801
States of admixed iron atoms in glasses of the system $CdGeO_3$-$CdF_2$-$AlF_3$ according to data from Mossbauer spectroscopy.—73-00403
Static and dynamic characteristics of bulk and contact electrical resistivity in $CdCr_2Se_4$ under stochastic current instability.—73-15176
Structure formation in Cd chalcogenide films produced from atomic-molecular beams.—73-15187
Structures and crystal chemistry of magnesium chloride and cadmium chloride.—73-02469
Synthesis and unit cell data of a new cadmium antimonate electronic ceramic.—73-08766
Tensimetric determination of the limits of the homogeneity region of the compound $Cd_4GeS_6$.—73-03207
Thermal stability and microstructure of new laser matrix cadmium-zinc glasses.—73-00563

**calcia,**
$(Pb,Ca)[(Mn_{0.5}W_{0.5})Ti]O_3$ ceramics: X-ray and dielectric studies.—73-08946
Alumina, calcia, yttria sealing composition.—73-13913
Calculation of the $CaO$-$SiO_2$-$Me_xO_y$ system viscosity.—73-02554
CaO clinker with improved antihydration property.—73-00782
Compressibility and sintering of aggregated MgO-CaO powder and the influences of adhesion of fine particles to the surface of aggregate.—73-16683
Effect of fluorine on phase separation of $CaO$-$Al_2O_3$-$SiO_2$ glass.—73-13966
Effect of storage conditions on handling and $SO_2$ reactivity of $Ca(OH)_2$-based sorbents.—73-00078
Effects of CaO impurity on microstructural evolution during sintering of alumina.—73-02805
Effects of synthesis by melting in solar and radiation furnaces on changes in phase composition in the systems $ZrO_2$-$Ge_2O_3$-CaO(MgO).—73-02249
Formation of $CaO$-$10Al_2O_3$ with the β-alumina-type structure by means of ion exchange.—73-02277
High-temperature stability of $Ca_2ZrSi_4O_{12}$.—73-16169
Low-temperature degradation behavior for CaO-doped 2.5Y-TZP ceramics.—73-02323
Network structure of rf-sputtered amorphous $AlPO_4$-MgO and $AlPO_4$-CaO films.—73-05439
Neutral, ultraviolet-absorbing, fixed tint lenses.—73-03955
Permeability of molten Cu or Ni into the calcium oxide refractory.—73-10753
Phase equilibria and crystal chemistry in portions of the system SrO-CaO-1/2$Bi_2O_3$-CuO: V, The system SrO-CaO-1/2$Bi_2O_3$.—73-16248
Phase equilibria in the CaO-$Me_2O_3$-$CaCl_2$-$H_2O$ system.—73-02378
Phase identification in calcia–alumina fibers crystallized from amorphous precursors.—73-02384
Phase relations in the system CaO-$B_2O_3$-$SiO_2$.—73-08695
Phase transition and oxygen deficiency in electrochemically reduced $Y^+$, Ca-PSZ crystals.—73-05455
Process for producing silicon carbide platelets.—73-05329
Properties of CaO-rich gunning material for converter.—73-00843
Role of CaO in the sintering of 12Ce-TZP ceramics.—73-06024
Sintering of high-purity magnesite and influence of CaO.—73-13266
Structure and properties of low-CaO contained clinker.—73-10168
Subsolidus relations in the $La_2O_3$-CuO-CaO phase diagram and the $La_2O_3$-CuO binary join.—73-16342
System CaO-SrO-CuO.—73-16358
Thermodynamic investigation of the $CaO$-$Al_2O_3$-$CaSO_4$-$H_2O$ system at 50°C and 85°C.—73-10181
Thermodynamic investigation of the $CaO$-$Al_2O_3$-$CaSO_4$-$K_2O$-$H_2O$ system at 25°C.—73-16376
Use in the glass industry of some chemical industry byproducts containing $Na_2O$ and CaO.—73-14524
XPS measurements on glass surfaces.—73-00429
Zirconia-modified calcium oxide ceramics and industrial recommendations.—73-12906

**calciners/calcination,**
Activators for accelerated calcination.—73-09804
Effect of calcination on characteristics and sintering behavior of $Al_2O_3$-$ZrO_2$ composite powders.—73-05755
Effect of calcination on the sintering of gel-derived, zirconia-toughened alumina.—73-16724
Flash calcines of kaolinite: kinetics of isothermal dehydroxylation of partially dehydroxylated flash calcines and of flash calcination itself.—73-12803
Gypsum calcination in superheated steam—a new process with lower energy demand and better product quality.—73-09979
Influence of the fineness of calcined kaolin on the sintering of electrical ceramic bodies based on Angrensk kaolins.—73-02873
Operating experience with the calcination of natural gypsum and desulfogypsum in a grinding and calcining plant.—73-00153
Stabilized tetragonal zirconium oxide as a support for catalysts: evolution of the texture and structure on calcination in static air.—73-02444
Structural changes during the calcination of raw coke.—73-12695
Use of RSP [reinforced suspension preheater] calciners in Sweden's largest rotary kiln plant at the Slite cement works.—73-03553

**calcite,**
Cleavage cracks in iceland spar.—73-17117
Crystal growth diagrams as an aid to interpreting the fabrics of calcite aggregates.—73-12558
Hydrothermal growth of calcite single crystals in nitrate solutions.—73-05850
Measurement of calcite growth rate in seeding continuously stirred tank crystallizer.—73-13749
Morphology, relationship, and origin of fiber and dendrite calcite crystals.—73-15908

Ordering of manganese ions in calcite structure.—73-08682
Sharp crack self-healing in $CaCO_3$.—73-02686
Zonation and geochemical patterns of buried calcite cements: Upper Smackover Formation, Clarke County, Mississippi.—73-15917

**calcium aluminate,**
Binder distribution in macro-defect-free [MDF] cements: relation between percolative properties and moisture absorption kinetics.—73-03437
$Ca_2AlMnO_5$: studies about its characterization and hydration.—73-13684
Calcium aluminate cements.—73-12263
Chemical synthesis and characterization of calcium aluminate powders—correction.—73-12942
Chemical synthesis and characterization of calcium aluminate powders.—73-05705
Early hydration of tricalcium aluminate-gypsum mixtures in the presence of sulfonated melamine formaldehyde superplasticizer.—73-00067
Effect of mixing water on morphology of $C_3A$ hydrates.—73-09912
Examination of $12CaO{\cdot}7Al_2O_3$ phase doped with magnesium, iron, and titanium oxides.—73-16144
High-resolution transmission electron microscopy study of microstructures of initially hydrated calcium aluminosulfate.—73-00101
Hydration kinetics of calcium aluminate phases in the presence of various ratios of $Ca^{2+}$ and $SO_4^{2-}$ ions in the liquid phase.—73-00102
Hydration of $4CaO{\cdot}Al_2O_3{\cdot}Mn_2O_3$ in the absence and the presence of gypsum—a comparative study with the hydration of $4CaO{\cdot}Al_2O_3{\cdot}Fe_2O_3$.—73-03478
Hydration of amorphous $12CaO{\cdot}7Al_2O_3$ [$C_{12}A_7$] coated with $SiO_2$.—73-13730
Hydration of $C_3A$ in the presence of additives replacing the effects of gypsum.—73-09988
Hydration of $C_3A$ in the presence of $Ca(OH)_2$, $CaSO_4{\cdot}2H_2O$, and $CaCO_3$.—73-00105
Hydration of calcium dialuminate and its mixtures containing slags.—73-09989
Identification of hydration reactions through stress induced by volume change: II, $C_4AF$ systems.—73-03481
Identification of hydration reactions through stresses induced by volume change: I, $C_3A$ systems.—73-00108
Influence of alumina on the hydration of monocalcium aluminate at different temperatures.—73-13737
Kinetics of tricalcium aluminate and tetracalcium aluminoferrite hydration in the presence of calcium sulfate.—73-00130
New approach to the preparation of ir transparent $Ca_{12}Al_{14}O_{33}$ material.—73-09222
Phosphate-bonded calcium aluminate cements.—73-00207
Preparation and properties of calcium aluminate compositions via sol-gel processing: effects of precursors.—73-14469
Properties of some blended high-alumina cements.—73-10114
Proton NMR relaxation study of calcium aluminate [CA] hydration reactions.—73-03523
Rapid conversion of calcium aluminate cement hydates, as revealed by synchrotron energy-dispersive diffraction.—73-10126
Retardation of calcium silicate and calcium aluminate hydration at 150°C, 86.2 MPa.—73-03530
Sintering study of calcium aluminate-II.—73-13269
Solubility properties of ternary and quaternary compounds in the $CaO{\cdot}Al_2O_3{\cdot}SO_3{\cdot}H_2O$ system.—73-00190
Stability of calcium sulfoaluminate hydrates in water solutions with various pH values.—73-00192
Structure and dynamics in calcium aluminate liquids: high-temperature $^{27}Al$ NMR and Raman spectroscopy.—73-12702
Synthesis and characteristics of fibrous $3CaO{\cdot}Al_2O_3{\cdot}3CaCO_3{\cdot}32H_2O$.—73-13291
Thermodynamic investigation of the $CaO{\cdot}Al_2O_3{\cdot}CaSO_4{\cdot}H_2O$ system at 25°C and the influence of $Na_2O$.—73-03546

**calcium fluoride,**
$CaF_2$ growth on Si, a-$SiO_2$ [studied] by in situ spectroscopic ellipsometry.—73-17111
$CaF_2$/Si interface using X-ray photoelectron spectroscopy.—73-09434
Characterization of $Ca_{1-x}Er_xFe_{2+x}$ solid solution thin films grown on Si(100) substrates.—73-03123
Effect of the $Er^{3+}$ concentration on the luminescence of $Ca_{1-x}Er_xF_{2+x}$ thin films epitaxially grown on Si(100).—73-04292
Effects of clinkering temperature and silicate phase on the hydration of $C_{11}A_7{\cdot}CaF_2$.—73-09931
Electrical conduction in $CaF_2$ and $CaF_2$-$Al_2O_3$ nanocomposite films on $Al_2O_3$ substrates.—73-07313
Electrical relaxation of dimers in rare-earth-doped calcium fluoride.—73-05388
Epitaxial bilayer growth of $CaF_2$(111)/Pd(111) on $CaF_2$(111) substrates.—73-08530
Initial formation of the $CaF_2$ interface: a theoretical study.—73-02623
Ion conductivity of solid solutions $Ca_{1-x}Th_xF_{2+2x}$ and $Ca_{1-x}U_xF_{2+2x}$.—73-00982
Mechanism of slow excitation in X-ray luminescence and thermoluminescence of $CaF_2$:Tm crystals.—73-08916
Optical and structural properties of $CaF_2$:Nd films on Si-based substrates.—73-04426
Structural study on fluorine-doped Bi(Pb)-Sr-Ca-Cu-O superconductors.—73-11906
Synthesis and ionic conductivity of nanophase $Ca_{1-x}La_xF_{2+x}$.—73-04176
Thermodynamic calculation of phase equilibria in the $CaF_2$-$SiO_2$-CaO system.—73-05515

**calcium phosphate,**
$^{31}P$ MAS-NMR spectroscopy of calcium phosphate glasses.—73-10391
Antibacterial calcium phosphate ceramic.—73-05189
Bone induction method.—73-12341
$Ca(H_2PO_4)_2{\cdot}H_2O$ dehydration under equilibrium conditions.—73-16039
Calcium phosphate ceramics as biomaterials.—73-12316
Calcium phosphate type glass-ceramic.—73-00727
Clinical applications of calcium phosphate biomaterials: a review.—73-08507
Coated refractory composition and method for making the same.—73-00886
Controlling stage of the calcium phosphate (tertiary) with natural gas reduction process.—73-16069
Development of chemically bonded ceramics in the $CaO$-$SiO_2$-$P_2O_5$-$H_2O$ system.—73-00060
Development of self-setting calcium phosphate cements.—73-00062
Dynamic fatigue of beta tricalcium phosphate bioceramics.—73-09572
Formation of porous calcium phosphate films on titanium oxide substrate by spray pyrolysis technique.—73-13065
Hardening material for medical and dental use.—73-02042
Hydration of tetracalcium phosphate.—73-06667
Hydration properties of α-tricalcium phosphate in tris solution.—73-16512
Improvement of chemical and mechanical properties of unidirectionally crystallized calcium phosphate glass-ceramics by reaction with ammonia gas.—73-14204
Influence of octacalcium phosphate [OCP] addition on hydraulic properties of apatitic cement.—73-13739
Kinetics of $Ca(H_2PO_4)_2{\cdot}H_2O$ thermal dissociation.—73-16191
Medical applications of calcium phosphate bioceramics.—73-02015
Medical or dental hardening compositions.—73-10639
Microwave sintering of calcium strontium zirconium phosphate [CSZP] ceramics.—73-05922
Preparation of calcium phosphate fibers for applications to biomedical fields.—73-02947
Preparation of calcium phosphate fibers for applications to biomedical fields.—73-10577
Process for producing shaped article of oriented calcium phosphate type compound.—73-02063
Properties of apatite cement composed of α-tricalcium phosphate and tetracalcium phosphate.—73-10106
Properties of calcium metaphosphate and calcium diphosphate powders prepared by spray pyrolysis technique.—73-00172
Resorbable bioactive phosphate-containing cements.—73-05243
Sinterability of ß-calcium orthophosphate powder prepared by spray pyrolysis.—73-06049
Sintering and properties of $CaTi_4(PO_4)_6$ [CTP] prepared by sol-gel process.—73-03006
Sintering behavior and mechanical properties of hydroxyapatite and dicalcium phosphate [DCP].—73-06052
Synthesis and thermal changes of calcium phenylphosphate and calcium phenylphosphate.—73-13301
Synthesis and thermal changes of calcium phenylphosphate and calcium phenylphosphonate.—73-05507
Synthesis of ultrafine calcium phosphate powders from $Ca(OH)_2$ suspension and various phosphoric aqueous solutions.—73-03058
System $YPO_4$-$Ca_3(PO_4)_2$-$Ca_2P_2O_7$.—73-02512
Thermal behavior of octacalcium phosphate intercalated with ß-dihydromuconate.—73-05653
Thermal behavior of octacalcium phosphate intercalated with ß-dihydromuconate.—73-12889
Thermodissociation and reduction of calcium phosphates in presence of silica.—73-16374

**calcium silicate hydrate,**
$^{17}O$ and $^{29}Si$ MAS NMR study of ß-$C_2S$ [dicalcium silicate] hydration and the structure of calcium-silicate hydrates.—73-13758
$^{29}Si$ NMR spectroscopy of silicate anions in hydrothermally formed CSH.—73-05477
$^{29}Si$ NMR study of the thermal decomposition of hydrothermally formed hillebrandite and xonotlite.—73-05478
Application of selective $^{29}Si$ isotopic enrichment to studies of the structure of calcium silicate hydrate (CSH) gels.—73-05358
Calcium silicate hydrates as clay substitute in porcelain enamel suspensions.—73-10200
Characterization of CSH from highly reactive ß-dicalcium silicate prepared from hillebrandite.—73-08567
Compositional and molecular character of the calcium silicate hydrates formed in the paste hydration of $3CaO{\cdot}SiO_2$.—73-06639
Effect of combined additions of silica fume, calcium sulfoaluminate, and gypsum on the hydration and strength development of $Ca_2SiO_4$.—73-09900
Effect of heat treatment on inner product CSH.—73-09908
Incorporation of minor and trace elements into calcium silicate hydrate (CSH) gel in hardened cement paste.—73-03482
Interpretation of compositional patterns found by quantitative energy dispersive X-ray analysis for cement paste constituents.—73-10019
Models for the composition and structure of calcium silicate hydrate (CSH) gel in hardened tricalcium silicate pastes.—73-10056
Properties of autoclaved calcium silicate materials using waste tile: influence of $SiO_2$ sources.—73-10107
Thermal decomposition of tricalcium silicate hydrate.—73-16372

**calcium silicate,**
$^{29}Si$ solid-state NMR study of tricalcium silicate and cement hydration at high temperature.—73-13776
Bioactivity of $Fe_2O_3$-containing $CaO$-$SiO_2$ glasses: in vitro evaluation.—73-14136
$CaSiO_3$ as a substrate material for Ba-Y-Cu-O superconducting oxide films.—73-01499
$CaSiO_3$ as a substrate material for Ba-Y-Cu-O superconducting oxide films.—73-11698
Cement-containing ceramic articles and method for production thereof.—73-12344
Characterization of CSH from highly reactive ß-dicalcium silicate prepared from hillebrandite.—73-08567
Comparison between the hydration processes of tricalcium silicate and beta-dicalcium silicate.—73-00046
Crystal structure and hydration reactivity of ß-$Ca_2SiO_4$ solid solutions.—73-09877
Dehydration processes of gyrolite.—73-16104
Development of chemically bonded ceramics in the $CaO$-$SiO_2$-$P_2O_5$-$H_2O$ system.—73-00060
Effect of calcium fluorosulfosilicate on formation of calcium silicate.—73-09899
Effect of sulfate on the reaction of $3CaO{\cdot}SiO_2$ formation in presence of clinker melt and its appearance in clinker.—73-06650
Effect of sulfate on the reaction of $C_3S$ [tricalcium silicate] formation.—73-09919
Effects of $K_2SO_4$ and $NaSO_4$ on $3CaO{\cdot}SiO_2$ formation and its microstructure.—73-13712
Efficient insulation of oil refinery vessel and piping utilizing calcium silicate.—73-07210
Electromelting mullite ceramics with added $Ca_2SiO_4$.—73-16759
EPR investigation of chromium ions in $Ca_2SiO_4$-$Cr_2O_3$ and $Ca_3Si_2O_7$-$Cr_2O_3$ solid solutions.—73-16139
Fine texture and hydration reactivity of ß-$Ca_2SiO_4$ solid solutions.—73-09962
Formation and solid-state properties of ß-dicalcium silicate.—73-09967
Formation of bonds in tricalcium silicate pastes as observed by scanning electron microscopy.—73-03470
Formation of $C_3S$ [tricalcium silicate] in the mixtures containing different silicate raw materials.—73-09968
Formation processes of ß-$C_2S$ by the decomposition of hydrothermally prepared CSH with $Ca(OH)_2$.—73-08629
Hydration of highly reactive ß-$C_2S$ prepared from hillebrandite.—73-09991
Hydrothermal reactions in the system $3CaO{\cdot}SiO_2$-$CaSO_4{\cdot}2H_2O$-$H_2O$.—73-12598
Hydrothermal synthesis of hillebrandite and thermal decomposition to highly reactive ß-$C_2S$.—73-09993
Influence of $F^-$ [fluoride] on crystalline structure of $C_3S$ [tricalcium silicate].—73-10001
Lithium as intensifier in the formation of dicalcium silicate phase.—73-10028
Metal corrosion caused by thermal insulating calcium silicate products and corrosion prevention measures.—73-10742
Model for the variations in solution chemistry during tricalcium silicate hydration.—73-10055
Molten steel pouring nozzle.—73-00888
Preparation and properties of calcium hydrosilicate, intended for use as protective coating.—73-06698
Preparation of $CaSiO_3$ powders by coprecipitation method and their sinterability.—73-02949
Proton high-resolution solid-state NMR study of $C_3S$ [tricalcium silicate] hydration.—73-03522
Reaction sintering of $Ca_2SiO_4$-$CaZrO_3$ composites.—73-13230
Retardation of calcium silicate and calcium aluminate hydration at 150°C, 86.2 MPa.—73-03530
Role of manganese on the kinetics of formation and hydration of $C_3S$ phase.—73-10142
Semidry pressing process for calcium silicate bricks.—73-10147
Structure and microtexture changes in phosphorous-bearing $Ca_2SiO_4$ solid solutions.—73-16331
Structure of fully hydrated portland cement and tricalcium silicate pastes: III. Specific surface area and permeability.—73-00195
Synthesis of ß-$Ca_2SiO_4$.—73-17026
Very early hydration of dicalcium silicate polymorphs.—73-00205

**calcium titanate,**
Modified lead calcium titanate ceramics with a relatively large dielectric constant for hydrophone applications.—73-04561
Reaction kinetics and grain growth behavior in $BaTiO_3$-$SrTiO_3$-$CaTiO_3$ ceramics.—73-17189

**calcium,**
$^{27}Al$ NMR spectroscopy of $CaO$-$Al_2O_3$-$SiO_2$ melts and glasses.—73-13923
Beneficiation of calcium borate minerals.—73-01847
Calcium concentration dependence of the intergranular film thickness in silicon nitride.—73-09435
Calcium hydroxide [CH] deposition in the near interfacial zone in plain concrete.—73-03438
$Ce^{3+}$ centers in $Y_3Al_5O_{12}$ (YAG) single crystals: II.—73-08558
Computation of antiferromagnetic properties of orthorhombic $CaCuO_2$.—73-07420
Control of crystal shape and modification of calcium carbonate prepared by precipitation from calcium hydrogen carbonate solution.—73-02754
Control of crystal shape and modification of calcium carbonate prepared by precipitation from calcium hydrogen carbonate solution.—73-12955
Critical carrier density and revival of superconductivity in Ca-substituted $YSrBaCu_{2.6}M_{0.4}O_{6+x}$ (M=Al, Fe).—73-08010
Crystal and magnetic structures of $Ca_2Cr_{0.5}Fe_{1.5}O_5$ at 2.1 K.—73-02174
Crystal structure of aluminum-calcium ferrite phase with variable composition of $CaFe_3AlO_7$ type.—73-02188
Crystal structure of basic calcium carbonate [BCC] and its decomposition process in water.—73-16082

Crystal structure of $Ca_{1-x}Nd_xF_{2+x}$ (x=0.1, 0.2) from precision X-ray diffraction data.—73-02191
Crystallization of $CaCO_3$ from $Ca(NO_3)_2$ solution: I, Reaction conditions and morphology of $CaCO_3$.—73-09878
Decalcification studies on avian eggshell.—73-05727
Defect structure, nonstoichiometry, and phase stability of Ca-doped $YCrO_3$.—73-03085
Dielectric properties and microstructural behavior of B-site calcium-doped barium titanate ceramics.—73-02570
Dissolution kinetics of $CaCO_3$ in common laboratory solvents.—73-12133
Dissolution of calcium carbonate crystals: a constant-composition kinetics study.—73-16111
Effect of the addition of $TiO_2$ and $ZrO_2$ on the crystallization of calcium aluminosilicate glasses.—73-14362
Electronic structure of $Ca_3AuN$.—73-16133
Evidence for oxygen nonstoichiometry in a stabilized Bi-Ca-Pb-O fluorite-type phase.—73-08621
FTIR investigations of the crystallization of ir-transmitting glasses: application to calcium gallate glass.—73-10377
Hydration of tricalcium germanate.—73-09462
Influence of Ca on superconductivity of $(Y_{1-x}Pr_x)Ba_2Cu_3O_{6.95}$ system.—73-11801
Influence of Ca on the irreversibility line of $YSr_2Cu_{2.67}Tl_{0.33}O_{6+z}$.—73-11802
Localization of carriers of Y-doped $CaCuO_2$ films prepared by an organometallic chemical vapor deposition method.—73-15535
Mathematical description of hydrogen partial pressure effect on the kinetics of reduction of phosphogypsum to calcium sulfide.—73-10033
Mechanical properties and microstructure of $Ca_2SiO_4$-$CaZrO_3$ composites.—73-06244
Mechanochemical oxidation of calcium phosphide traces by combined and free oxygen in electrothermophosphorus slag.—73-16863
Metal-insulator transition with oxygen content in $CaVO_{3-y}$.—73-05596
Nitridation of calcium-stabilized zirconia.—73-08926
Oxidation of $TiB_2$-$CaB_6$ composite material.—73-13486
Perturbed-angular-correlation spectroscopy: evidence for probe-dopant interactions in Ca-doped barium titanate.—73-12648
Phase changes and thermodynamic properties of $CaTiO_3$. Spectroscopic data, vibrational modeling, and some insights on the properties of $MgSiO_3$ perovskite.—73-08691
Phase transitions in perovskite $La_{1-x}Ca_xMnO_3$.—73-08697
Polymorphism of calcium titanate.—73-02395
Polysomatism and structural models of Ca silicates.—73-02397
Preparation of (Ca, Sr)$CuO_2$ under various oxygen partial pressures and substitution of elements.—73-15592
Preparation of a calcium-substituted copper-rich yttrium barium copper oxide superconductor from a spray-dried nitrate precursor.—73-08175
Preparation of high-strength calcium-mica-containing machinable glass-ceramics.—73-00684
Preparation of tazheranite powders by solid phase reaction and conductivity of sintered bodies.—73-02972
Preparation of $Y_{1-x}Ca_xBa_2Cu_4O_8$ ($0 \le x \le 0.1$) superconductor films by the dipping-pyrolysis process.—73-04789
Properties of $CaCl_2$ hydrate with an inorganic powder: I, Electrical conductivity of $CaCl_2 \cdot nH_2O$ ($n$=6–7.35) with $\alpha$-$Al_2O_3$ powder.—73-12867
Properties of calcium-added fly ashes.—73-08499
Proton conduction in sintered oxides based on $CaZrO_3$.—73-04154
PTCR characteristics of semiconducting (Ba, Ca)$TiO_3$ ceramics fired in reducing-reoxidizing atmospheres.—73-15127
Pyrolysis mechanism of basic calcium carbonate.—73-08714
Pyrolysis mechanism of basic calcium carbonate.—73-16282
Quick setting and hardening mechanism of $C_4A_3(SO_4)$.—73-10123
Reactions of cesium with dehydrated calcium zeolite A: crystal structures of $Cs_6Ca_3$-A, $Cs_{11}Ca_{0.5}$-A·0.5Cs, and $Cs_{12}$-A·0.5Cs.—73-12672
Scattering-loss mechanism in $CaF_2$-film-assisted diffusion bonding of $MgF_2$ ceramics.—73-08966
Superconductivity of $Y_{1-x}Ca_xBa_2Cu_4O_{8+y}$.—73-08231
Synthesis and characteristics of fibrous $3CaO \cdot Al_2O_3 \cdot 32CaCO_3 \cdot 3H_2O$.—73-03036
Synthesis of a new compound, $Ca_{0.8}Ce_{1.2}Sn_2O_7$, with pyrochlore structure.—73-03040
Synthesis of amorphous calcium carbonate and its crystallization.—73-17031
Thermodynamics and phase equilibria in the Ca-Cu-O system.—73-05517
Thermomechanical fatigue [TMF] behavior of a silicon carbide fiber-reinforced calcium aluminosilicate composite.—73-03368
Transport properties near superconducting-nonsuperconducting phase boundary in $CaLaBaCu_3O_y$.—73-15660
Vaterite (an uncommon polymorph of $CaCO_3$): occurrence in boreholes demonstrate unexpected longevity.—73-15916
X-ray powder diffraction study of $CaTiO_3$ perovskite at high temperatures.—73-08794
XPS study on the carbonation process of $Ca(OH)_2$.—73-16400
XRD, HRTEM, and FTIR study of Ca-doped $Al_2O_3$.—73-12738

**calculations,**
Calculation of $4f^65d$ energy levels of $Eu^{2+}$ ion in KX (X=Cl, Br, I) crystals.—73-08560
Comparative study of all-electron and core pseudopotentials basis sets for periodic ab initio Hartree-Fock calculation: the case of $MgSiO_3$-ilmenite.—73-05373
Determination of crack growth parameters and validation of a $v$-$K_I$ relation from statistical and dynamic experiments.—73-03261
First-principles calculation of electronic, optical, and structural properties of $\alpha$-$Al_2O_3$.—73-05400
General algorithm for calculating batches in the ceramic industry.—73-08339
Influence of Weibull modulus on distribution of estimated modulus.—73-09623
Life-assessment technology for power-plant components.—73-13559
Predicting the life of high-temperature structural components in power plants.—73-13579
Use of gate R&R [repeatability and reproducibility] studies and their relationship to the testing of ceramic materials.—73-08455

**calorimeters/calorimetry,**
Electronic and lattice characteristics of lead selenide studied by low-temperature (1–4 K) calorimetric spectroscopy.—73-16131

**capacitors,**
Ceramic capacitor with a grain-boundary-insulated structure.—73-04189
Ceramic composition.—73-11003
Ceramic materials of improved dielectric constants, and capacitors fabricated therefrom.—73-11004
Characterization of insulating boundary layers of BL [barrier layer] capacitors.—73-07287
Characterization of insulating boundary layers of BL [boundary layer] capacitors.—73-14682
Conduction properties of grain boundary in $SrTiO_3$-$Bi_2O_3$ capacitors.—73-00940
Conduction properties of grain boundary in $SrTiO_3$-$Bi_2O_3$ capacitors.—73-10926
Development and fabrication of thin film $BaTiO_3$ capacitors using radio-frequency magnetron sputtering.—73-07297
Dielectric ceramic compositions.—73-04205
Doping in low-temperature-sintered $SrTiO_3$ GBBL [grain boundary barrier layers] capacitors.—73-04079
Effect of $SiO_2$ on the reliability of multilayer ceramic capacitors with Ni electrode.—73-07306
Effects of bias-temperature cycling on electrical characteristics of YBCO/YSZ/Si Su/S capacitors.—73-04082
Effects of nitridation temperature on the electron trap characteristics of nitrided-oxide metal-oxide-semiconductor capacitors.—73-07474
Electrical properties of ferroelectric thin-film capacitors with different structures.—73-04549
Fast decay component of the remanent polarization in thin-film PZT capacitors.—73-11573
Fine-grained $BaTiO_3$ powder mixture and method for making.—73-04209
Grain core–grain shell structure in Nb-doped $BaTiO_3$ capacitor ceramics.—73-10952
Grain-boundary structure of $Bi_2O_3$-diffused $BaTiO_3$ BL capacitor.—73-00974
Grain-boundary structure of $Bi_2O_3$-diffused BL capacitor.—73-10953
High-frequency $c$-$v$ investigation of metal-oxide-semiconductor capacitors prepared by low-temperature subatmospheric pressure chemical vapor deposition of $SiO_2$ films on silicon substrates.—73-14958
Measurements of hydrogen redistribution in hot electron injection of MOS capacitors.—73-04133
Metal-oxide-semiconductor capacitor formed from thermally oxidized $n$-type 6H-SiC with the $(000\bar{1})$C orientation.—73-11313
Method for manufacturing a ceramic capacitor having varistor characteristics.—73-04217
Method for manufacturing electrodes for multilayer ceramic capacitors.—73-11029
Method of forming an integrated circuit capacitor dielectric and a capacitor formed thereby.—73-04220
Method of making varistor or capacitor.—73-01379
Physicochemical control of $BaTiO_3$ powders and incidence on the quality of ceramic capacitors.—73-10982
Process for fabricating a ferroelectric capacitor in a semiconductor device.—73-04587
Process for producing ceramic capacitors with thinner electrodes.—73-04229
Process-dependent electrical characteristics and equivalent circuit model of sol-gel-based PZT capacitors.—73-11604
Pump-probe charge-integrating investigation of trap emission kinetics in ultrathin MOS capacitors.—73-04159
PZN-based relaxors for MLCC's [multilayer ceramic capacitors].—73-14726
Semiconductor device having a capacitor dielectric film of multilayer structure and a method of controlling the same.—73-11543
Semiconductor integrated circuit having silicon nitride provided as insulator of capacitor.—73-11051
Simplified closed-form trap-assisted tunneling model applied to nitrided oxide dielectric capacitors.—73-10987
Terminal electrodes for multilayer ceramic capacitor and method of manufacture thereof.—73-04236
Thin-film capacitor and apparatus for manufacturing [the] same.—73-04238

**capillarity,**
Coalescence of two viscous cylinders by capillarity: I, Theory.—73-02561
Coalescence of two viscous cylinders by capillarity: II, Shape evolution.—73-02562
Hydraulic and electroosmotic flow through silica capillaries.—73-08882
Polycapillary model of a porous medium for analyzing filtration processes in ceramics.—73-03182

**carbides,**
$Al_2O_3$-based ceramic.—73-12337
Alumina–chromium carbide composite through an internal synthesis method.—73-02725
Apparatus and method for producing carbide coatings.—73-01841
Apparatus and methods for producing ceramic products.—73-01842
Behavior of nucleation and growth of carbide layers on alloyed carbide particles in substrates in salt bath carbide coating.—73-09022
Carbide tips for bandsawing.—73-15960
Carbides of Rare-Earth Metals: Phase Diagrams of R.E.M.-C Systems.—73-13650
Carbon fibers having high strength and high modulus of elasticity and polymer composition for their production.—73-12448
Carbothermal synthesis of binary (MX) and ternary ($M^1$, $M^2X$) carbides, nitrides, and borides from polymeric precursors.—73-12934
Characteristics of chromium carbide layers produced on martensitic stainless steel using different chemical vapor deposition (CVD) techniques.—73-10201
Charge transfer between monolayer graphite and NbC single-crystal substrates.—73-02559
Chemical vapor deposited in situ composites in the system Ti-Si-C.—73-02744
Chemical vapor deposition of novel electronic materials from carbon disulfide.—73-11111
Chromium-carbide-reinforced composite coatings for high-temperature hard-coat applications.—73-06750
Comet-shaped carbides in the uppermost surface layer of bearings.—73-05372
Complex carbides in synthetic diamond crystals produced at *≈5.5 GPa.—73-08579*
Costing carbide indexable drills.—73-05262
Crystal structure, magnetic susceptibility, and electrical conductivity of the uranium silicide carbides, $U_3Si_2C_2$ and $U_{20}Si_{16}C_3$.—73-05377
CVD carbide coatings on Blackglas–Nicalon (C) composites for oxidation protection.—73-10514
Effects of carbide addition on the mechanical properties of the $Ti(C_{0.5},N_{0.5})$-30 wt% $TiB_2$-carbide sintered compacts.—73-03274
Effects of chemistry on the grain size refinement in nanocrystalline Ru and Ru-C powders prepared by mechanical attrition.—73-16747
Effects of $Cr_3C_2$ particulate-reinforced alumina composites on microstructure and mechanical properties.—73-16748
Electronic Structure of Refractory Carbides and Nitrides.—73-09763
Encapsulation of ZrC and $V_4C_3$ in graphite nanoballs via arc burning of metal carbides/graphite composites.—73-12429
Enrichment in molybdenum carbides and nitrides during $Ar^+$ bombardment.—73-09118
Formation and magnetic properties of rapidly quenched $R_2Fe_{17}C_x$ (R=Gd and Ho) compounds with higher C concentrations.—73-05569
Friction and wear behavior of a number of ceramic-coated steels matched as sliding pairs to various surface-treated steels.—73-06795
Gas pressure sintering of $SiC_p$-$TiC_p$ composites.—73-13068
Gas-pressure combustion sintering and properties of $Cr_3C_2$ ceramic and its composite with TiC.—73-05822
Gas-pressure combustion sintering and properties of $Cr_3C_2$ ceramic and its composite with TiC.—73-13071
Group VIB metal carbides from metal salicylate precursors.—73-02097
Improved mechanical properties of $Cr_3C_2$ using particulate SiC reinforcement.—73-09615
Lifetime of positrons in carbides with $B1$ structure.—73-05429
Magnetic and Mossbauer effect study of $Er_2Fe_{17}C_2$.—73-07948
Making carbides and nitrides.—73-12477
Method for forming carbide coating on various metals and their alloys.—73-00286
Model of $Sm_{11}Fe_{12}C_{18}$ crystal structure.—73-16219
Molten salt electrodeposition of refractory metal carbide: II, Mechanism and nucleation studies.—73-06834
Mossbauer study of $Gd_2Fe_{17}C_{20}$ compound prepared by melt quenching.—73-08672
Phonon-free superconductivity of cubic monocarbides and mononitrides.—73-16272
Plasma-sprayed Mo-$Mo_2C$ composites: microstructure and properties.—73-06840
Prealloyed high-vanadium, cold work tool steel particles and methods for producing the same.—73-00293
Preparation of $Yb_2Cr_2C_3$ and magnetic properties of the carbides $R_2Cr_2C_3$ (R=Yb, Ld–Lu) with $Ho_2Cr_2C_3$-type structure.—73-04639
Process for the preparation of metal carbides.—73-02129
Processing of ceramic carbide powders in a nontransferred arc thermal plasma reactor.—73-05998
Processing TiZrC and $TiZrB_2$.—73-08538
Production of metal carbide articles.—73-05332
Rapid omnidirectional compaction process for producing metal nitride, carbide, or carbonitride coating on ceramic substrate.—73-01879
Recent trend of carbide tool materials.—73-08539
Refractory carbide coatings on carbon synthesized by fused slurry process.—73-06018
Regularities of the oxidation-reduction reactions in mixtures of carbides and oxides of metals of the IVA and VA groups.—73-12675
Sliding material.—73-10351
Structure defects in rare-earth-iron carbides with the hexagonal $Th_2Ni_{17}$ structure type: a study by means of high-resolution electron microscopy.—73-03113

Superconducting material comprising $Rb_xCs_yC_{60}$.—73-12002
Surface-coated hard material for cutting tools or wear-resistance tools.—73-03702
Tetragonal and cubic crystal structures of some binary and ternary metal dicarbides in the series Ce-Er, Ce-Lu, U-La, and U-Ce.—73-02518

**carbon dioxide,**
Carbon recycling system using waste heat: studies on activated magnetite.—73-02004
Chemical technologies for global environment.—73-03386
$CO_2$ decomposition by oxide ceramics intercalated in layered compound.—73-05371
Control of solid catalyst structure for resource production from carbon dioxide.—73-02008
Effect of carbon dioxide on the reaction of $YBa_2Cu_3O_{6.5+x}$ with water vapor.—73-11731
Effect of $SO_2$ and $CO_2$ on cement paste.—73-00077
Effect of the Heat Utilization Order on production processes in the brick and tile industry.—73-05111
Geopolymer cements to minimize carbon dioxide greenhouse warming.—73-03475
Hydrophobic silica $CO_2$ aerogels.—73-00641
Power station with low environmental pollution.—73-02017
Prospects for using high-power $CO_2$ lasers to machine and weld quartz glass products.—73-01823

**carbon fibers,**
Active brazing alloy containing carbon fibers for metal-ceramic joining.—73-13794
Application of a polymeric boron nitride precursor as a matrix in carbon fibers.—73-09019
Application of carbon fibers to construction materials in Japan—a review.—73-12411
Application of carbon fibers to the resistive wire anode of position-sensitive proportional counters for soft X-rays (100–1000 eV).—73-04059
Behavior of carbon fiber-reinforced cement composites in direct tension.—73-03436
Burner rig oxidation of continuous carbon fiber-reinforced silicon carbide.—73-09524
C/SiC turbine rotor development.—73-12414
Carbon fiber-reinforced SiC composites produced by reaction bonding.—73-12930
Carbon-fiber-reinforced SiC composites produced by reaction bonding.—73-05698
Changes in fracture surface area and actual fracture energy of a carbon-fiber-reinforced silicon nitride composite during failure.—73-09546
Changes in fracture surface area and actual fracture energy of a carbon-fiber-reinforced silicon nitride composite during failure.—73-17243
Chemical vapor deposition of very thin coatings on carbon fiber bundles.—73-09042
Composite carbon-carbon materials[—literature review].—73-12420
Composite material with carbon-reinforced fibers and its production.—73-12454
Concrete reinforced with up to 0.2 vol% of short carbon fibers.—73-06643
Effect of annealing the polymer on the adhesion between carbon fibers and a thermoplastic matrix.—73-03577
Effect of carbonization atmospheres on yields and tensile strength of phenolic resin-based carbon fibers.—73-02781
Effect of carbonization atmospheres on yields and tensile strength of phenolic resin-based carbon fibers.—73-12999
Effect of the structure of carbon fibers on the structure of fiber intercalated compounds.—73-12577
Electronic properties of activated carbon fibers.—73-12796
Engineering properties of carbon-fiber-reinforced cement composites.—73-00083
Enhancement effect of micropore filling for supercritical methane by MgO dispersion.—73-08529
Evaluation of naphthalene-based mesophase as a carbon fiber precursor.—73-13050
Evaluation of the actual fracture energy of the carbon fiber-reinforced silicon nitride composite by the Kr-BET adsorption technique.—73-13527
Evaluation of the actual fracture energy of the carbon-fiber-reinforced silicon nitride composite by the Kr-BET adsorption technique.—73-06409
Fabrication and characterization of carbon-fiber-reinforced glass composites.—73-03842
Fabrication and mechanical properties of carbon fiber-reinforced silicon carbide composites.—73-13529
Fabrication and mechanical properties of carbon-fiber-reinforced silicon carbide composites.—73-06413
Fiber pullout and fracture energy of C-fiber/C-matrix composites.—73-06420
Flexural and shear behavior of concrete beams reinforced with 3-D continuous carbon fiber fabric.—73-00094
Foreseeing of fracture in CFGFRP composites by the measurement of residual change in electrical resistance.—73-12140
Foreseeing of fracture in CFGRFP composites by the measurement of residual change in electrical resistance.—73-06425
Formation and microstructure of nodular filamentous carbon.—73-13398
Fracture toughness of carbon-fiber-reinforced ceramic composites.—73-06440
Heat treatment method for silicon- and carbon-containing ceramic fibers and fibers of the same kind with a laminated structure.—73-01856
High-temperature treatment of carbon fiber/ceramic composites prepared for borosiloxane.—73-13088
Hybrid matrix composites reinforced with carbon fibers via polymer pyrolysis.—73-02853
Improvement of output voltage in ir sensor using semiconductive fiber by treatment of high-voltage pulse.—73-07576
Infrared sensing by semiconducting ceramic monofiber.—73-02622
Inhibition of the oxidation of carbon fibers and composites.—73-13476
Interaction between carbon fiber and pitch as measured by high-temperature electron paramagnetic resonance.—73-13404
Interfacial shear strength evaluation of ceramic-coated carbon fibers.—73-13556
Interfacial structure of chemical vapor infiltration carbon fiber/SiC composite.—73-06238
Izod impact test for measuring the fracture energy of fiber-reinforced ceramics.—73-12153
Matrix cracking and fiber bridging of carbon-fiber-reinforced carbon matrix composites.—73-06472
Mechanical properties of fine carbon filaments by microtensile test method.—73-13563
Mechanical properties of high-strength cement composite with carbon fiber.—73-06685
Method for the preparation of silicon carbide-carbon fiber composite.—73-12490
Method of coating carbon fibers with a carbide.—73-02113
Microstructure effects on humidity-sensitive electrical resistivity of carbon fibers.—73-05597
Microstructure effects on humidity-sensitive electrical resistivity of carbon fibers.—73-16544
Modeling and simulation of the oxidative stabilization process of pitch-based carbon fibers.—73-13480
Novel method for measuring direct compressive properties of carbon fibers [CF's] using a micromechanical compression tester.—73-15826
Performance of a carbon fiber-reinforced mullite [C/mullite] matrix composite.—73-06499
Pitch-based advanced carbon materials—resourceful utilization technologies of pitch.—73-12439
Potential qualities of pitch-based carbon fiber for high-temperature composites.—73-17410
Preparation of carbon fiber/carbon composites using intercalated carbon fibers.—73-13184
Preparation of unidirectionally reinforced carbon–SiC composite by repeated infiltration of polycarbosilane.—73-13209
Preparation of unidirectionally reinforced carbon-SiC composite by repeated infiltration of polycarbosilane.—73-05983
Properties of residue compounds obtained from $H_2SO_4$–carbon-fiber-intercalated compound.—73-16578
Pulsed chemical vapor infiltration of SiC to three-dimensional carbon fiber preforms.—73-02984
Pyrolytic carbon fiber/aluminum composites.—73-10268
Reactivities of carbon fibers in hot-pressed carbon-fiber-reinforced SiC ceramic composite.—73-16971
Science and application of new carbon.—73-02088
Self-diagnosis of fracture in CFGFRP composites and CFGFRP-reinforced concrete.—73-01928
Sliding wear of an aluminum-silicon alloy reinforced with nickel-coated carbon fibers.—73-09671
Strength degradation of SiC-coated carbon fibers.—73-09676
Structural features and Young's modulus of carbon fibers.—73-03359
Surface characterization of carbon fibers and interfacial properties of carbon fiber composites.—73-13454
Weaving ability of pitch-based carbon fiber and its evaluation method.—73-12446

**carbon monoxide,**
Contact combustion type carbon monoxide sensor.—73-11515
Continuous on-line determination of CO concentration in kilns for firing porcelain.—73-10809
Low-temperature catalytic gas purification from CO.—73-16530
Low-temperature FTIR investigation of the interaction of CO with nanosized ZSM-5 and silicalite.—73-08903
Making resistance gas sensors.—73-11026
New gas-sensing method for detecting carbon monoxide by use of the complex impedance of a CuO/ZnO heterocontact under a dc bias voltage.—73-11348
Selective sensing of carbon monoxide gas in CuO-banded ZnO ceramics.—73-15157

**carbon,**
Aerocapacitor: an electrochemical double-layer energy storage device.—73-07282
Alumina coated with a layer of carbon as an absorbent.—73-05187
Application of $Cr_2O_3$-bearing–magnesia raw materials to magnesia-carbon bricks.—73-00776
Attempt to grow diamond phase carbon films from an organic solution.—73-09021
Behavior of boric compounds added in MgO-C bricks.—73-00779
Behavior of carbon obtained from pitch and resin added to carbon-containing refractories.—73-14574
Behavior of carbon-containing refractories at high temperature.—73-00780
Binding and plasticizing agent for preparing carbon-containing, refractory, ceramic materials, and material prepared therewith.—73-14633
Burning moderate quicklime for aerated fly ash concretes in vertical kiln.—73-10706
$C_{60}$ solid-state rotational dynamics and production and EPR spectroscopy of fullerenes containing metal atoms.—73-16038
Carbofilm: present and future applications in biomedical devices.—73-08526
Carbon bricks for blast-furnace hearth lining under the effect of hot metal.—73-14577
Carbon coating of ceramic materials by pyrolysis of polymeric-based systems.—73-16662
Carbon from phenolic resins: carbon yield and volatile components—recent studies.—73-10707
Carbon growth by thermal laser-assisted chemical vapor deposition.—73-12931
Carbon materials in medicine.—73-08527
Carbon nanotubes at as-grown top surface of columnar carbon deposit.—73-17112
Carbon substance and its manufacturing method.—73-05288
Carbon-containing black glass monoliths.—73-00728
Carbon-containing black glass monoliths.—73-14535
Carbon-containing carbon-bonded refractories with improved physical properties.—73-14636
Carbon-silicon carbide composite material and method for the preparation thereof.—73-15979
Carbonaceous protective films and method of depositing the same.—73-02090
Carbons and fullerenes—chemical modifications of fullerenes.—73-12416
Carbons and fullerenes.—73-12417
Characteristics of carbon-coated optical fibers.—73-03823
Characterization of hydrogenated amorphous carbon films by nuclear magnetic resonance techniques.—73-08569
Characterization of tungsten films and hard tungsten-carbon coatings prepared by dc magnetron sputtering process.—73-03568
Chemically treated glass fibers with improved reinforcement properties.—73-03910
Coated carbonaceous articles and method for making [the] same.—73-15983
Coating of SiC gradient carbon material with mullite film and its oxidation resistance.—73-17216
Compaction, distribution, and chemical bonding of tungsten-implanted glassy carbon.—73-12553
Comparative study of the fretting wear of hard carbon coatings.—73-03246
Comparison of techniques for producing diamondlike carbon coatings.—73-12952
Comparison of three techniques for depositing DLC [diamondlike carbon] films at temperatures between 25° and 100°C.—73-16680
Continuously restoring cathode [CRC].—73-08328
Dependence of mechanical properties of MgO-C bricks on graphite content.—73-17273
Determination of $sp^2/sp^3$ carbon bonding ratio in a-C:H including irradiation damage by factor analysis of Auger electron spectra.—73-16106
Determination of trace levels of free carbon in lime.—73-09885
Development of $Al_2O_3$-C refractories for iron-ore smelting reduction furnace.—73-00800
Development of high-performance $Al_2O_3$-C castable.—73-10719
Development of semigraphitized silicon carbide–carbon brick.—73-07206
Diamond growth on turbostratic carbon by hot filament chemical vapor deposition.—73-12985
Diamondlike amorphous carbon films prepared by rf sputtering in argon.—73-09071
Diamondlike amorphous carbon films prepared by rf sputtering in argon: electron-assisted investigations.—73-12987
Diamondlike carbon thin film protected hologram and method of making [the] same.—73-12463
Effect of carbon coating on mechanical strength of SiC whisker-reinforced alumina composites.—73-17281
Effect of ion energy flux on the properties of hydrogenated amorphous carbon films.—73-02788
Effect of microstructure and hydrogen content on the characteristics of amorphous hydrogenated carbon protective coatings.—73-03137
Effect of oxygen on hydrogenated amorphous carbon films.—73-13011
Effect of pitch and phenolic resin on the mechanical properties of $Al_2O_3$-C nozzle.—73-00804
Effect of radio frequency substrate biasing in the deposition of diamondlike carbon films in an electron cyclotron resonance discharge.—73-02794
Effects of carbon impurities in high-$T_c$ superconducting tapes using Auger electron spectroscopy.—73-04707
Effects of impregnation on the manufacture of high-density carbon materials.—73-16752
Electrochemical patterning of amorphous carbon on diamond.—73-09111
Electron drift mobility in DLC [diamondlike carbon] thin films.—73-12794
Electron spin resonance study of diamondlike nuclei produced in an Si surface layer by high-dose C ion doping.—73-06157
Electronic structure of fullerenes and fullerides: artificial atoms and their solids.—73-16134
Emission spectra and morphology of carbon films by ECR plasma CVD.—73-03141
Etch masks of semimetallic amorphous carbon thin films produced by electron-beam sublimation of graphitic carbon.—73-07510
Fluorohydrogenated amorphous carbon (a-C:H, F) films prepared by the rf plasma decomposition of 1.3-butadiene and carbon tetrafluoride.—73-09134
Formation of carbon nanotubes by evaporation of carbon rod containing scandium oxide.—73-17135
Forming of carbon powders by cyclic-CIP and analysis of their densification behavior.—73-16798
Graphite, natural and synthetic particles.—73-12277
Graphite/carbon articles for elevated temperature service and method of manufacture.—73-12466
Growth and morphology of carbon grains.—73-09458
Growth of high-quality *p*-type GaAs epitaxial layers using carbon tetrabromide by gas-source molecular beam epitaxy [GSMBE] and molecular beam epitaxy.—73-11236
Hall mobility and temperature-dependent photoluminescence of carbon-doped GaAs.—73-14956

Handbook of Carbon, Graphite, Diamond, and Fullerenes: Properties, Processing, and Applications.—73-06603
High-flexural-strength ceramic fiber-reinforced silicon carboxide composite.—73-03930
High-temperature oxidation failure of C/SiC continuous fiber ceramic matrix composites.—73-13474
Inference of substrate temperature on the formation of carbon films by hybrid plasma CVD.—73-09171
Influence of carbon source on the synthesis of AlN powder from aluminum polynuclear complexes.—73-02867
Influence of properties on carbon solid by preheat-treatment temperature.—73-13553
Influence of substrate temperature on the formation of carbon films by hybrid plasma CVD.—73-16842
Intermittent carbon coatings for application in ceramic matrix composites.—73-08533
Ion-beam-induced compaction in glassy carbon.—73-09473
Kinetics and mechanisms of oxidation of 2D woven C/SiC composites: I, Experiemental approach.—73-17225
Kinetics and mechanisms of oxidation of 2D woven C/SiC composites: II, Theoretical approach.—73-17226
Kinetics of the reduction of carbon/alumina powder mixture in a flowing nitrogen stream.—73-13112
Kinetics of wetting and spreading of Cu-Ti alloys on alumina and glassy carbon substrates.—73-03613
Linear thermal expansion coefficient and biaxial elastic modulus of diamondlike carbon [DLC] films.—73-08900
Magnesia-carbon refractory compositions for slide gate plates and method of manufacture.—73-04033
Material properties and tribological performance of hydrogenated sputter carbon overcost on rigid disk.—73-17375
Mechanical properties of hydrogenated hard carbon films.—73-09639
Mechanism of carbon incorporation during GaAs epitaxy.—73-04400
Mesophase pitches, carbon fiber precursors, and carbonized fibers.—73-02105
Method for coating optical fibers.—73-03942
Method of forming titanium nitride coatings on carbon/graphite substrates by electric arc thermal spray process using titanium feed wire and nitrogen as the atomizing gas.—73-05316
Method of producing a carbon-coated ceramic membrane and associated product.—73-04998
Microhardness and Young's modulus of diamond and diamondlike carbon films.—73-13572
Microstructure of carbon layers deposited on optical fibers and hydrogen diffusion in the layers.—73-06311
Microstructure of carbon layers deposited on optical fibers and hydrogen diffusion in the layers.—73-17169
Microtexture of high surface area activated carbons.—73-13432
Nanocomposite Si/C/N powder production by laser-aerosol interaction.—73-09219
Nanoindentation response of systems with thin hard carbon coatings.—73-12837
New forms of carbons and nonequilibrium processing.—73-12638
Noble gas ion-assisted evaporation of carbon.—73-16882
Notch effects in carbon matrix composites.—73-17406
Observation of hydrogenated amorphous carbon films by atomic force microscopy.—73-08679
Optical absorption and photoluminescence of unhydrogenated amorphous carbon films.—73-05600
Optical properties of amorphous carbon thin films prepared by plasma deposition in a graphite hollow cathode.—73-12849
Oxidation mechanisms and kinetics of 1D-SiC/C/SiC composite materials: I, An experimental approach.—73-06317
Oxidation mechanisms and kinetics of 1D-SiC/C/SiC composite materials: II, Modeling.—73-06318
Oxidation of carbon in continuous fiber-reinforced ceramic matrix composites.—73-09532
Oxidation of carbon in fiber-reinforced ceramic matrix composites.—73-17233
Oxidation-resistant carbon and method for making [the] same.—73-05323
Oxidizing prevention of MgO-C bricks for converter.—73-00833
Peculiar magnetic property of pyrolytic carbon prepared from adamantane.—73-16561
Periclase-carbon refractories bonded with lignosulfonates and complex additives.—73-00835
Periclase-carbon tubes for protection of a stream of metal from secondary oxidation.—73-00836
Permeability of MgO-C bricks.—73-00837
Photoluminescence of superlattices in GaAs δ-doped with C.—73-07728
Plasma deposition of BN, BCN:H, and Me-BCN:H films using N-trimethylborazine (M=Ti, Nb).—73-09241
Plasma diagnostics of rf discharges used for the deposition of hydrogenated amorphous carbon coatings.—73-09242
Potential role of atomic carbon in diamond deposition.—73-13170
Preparation of Al-C-O-N films by microwave plasma chemical vapor deposition.—73-16911
Preparation of C-SiC composites and its properties.—73-02946
Preparation of carbon molecular sieves by propylene pyrolysis over microporous carbons.—73-08537
Preparation of carbon solid from dormant mesophase pitch without using a binder.—73-02948
Preparation of carbon/ceramic composite materials by use of raw coke: VIII, Rod shape growth of ß-SiC and effects on fracture toughness in carbon-based ceramic composites.—73-16919
Preparation of diamondlike carbon films by ECR plasma CVD with an additional negative bias.—73-16922
Process for preparing self-supporting bodies and products produced thereby.—73-00296
Processing-structure properties' relations in titanium boron carbon ceramic-ceramic composites produced by transient plastic phase processing.—73-16954
Reaction between magnesia and carbon at high temperature.—73-00847
Recent findings in the development of magnesia-carbon brick.—73-10759
Research and modeling of carbon combustion diffusion kinetics during burning of fuel-containing ceramics under commercial production conditions.—73-15753
Science and application of new carbon.—73-02088
Si-C-O system: II, Isobaric evolution of the system.—73-16302
SiC/C composite sheets produced from polycarbosilane/resin/binder mixtures.—73-06040
SiC/C composite sheets produced from polycarbosilane/resin/binder mixtures.—73-13252
Silicon diimide, a process for its preparation and silicon nitride obtained therefrom.—73-05338
Spectroscopic ellipsometry of carbon electrodes during electrochemical activation.—73-15171
Stability of metals, carbides, and oxides in carbon-magnesia refractories.—73-00868
Structural model of glassy carbon based on Auger spectroscopic analyses.—73-16325
Structure and tribology of hard carbon films synthesized by ion beam deposition.—73-17013
Synthesis of diamondlike carbon (a-C:H) films by hybrid plasma CVD—effects of ion beam injection energy on film deposition.—73-03046
Synthesis of diamondlike carbon (a-C:H) films by hybrid plasma CVD—effects of ion-beam injection energy on film deposition.—73-13303
TEM observations of SiC-SiC composites with a carbon interphase layer annealed in air at high temperatures.—73-03205
Temperature measurement with a carbon thermal indicator.—73-01931
Thermal stability of encapsulated tungsten/carbon multilayer thin films.—73-08992
Thermomechanical properties of $Al_2O_3$-C slide plate brick.—73-10776
Thermostability of diamondlike carbon [DLC] films.—73-08997
Thermostability of diamondlike carbon films.—73-16640
Time-dependent evolution of the structure and chemical bonds in diamondlike carbon films generated by the hot filament chemical vapor deposition method.—73-16383
Turning of carbon and glass fiber hybrid cloth composite material.—73-04951
Ultrasonic characterization of oxidation mechanisms in Nicalon/C/SiC composites.—73-17236
Variation of crystal-field coefficients with carbon content in the $Sm_2Fe_{17}C_{3-\delta}$ series of compounds.—73-09005
Wear mechanisms of amorphous carbon and zirconia coatings on rigid disk magnetic recording media.—73-09694
Wear reduction by pyrolytic carbon on tribosurfaces.—73-09697
X-ray photoelectron spectroscopy and X-ray-excited Auger electron spectroscopy studies of the initial deposition of hydrogenated amorphous carbon.—73-05523

**carbon-carbon composites,**
Advanced carbon-carbon for space radiators.—73-12409
Arc-jet testing of damaged RCC-3 repaired using preceramic polymers.—73-12412
Assessment of carbon-carbon composite research in the Far East.—73-15959
Carbon-carbon mounts for lightweight optical systems.—73-12415
Carbon-carbon: bringing it to the marketplace.—73-05260
Carbon-fiber-reinforced composite material having a gradient carbide coating.—73-05289
Carborane-based inhibitors for carbon-carbon composites.—73-12418
Characterization of carbon-carbon composites by laser Raman spectroscopy.—73-17114
Coating for protecting a carbon-carbon composite from oxidative degradation.—73-03913
Coating materials assessment for carbon-carbon space structures.—73-12419
Composite carbon-carbon materials[—literature review].—73-12420
Conversion coating on carbon/carbon composites with controlled microstructure.—73-15984
Development of carbon-carbon composites for primary structure and thermal protection system of space vehicles.—73-05265
Effect of joint designs on vibration natural frequencies of carbon-carbon satellite truss.—73-12426
Effects of heat treatment on mechanical and thermal properties of CVD-densified Novoltex carbon/carbon composites.—73-12428
Electrical heating resistance using resistive elements made of carbon/carbon composite material.—73-01051
Evaluation and selection of joint designs for a carbon-carbon satellite truss.—73-12430
Evaluations of the thermal shock resistances and fracture toughnesses of graphite and C-C composites by arc discharge heating.—73-05562
Experimental and statistical characterization of brittle composites.—73-09594
Failure mechanisms in mission-cycled carbon-carbon composites under flexural load at room and elevated temperatures.—73-17315
FEM analysis of SACC-II truss and component parts.—73-12431
Friction elements of composite carbon material and of differential texture.—73-02096
Glass sealants for carbon-carbon composites.—73-00494
High-temperature-resistant structure.—73-12472
Industrial R&D on advanced materials in the CIS.—73-17488
Influence of fiber surface treatment on the mechanical properties of fabric-reinforced carbon-carbon composites.—73-13550
Inhibition of the oxidation of carbon fibers and composites.—73-13476
Initial polymer degradation as a process in the manufacture of carbon-carbon composites.—73-09183
Interaction between carbon fiber and pitch as measured by high-temperature electron paramagnetic resonance.—73-13404
Intercalated hybrid graphite fiber composite.—73-05305
Internal friction measurement of carbon-carbon composites by lateral vibration method.—73-12149
Iridium coatings on carbon-carbon composites produced by two different sputtering methods: a comparative study.—73-10245
Joining of carbon-carbon composites by graphite formation.—73-12433
Joining of metal films to carbon-carbon composite material by metal plasma immersion ion implantation.—73-00246
Load transfer and failure of joints in carbon-carbon material.—73-13560
Material damping studies on carbon-carbon composites.—73-09474
Mechanical properties of carbon-carbon composites.—73-09635
Method for producing carbon-carbon composite materials.—73-02112
Method of manufacturing composite material of carbon fibers in a carbon matrix.—73-02115
Microstructural control of carbon fiber/carbon composites using high carbon yield pitches as matrix precursor.—73-13136
Microstructural design of C-C composite.—73-05269
Microstructural observations on the failure modes of a unidirectional carbon-carbon composite.—73-13422
Moisture- and oxidation-resistant carbon/carbon composites.—73-12498
NDE of structural and functional carbon-carbon composites after first carbonization.—73-17405
Porous carbon-carbon composite filtering membrane support with a carbon fiber mat substrate.—73-02120
Post coating treatment of silicon carbide-coated carbon-carbon substrates.—73-16008
Post coating treatment of silicon carbide-coated carbon-carbon substrates.—73-16009
Preparation of C/C-SiC nanomatrix composites by chemical vapor infiltration.—73-09258
Preparation of carbon fiber/carbon composites using intercalated carbon fibers.—73-13184
Process for manufacturing porous tubes of high permeability made from carbon-carbon composite material, and their application.—73-05327
Process for preparing an impermeable carbon fiber-reinforcing type of composite material.—73-02124
Sol-gel silica in the healing of microcracks in SiC-coated carbon-carbon composites.—73-12444
Strength of thin 2-D carbon-carbon composite as a function of reinforcement fabric thickness and fiber type.—73-13595
Structural articles.—73-05344
Vapor-grown carbon-fiber-reinforced carbon/carbon composites.—73-12445

**carbonates,**
Calcination and reduction of AUC (ammonium uranyl carbonate)—characteristics and phase change of powder.—73-08285
Control of crystal shape and modification of calcium carbonate prepared by precipitation from calcium hydrogen carbonate solution.—73-02754
Control of crystal shape and modification of calcium carbonate prepared by precipitation from calcium hydrogen carbonate solution.—73-12955
Crystal structure of basic calcium carbonate [BCC] and its decomposition process in water.—73-16082
Crystal structure of new natural fluorocarbonate $Na_3Ca(Mn,Ca)(CO_3)_3F$.—73-02205
Crystal structure of new natural sulfatocarbonate, $Na_{25}BaTR_2(CO_3)_{11}(HCO_3)_4(SO_4)_2F_2Cl$.—73-16088
Crystallization of $CaCO_3$ from $Ca(NO_3)_2$ solution: I, Reaction conditions and morphology of $CaCO_3$.—73-09878
Decomposition of praseodymium hydroxy carbonate and praseodymium carbonate hydrate.—73-02227
Dissolution kinetics of $CaCO_3$ in common laboratory solvents.—73-12133
Dissolution of calcium carbonate crystals: a constant-composition kinetics study.—73-16111
Dolomite.—73-12269
Effect of undecomposed carbonate on the oxygen analysis of $YBa_2Cu_3O_{7-y}$.—73-01534
Effects of cation (Sr, Pb, and Ba) on calcium carbonate polymorphs under diffusional conditions.—73-09930
Formation of macro- and microcracks during machining of ceramics.—73-05814
Fuel cells of molten carbonate type.—73-14707
Heterogeneity of carbonatites.—73-08635
Intercalation of benzenecarboxylate ions into the interlayer of hydrotalcite.—73-00981
Ir and Raman spectra of the new $Ba_{1.5}Sr_{0.5}CuO_{3+\delta}(CO_2)_y$ carbocuprate.—73-02308
New oxide superconductors containing carbonate groups.—73-01612
Pyrolysis mechanism of basic calcium carbonate.—73-08714
Pyrolysis mechanism of basic calcium carbonate.—73-16282

Spectral properties of weakly ferromagnetic dielectric crystals $CoCO_3$ in nearly saturated paramagnetic state.—73-07356
Structure and properties of $(Ba,Ca)TiO_3$ ceramics prepared using $(Ba,Ca)CO_3$ precursors: I, Crystallographic and microstructural studies.—73-13287
Structure and properties of $(Ba,Ca)TiO_3$ ceramics prepared using $(Ba,Ca)CO_3$ precursors: II, Diffuse phase transition [DPT] behavior.—73-11622
Synchrotron-radiation-stimulated tungsten deposition on silicon from $W(CO)_6$.—73-03034
Synthesis and characteristics of fibrous $3CaO{\cdot}Al_2O_3{\cdot}3CaCO_3{\cdot}32H_2O$.—73-13291
Synthesis of amorphous calcium carbonate and its crystallization.—73-17031
Thermal decomposition of hydrotalcites. An ir and NMR spectroscopy study.—73-08775
Vaterite (an uncommon polymorph of $CaCO_3$): occurrence in boreholes demonstrate unexpected longevity.—73-15916

**carbonation,**
Accelerated carbonation of a blast-furnace cement concrete.—73-03431
Carbonation and corrosion of rebars in salt contaminated OPC/PFA [ordinary portland cement/pulverized fly ash] concretes.—73-00029
Carbonation of autoclaved lightweight concretes [ALC's].—73-13686
Carbonation of concrete and the mechanism of moisture, heat, and carbon dioxide flow through porous materials.—73-06632
Carbonation of ettringite.—73-00030
Carbonation of jet cement pastes.—73-09837
Carbonation of OPC [ordinary portland cement] and OPC/silica fume hardened cement pastes in air under conditions of fixed humidity.—73-06633
Carbonation reaction of synthetic 11-Å tobermorite in aqueous solution.—73-03440
Carbonation reaction of synthetic 11-Å tobermorite in aqueous solution.—73-16044
Carbonation, moisture, and empty pores.—73-09838
Characteristics of carbonation of concrete used with ternary cement.—73-09845
Comparison between the carbonation of OPC and PFA concrete in a mass concrete structure.—73-09859
Corrosion of reinforcement in jet cement mortar due to carbonation.—73-09871
Decomposition of synthetic ettringite by carbonation.—73-03448
Diffusion and adsorption studies on hardened cement paste and the effect of carbonation on diffusion rates.—73-03452
FTIR and XPS investigations of the effects of carbonation on the solidification/stabilization of cement-based systems—portland type V with zinc.—73-06662
Influence of carbonation on the mechanical properties and texture of hardened mortar.—73-10006
Permeability and porosity changes associated with cement grout carbonation.—73-00161
Polarizing microscope—a tool of interest for investigation on concrete; application to carbonation.—73-01924

**carbonitrides,**
Analytical electron microscopy and Raman spectroscopy studies of carbon nitride thin films.—73-06186
Electrochemical and surface properties of a metal carbonitride-oxide composite electrode.—73-00960
Nanoindentation studies of ultrahigh strength carbon nitride thin films.—73-08923
Phase equilibria in the Si-C-N-O system and the kinetic analysis of silicon carbide whisker growth.—73-08692
Rapid omnidirectional compaction process for producing metal nitride, carbide, or carbonitride coating on ceramic substrate.—73-01879
Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: I, The organic/inorganic transition.—73-09314
Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: II, Effect of oxygen curing on properties of ex-PCSZ monofilaments.—73-09315
Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: III, Effect of pyrolysis conditions on the nature and properties of oxygen-cured derived monofilaments.—73-09316
Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: IV, Oxygen-free model monofilaments.—73-09317
Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: V, Oxidation kinetics of model filaments.—73-09318
Silicon oxycarbonitride by pyrolysis of polycyclosiloxanes in ammonia.—73-14559
Sintered carbonitride alloy with highly alloyed binder phase.—73-16018
Stress in $NbC_xN_{1-x}$ films prepared by reactive rf magnetron sputtering.—73-14734
Structural characterization of silicon carbonitride ceramics from polymeric precursors using nuclear magnetic resonance.—73-05491
Synthesis and tribological properties of carbon nitride as a novel superhard coating and solid lubricant.—73-09683

**carbosilanes,**
Mechanism of ceramization of electron-irradiation-cured polycarbosilane fiber.—73-09201

**carbothermal reduction,**
Carbothermal production of aluminum nitride.—73-09026
Kinetics of carbothermal reduction synthesis of beta silicon carbide.—73-05888
Synthesis of AlN powder by carbothermal reduction-nitridation method: effect of additives on reaction rate.—73-17030
Vacuum carbothermic reduction of uranium dioxide microspheres in a static graphite bed.—73-15702

**carriers,**
Ceramic catalyst carriers and catalysts for carrying out chemical processes and for purifying gaseous discharges.—73-12317
Characteristics of the diffusion and drift of nonequilibrium carriers in $CdCr_2Se_4$.—73-03080
Determination of the carrier concentration of doped ZnSe from infrared measurements.—73-01125
Effect of Anderson disorder on the correlation functions and binding energy of excess carriers in a $Cu_4O_8$ cluster.—73-05544
Increase in the diffusion length of carriers in polycrystalline PbTe films.—73-14978
Lifetime of the minority carriers in *p*-type epitaxial $Cd_xHg_{1-x}Te$ films.—73-07636
Photoreflectance characterization of GaAs as a function of temperature, carrier concentration [CC], and near-surface electric field.—73-11390
Polarizibility of a carrier in GaAs quantum dot.—73-04445
Preparation and evaluation of mullite ceramic carrier for immobilization of enzyme.—73-05617
Preparation and evaluation of mullite ceramic carrier for immobilization of enzyme.—73-13173
Preparation and properties of immobilized mercuric reductase in porous glass carriers.—73-10393
Problem of the intrinsic carrier density in $Cd_xHg_{1-x}Te$ solid solutions.—73-01289
Processes of recombination of nonequilibrium carriers in epitaxial GaAs films.—73-01291
Structure and carrier lifetime in LT [low-temperature] GaAs.—73-15184
Ultrafast carrier dynamics in III-V semiconductors grown by MBE at very low substrate temperatures.—73-01359

**cast iron,**
Application of antiabrasive nodular cast iron to double rollers.—73-12106
Problems with enameling cast-iron articles.—73-06844

**castables,**
Application of rheology in monolithic refractories.—73-14571
Castable lining technique to bottom of teeming ladle.—73-14578
Development and application of light-burned MgO-bonded alumina castable.—73-10714
Development of high-performance $Al_2O_3$-C castable.—73-10719
Effect of slag composition on wear of alumina-spinel castable for steel ladle.—73-14588
Effects of ultrafine $SiO_2$, $Al_2O_3$, and $Cr_2O_3$ powders on character of ultralow cement corundum castables.—73-10726
Low-cement castable replaces silicon carbide bricks used to line shaft furnace at CCR.—73-10739
New refractory practices in the anode casting department of Noranda Minerals' Horne Smelter, Rouyn-Noranda, Quebec[, Canada].—73-10747
Strength development of bauxite-based ultralow-cement castables.—73-10771
Wear mechanism of castable for steel ladle by slag.—73-14632

**casting,**
Casting from the beginning up to present-day technology.—73-08324
Casting of sanitary ware comparison of technology.—73-14563
Casting-up parameters for quartz ceramics.—73-01765
Centrifugal casting of ceramics. Principal parameters and regularities of the process.—73-02735
Centrifugal casting of ceramics. Properties of the castings.—73-12015
Continuous casting plant for graphitized alumina refractories.—73-03994
Correlation of physical properties of casting kaolins.—73-07240
Development and application of porous plastic molds for the casting of sanitary ware and dinnerware.—73-08331
Development of cast pipe for copper continuous casting.—73-10716
Formation of a ceramic composite by centrifugal casting.—73-04972
Hot casting of pressureless-sintered silicon carbide ceramics—the method.—73-05846
Injection sleeve for die casting and a method of casting an aluminum or an aluminum alloy part.—73-13917
Metal guiding separation rings for horizontal continuous casting machines.—73-00831
Method of making a complex ceramic core for use in metal casting process.—73-04035
Microwave application in precision investment casting operations.—73-05915
Mold for casting components.—73-01871
Producing cast stone sheets to close size tolerances.—73-01820
Selection of materials and parameters for sanitary ware casting.—73-07272
Simple fabrication process of intermetallic compounds utilizing low-temperature pressure casting of alumina.—73-03641
Tests of thermal insulation plates of the unpreheated lining of continuous casting machine tundishes.—73-00877

**catalyst supports,**
Carbon monoxide hydrogenation on cobalt/alumina and cobalt/NaX catalysts.—73-00213
Ceramic catalyst carriers and catalysts for carrying out chemical processes and for purifying gaseous discharges.—73-12317
Ceramic catalyst supports and catalysts for chemical processes and scrubbing of gas discharges.—73-08504
Influence of the support in the selectivity of Ni/clay catalysts for vegetable oil hydrogenation.—73-16521
Oxide catalyzed reactions of ethylene oxide under conditions relevant to ethylene epoxidation over supported silver.—73-02660
Stabilized tetragonal zirconium oxide as a support for catalysts: evolution of the texture and structure on calcination in static air.—73-02444

**catalysts/catalysis,**
Ac electrical parameters to monitor the sintering of a composite mixed conductor catalyst.—73-01880
Activated zeolite beta and its use for hydrocarbon conversion.—73-05185
Application feasibility of a calcination catalyst in cement manufacture—a case study.—73-09817
Binary La-Pd oxide catalyst and method of making the catalyst.—73-02022
Boron nitride system including an hBN starting material with a catalyst and a sintered cBN body having a high heat conductivity based on the catalyst.—73-15977
Catalyst carrier.—73-05192
Catalyst composition for improving combustion efficiency of liquid fuels.—73-02024
Catalyst comprising amorphous NiO on silica/alumina support and process for butene dimerization.—73-05193
Catalyst for cracking of paraffinic feedstocks.—73-02025
Catalyst for destruction of organohalogen compounds.—73-12342
Catalyst for purifying exhaust gas.—73-02026
Catalyst for purifyng automotive exhaust gas.—73-03673
Catalysts for the high-temperature steam reforming of hydrocarbons.—73-05194
Catalysts for the purification of exhaust gas.—73-02027
Catalytic body and process for producing the same.—73-12343
Catalytic converter having a metallic monolith mounted by a heat-insulating mat of refractory ceramic fibers.—73-05196
Catalytic converter materials for pollution control.—73-02005
Ceramic DENOX catalysts for selective catalytic reduction of industrial emissions of nitrogen oxides.—73-15922
Characterization of $Na_2O$-$MnO_x$-$CuO_x$ catalysts for the oxidative dimerization of methane.—73-09437
Chromia on silica and alumina catalysts: surface structural consequences of interfacial events in the impregnation course of aquated Cr(111) ions.—73-16055
Comparison of particle size of cracking catalyst determined by laser light scattering and dry sieve methods.—73-08383
Control of solid catalyst structure for resource production from carbon dioxide.—73-02008
Copper/zinc oxide/aluminum oxide-containing catalysts.—73-12357
Crystalline metalloaluminum borates.—73-05211
Crystallochemical nature of copper-magnesium catalysts.—73-02224
Deodorant ceramic catalysts.—73-05165
Dual zeolite fluid cracking catalyst composition for improved gasoline octane.—73-02034
Dynamic effects of vaporization with exothermic reaction in a porous catalytic pellet.—73-08602
Effect of conditions of zeolite Ni/H-DC preparation on catalytic properties in the reaction of $CO_2$ hydration.—73-16456
Effect of Si:Al ratio and type of binder on the catalytic properties of HZSM-5 catalysts.—73-13018
Evaluation of the catalytic activity of a high-surface-area, regular, porous solid formed from the clusters of clusters, $M^B_4O[(CO)_9Co_3CCO_2]_6$, M=Co, Zn.—73-05561
Exhaust gas disposable catalyst and method of manufacturing the same.—73-02035
Exhaust gas purifier for methanol-fueled engines.—73-05212
Exhaust gas purifying catalyst and an exhaust gas purifying method using the catalyst.—73-02036
Fluoride beidellite clay and process for preparing the clay.—73-12310
Gasoline hydrocracking catalyst and process.—73-12368
Group IVB oxide addition to noble metal on rare-earth-modified silica alumina as hydrocarbon conversion catalyst.—73-05215
Hydrogenation of nitriles by a tungsten carbide catalyst.—73-15995
Imogolite: a possible new type of shape-selective catalyst.—73-05171
Influence of small amounts of tungsten on the physicochemical and catalytic properties of (40)4-heteropolyanions.—73-12815
Iron-cobalt catalysts for ammonia synthesis with ceria additives.—73-16526
Material, structure, filter, and catalytic converter.—73-12375
Metal on rare-earth-modified silica–alumina as hydrocarbon conversion catalyst.—73-02047
Metal-promoter interactions in vanadium-oxide-promoted $Rh/SiO_2$ catalysts.—73-16213
Method for producing a particulate zeolite and a particulate zeolite produced thereby.—73-05224
Method for purification of lean-burn engine exhaust gas.—73-12383
Method for the reactivation of spent alumina-supported hydrotreating catalysts.—73-05228
Method of manufacturing hydrocarbon conversion catalyst.—73-02052
Nature of active sites in the oxidative coupling of methane to ethane over Li/MgO catalysts.—73-08675
Perovskite-type rare-earth complex oxide combustion catalysts.—73-02054

Photoactive catalyst of barium phosphate or calcium phosphate supported on anatase titanium dioxide.—73-02055
Precious metal catalysts utilizing composites of oxygen ion-conducting and inert support materials.—73-12394
Precious metal catalysts with oxygen-ion conducting support.—73-00294
Preparation of alumina-fiber-type catalyst for methane combustion by sol-gel method.—73-16915
Process for producing a denitration catalyst.—73-12397
Process for producing catalyst composition for use in hydrodesulfurization of hydrocarbon oil and process for hydrodesulfurizing hydrocarbon oil.—73-02059
Rare-earth-containing high-silica zeolite having pentasil type structure and process for the same.—73-02066
Supported catalysts.—73-02070
Surface NiO species in $NiO/SiO_2$ catalysts [studied] using temperature-programmed reduction and X-ray diffraction.—73-02473
Synthetic zeolites and their catalyses—highly active catalysts with molecular size recognizability.—73-12333
Unsupported molybdena catalysts: precipitation, characterization, and catalytic activity.—73-13332
Used catalyst as an additive in ceramic glazes.—73-07278
Vacancy titanates intercalated with cationic hydroxy aluminum complexes.—73-03704
Vanadia/titania catalysts in selective catalytic reduction of nitric oxide with ammonia.—73-02535
Yttrium-containing zeolite Y cracking catalyst.—73-05251
Zeolite catalyst of hexagonal structure and its application.—73-05252
Zeolite catalysts suitable for hydrocarbon conversion.—73-02075
Zeolite SSZ-37.—73-05348
Zeolite ZK-5 catalyst.—73-02078
Zeolitic catalyst of MFI type, its preparation and use.—73-05255

**cathode-ray tubes,**
Design methodology for manufacturing glass cathode ray tubes.—73-03831
Glass pressure-vessel for a cathode ray tube.—73-00734
Method of producing a glass front panel protected from coloring by electron rays.—73-03952

**cathodes,**
Cathode performance of ACF/acetylene black hybrid electrodes for phosphoric acid fuel cell.—73-10919
Cathodic phenomena in aluminum electrowinning.—73-07285
Cesium coating of thin-film zinc sulfide cold cathodes.—73-11094
Continuously restoring cathode [CRC].—73-08328
Electron-beam diodes using ferroelectric cathodes.—73-01407
Emission characteristics of metal-oxide-semiconductor electron tunneling cathode.—73-11192
Emission life and surface analysis of barium-impregnated thermionic cathodes.—73-10945
Fabrication of gated silicon field emission cathodes for vacuum microelectronics and electron-beam applications.—73-11208
Innovative high-deposition-rate plasma-transferred arch [PTA] surfacing technique.—73-08346
Low-voltage field emitter array cathode for high-frequency applications.—73-10970
Model for predicting the effects of device geometry on the capacitance of field emitter array cathodes.—73-12835
Theoretical study on three-photon excitation and photoemission on a negative electron affinity (NEA) GaAs photocathode.—73-11480

**cathodoluminescence,**
Cathodoluminescence wavelength imaging for spatial mapping of excitons bound to dislocations and structure defects in CdS.—73-09436
Characterization of zirconia-toughened alumina (ZTA) ceramics by SEM cathodoluminescence.—73-12551

**cation exchange,**
Cation exchange properties of $LiTi_2(PO_4)_3$ and synthesis of its microporous materials via glass.—73-04060

**cations,**
$^{27}Al$ NMR spectroscopic investigations on intercalation in oxyhydroxyl aluminum cations in the interlayer space of hectorite.—73-02143
Cation distribution in the Mn-Zn ferrites using Mossbauer effect.—73-05366
Effects of cation (Sr, Pb, and Ba) on calcium carbonate polymorphs under diffusional conditions.—73-09930
Insertion reaction of $V_6O_{13}$ electrodes reversibly incorporating divalent cations.—73-04119
Mossbauer study on the distribution change and charge conversion of cations in $CoFe_2O_4$.—73-07967
Multi-cation α-SiAlON's.—73-02338
Parameters affecting pressureless sintering of α′-SiAlON's with lanthanide-modifying cations.—73-05944
Redox reactions between cations of different polyvalent elements in glass melts: an optical basicity study.—73-10398
Role of cations in the formation of aqueous silica gels.—73-00698
Theory of cation substitution effect in ionic conductors.—73-01037
XRD study of cation distribution in the Mn-Zn ferrites.—73-12736

**cavitation,**
Cavity evolution during tensile creep of $Si_3N_4$.—73-06337
Effects of reinforced content and shape on cavitation and failure in metal-matrix composites.—73-03277

**cells,**
Analysis and modeling of sol foaming for the preparation of low-density ceramics.—73-12917
Impedance studies of the cell Pt/(Na, Sr)ß″-alumina/Pt.—73-04111
Strut crack formation in open cell alumina ceramics.—73-13288
Synthesis and characterization of $LiMeO_2$ (M=Ni, Ni/Co, and Co) for 4-V secondary nonaqueous lithium cells.—73-01030
Synthesis and characterization of $LiMeO_2$ (Me=Ni, Ni/Co, and Co) for 4-volt secondary nonaqueous lithium cells.—73-10993

**cellulose,**
Effects of microcrystalline cellulose on the properties of whiteware bodies.—73-10834

**celsian,**
Densification of gel-derived celsian glass.—73-03830
Gallium and germanium substitutions in celsian.—73-16161
Liquid-phase sintering of silicon-nitride-reinforced celsian ceramics for advanced radomes.—73-13118
Synthesis of glass-ceramics in the wollastonite–apatite–celsian system.—73-07182
Synthesis of monoclinic celsian glass-ceramic from alkoxides.—73-10607

**cement industry,**
Adsorptive and catalytic flue gas purification of exhaust gases from cement plants: laboratory and small-scale experiments.—73-00017
Alternative blending systems in the cement industry.—73-00023
Automatic raw mix preparation process in the cement works of Vibo Valentia and Salerno.—73-09825
Commissioning of a 2.5 million ton per year clinker production line in [S.] Korea.—73-00042
East European cement industry: looking for investment and modernization.—73-03453
Ecological and economical aspects of cement production when using waste-derived fuels.—73-00068
Efficient modification of the production line at the Kaohsiung cement works in Taiwan.—73-09941
Efficient quarrying equipment at the Mannersdorf Cement Works, Austria.—73-03463
Emerging technologies for utilizing wastes in cement production.—73-03464
Experiences with the KCS Kiln Control System at a large rotary kiln plant in South Korea.—73-15874
Gear units for the cement industry—experience, developments, and trends.—73-12030
Increasing the roller mill capacity in line 8 of Cementa AB's Slite plant.—73-03483
Inland Cement alternative fuel program.—73-05119
Magotteaux-Slegten-Sturtevant optimized cement grinding system.—73-10031
New cement grinding plant at Dyckerhoff AG's Neubeckum plant.—73-03504
New raw grinding plant with integral roller press at the Hualien cement works in Taiwan.—73-15738
New ways of energy management to increase productivity of energy in the [cement] factory.—73-00151
Operating experience with twin roll presses at the Asia Cement Corporation, Taiwan.—73-00154
Operating results and $NO_x$ emissions with the ROTAFLAM burner at the Retznei cement factory.—73-03510
Operating results of OK roller mills in Japanese and Korean cement plants.—73-03511
Optimized control system for rotary cement kilns based on a linguistic model.—73-01963
Pocket belt conveyor—a special vertical conveyor for the cement industry.—73-01811
Possible ways of energy conservation in cement manufacture.—73-03520
Practical application of rule- and knowledge-based system techniques to industrial processes.—73-01815
Present problems in cement manufacturing.—73-10093
Quality assurance and control using flexible modular system technology—POLAB.—73-10116
Raising the throughput of the roller grinding mill at the Slite [Sweden] cement works.—73-10124
Recent advancement in cement industry—manufacturing system and special cements.—73-03526
Reduction of environmental pollution by using secondary raw materials.—73-05147
Retrofit of cement grinding circuit at Cementos Veracruz Plant, Mexico.—73-03532
Safe burning of cement raw mixes.—73-03534
Sampling of trace constituents in the clean gas coming from rotary cement kilns.—73-00187
Shell scanning systems improve plant operations.—73-05086
Siam City Cement Co.'s fifth production unit with a clinker capacity of 10 000 Mt per day goes on stream.—73-13777
State of the art in raw meal grinding [in cement industry].—73-10162
Storage and metering of moist desulfogypsum at the Phoenix cement works.—73-10163
Storage of additives for cement production at the Marker Cement Works, Harburg [Germany].—73-13780
Trace element determination by X-ray fluorescence in a cement plant.—73-00201
Use of scrap tires in the U.S. cement industry.—73-03554
Utilization of industrial wastes and byproducts in cement industry.—73-10188
Ways and means of optimizing reciprocating grate coolers.—73-03558
World's largest [cement] packing and loading plant at the Tabkwang plant of Siam City Cement Co.—layout and mechanical configuration.—73-13793

**cemented carbide,**
Cemented carbide body used preferably for abrasive rock drilling and mineral cutting.—73-12449
Cemented carbide.—73-10304
Coated cement carbides and processes for the production of [the] same.—73-12451
Oxidation behavior of hard and binder phase-modified WC·10Co cemented carbides.—73-00254
Properties of CVD-coated cemented carbides affected by those of substrate.—73-13887
Quantitative phase analysis by X-ray for Co binder structure in WC-Co cemented carbides.—73-10269

**cements,**
[Cement] raw meal production with twin roll presses—a report on two years of operation experience.—73-09843
Ac impedance spectroscopy study of microcracking in cement-based composites during compressive loading.—73-03430
Ac impedance spectroscopy: II, Microstructural characterization of hydrating cement–silica fume systems.—73-06619
Accelerated aging process of AR fibers in the cement matrix.—73-13922
Accelerated testing of cements in brines.—73-03432
Acceleration of strength gain of lime-pozzolana cement by thermal activation.—73-06620
Accuracy of test method for cement content in hardened concrete by sodium gluconate.—73-09802
Action of chloride ions on hydrated cement pastes: influence of the cement type and long-time effect of the concentration of chlorides.—73-03433
Active belite cement.—73-09805
Activity and properties of pozzolan used in blended cements.—73-06622
Activity of cement stone treated by hydrodynamical method.—73-00016
Adiabatic temperature rise of low-heat cement using ground granulated blast-furnace slag and fly ash.—73-09806
Adsorption on fractal structures: applications to cement materials.—73-13673
Advanced techniques for measuring rheology of cement-based refractories.—73-08371
Advances in portland and blended cements.—73-09807
Alinite cement, a hydraulic cementitious material made of incinerator wastes.—73-09810
Alkali metal salts as set accelerators for high-alumina cement.—73-03434
Alkali-activated cementitious systems in China: a review.—73-06623
Alkali-activated slag cementitious material for drilling operation.—73-13675
Alkali-activated slag–cement-based radioactive waste forms.—73-00019
Alkali-silicate admixture for cement composites incorporating pozzolan or blast-furnace slag.—73-13677
Application feasibility of a calcination catalyst in cement manufacture—a case study.—73-09817
Application of ac impedance techniques in studies of porous cementitious materials: I, Influence of solid phase and pore solution on high-frequency resistance.—73-06624
Application of ac impedance techniques in studies of porous cementitious materials: II, Relationship between ACIS [ac impedance spectroscopy] behavior and the porous microstructure.—73-06625
Application of ac impedance techniques in studies of porous cementitious materials: III, ACIS [ac impedance spectroscopy] behavior of very low porosity cementitious systems.—73-13678
Application of electrical conductivity methods in interfacial cement chemistry.—73-06626
Asbestos cement products with protective and decorative coatings based on waste-diluted painting compositions.—73-13679
Assessment of the suitability of limestone for producing portland limestone cement.—73-00027
Autogenous shrinkage of cement paste.—73-09823
Autogenous shrinkage properties of various cement pastes.—73-09824
Barium aluminate cement—its synthesis and formation kinetics.—73-13681
Behavior of basalt fibers in high alumina cement matrix.—73-00028
Behavior of carbon fiber-reinforced cement composites in direct tension.—73-03436
Belite cement from barium-containing byproduct.—73-09830
Binder distribution in macro-defect-free [MDF] cements: relation between percolative properties and moisture absorption kinetics.—73-03437
Binder distribution in macro-defect-free cements: relation between percolative properties and moisture absorption kinetics—correction.—73-06628
Blast-furnace slag processing for blended cements.—73-09831
Blended cement according to ENV 197 and experiences in Germany.—73-09832
Blended cements containing granulated slags from ferrochrome production.—73-13683
Blended cements.—73-09833
Calcium aluminate cements.—73-12263
Calcium sulfoaluminate cements prepared from waterworks slime, a potential alumina resource for the production, and the possibility of lowering firing temperature.—73-09835
Calorimetry, rheology, and compressive strength of superplasticized cement pastes.—73-06630
Carbonation of jet cement pastes.—73-09837
Carbonation, moisture, and empty pores.—73-09838
Cement equivalence factors for fly ash [FA].—73-13687
Cement in the $C_{11}A_7$;$CaF_2$-$C_2S$ [$11CaO·7Al_2O_3$-$CaF_2$-$CaO·SiO_2$] system.—73-13688
Cement pastes of low water-to-solid ratio: an investigation of the polymerization of silicate anions in the presence of a superplasticizer and silica fume.—73-00032
Cement savings in precast and monolithic concretes and reinforced concretes.—73-13689
Cement strength and concrete strength—an apparition or a dichotomty.—73-09839
Cement use for radioactive waste embedding and disposal purposes.—73-04888

Cement with interground additives—capabilities and environmental relief: I.—73-09840
Cement with interground additives—capabilities and environmental relief: II.—73-09841
Cement without clinker using calcium-adding liquid slag.—73-06634
Cement-based building material coated with glaze at 900°C.—73-09842
Cement-containing ceramic articles and method for production thereof.—73-12344
Cement/clay-based segments made by compaction and sintering technologies.—73-03977
Cements based on modified portland and sulfoaluminate-belite clinkers.—73-13690
Cements incorporating brown coal fly ash from the Latrobe valley region of Victoria, Australia.—73-06635
Cements Research Progress 1990.—73-09760
Ceramic Transactions, Volume 37: Cement-Based Materials: Present, Future, and Environmental Aspects.—73-13651
Ceramic Transactions, Volume 40: Cement Technology.—73-17520
Characteristics of hydrated alite in hardened cement body.—73-00034
Characteristics of hydrated alite in hardened cement body.—73-09847
Characteristics of masonry cement produced at 975°C in fluidized bed boiler.—73-06636
Chemical analysis of cement.. "a more complete solution."—73-03441
Chemical attack on hardened cement pastes of blended cements: I, Attack of chloride solutions.—73-00036
Chemical identification of portland cements in New Zealand concretes: II, The Ca-Sr-Mn plot in cement identification and the effect of aggregates.—73-06638
Chemical resistivity of cement replaced with binary pozzolans.—73-09852
Chemistry, structure, properties, and quality of clinker.—73-09853
Circuit models for cement-based materials obtained from impedance spectroscopy.—73-00041
Clinker formation and new processes.—73-09855
Commissioning of a 2.5 million ton per year clinker production line in [S.] Korea.—73-00042
Comparative study of the ferrite phase in high-iron cements with pure $C_2A_xF_{1-x}$ by Mossbauer spectrometry.—73-00045
Complete substitution of natural raw materials by shale industry waste at cement plant reconstruction.—73-09862
Composite systems and microstructure of polymer-modified cement.—73-09863
Compositions for forming high-temperature ceramic particulate filters.—73-04029
Compressive strength and diametral tensile strength of some calcium-orthophosphate cements: a pilot study.—73-17254
Compressive strengths of hydraulic cements produced in the United States.—73-06640
Computational materials science of cement-based materials.—73-06641
Concretes in low- and non-clinker cements.—73-13698
Conservation of raw material through use of industrial wastes in cement manufacture.—73-09864
Contribution to the formation mechanism of the transition zone between rock-cement paste.—73-00049
Correlation between crack tortuosity and fracture toughness in cementitious material.—73-05032
Correlation between zeta potential and mechanical properties for cementitious materials.—73-00051
Corrosion of reinforcement in jet cement mortar due to carbonation.—73-09871
Cost-effective utilization of oil shale at Rohrbach Zement Co.—a review of two significant process developments.—73-09872
Critical reappraisal of ion diffusion through cement-based materials: I, Sample preparation, measurement technique, and interpretation of results.—73-09874
Cryogenic salt resistance of asbestos cement pile pipes.—73-13699
Crystal structure of $C_4A_3\bar{S}$ [tetracalcium trialuminate sulfate].—73-13700
Deformed steel fiber-cementitious matrix bond under impact.—73-00055
Degradation mechanism of hardened cement by oil.—73-09881
Degradation of cement superplasticizers in a high alkaline solution.—73-03449
Deterioration of cement mortars immersed in NaCl and $CaCl_2$ solution.—73-09883
Determination of cement content in a concrete mix by heat flow measurement.—73-00057
Determination of specific surface area by the laser diffraction technique: comparison with the Blaine [air] permeability method.—73-00058
Determination of sulfonated naphthalene formaldehyde superplasticizer in cement: a new spectrofluorimetric method and assessment of the uv method.—73-09884
Development in nonportland cements.—73-09888
Development of a mortar consisting of slag, gypsum, and portland cement for injection into multiple-leaf masonry: I, Optimizing the cementitious binder.—73-13704
Development of a new method for the determination of iron content of hydraulic cementitious materials and pozzolans.—73-06645
Development of compressive strength and porosity of some regulated set cements (RSCS) both made from rotary-kiln and laboratory-oven clinker hydrated at 20° *and 5°C.—73-03451*
Development of microstructures in plain cement pastes hydrated at different temperatures.—73-00061
Development of radiation-thermal technology of cement manufacture.—73-09891
Development of self-setting calcium phosphate cements.—73-00062
Diffusion and adsorption studies on hardened cement paste and the effect of carbonation on diffusion rates.—73-03452
Diffusion in cementitious materials: I, Comparative study of chloride and oxygen diffusion in hydrated cement pastes.—73-00063
Dissolution of sparingly soluble inorganic compound in aqueous suspension containing ion-exchange resin: VIII, Hydration products of tricalcium silicate ($Ca_3SiO_5$).—73-16717
Ecological balance of cement and concrete—comparison of ecologically relieving and burdening effects on the environment.—73-00069
Effect of additives on the strength characteristics of MDF cement composites.—73-09896
Effect of admixture on hydration of cement, adsorptive behavior of admixture, and fluidity and setting of fresh cement paste.—73-09897
Effect of aggregate size on transition zone properties at the portland cement paste interface.—73-00070
Effect of bituminous emulsions on the sulfate resistance of cement pastes.—73-00071
Effect of cement composition on chloride binding and corrosion of reinforcing steel in concrete.—73-00073
Effect of chloride and sulfate ions on reinforcement corrosion.—73-03454
Effect of different drying techniques on pore size distribution of blended cement mortars.—73-13707
Effect of gypsum on early hydration of blast-furnace slag blended cement.—73-09907
Effect of intergrinding and separate grinding of cement raw mix on the burning process.—73-03456
Effect of low-grade fuels, combustible wastes, and nontraditional raw materials [on cement manufacture].—73-09910
Effect of silica fume on cement hydration in low-porosity cement pastes.—73-00075
Effect of silica fume on pore structure and chloride diffusivity of low-porosity cement pastes.—73-00076
Effect of $SO_2$ and $CO_2$ on cement paste.—73-00077
Effect of the action of make-up water subjected to the treatment of magnetic field on cement mortars and their chemistry of binding processes.—73-00079
Effect of thermal treatment on the reactivity of clinker minerals produced from vertical shaft kiln.—73-09923
Effect of water-soluble polymer on the flexural strength and moisture sensitivity in MDF [macrc-defect-free] cement composites.—73-03457
Effects of clays on fracture properties of cement-based materials.—73-03458
Effects of curing temperature on strength development and heat of hydration of super-low-heat cement.—73-09932
Effects of $K_2SO_4$ and $NaSO_4$ on $3CaO{\cdot}SiO_2$ formation and its microstructure.—73-13712
Effects of limestone powder of hydration of super-low-heat cement.—73-09936
Effects of measurement condition on electric resistance in cement mortar specimens.—73-09937
Effects of silica fume on alkali-silica expansion in mortar specimens.—73-03460
Effects of sulfate and expansive clinker contents on expansion time of expansive cement paste.—73-00081
Effects of the heavy metal ions on the hydration and microstructure of the cement paste.—73-13714
Effects of using rice husk and its ash as fuel and raw material component, respectively, in cement manufacture.—73-09940
Effects on cement paste of treatment with an extended set control admixture.—73-00082
Electrical conductivity of hardened cements for different temperatures.—73-09942
Electrochemical removal of chloride from hardened cement paste.—73-13719
Electron probe microanalysis of gasifier slag cement pastes.—73-09943
Energy approach to bond strength determinations in cement systems.—73-09945
Engineering properties of carbon-fiber-reinforced cement composites.—73-00083
Environmental regulations of the manufacture and use of cement-based products.—73-03466
Epoxy-modified cements [EMC's] cured with catalytic curing agents for fixation of radioactive waste.—73-08297
Estimation of properties and results of utilization of a new type of cement SG-45.—73-00084
Estimation of the specific surface of cement industry materials according to their particle size distribution.—73-09947
European (EN) and World (ISO) standards—comparison with ASTM standards.—73-13618
Evaluation of an optimum percentage addition of fluorspar in white cement raw mix containing 4% $SO_3$.—73-09949
Evaluation of granulated blast-furnace slag as a cementitious admixture—a case study.—73-06652
Evaluation of physicochemical and hydration characteristics of supersulfated cement.—73-13720
Evaluation of the alkali resistance of glass fibers and durability of glass-reinforced cement.—73-13983
Evaluations of residual axial stresses and interfacial friction in Nicalon fiber-reinforced macrodefect-free cement composites.—73-00085
Exchange of water and heavy water in gypsum, lime, and hydrogarnet.—73-09955
Experiments on the contact angle between mercury and hardened cement paste.—73-00088
Fibrocement materials based on glass fiber.—73-13724
Finish grinding of cement with POLYCOM twin roll press: I, Investigation of mixtures of clinker meal and sulfate-containing agents.—73-00091
Flexural strength and microstructure of cement binders reinforced with wollastonite microfibers.—73-06655
Flow behavior of modified cement pastes.—73-06656
Fluidity analysis of cement paste using a tuning-fork vibrating viscometer.—73-09965
Fluidity of spherical cement.—73-09966
Formation of dispersed cement rocks.—73-00095
Formation of ettringite at elevated temperature.—73-06657
Formation of zeolites in OPC [ordinary portland cement]-PFA [pulverized fly ash] mixes.—73-06658
Formulation and setting times of some calcium orthophosphate cements: a pilot study.—73-15925
Fracture behavior of cement-based materials.—73-06660
Fracture of microfiber-reinforced DSP [densified small particle] materials.—73-09972
Freshness of cement: conditions for syngenite $CaK_2(SO_4)_2{\cdot}H_2O$ formation.—73-06661
Frost susceptibility of fiber-reinforced cement building materials based on the three-dimensional pore structure.—73-13727
FTIR and XPS investigations of the effects of carbonation on the solidification/stabilization of cement-based systems—portland type V with zinc.—73-06662
Geopolymer cements to minimize carbon dioxide greenhouse warming.—73-03475
Grinding and properties of cements with several principal constituents.—73-09976
Gypsum-free high early-strength cement.—73-06665
Hardening process for several phosphate glass-containing cements.—73-03476
High-resolution transmission electron microscopy study of microstructures of initially hydrated calcium aluminosulfate.—73-00101
Humidity dependence on electrical resistance of cement materials.—73-09985
Hydration and setting time of MgO-type expansive cement.—73-03477
Hydration kinetics of cement paste containing concrete admixture.—73-00103
Hydration of alkali-slag cements at 150°.—73-00104
Hydration of cement and silica fume paste.—73-00106
Hydration of cement with heavy water.—73-09990
Hydration of type K expansive cement paste and the effect of silica fume: II, Pore solution analysis and proposed hydration mechanism.—73-06668
Hydration process of cement pastes studied by means of oscillatory rheological techniques.—73-00107
Hydration products and mineral phase of fly ash–slag–alkali cementing material (FKJ).—73-09992
Hydraulic behavior of calcium sulfoaluminate-based cements derived from industrial process wastes.—73-13731
Hydrothermally synthesized aluminum phosphate cements.—73-06669
Ideal structural model for very low porosity cementitious [VLP] systems.—73-03480
Immobilization of radioactive wastewater residues in a cement matrix.—73-09994
Immobilization science of cement systems.—73-06670
Impact behavior of corrugated sheets of fiber-reinforced cement.—73-09995
Impedance spectroscopy of hydrating cement-based materials: measurement, interpretation, and application.—73-13734
Impedance studies of wollastonite microfiber-reinforced cement paste systems.—73-06671
Importance of precision statements in developing performance standards for cement.—73-09997
Improving the technology of manufacturing asbestos cement products using polyacrylamide.—73-13736
Incorporation of fluorides into cement kiln materials under different modes of operation.—73-09999
Influence of aqueous phase composition on the zeta potential of cement in the presence of water-reducing admixtures.—73-10002
Influence of cement composition on concrete durability.—73-00112
Influence of degree of hydration of slag on slag cements.—73-13738
Influence of different sized fractions of a fly ash [FA] on workability of mortars.—73-06674
Influence of electric field strength on cement durability.—73-00115
Influence of initial curing on sulfate resistance of blended cement concrete.—73-10009
Influence of particle sizes of individual minerals on the hydration processes in the system $C_2S$-$C_4A_3\bar{S}$-$C\bar{S}$ [dicalcium silicate-tetracalcium trialuminate sulfate-anhydrite].—73-03486
Influence of polymer modification on the adhesion of cement pastes to aggregates.—73-00119
Influence of polymer modifications on the adhesion of cement pastes to aggregates.—73-00121
Influence of set-retarding superplasticizers and microsilica on setting times of pastes at various temperatures.—73-06676
Influence of slag content on the microstructure, permeability, and mechanical properties of concrete: II, Technical properties and theoretical considerations.—73-06677
Influence of superplasticizer on fluidity of fresh cement paste with different clinker phase composition.—73-10014
Influence of temperature on water loss and shrinkage of hardened cement paste.—73-10015
Influence of the degree of pore saturation on the resistivity of concrete and the corrosion rate of steel reinforcement.—73-03489
Influence of the hydration process upon microwave properties of cements.—73-00126

Influence of the parameter "specific surface" in the qualification as high, or not, sulfate resistance of a portland cement.—73-13741
Influence of various hydraulic binders on performance of very low porosity cementitious systems.—73-03490
Influencing the properties of cement by grinding clinker in twin roll presses.—73-03491
Interaction of alkali oxide and $SO_3$ on $3CaO{\cdot}SiO_2$ formation and microstructure.—73-13743
Interface between polymer-modified cement paste and aggregate.—73-00128
Interfacial debonding and fiber pullout stresses: III, Interfacial properties of cement matrix composites.—73-06680
Interground fiber cement.—73-10195
International development of standards for cements.—73-10018
Ion diffusivity in cement hydrates containing silicious mineral admixtures.—73-10021
Kinetics of aluminoferrite formation at different conditions.—73-13746
Laboratory automation in a cement plant.—73-10025
Lithium salts as set accelerators for high alumina cement [HAC].—73-06682
Manufacture of manganese-iron slag cement with low content of clinker.—73-10032
Manufacture of more efficient infrared heaters through use of electrical insulating cement.—73-03494
Masonry properties as influenced by mortars.—73-06684
Measures to inhibit alkali-dolomite reaction.—73-13750
Mechanical behavior and microstructural development in phosphate-modified high-alumina cement.—73-10034
Mechanical properties and microstructure of cement binders reinforced with synthesized xonotlite microfibers.—73-13751
Mechanical properties of high-strength cement composite with carbon fiber.—73-06685
Mechanical properties of magnesium ammonium phosphate cements and their zeolite composites.—73-03496
Mechanical properties of supersulfated cement containing phosphogypsum.—73-03497
Mechanism for the thinning effect of diluents on cement raw slurry.—73-10036
Mechanism of $3CaO{\cdot}SiO_2$ prevention in presence of excess $SO_3$.—73-10037
Mechanism of alkali-silica reaction and the significance of calcium hydroxide.—73-00136
Mechanism of drying creep of cement-based materials: diffusion processes and microcracking.—73-10038
Mechanochemical activation of high-alumina cements [HAC]: I, Hydration behavior.—73-00137
Metallurgical slags as blending materials for cement manufacture.—73-06686
MgO-ammonium polyphosphate systems.—73-14604
MgO-type delayed expansive cement.—73-00139
Microcharacteristics and properties of hardened alkali-activated cementitious [AAC] materials.—73-10045
Microfine cements.—73-03498
Microstructural characterization of MDF cement–SiC whisker composites.—73-06247
Microstructural characterization of the transition zone in cement systems by means of ac impedance spectroscopy.—73-06687
Microstructural study of gypsum-activated fly ash hydration in cement paste.—73-00141
Microstructure and frost durability of cementitious building materials reinforced with nonasbestos fibers.—73-00142
Microstructure and frost durability of cementitious building materials reinforced with nonasbestos fibers.—73-10049
Microstructure and mechanical properties of hardened cement paste incorporating ground granulated blast-furnace slag.—73-10050
Microstructure and microanalysis of hardened cement pastes involving ground granulated blast-furnace slag.—73-00143
Microstructure and properties of expansive cement mortar with silica fume.—73-10051
Microstructure of hardened cement paste—a new interpretation.—73-00144
Microstructure–property relationships in macrodefect-free cement.—73-06689
Microwave processing of geopolymer–cement-based waste forms.—73-03501
Milling kinetics of glass-ceramic–cement in a ball mill.—73-01799
Mineralizers, modifiers, and activators in the clinkering process.—73-10053
Modeling of the corrosion of cement paste by deionized water.—73-03503
Modification of transition zone microstructure—silica fume coating of aggregate surfaces.—73-10057
Moisture diffusion in soil–cement mixtures and compacted lean concrete.—73-00145
Monolithic coverings for floors with increased service strength on the basis of VNV modified by a polymer.—73-00146
New cement standard in Australia—its implication and further development.—73-10062
New energy-saving cement—iron-rich fluoroaluminate cement.—73-13756
New low-heat cement made with $CaO{\text-}Al_2O_3{\text-}SiO_2$ glass.—73-10065
New method of enhancing cement-aggregate interfaces: I, Ideal aggregate and its effects on interfacial microstructures.—73-10066
New mixing plant for cementitious materials at Rohrbach Zement [Dotternhausen, Germany].—73-00150
New perspective on the cement hydration characteristics of cement phases.—73-10067
New technique for economical manufacture of cement-based binders.—73-13757
Numerical analysis of through-diffusion experimental results.—73-03508
Occurrence of large silica-fume-derived particles in hydrated cement paste.—73-10071
Peculiarities of the process of cement clinker formation by changing the interaction sequence of reacting components.—73-10077
Penetration of cement paste into lightweight aggregate.—73-03514
Phase relations in the system $Ca_2SiO_4$-CaO-$CaSO_4$-$CaF_2$ relevant to cement clinkering.—73-10080
Phosphate-bonded calcium aluminate cements.—73-00207
Physical properties of gypsum-cement plastic pastes and hardened mortars: II.—73-06695
Physicochemical characteristics of cement produced using sulfur-bearing fuels in the black meal process for cement manufacture.—73-13760
Pore solution composition and reinforcement corrosion characteristics of microsilica-blended cement concrete.—73-00165
Pore structure of hardened alumina cement paste by water vapor sorption.—73-06696
Pores and cracks in cemented waste and concrete.—73-03519
Possibility of making hydraulic binder by chemical activation of domestic ash and mixture of slag and domestic ash.—73-13761
Potential of fly ash for cement manufacture.—73-00166
Potentials of using dolomitic limestone in making sulfoaluminate-silicate cements.—73-13762
Preferred nucleation of secondary ettringite in preexisting cracks of steam-cured cement paste.—73-13763
Preparation and hydration study of alinite cement.—73-00169
Preparation of low-clinker cement using cinder from fluidized bed furnace of power plant.—73-10092
Problems of magnesium oxychloride cements.—73-10098
Processing of optimized cements and concretes via particle packing.—73-06700
Production and the properties of low-heat cement using dephosphorized slag.—73-10101
Production of binding materials using coal gangue.—73-10102
Production of cement requiring low energy expenditure—an industrial test.—73-00171
Production of lime-slag cement based on wastes of a metallurgical plant.—73-13767
Production performance and utilization of a special superplasticized cement.—73-06702
Properties of blended cement containing silica fume and super-pulverized materials with water-cementitious material ratios.—73-10108
Properties of cement containing calcium ferrite sulfate.—73-10109
Properties of concrete incorporating low quantity of cement and high volumes of ground granulated slag.—73-00173
Properties of flowable, high-volume fly ash–cement composite.—73-03521
Properties of hardened cement paste and reinforcing bars upon cooling from elevated temperatures.—73-13769
Properties of polymer-modified mortars made with blended cements.—73-06705
Properties of some blended high-alumina cements.—73-10114
Properties of special cement [with] adjusted particle size distribution.—73-06706
Properties of special concrete with super-low-heat-type ternary cement.—73-10115
Proton NMR relaxation study of calcium aluminate [CA] hydration reactions.—73-03523
Quality improvement in clinker using mineralizers/activators.—73-10118
Quantitative analysis of quality control factors related with compressive strength and cement fineness.—73-10120
Quantitative backscattered electron analysis of cement paste.—73-10121
Quantitative determination of residual silica fume in DSP [densified with small particles] cement pastes by $^{29}Si$ NMR.—73-03524
Quantitative determination of triethanolamine [TEA] in cements.—73-06710
Quantitative relationship between permeability and pore size distribution of hardened cement paste.—73-10122
Quantitative structural study of fresh cement paste by image analysis: I, Image processing.—73-00176
Quantitative structural study of fresh cement paste by image analysis: II, Measurements and their application.—73-00177
Quantitative X-ray diffraction analysis of high-alumina cements.—73-00178
R&D trends in cement and concrete.—73-13771
Radiometric emanation method for monitoring morphology and porosity changes during radwaste cementation.—73-04895
Rapid analysis of cement to ASTM: C-114.—73-03525
Rapid conversion of calcium aluminate cement hydates, as revealed by synchrotron energy-dispersive diffraction.—73-10126
Rapid hardening cement-gypsum composites for shotcreting on the base of Bulgarian raw materials: I, Introduction, materials, design of the compositions, strength, and deformability.—73-00179
Rapid hardening cement-gypsum composites for shotcreting on the base of Bulgarian raw materials: II, Structural investigations, tests in production conditions, conclusions.—73-00180
Rapid setting magnesium phosphate cement [MPC] for quick repair of concrete pavements—characterization and durability aspects.—73-00181
Rationalized ac impedance model for microstructural characterization of hydrating cement systems.—73-00182
Reaction between cement and natural waters containing dissolved carbon dioxide.—73-10129
Reaction bonding mechanisms in regular and retarded magnesium ammonium phosphate cement systems.—73-10130
Reactive products and mineral phase for FKJ [fly ash slag alkali] cementitious material.—73-13659
Recent advance in cement grinding and milling technology.—73-04946
Redox reactions proceeding during the hardening process of sulfide-containing cement.—73-10132
Relation between $T_g$ of PEG [polyethylene glycol] protective acrylic polymer and physical properties, crack inhibition property.—73-10134
Relationship between the strength and nondestructive parameters of rice husk ash [RHA] concrete.—73-03528
Relationships between composition, structure, and mechanical properties of very low porosity cementitious systems.—73-00184
Replacement of portlandite by gypsum in the interfacial zone and cracking related to crystallization pressure.—73-03529
Research on $C_2A_xF_{1-x}$ in iron-rich fluoroaluminate cement.—73-06711
Research on cement-based materials: expanding our horizons.—73-06712
Retarded acid-soluble well cement compositions and methods.—73-10196
Retention of radioactive and toxic liquids [in a cementitious matrix].—73-03531
Rheology of cementitious systems.—73-06713
Selection of stimulation agents for alkali-slag cement.—73-13774
SEM investigation of fracture surfaces using stereo pairs: II, Fracture surfaces of rock-cement paste composite specimens.—73-10146
SEM investigations of fracture surfaces using stereo pairs: I, Fracture surfaces of rock and of cement paste.—73-03536
Separation and determination of gypsum and hemihydrate in [portland] cement using DSC.—73-10148
Separation of the aluminate and ferrite phases from cement clinker by selective dissolution and their crystal structure refinement.—73-10149
Several methods to investigate the microstructural features of the interfacial zone between a steel fiber and cement paste matrix.—73-10150
Simple chemical clock reactions: application to cement hydration.—73-10152
Simultaneous production of cement and electrical power by fluidized bed combustion of pretreated gangue.—73-06716
Simultaneous rheological and kinetic measurements on cement pastes.—73-00188
Single-component alkali metal silicate cement composition.—73-12403
$SO_3$ content of portland and blended cements: porosity and behavior of the resultant mortars.—73-13779
Solubility of $Ca(OH)_2$ and $CaSO_4{\cdot}2H_2O$ in the liquid phase from hardened cement paste.—73-10157
Special and new cements.—73-10159
Special features of cement standards in China.—73-10160
Strength and toughness of reinforced chemically bonded ceramics [CBC's].—73-10164
Strength development and heat of hydration of low heat cement.—73-06721
Strength development in hardened cement paste: examination of some empirical equations.—73-06722
Stress corrosion of cement mortars in ammonium sulfate solution.—73-03541
Subcluster model of cement particle size distribution.—73-06723
Suitability of rice husk ash obtained by fluidized-bed combustion for blended cement.—73-06724
Sulfoferrite cements.—73-13784
Summary of the results of laboratory inspections conducted by the Cement and Concrete Reference Laboratory.—73-10173
Synthesis and properties of low-energy cements based on $C_4A_3\$$ [tetracalcium trialuminate sulfate].—73-13785
Synthetic fiber-reinforced cement composites—optimization of the composition and structural and mechanical properties.—73-10177
Technology and application of BauMix cellular concrete.—73-00196
Thermodynamic model for blended cements.—73-03547
Thermodynamic modeling of cement degradation: impact of redox conditions on radionuclide release.—73-03548
Toughening of high-strength cementitious matrix reinforced by discontinuous short fibers.—73-10182
Trace element balances in kiln system of a few Indian cement plants.—73-10183
Transformations of hydrate phases at low temperature.—73-13790
Two experimental techniques for studying the effects of the interfacial zone between cement paste and rock.—73-08452
U.S. Cement: restructured and positioned for awaited upturn.—73-03549
Unexpected effects of alkali hydroxide added to cement mix water.—73-03550
Update on the properties of clinker and cement derived from industrial chemical wastes.—73-03551
Use of oscillatory shear to study flow behavior of fresh cement paste.—73-00202
Use of the volcanic rock of Zakarpatya as active mineral admixture in cement.—73-15915
Variations of water absorption rate and porosity with depths from an exposed concrete surface: effects of exposure conditions and cement type.—73-10190
Why performance standards for hydraulic cement.—73-10192

XRD analysis and leachability of solidified phenol-cement mixtures.—73-06733
Zeta potential of cement with new type apparatus applying laser or ultrasonic technology.—73-10194

**centers,**
Annihilation of paramagnetic centers in yttria-stabilized zirconia.—73-03078
Bound phonons and DX centers in GaAs under hydrostatic pressure.—73-11086
Calculation of $F^+$ centers in the $CuO_2$ plane of HTSC.—73-15395
Capacitance-voltage characteristics of selectively doped heterostructures containing deep centers.—73-01090
Deep trapping centers in *n*-type GaAs bombarded with fast neutrons.—73-14826
Deformation-stimulated changes in the concentration of light-emitting centers in GaAs.—73-01121
Direct proof of two-electron occupation of Ge-DX centers in GaAs codoped with Ge and Te.—73-11143
EL2 center family [studied] by polarization-luminescence methods.—73-07478
Energy band structure of $La_2O_3$ crystal and $F^+$, $F$ centers.—73-02265
ESR studies of $Mn^{2+}$ centers in $Sr_{1-x}Ba_xF_2$:Mn crystals.—73-05397
Formation of deep centers in GaAs by laser irradiation.—73-07536
Ground state parameters of $F$ center in BeO.—73-16162
Index gratings stabilized by deep centers for fast optical addressing.—73-07589
Influence of annealing on the spectrum of deep centers in ZnSe.—73-01200
Kinetics and mechanism of the destruction of $PO_4^{2-}$ centers in phosphate glasses activated by silver.—73-00362
Local vibronic instability of low-symmetry centers.—73-16199
Magnetophotoconductivity studies of $D^0$ and $D^-$ centers in GaAs quantum wells in metallic and insulating states.—73-07655
Methyl- and dimethyl-associated paramagnetic centers in $SiO_2$ thin films.—73-12834
Multifrequency and Fourier transform electron paramagnetic resonance and electron spin echo spectroscopies for determination of the $T_1$ and $T_2$ spin-lattice relaxation times of the $E'_1$ center.—73-03742
Nature of paramagnetic centers in cadmium borate glasses.—73-00378
Nature of paramagnetic centers in cadmium borate glasses.—73-00379
Nature of paramagnetic centers in tin dioxide.—73-17178
New $As_{Ga}$-related center in GaAs.—73-15054
Paramagnetic centers in glasses and glass-ceramics induced by simulated space irradiation.—73-06951
Photoelectrically active and inactive slow electron trapping centers in ZnSe crystals.—73-11376
Photoinduced formation of surface recombination centers in GaAs.—73-04438
Role of bulk deep centers in the generation of the surface photo-emf in low-resistivity ZnSe single crystals.—73-07775
Time-resolved low-temperature luminescence of nonbridging oxygen [NBO] hole centers in silica glass.—73-00567

**centrifuges,**
Centrifugal casting of ceramics. Properties of the castings.—73-12015
Process for controlling the temperature of a fiber centrifuger.—73-05005

**ceramic industry,**
1992—a year of improvements for the ceramic industry.—73-13632
Advanced ceramics in The Netherlands.—73-06554
American fair.—73-17461
Big name in ceramics: Villeroy & Boch.—73-17463
Ceramics center indigenous to Okayama [Japan].—73-03385
Cevisama: the new face of Spain.—73-17466
Comparison between Italy and Spain.—73-17467
Conditions in the glass, ceramics, and porcelain sector from the year 1993 to its privatization.—73-06563
Development and prospects of China's ceramic machinery.—73-12130
EEC finances energy saving.—73-17475
Energy efficiency in the ceramic industry.—73-17476
Fin Riwal: a world group.—73-17478
Forty years of development of ceramics in France (1950-1990).—73-06569
France is an open market.—73-17480
Germany's ceramic industry after unification.—73-03393
Green [environmentally conscious] ceramics manufacturing.—73-17485
Innovative strategies for the ceramic machinery industry.—73-17489
Laufen: a Swiss multinational.—73-17492
New materials—Western Australia.—73-06584
New technologies for the rational use of energy in the ceramic industry.—73-04935
New technologies for the rational use of energy in the ceramics industry.—73-04936
Programming management control.—73-17500
Robert L. Coble: a retrospective.—73-06592
South African ceramic developments.—73-05181
Spotlight on Acimac.—73-17503
Structure of the Italian ceramic machinery industry.—73-17504
Successful Ceramitec.—73-17505
Technical standards and [the] ceramic industry.—73-17506
Tecnargilla expanding.—73-17507
Turkey: a rapidly expanding market.—73-17509

**ceramic matrix composites,**
Acoustic microscopic characterization of fiber/matrix interface of SiC fiber-reinforced reaction-bonded $Si_3N_4$ matrix composites.—73-12102
Aspects of residual thermal stresses in continuous-fiber-reinforced ceramic matrix composites.—73-08810
Aspects of the morphology and creep behavior of a unidirectional $SiC_f$-MLAS material.—73-06326
Behavior of ceramic matrix fiber composites under longitudinal loading.—73-03240
Breaking down the barriers for ceramic matrix composites (CMC's).—73-02003
BSG-doped CMC's for thermal durability.—73-10500
Ceramic matrix composites by microwave-assisted CVI.—73-05700
Ceramic matrix composites.—73-05158
Ceramic Matrix Composites.—73-06600
Ceramic Transactions, Volume 38: Advances in Ceramic-Matrix Composites.—73-13652
Characterization of ceramic matrix composite tubes at ambient and elevated temperatures.—73-17246
Characterization of damage onset in glass-ceramic matrix composites angle-ply laminates.—73-03244
Characterization of subsurface damage in ceramic matrix composites by confocal scanning laser microscopy.—73-03125
Characterization of the performance of 1-3 type piezocomposites for low-frequency applications.—73-01394
Crack growth behavior of $SiC_f$/SiC composite at room and high temperatures.—73-17258
Crack growth resistance model for fiber-reinforced ceramic materials.—73-06349
Delamination, fiber bridging, and toughness of ceramic matrix composites [CMC's].—73-06370
Development of oxide coatings for matching oxide fiber–oxide matrix composites.—73-16706
Direct electrical heating of ceramic matrix composites to determine tensile-stressed oxidation properties.—73-12132
Effect of fiber coating on mechanical properties of Nicalon fibers and Nicalon fiber/SiC matrix composites.—73-17284
Effect of fiber coating thickness on the interfacial properties of a continuous fiber ceramic matrix composite.—73-17285
Effect of fiber fractures on the frictional heating in a uniaxially fiber-reinforced ceramic matrix composite.—73-09575
Effect of interfacial properties on fracture toughness in fiber-reinforced ceramic composites.—73-03267
Effect of intergranular phase on mechanical properties of $Si_3N_4$-$Si_2N_2O$ composites.—73-03268
Effect of processing and fiber coating on fiber-matrix interaction in mullite fiber–mullite matrix composites.—73-09090
Effect of specimen shape on fracture toughness and effective fracture energy in SiC-SiC composite.—73-15793
Effects of density and fiber volume on the mechanical properties of SiC matrix composites reinforced with T-300 fibers.—73-12427
Effects of matrix microcracking on the oxidation behavior of carbon-fiber/glass-matrix composites.—73-07019
Effects of residual stress and frictional sliding on *R*-curve behavior in fiber-reinforced ceramics.—73-06398
Effects of weave geometry on properties of Nicalon-reinforced ceramic matrix composites.—73-13037
Electrophoretic deposition to synthesize advanced ceramic/ceramic laminar composites.—73-09116
Elevated-temperature cyclic fatigue of silicon carbide fiber-reinforced silicon carbide matrix composites.—73-17304
Evaluation of interfacial properties of fiber-reinforced ceramic composites using fiber push-in tests.—73-09593
Fabrication of SiC matrix surface composites by chemical vapor infiltration with microwave heating: temperature effects.—73-16776
Failure statistics of an oxide-oxide ceramic composite.—73-17317
Formation of high-temperature structural ceramics and ceramic matrix composites by the oxidation of solid metal-bearing precursors.—73-16789
Fraction and fatigue of a Nicalon/CAS continuous-fiber-reinforced glass-ceramic matrix composite.—73-03295
Fracture and flexural characterization of monolithic SiC and $SiC_w$/SiC composites at room and elevated temperatures.—73-17324
FRCMC's: a sample preparation challenge.—73-08401
Generic model for creep rupture lifetime estimation on fibrous ceramic composites.—73-06445
High-temperature plasticity effects in bridged cracks and subcritical crack growth in ceramic composites.—73-09611
High-temperature treatment of carbon fiber/ceramic composites prepared for borosiloxane.—73-13088
Hybrid matrix composites reinforced with carbon fibers via polymer pyrolysis.—73-02853
Implications of fiber stress rupture on lifetimes of ceramic matrix composites.—73-17351
In situ fiber strengths in ceramic matrix composites from fracture mirrors.—73-09617
In situ formation of boron nitride interfaces on Nextel 312 continuous ceramic fiber: I, Nitriding process and Blackglas ceramic matrix composite properties.—73-17353
In situ formation of boron nitride interfaces on Nextel 312 continuous ceramic fiber: II, Oxidation of Blackglas ceramic matrix composites.—73-17354
In situ formation of metal-ceramic microstructures, including metal-ceramic composites, using reduction reactions.—73-03599
In-plane shear properties of 2-D ceramic matrix composites.—73-17355
Indentation behavior of continuous fiber-reinforced ceramic matrix composites.—73-00502
Industrial minerals as strengthening agents in ceramic matrix composites.—73-09170
Intermittent carbon coatings for application in ceramic matrix composites.—73-08533
Knitted fiber-reinforcing material.—73-03687
Knowledge-based decision support systems for rapid and efficient production planning in CMC fabrication.—73-15733
Life Prediction Methodologies and Data for Ceramic Materials (ASTM Special Technical Publication 1201).—73-17531
Load ratio effects on the fatigue behavior of silicon carbide fiber-reinforced silicon carbide.—73-17373
Low-temperature deposition of silicon nitride coatings on fibers for CMC's.—73-16852
Low-temperature processing of ceramic woven fabric/ceramic matrix composites.—73-05902
Making ceramic composites by melt infiltration.—73-09195
Material response of diboride matrix composites to low-pressure-simulated hypersonic flows.—73-12435
Mechanical behavior of a 3-D braided, continuous SiC fiber-reinforced/CVI SiC matrix composite at ambient and elevated temperatures.—73-17379
Mechanical properties of a laser-cut alumina matrix-silicon carbide whisker composite.—73-09632
Mechanical properties of chemically vapor infiltrated ceramic matrix composites.—73-17383
Mechanical properties of Nextel 312 fiber-reinforced SiC matrix composites in tension.—73-17387
Method for fabrication of continuous-fiber-reinforced ceramic matrix composites.—73-16866
Method for making ceramic matrix composites.—73-04986
Methodology for relating the tensile constitutive behavior of ceramic matrix composites [CMC's] to constituent properties.—73-13571
Methods for reliable measurements of thermal transport properties of ceramic matrix composites.—73-08413
Microcracking stress and transverse properties of hybrid ceramic matrix composites.—73-17398
Micromechanical analysis of damage mechanisms in ceramic matrix composites during mechanical and thermal cycling.—73-03340
Microstructural analysis using image analysis.—73-09476
Microstructural evolution in whisker-reinforced SiC-SiC composites.—73-09478
Microstructural study comparing CFCMC's [continuous fiber ceramic matrix composites] with differing mechanical properties.—73-17156
Microstructure of silicon carbide fiber-reinforced silicon carbide ceramic matrix composites heat-treated in vacuo and in pure oxygen.—73-03174
Microwave sintering of hydroxyapatite-based composites.—73-05923
Modeling of strength in SiC/SiC composite systems.—73-17401
Modeling the stress-strain behavior of unidirectional ceramic matrix composite laminates.—73-09653
Molybdenum palladium fiber matrix interlayers for ceramic composites.—73-13875
Monitoring damage growth in titanium matrix composites [TMC's].—73-12167
Multifunctional ceramics for thermal shock applications.—73-03626
Multiple matrix cracking in brittle matrix composites.—73-06494
New development of the *J*-based fracture testing technique for ceramic matrix composites [CMC's].—73-12172
New model for evaluation of the interfacial friction coefficient and residual clamping stress in a fiber-pushout test.—73-08924
Oxidation of carbon in fiber-reinforced ceramic matrix composites.—73-17233
Potential qualities of pitch-based carbon fiber for high-temperature composites.—73-17410
Preparation techniques for analysis of fiber-reinforced ceramic matrix composites.—73-08435
Pressureless densification of ceramic matrix composites: analytical model.—73-05990
Probabilistic failure predictions in ceramics and ceramic matrix fiber-reinforced composites.—73-17416
Processing and mechanical properties of $Si_3O_4$-SiC whisker–TiN system composite material.—73-05995
Production of ceramic matrix composites by CVI and DMO [directed metal oxidation] for industrial heating industry.—73-06001
Recent developments in ceramic materials processing and applications.—73-15932
Reinforcements for ceramic matrix composites for elevated-temperature applications.—73-09662
Relationship between bending strength and tensile strength.—73-09663
Size effect in fracture of ceramic-ceramic composite materials.—73-06522
Strength versus gauge length in ceramic matrix composites.—73-09677
Stress corrosion cracking in a unidirectional ceramic-matrix composite.—73-06531
Subcritical crack growth in continuous-fiber-reinforced ceramic composites.—73-09679
Tensile behavior of ceramic/ceramic composites before and after exposure to high-temperature combustion environment.—73-17440
Theoretical study of the effect of initial flaw size on the proportional limit.—73-09374
Thermal aging effects in oxide/oxide ceramic matrix composites.—73-13602
Titanium matrix composites for NASP airframe usage.—73-10290
Transverse cracking in a fiber-reinforced ceramic matrix composite.—73-06543
Ultimate tensile strength of metal and ceramic matrix composites.—73-06547

Whisker-matrix interfacial reactions in SiC, $Si_3N_4$, and $Al_{18}B_4O_{33}$ whisker-reinforced aluminum-matrix composites.—73-13910
Work hardening behavior of alumina particulate-reinforced 2024 aluminum alloy matrix composites.—73-13911
**ceramic-metal systems,**
Abrasion protective and thermal dissipative coating for jet engine components leading edges.—73-10299
Advanced thermal barrier coated superalloy components.—73-03669
Alumina ceramic-metal articles.—73-03670
Articles including a ceramic member and a metal member bonded together.—73-03671
Bonding, structure, and properties of metal/ceramic interfaces.—73-00211
Ceramic articles with a modified metal-containing component and methods of making [the] same.—73-03674
Ceramic composite coating material.—73-10305
Ceramic-metal composite substrate and method for producing the same.—73-03675
Ceramic-metal interfaces brazed with Al-base alloys.—73-03563
Coated metal article.—73-03677
Combined body of ceramics and metal.—73-03679
Combustion synthesis of TiC-$Al_2O_3$-Al and TiC-$Al_2O_3$-Ti ceramic-metal composites.—73-05713
Deposition process of a ceramic coating on a metallic substrate.—73-10309
Experimental observation of the failure mechanisms of metal/ceramic interfaces under mode I loading.—73-13835
Finite element analysis of thermal residual stresses at graded ceramic-metal interface: I, Model description and geometrical effects.—73-06791
Finite element analysis of thermal residual stresses at graded ceramic-metal interfaces: II, Interface optimization for residual stress reduction.—73-06792
Fracture resistance of metal-ceramic interfaces.—73-13838
Heat-resistant materials.—73-10315
High-temperature turbine engine structure.—73-10318
In situ formation of metal-ceramic oxide microstructures.—73-00283
Infiltrated fiber-reinforced metallic and intermetallic alloy matrix composites.—73-03685
Influence of crystallography and oxide and metallic types on the structure and properties of metal-ceramic interfaces.—73-13845
Interface science of controlled metal/metal and metal/ceramic interfaces prepared using ultrahigh vacuum diffusion bonding.—73-00244
Laser welding process for attaching metal to ceramic substrate.—73-10320
Mechanically retained wear-resistant ceramic pad.—73-10321
Metallographic and fracture surface investigations of metal-ceramic bicrystals.—73-06825
Method for forming a surface coating using powdered solid oxidants and parent metals.—73-03689
Method for increasing the wettability of aluminum metal to alumina-containing fibers.—73-10325
Method for producing self-supporting ceramic bodies with graded properties.—73-03691
Method for protecting articles from hydrogen absorption by application of an alumina coating.—73-03692
Method for repair and restoration of a ceramic thermal-barrier-coated substrate by providing an intermetallic coating.—73-03693
Method of forming ceramic layer on metallic body.—73-10327
Method of forming tappet of the kind having ceramic seat plate.—73-03694
Method of making a gas turbine blade having a duplex coating.—73-03695
Method of making a shaped part comprising a metallic member and a ceramic member.—73-10328
Moldable composition, process for producing sintered body therefrom, and products from [the] same.—73-10333
Multilayered, cofired, ceramic-on-metal circuit board for microelectronic packaging.—73-04225
Numerical modeling of residual stresses in graded ceramic-metal joints.—73-03630
Preparation of ceramic-metal coatings.—73-13921
Process for forming protective base coatings on metals.—73-00295
Reliability factors in ceramic/metal joining.—73-00264
Sintered ceramic-metal composite product and method of fabricating the same.—73-10350
Stress-corrosion cracking at ceramic-metal interfaces.—73-00268
Thermally protective composite ceramic-metal coatings for high-temperature use.—73-10354
Transient liquid phase ceramic bonding.—73-00302
Wetting, adhesion, and electronic structure of metal/ceramic interfaces: a comparison with metal-semiconductor Schottky contacts.—73-03667
Zirconium oxide and nitride coated cardiovascular implants.—73-03705
**ceramics,**
Application of ceramic fiber to reheating furnace for hot strip mill.—73-00775
Application of thermal analysis in modern ceramic technology.—73-01885
Article of ceramic material and production thereof.—73-01846
Aspects in grinding of ceramics.—73-16658
Block gage and method of making ceramic material.—73-04960
Ceramic bonding method.—73-00279
Ceramic building block.—73-15935
Ceramic circuit board with a curved lead terminal.—73-14743
Ceramic conveyor belt.—73-15939
Ceramic guide pin.—73-05201
Ceramic hollow bodies and method of manufacturing such bodies.—73-04962
Ceramic simulated log.—73-12348
Ceramic tools stand up to composites.—73-05159
Ceramic/distillable binder compositions.—73-12350
Ceramics decoration and environmental protection.—73-00897
Ceramics in the equipment for metal transformation—interest in an electroerodable ceramic material.—73-02006
Deformation energy of Kelvar backing plates for ceramic armors.—73-12763
Designing an extruder with allowance for the properties of ceramic extrusion compounds: III.—73-12021
Designing an extruder with allowance for the properties of ceramic extrusion compounds: IVb.—73-12125
Dictionary of Ceramic Science and Engineering, Second Edition.—73-17525
Double-layered ceramic heater.—73-15940
Electricity potential in the ceramics industry.—73-13616
Faculty of the Glass and Ceramic Machines of the Machine and Textile Institute [Liberec, Czech Republic].—73-15725
Forming principles and manufacturing limits for the production of ceramic tapes.—73-12029
Forty years of ceramic development in France 1950-1990.—73-13621
Forty years of ceramic technology and development.—73-13622
Functional classification of vitreous, vitrocrystalline, and ceramic materials.—73-03392
Fundamentals of bonding ceramic materials to metals.—73-13840
Generation and propagation behavior of laser-induced thermal cracks.—73-16500
High-pressure discharge lamp with ceramic vessel.—73-05217
Materials Science Monographs, Volume 80: Structure and Properties of Ceramics.—73-17532
Mechanical activation of solid-state reactions by grinding and its importance for production of high-technology ceramics[—literature review].—73-13130
Method of manufacture of a contact guide.—73-04996
Mixing in the ceramic industry—an introduction into theory+practice.—73-12046
NACSIS-IR database for academic conferences of the Ceramic Society of Japan.—73-09730
New routes for fabricating ceramic materials.—73-13150
Nonmetallic raw materials in former East Germany.—73-01990
Nonthermal builtup granulation as an alternative to spray-dry particle method.—73-01804
Present status and development of high-technology ceramics in Russia.—73-13636
Problems in producing a thermally stable, high-strength, heat-resistant ceramic.—73-08520
Quasi-isostatic pressing for the production of ceramics.—73-01824
Relationships between toughening mechanisms of ceramics.—73-17420
Role of surfactants in concrete and ceramic fields.—73-00186
Silver chemical coating on ceramics.—73-00266
Sintering of ceramic bodies containing glass.—73-00924
Strength of ceramic structural parts under multiaxial loading.—73-13594
Synthesis of lithium aluminate, mullite, and colored zirconia by a combustion process.—73-09360
Ten years of experience with thermoanalyses.—73-12203
Three decades of expanding decorating horizons.—73-03425
**cerates,**
Influence of $Nd_2O_3$ doping on the reaction process and sintering behavior of $BaCeO_3$ ceramics.—73-16837
**ceria,**
Anisotropy of deposition rate in magnetron sputtering of $CeO_2$.—73-02726
Ce 3*d* and Zr 3*d* X-ray photoelectron spectroscopy spectra of $ZrO_2$-12 mol% $CeO_2$ after heat treatments and $Ar^+$ etching.—73-08565
$CeO_2$ films deposited by dc reactive magnetron sputtering.—73-02736
Characterization and optimization of cerium dioxide films deposited by rf magnetron sputtering.—73-12938
Chemical and electrical properties of Yb-doped strontium cerates in coal combustion atmospheres.—73-02560
Coloration in ceria-doped zirconia induced by reduction heat treatment.—73-08824
Comparative model study of antimony and cerium oxide refining.—73-00599
Destabilization behavior of ceria-stabilized tetragonal zirconia polycrystals by sodium sulfate and vanadium oxide melts.—73-08596
Developments in highly toughened $CeO_2$-$Y_2O_3$-$ZrO_2$ ceramic system.—73-02772
Diffusionless tetragonal–cubic transformation temperature in zirconia–ceria solid solutions.—73-02237
Effect of yttria and ceria on mechanical properties and oxidation behaviors of α-SiAlON ceramics.—73-17296
Effects of long-range forces on oxygen transport in yttria-doped ceria: simulation and theory.—73-13349
Elastic modulus and fracture toughness of $CeO_2$-containing tetragonal zirconia polycrystals.—73-17302
Electric conductivity of $CeO_2$-$Ta_2O_5$ ceramics in an atmosphere of combustion products and in air.—73-05553
Electrochemical liquid deposition [ELD] of ceria.—73-16758
Epitaxial $CeO_2$ buffer layers for $YBa_2Cu_3O_{7-\delta}$ films on sapphire.—73-08062
Exploring the feasibility of producing $CeO_2$-SrO-based solid electrolytes.—73-00968
Grain-boundary modification of ceria-stabilized tetragonal zirconia polycrystals by a small amount of alumina addition.—73-09151
Hartree-Fock periodic study of bulk ceria.—73-05413
High-temperature Hall measurements on cerium dioxide thin films.—73-11249
Influence of substrate temperature on the properties of argon-ion-assisted deposited $CeO_2$ films.—73-12816
Kinetics of $CeO_2$ surface area reduction in a mixture of HCl, $H_2O$, and $O_2$.—73-13414
Large-area epitaxial $CeO_2$ buffer layers on sapphire substrates for the growth of high-quality $YBa_2Cu_3O_7$ films.—73-04752
Low-temperature oxidation and reduction of ceria particles on Rh(111).—73-06816
Low-temperature phase equilibria by the flux method and the metastable-stable phase diagram in the $ZrO_2$-$CeO_2$ system.—73-12623
Magnetic properties of $xCeO_2$–$(1-x)(3B_2O_3$·*PbO) glasses*.—*73-00512*
Mechanical properties of low-temperature sintered ceria-stabilized tetragonal zirconia polycrustals: III, Thermal shock resistance.—73-13564
Mechanical properties of low-temperature sintered ceria-stabilized tetragonal zirconia polycrystals: II, Fracture toughness.—73-13565
Mechanical properties of yttria- and ceria-doped zirconia ceramics.—73-03339
Mechanism of diffusion and ion transport of chloride ions on hydrous ceric oxide.—73-06167
Microdomains in urania-yttria and urania-ceria.—73-01753
Mixing effects in $CeO_2$/$TiO_2$ and $CeO_2$/$SiO_2$ systems submitted to $Ar^+$ sputtering.—73-05437
Opacified enamel for direct-on enameling on unpickled steel plate.—73-10334
Optical properties of ion-assisted-deposited $CeO_2$ films.—73-02653
Optical properties of $TiO_2$, $Y_2O_3$, and $CeO_2$ thin films deposited by electron beam evaporation.—73-02655
Physical properties and output characteristics of piezoelectric transformer of Pb(Mg, Te, Mn, Nb)$O_3$-PZT ceramics with addition of $CeO_2$.—73-11597
Preliminary consideration of the growth behavior of $CeO_2$, $SrTiO_3$, and $SrVO_3$ films on Si substrate.—73-05955
Preparation of $Y_2O_3$-doped $CeO_2$ ceramic for pH electrode.—73-10985
Preparation of $Y_2O_3$-doped $CeO_2$ ceramics for pH electrode.—73-01015
Properties of $CeO_2$ and $CeO_{2-x}$ films: II, High-temperature properties.—73-12868
Protonic and oxide ionic conduction in $BaCeO_3$-based ceramics: effect of partial substitution for Ba in $BaCe_{0.9}Nd_{0.1}O_{3-\alpha}$ with Ca.—73-04156
Raman scattering study of cubic-tetragonal phase transition in $Zr_{1-x}Ce_xO_2$ solid solution.—73-08717
Role of defect interaction in boundary mobility and cation diffusivity of $CeO_2$.—73-17098
Superconductive articles including cerium oxide layer.—73-04880
Synthesis and study of $CeO_2$-$V_2O_5$ ceramic pigment.—73-10900
Synthesis of metastable tetragonal (*t'*) zirconia-ceria solid solutions by the polymerized complex method.—73-17040
Systematic examination of hydrogen ion conduction in rare-earth-doped barium cerate ceramics.—73-01033
Thermal diffusivity of plasma-sprayed coatings of $ZrO_2$ with 8 wt% $Y_2O_3$ and $ZrO_2$ with 25 wt% $CeO_2$.—73-02707
Thermal stability of nanostructured titania and titania-ceria ceramic powders prepared by the sol-gel process.—73-17057
Thermodynamic properties of cerium oxalate and cerium oxide—comment.—73-16377
Transmission electron microscopy characterization of a ceria-fluxed silicon nitride.—73-03209
Ultraviolet absorbing, green-tinted glass.—73-00764
Zirconia-, yttria-, and ceria-based ceramics with high electrical conductivity.—73-10999
**cerium,**
Anion transport in $Ba_{0.5}Ce_{0.5}F_{2.5}$ single crystal with spatially oriented fluctuations of composition.—73-17072
Body of cerium-doped quartz glass.—73-00726
Cerium silicide formation in thin Ce-Si multilayer films.—73-02738
Characteristics of holographic memory and phase conjugate of Ce:Fe:$LiNbO_3$ crystal.—73-02557
Characterization of three-dimensional through-thickness transformation zone in 9-mol% Ce-TZP ceramics.—73-17247
Crystal structure of gadolinium- and yttrium-doped barium cerate.—73-12561
Effect of iron on formation of color centers in cerium-containing silicate glasses.—73-00457
Effects of cerium doping on the resistivity of PTCR barium lead titanate.—73-07468
Grain growth kinetics in alumina–zirconia (CeZTA) composites.—73-09457
Influence of surface charge on the cathodoluminescence of Ce:YAG.—73-02620
Magnetism and electron transport properties of mixed valence $CeMn_{2-x}Si_{2+x}$ crystals [$(0.1 \le x \le 0.25)$].—73-16533
Mechanical properties of low-tempeature-sintered Ce-TZP: I, Bending strength and Weibull modulus.—73-03335
New phosphide $CeNi_{5-x}P_3$ ($x$=0, 1) and its crystal structure.—73-16227
NMR of Cu and Pr in the two-phase compound $Pr_{1.85}Ce_{0.15}CuO_{4-y}$.—73-05440
Optical reflectivity spectra of incommensurate layer compounds, $(CeS)_{1.2}NbS_2$ and $(CeS)_{0.6}NbS_2$.—73-08936

Partially stabilized $ZrO_2$-based laminar ceramic composites.—73-12391
Phase equilibria in the system $CePO_4$-$Na_3PO_4$.—73-02381
Phase relations in the system $Ce_2O_3$-$Al_2O_3$ in inert and reducing atmospheres.—73-16256
Phase relations in the system $Ce_2O_3$-$Ce_2Si_2O_7$ in the temperature range 1150° to 1970°C in reducing and inert atmospheres.—73-16257
Plasticity-induced fatigue damage in [12 mol%] ceria-stabilized tetragonal zirconia polycrystals.—73-17408
Point-contact spectroscopy of $La_{1-x}Ce_xB_6$.—73-08703
Preparation of ultrafine ceria-stabilized zirconia particles coated with yttria.—73-09272
Processing and microstructure of a Ce-doped in situ O´+β´-SiAlON composite.—73-16950
Stress-strain characteristic of Ce-TZP ceramics under compression.—73-06533
Synthesis and structure of cerium titanates in films.—73-02491
Synthesis of a new compound, $Ca_{0.8}Ce_{1.2}Sn_2O_7$, with pyrochlore structure.—73-03040
Temperature dependence of penetration depth and surface resistance of $Nd_{1.85}Ce_{0.15}CuO_4$.—73-16610
Temperature dependence of point-contact spectra for $Ag:Nd_{1.85}Ce_{0.15}CuO_{4-\delta}$.—73-08246

**cermets,**
Abrasive wear rates of certain ceramics and cermets relative to their microhardness and fracture toughness.—73-09540
Active wear mechanisms in a titanium-based cermet when machining steels.—73-03560
Application of silica sol to permeable cermet.—73-06738
Cause of formation of pores in titanium-carbide-based cermet with the addition of zirconium carbide.—73-13804
Cermet surface-distributive heaters based on nickel-titanium powder.—73-00214
Creep characteristics of TiC-$Mo_2C$-Ni cermet sintered after nitrification in the course of raising temperature.—73-06763
Film thickness effects on the optical and electrical properties of Cu-$GeO_2$ thin cermet films.—73-06790
Friction and wear characteristics of $B_4C$-$TiB_2$ ceramics and $Mo_2FeB_2$-Fe-type cermets.—73-13839
High neutron absorbing refractory compositions of matter and methods for their manufacture.—73-03684
Influence of morphology on the optical properties of nanocermets and granular inhomogeneous media.—73-13847
Influence of the deposition conditions on the optical, electrical, and magnetic properties of sputtered Fe-$Al_2O_3$ and Ni-$Al_2O_3$ nanocermet films.—73-10239
Long-lasting thermocouple for high-temperature measurements of liquid metals, mattes, and slags.—73-00285
Mechanism of reaction sintering of iron–iron boride cermets.—73-06822
Nickel cermet, and process for preparing it.—73-03698
Relation between microstructures and cutting performance of titanium-carbide-based cermet containing nitrogen.—73-06850
Stability of cermet coatings and their dependence on the distribution of elements.—73-00267
Surface-coated cermet blade member.—73-10353
TiC-base cermet alloy.—73-00300
Titanium-carbonitride-based cermets: processes and properties.—73-06867
Toughening of Ni-bonded $Cr_3C_2$ by Mo particulates.—73-10291

**cesium,**
Acoustic study *p-T* phase diagram of $Cs_2HgCl_4$ crystals.—73-16026
Anisotropy of low-temperature vibrational characteristics illustrated by example of thermal conductivity of ferroelastic $CsDy(MoO_4)_2$.—73-16032
Anomalous behavior of ultrasonic velocity in cesium borate glasses.—73-10418
Anomalous paraelectric behavior of hydroxyl ion in a cesium bromide crystal.—73-08552
Cesium on GaP(110) surfaces: a confirmation of the metal-induced gap states-plus-defects model.—73-11095
Crystal structure of $Cs_3Nd(MoO_4)_3$.—73-02193
Crystal structure of ferroelastic phase II of $Cs_3H(SeO_4)_2$.—73-02194
Crystal structure of the cesium bronze $Cs(Mo_{0.95}W_{0.05})_7O_{21}$.—73-02215
Defect-induced smoothing of the superionic phase transition in $Cs_{1-x}M_xHSO_4$ protonic conductors: I, Potassium substitution.—73-03086
Defect-induced smoothing of the superionic phase transition in $Cs_{1-x}M_xHSO_4$ protonic conductors: II, Lithium substitution.—73-03087
Defect-induced smoothing of the superionic phase transition in $Cs_{1-x}M_xHSO_4$ protonic conductors: III, Rubidium substitution.—73-03088
Eigen luminescence of $CsMgCl_3$ single crystals.—73-02592
Fusibility diagram of the system $CsPO_3$-$Ga(PO_3)_3$ and the properties of the compound $CsGa(PO_3)_4$.—73-16160
High-temperature phase transitions in $CsDy(MoO_4)_2$.—73-02283
High-temperature synthesis of $CsAlSiO_4$-ANA, a new polymorph in the system $Cs_2O$-$Al_2O_3$-$SiO_2$: I, The end member of ANA type of zeolite framework.—73-02284
Lattice dynamics and specific heat of layered $CsDy(MoO_4)_2$ crystals.—73-16193
Magnetooptic channel waveguides in Ce-substituted yttrium iron garnet.—73-11665
Manifestations of periodic superstructure in $CsDy(MoO_4)_2$.—73-16209
Neutron diffraction refinement of structure of nonlinear optical crystal of $Cs_2UO_2Cl_4$.—73-01755
Peculiarities of low-temperature lattice dynamics of layered crystals $CsR(MO_4)_2$ (R=Dy,Gd).—73-08689
Pollucite via low-temperature reaction of glassy frits.—73-14461
Radiative and nonradiative decay of electronic excitations in CsCl crystals.—73-17096
Rf microwave dielectric relaxation and conductivity in $Cs_{1-x}M_xHSO_4$ disordered protonic conductors.—73-01021
Structural changes in isostoichiometric family of $Cs_2[Ln(NO_3)_5(H_2O)_2]$ [Ln=La, Ce, Nd].—73-02447
Structure phase transitions in $CsDy(MO_4)_2$.—73-08761
Symmetry of the unoccupied states in Cs graphite intercalation compounds by X-ray absorption.—73-02474
Synthesis and properties of the cuprates of cesium and sodium.—73-02488
Thermal decomposition of the cesium ferrate(VI).—73-12719
Thermostimulated luminescence of CsI:Na crystals with different contents of the activator in the region of destruction of $Na^0$ centers.—73-02715
Three-dimensional/one-dimensional transition in the $Cs^+$ sublattice of the mixed valence $CsTi_8O_{16}$ hollandite: structures at 297 K and 673 K.—73-02527
Ultrasonic velocity in cesium borate glasses.—73-00571
X-ray photoemission spectroscopy studies of cesium and oxygen on GaAs(100).—73-07865
X-ray study of the ordering behavior in the low-temperature phase of $Cs_3D(SeO_4)_2$.—73-08795

**chalcogenides,**
$^{19}F$ nuclear magnetic resonance investigation of the glass $[(Ga_2S_3)_{0.25}\cdot(GeS_2)_{0.75}](NaF)_{0.25}$.—73-13986
Absorption edge structure of cubic cadmium and zinc chalcogenides.—73-14764
Assessment of the average coordination number concept in multicomponent, isostructural chalcogenide glasses.—73-13928
Cadmium chalcogenide semiconducting thin films prepared by electrodeposition from boiling aqueous electrolytes.—73-11088
Calorimetric and morphological study of the crystallization process in some chalcogenide glasses.—73-13932
Chalcogenide glasses of the system Ag-Cu-As-Se investigated by differential thermal analysis.—73-14140
Characteristics and new capabilities of intercalated chalcogenide semiconductors.—73-07403
Corona discharge-stimulated transverse diffusion of silver in glassy As-Se films.—73-00603
Crystallization of doped chalcogenide glasses.—73-13953
Degrees of freedom and ionic mobility in silver chalcogenide glasses.—73-00318
Determination of zinc, cadmium, and lead during investigation of nonstoichiometry of chalcogenides of metals.—73-12129
Direct observation of medium-range order in glasses by means of electron field emission.—73-13961
Effect of external action on the optical loss from fiber light guides made of chalcogenide glass.—73-00455
Effect of uniaxial compression on phase transitions in the ferroelectrics $Sn_2P_2S_6$ and $Sn_2P_2Se_6$.—73-15257
Electrical and optical studies in some Bi-doped amorphous chalcogenide thin films.—73-07482
Electron and hole energy spectrum parameters of cubic cadmium and zinc chalcogenides.—73-14878
Electron density distribution in $CdCr_2S_4$ and $CdCr_2Se_4$ crystals: precise X-ray diffraction study.—73-02254
Folded acoustic phonons [observed] by Raman scattering in amorphous chalcogenide superlattices.—73-08625
Glass formation and some properties of the Ge-As-Se-Te glasses and amorphous films in a region with Te contents [of] 45–70 at.%.—73-14195
Glass phases based on the Se-S-X (X=Cu, Zn) system.—73-00347
Growth of tellurium oxychalcogenide single crystals.—73-16163
Infrared chalcogenide optical fibers.—73-00505
Interaction of components in fluorochalcogenide vitreous systems.—73-14013
Intrinsic and photoinduced elliptical dichroism and birefringence in chalcogenide glasses.—73-14212
Luminescence and Raman light scattering in some I-III-$VI_2$ crystals and their solid solutions.—73-16204
Model of the Nernst-Ettinghausen effect in chalcogenide glasses.—73-01247
Natural and photoinduced optical activity of chalcogenide glasses.—73-00518
New arguments for off-center position of tin atoms in $Pb_{1-x}Sn_xTe_{1-y}Se_y$ and $Pb_{1-x}Sn_xTe_{1-y}S_y$.—73-16548
New chalcogenide glass with conductivity due to copper ions.—73-14233
Nonlinear Fabry-Perot cavity with chalcogenide glass thin films.—73-07056
Nonmetallic glasses prepared by melt spinning method: glass formation, properties, anomalies.—73-14442
Optical and magnetooptical properties of $HgCr_2X_4$ (X=S, Se) single crystals.—73-16552
Optical bistability and photoinduced quenching of light scattering in bulk chalcogenide glasses under sub-band-gap excitation.—73-15070
Origin of photostructural changes in chalcogenide glasses.—73-14062
Peculiar behavior of carrier effective mass and lifetime in $CuCr_2S_{2.5}Se_{1.5}$ ferromagnetic semiconductor with strong *s-d* interband exchange.—73-15085
Photoinduced anisotropy and gyrotropy in chalcogenide glasses.—73-14247
Photostructural transformations in chalcogenide glassy semiconductor films by photoelectron spectroscopy.—73-01284
Pulsed vacuum uv irradiation of AsSe and $As_2S_3$ glassy chalcogenide semiconductor films.—73-04458
Self-limiting growth of zinc chalcogenides and their superlattices.—73-04476
Size-quantized semiconductor cadmium chalcogenide particles in Langmuir-Blodgett films.—73-07801
Stabilization and thermoelectric properties of rare-earth chalcogenides γ-$LaS_x$.—73-08740
Structural stability of chalcogenide glasses in submicron multilayer films.—73-14100
Structure formation in Cd chalcogenide films produced from atomic-molecular beams.—73-15187
Third-order nonlinear optical properties of $As_2S_3$ chalcogenide glass.—73-07091
Transport processes in chalcogenide glasses of silver-copper-arsenic-selenium system.—73-00569
Tunnel state parameters in lead chalcogenides.—73-16386
Vibrational resonance Raman spectra and the valence force field of iridium dichalcogenides $IrS_2$ and $IrSe_2$.—73-02538
X-ray study of $TlGaSe_2$ and $TlInS_2$.—73-01367

**chalcopyrite,**
Transport properties of $CuInS_2$, $CuInSe_2$, and $CuInTe_2$ thin films.—73-09426
Valence manipulation and homojunction diode fabrication of chalcopyrite structure Cu-In-Se thin films.—73-04508

**chamotte,**
History of chamotes: 1950-1990.—73-12280

**characterization,**
Ceramic surface preparation—microscopy analysis.—73-05023
Characterization of Ceramics.—73-13653
Characterization of pulsed-laser-deposited zinc oxide.—73-13377
Characterization techniques and properties of nonaqueous magnetic colloids.—73-07927
Characterization techniques for agglomerate structures.—73-08380
Light scattering: a basis of effective particle characterization techniques.—73-15811
Particle size analysis by laser diffraction.—73-05077
Plasma characterization and process control diagnostics.—73-09240
Preliminary study and laboratory characterization of the Carpentier pyrophyllite mineral.—73-05145
Rheology: a versatile materials characterization technique.—73-12189
Science and the art museum: the analysis of archaeological materials.—73-09795
Surface characterization.—73-08447
Synthesis and characterization of titanium pillared clays: influence of the temperature of preparation.—73-03038
Temperature-programmed desorption [TPD] as a surface characterization method of ceramic powders.—73-08448
Thermal analysis for characterization of ceramic materials.—73-12204
Thermal wave photopyroelectric characterization of advanced materials: state of the art.—73-08450
Ultrasonic characterization of green and sintered ceramics: I, Time domain.—73-12206
Vickers indentation method applied to the characterization of ceramic glazes.—73-08459

**charge density wave,**
CDW suppression and photoinduced gap states in $BaBiO_3$.—73-02156
Damping of CDW's in $NbSe_3$.—73-07433
Raman spectroscopic study of $K_{0.3}MoO_3$ in charge density wave (CDW) states.—73-05467
Sliding motion of CDW in quasi-2-D ν-$Mo_4O_{11}$ crystal.—73-05638

**charge,**
Algorithm for calculating glass charge compositions.—73-00587
Charge reversal of kaolinite by hydrolyzable metal ions: an electroacoustic study.—73-12754
Dependence of thermomechanical properties of silicate glass on the ratio of charge to cullet.—73-00609
Frit making (frit melting) during inclined flow of the charge.—73-00632
Frit melting in a moving charge along a ramp.—73-00633
Interbilayer charge dynamics in $YBa_2Cu_3O_{6+x}$.—73-15520
Monte Carlo model for trapped charge distribution in electron-irradiated α-quartz.—73-12836
Positive charge generation in $SiO_2$ by electron-impact emission of trapped electrons.—73-13362
Recharging ceramics.—73-10986
Role of the radicals $PO_3^{2-}$ in accumulation of charge upon irradiation of phosphate glasses by electrons.—73-00397

**checker brick,**
Energy reduction by z-type checker blocks in regenerators.—73-00813
Features of operation of blast-furnace hot-blast stoves with poured checkerwork.—73-00815
Stressed and strained condition of the checkerwork, lining, and shell of a blast-furnace hot-blast stove with poured checkerwork.—73-00870

**chemical analysis,**
Chemical analysis of cement.. "a more complete solution."—73-03441
Chemical fingerprinting in detrital ilmenite: a viable alternative in provenance research.—73-15899
Determination of oxygen in oxide ceramics by inert gas fusion analysis—effect of bath metals.—73-16108
Quantitative chemical analysis of borosilicate glasses by the inductively coupled plasma-atomic emission spectroscopy method.—73-03754
Sampling and analysis of KGa-1B well-crystallized kaolin source clay.—73-12678

**chemical reaction,**
Mechanically induced reactivity of solids.—73-13131
Reactions of copper and copper oxides with nitride ceramics (AlN, SiAlON, $Si_3N_4$) and oxide additives ($Al_2O_3$, $Y_2O_3$, $SiO_2$, MgO).—73-03230

**chemical resistance,**
Effect of bituminous emulsions on the sulfate resistance of cement pastes.—73-00071
IRSS investigations of chemical resistance of sealing glasses.—73-00361
Method for increasing chemical resistance of porcelain enamels, especially titanium porcelain enamels: II.—73-10253
Novel porous glass with chemical resistance and good shaping ability prepared from borosilicate glass containing ZnO.—73-00672
**chemical vapor deposition (CVD),**
Active plasma species in TiN film formation process by plasma CVD method.—73-02723
Aerosol chemical vapor deposition of metal oxide films.—73-12336
Amorphous $Si_3N_4$ thin films deposited by dc-PCVD plasma CVD method.—73-05690
Apparatus for depositing of a material on a substrate by chemical vapor deposition.—73-15706
Chemical foundations in understanding the step coverage problem in chemical vapor deposition using silane chemistry.—73-09039
Chemical vapor deposition of ß-SiC by pyrolysis of MTS and effect of excess C sources.—73-09041
Chemical vapor deposition of borophosphosilicate glass initiated by high-frequency discharge plasma.—73-00594
Chemical vapor deposition of $SiO_2$ from tetraethoxysilane: the effect of the surface hydroxyl concentration.—73-02745
Coating porous materials with metal oxides and other ceramics by MOCVD.—73-05208
Comparison of the pyrolysis products of dichlorodimethylsilane in the chemical vapor deposition of silicon carbide on silica in hydrogen or argon.—73-16679
CVD diamond by alternating chemical reactions.—73-12459
CVD diamond for coating twist drills.—73-05296
CVD diamond or diamondlike carbon for chemical-mechanical polish etch stop.—73-02093
CVD method for forming Bi-containing oxide superconducting films.—73-11950
CVD method for forming metal boride films using metal borane cluster compounds.—73-12460
CVD process for the manufacture of ceramic fibers.—73-04969
CVD synthesis and thermoelectric properties of boron carbide.—73-12966
Dependence of electrical properties on film thickness in $Pb(Zr_xTi_{1-x})O_3$ thin films produced by metallorganic chemical vapor deposition.—73-08832
Deposition behavior of $Pb(Zr_xTi_{1-x})O_3$ thin films by metallorganic vapor deposition.—73-12974
Deposition of optical coatings by laser-assisted evaporation and by photoassisted chemical vapor deposition.—73-12977
Deposition of tantalum oxide films by ArF excimer laser chemical vapor deposition.—73-05738
Deposition rates of titanium nitride plates prepared by chemical vapor deposition of $TiCl_4$+$NH_3$ system.—73-16698
Diamond and its preparation by chemical vapor deposition method.—73-05297
Diamond chemical vapor deposition (CVD) via microwave-excited plasma from water-ethanol solutions.—73-05741
Diamond crystal growth apparatus.—73-04971
Difluorosilylene as a precursor for the chemical vapor deposition of titanium silicide.—73-12988
Digital chemical vapor deposition of silicon oxide/nitride and its surface reaction study.—73-03832
Dimer formation on (001)GaAs under organometallic chemical vapor deposition growth conditions.—73-07446
ECR CVD method for forming BN films.—73-12464
Effect of mercury uv photolysis on vapor deposition of $SnO_2$.—73-13008
Effect of pressure on plasma-assisted chemical vapor deposition of silicon oxide(s).—73-09088
Effect of the chemical nature of transition metal substrates on chemical vapor deposition of diamond.—73-06777
Effect of water vapor on the growth of aluminum oxide films by low-pressure chemical vapor deposition.—73-09101
Effects of $C_3H_8$ on the chemical vapor deposition of silicon carbide in the $CH_3SiCl_3$+$H_2$ system.—73-13028
Effects of oxygen doping on properties of microcrystalline silicon film grown using rapid thermal chemical vapor deposition [RTCVD].—73-16466
Epitaxial growth of GaAs prepared by low-pressure MOCVD at low temperatures.—73-07506
Erosive wear behavior of chemical-vapor-deposited multilayer tungsten carbide coating.—73-06784
Fabrication of ceramic composites by CVD/HP process.—73-16772
Formation of epitaxial $Pb(Zr,Ti)O_3$ thin film by CVD.—73-02832
Free-standing diamond sheet and method and apparatus for making [the] same.—73-05301
FTIR, SIMS, and electrical characterization of $Si_3N_4$ thin films obtained from CVD assisted by in situ electrical discharge.—73-04107
Growth kinetics and reaction mechanism of silicon chemical vapor deposition from silane.—73-02844
Growth of epitaxial PLZT film by CVD.—73-02846
Heat-treated chemically vapor deposited products and treatment method.—73-03683
Heteroepitaxy of $TiO_2$, $VO_2$ films, and $TiO_2$/$VO_2$ multilayers grown on sapphire(1$\bar{1}$20) by metallorganic chemical vapor deposition.—73-09160
High-purity and high-density SiC ceramics.—73-02081
High-quality $Y_1Ba_2Cu_3O_{7-\delta}$ ultrathin films produced in situ by high-growth-rate chemical vapor deposition.—73-04733
High-temperature oxidation of chemically vapor deposited silicon nitride in a carbon monoxide-carbon dioxide atmosphere.—73-17222
Homoepitaxial growth of diamond by an advanced hot-filament chemical vapor deposition method.—73-09162
Hot filament activated chemical vapor deposition of boron nitride.—73-02851
Improvement of thermal stability of SiC fiber by CVD-C, SiC coating.—73-02861
Interfacial characterization of chemically vapor deposited titanium carbide on cemented carbide.—73-16186
Kinetics in thermal laser-assisted chemical vapor deposition of titanium carbide.—73-13109
Kinetics of chemical vapor deposition of tungsten carbide.—73-13110
Laser-assisted CVD process forming oxide superconducting films.—73-11959
Low-energy ion doping of growing diamond by CVD.—73-02102
Low-pressure chemical vapor deposition process for depositing high-density, highly conformal titanium nitride films of low bulk resistivity.—73-02103
Low-temperature [≥300°C] chemical vapor deposition of silicon nitride from tetrasilane and hydrogen azide.—73-05898
Method for determining thickness of chemical-vapor-deposited layers.—73-12208
Method for forming CVD thin glass films.—73-13918
Method for forming diamond films by plasma jet CVD.—73-05311
Method for growing a diamond thin film on a substrate by plasma-enhanced chemical vapor deposition.—73-02109
Method for producing CVD diamond film substantially free of thermal-stress-induced cracks.—73-12487
Method for producing flat CVD diamond film.—73-05314
Method of chemical vapor deposition of boron nitride using polymeric cyanoborane.—73-16004
Method of forming a superconducting oxide layer by MOCVD.—73-11970
Method of forming silicon carbide.—73-12492
Method of growing thin film.—73-05317
Method of making hard boron nitride by a plasma CVD method employing beam irradiation.—73-12494
Method of manufacturing a diamond heat sink.—73-12495
Microstructure and growth of SiC film by excimer laser chemical vapor deposition at low temperatures.—73-09209
MOCVD erbium sources.—73-04407
MOCVD of *a*-axis or *b*-axis-oriented superconducting Bi-Sr-Ca-Cu-O films.—73-04856
MOCVD of beta-alumina.—73-16872
Molybdenum-enhanced low-temperature deposition of crystalline silicon nitride.—73-12501
Monte Carlo simulation for dissociation of hydrogen during electron-assisted chemical vapor deposition of diamond.—73-13142
Morphology and structure of tantalum oxide deposit prepared by KrF excimer laser CVD.—73-12633
Nucleation and growth of chemical vapor deposition TiN films on Si(100) as studied by total reflection X-ray fluorescence, atomic force microscopy, and Auger electron spectroscopy.—73-09496
Numerical analysis of deposition rates of zirconium thin films by thermal chemical vapor deposition.—73-02913
Numerical simulation of hydrodynamics and heat transfer in a hot-wall CVD reactor.—73-13156
Optimizing metallorganic chemical vapor deposition of YBCO films: substrates and $pO_2$-$T$ conditions.—73-01621
Organometallic chemical vapor deposition of $SnO_2$ single-crystal and polycrystalline films.—73-02914
Oxygen and hydrogen effects on the chemical vapor deposition of aluminum nitride films.—73-05942
Phase transformation in chemically vapor deposited κ-alumina.—73-17180
Photoemission study of low pressure chemical vapor deposited and reactively sputtered titanium nitride in W/TiN/Si.—73-07721
Photoenhanced chemical vapor deposition: system design consideration.—73-16898
Plasma-enhanced CVD of oxide superconducting films by utilizing a magnetic field.—73-04864
Predicting intrawafer film thickness uniformity in an ultralow pressure chemical vapor deposition reactor.—73-16903
Preparation of $BaTiO_3$ films by CVD.—73-05969
Preparation of magnesium nitride powder by low-pressure chemical vapor deposition.—73-02953
Preparation of $ZrO_2$-$Y_2O_3$ films by CVD using ß-diketone metal chelates.—73-05987
Process for chemical vapor purification of group IIIA metal fluorides.—73-02122
Process for depositing titanium nitride film by CVD.—73-12508
Rapid formation of zinc oxide films by an atmospheric-pressure chemical vapor deposition method.—73-06006
Reaction mechanism of electrochemical vapor deposition [EVD] of yttria-stabilized zirconia film.—73-13227
Reactive-flow simulation of the hot-filament chemical vapor deposition of diamond.—73-13234
Recent progress and application of synthesized diamond (present status and future of vapor phase deposition of diamond).—73-02086
Reduced thermal budget processing of Y-Ba-Cu-O high-temperature superconducting thin films by metallorganic chemical vapor deposition.—73-01647
Role of gas-phase nucleation in the preparation of $TiO_2$ films by chemical vapor deposition.—73-09307
Safety and environmental aspects of CVD.—73-08362
Scaling laws for diamond chemical vapor deposition: I, Diamond surface chemistry.—73-13244
Scaling laws for diamond chemical vapor deposition: II, Atomic hydrogen transport.—73-13245
Self-limiting adsorption and in situ optical monitoring for atomic layer epitaxy of oxide superconductors.—73-04804
Sequential deposition of diamond from sputtered carbon and atomic hydrogen.—73-13250
Sequential deposition of $SiO_2$ and poly-Si in isolation trenches.—73-06034
Silicon nitride elaborated by a low-pressure chemical vapor deposition from $Si_2H_6$ and $NH_3$ at low temperature.—73-03002
Silicon nitride films deposited from $SiH_2Cl_2$-$NH_3$ by low-pressure chemical vapor deposition: kinetics, thermodynamics, composition, and structure.—73-08731
Silicon oxynitride films deposited by mercury photosensitization chemical vapor deposition.—73-16987
Single-phase deposition of α-gallium nitride by a laser-induced transport process.—73-06047
$SiO_2$ films by low-pressure chemical vapor deposition using diethylsilane—processing and characterization.—73-03015
Synthetic Diamond: Emerging CVD Science and Technology (Electrochemical Society Series).—73-17538
Temperature dependence of species concentration near the substrate during diamond chemical vapor deposition.—73-09371
Thermal oxidation characteristics of chemical vapor deposited diamond films.—73-03232
Thermodynamical and experimental analyses of chemical vapor deposition of ATO from $SnCl_4$-$SbCl_5$-$H_2O$ gas mixture.—73-12722
Thin $TiO_2$ films prepared by low-pressure chemical vapor deposition.—73-04180
$TiO_2$-$SnO_2$ deposits prepared by CVD.—73-06123
Two-precursor model for low-pressure chemical vapor deposition of silicon dioxide from tetraethylorthosilicate.—73-13328
X-ray absorption study of diamond films grown by chemical vapor deposition.—73-02540
**chemical vapor infiltration,**
Ceramic matrix composites by microwave-assisted CVI.—73-05700
Chemical vapor infiltration of boron nitride interphase in ceramic fiber preforms: discussion of some aspects of the fundamentals of the isothermal chemical vapor infiltration process.—73-02746
Chemical vapor infiltration using microwave energy.—73-04966
Chemical vapor infiltration: dispersed and graded depositions for ceramic composite.—73-16675
Effects of deposition mechanisms in the modeling of forced-flow/temperature-gradient chemical vapor infiltration [FCVI].—73-05778
Microwave energy-assisted chemical vapor infiltration.—73-01869
Model for the isothermal isobaric chemical vapor infiltration in a straight cylindrical pore: I, Description of the model.—73-13139
Modeling the densification of porous structures in CVI ceramic composites processing.—73-16873
Production of ceramic matrix composites by CVI and DMO [directed metal oxidation] for industrial heating industry.—73-06001
Scaleup and modeling of forced chemical vapor infiltration.—73-16979
**chemicals,**
Lithium chemicals.—73-12284
**chemisorption,**
Electronic and molecular dynamics of chemisorption on α-$Fe_2O_3$ with time-delayed injection of donor-acceptor gases.—73-08862
**chemistry,**
Effect of glass chemistry on the microstructure and properties of self-reinforced silicon nitride.—73-06209
Optical basicity and glass chemistry.—73-00380
**chevron notch,**
Evaluation of fracture toughness by chevron V-notch method.—73-13525
**chlorides,**
Acoustic study *p*-*T* phase diagram of $Cs_2HgCl_4$ crystals.—73-16026
Action of chloride ions on hydrated cement pastes: influence of the cement type and long-time effect of the concentration of chlorides.—73-03433
Appraisal of steel corrosion threat with chlorides in reinforced concrete construction.—73-00026
Calculation of chloride diffusion coefficients in concrete from ionic migration measurements.—73-03439
Chemical attack on hardened cement pastes of blended cements: I, Attack of chloride solutions.—73-00036
Chloride binding capacity [CBC] and binding isotherms of OPC [ordinary portland cement] pastes and mortars.—73-00037
Chloride-induced corrosion of reinforcing steel.—73-03443
Comparison between etching in $Cl_2$ and $BCl_3$ for compound semiconductors using a multipolar electron cyclotron resonance source.—73-04272
Comparison of two methods for measuring the chloride ion permeability of concrete.—73-09860
Diffusion of chlorides into concrete—influence of PFA [pulverized fuel ash] quality.—73-00064
Distribution and growth of isolated spherical particles of separated AgCl phase in photochromic glass from the standpoint of Greenwood theory.—73-00326
Effect of cement composition on chloride binding and corrosion of reinforcing steel in concrete.—73-00073

Effect of chloride and sulfate ions on reinforcement corrosion.—73-03454
Effect of hydrostatic pressure on phase transitions in perovskite-like crystals of $RbCl/CdCl_2$ system.—73-16116
Effects of nickel chloride and calcium chloride on hydration of portland cement.—73-06651
Eigen luminescence of $CsMgCl_3$ single crystals.—73-02592
Electrochemical extraction of chlorides from concrete: I, A qualitative model of the process.—73-13717
Electrochemical removal of chloride from hardened cement paste.—73-13719
Electronic properties of ionic insulators on metal and semiconductor surfaces: RbCl on Si(100) and W(110).—73-04096
Evaluation of $AgNO_3$ solution spray method for measurement of chloride penetration into hardened cementitious matrix materials.—73-01895
Factors affecting use of calcium chloride in concrete.—73-06654
Field method for measuring the chloride content of concrete.—73-13725
Growth of $YBa_2Cu_3O_{7-\delta}$ single crystals with the aid of an NaCl-KCl flux.—73-01565
In situ passivation of GaAs after $BCl_3/Cl_2$ reactive ion etching.—73-07581
Influence of autogenous healing of cement mortar on chloride corrosion of embedded steel bars in mortar.—73-10003
Influence of PFA [pulverized fly ash], slag, and microsilica on chloride-induced corrosion of reinforcement in concrete.—73-00118
Influence of sodium chloride on the corrosion and exudation of fused cast refractories.—73-14597
Influence of soluble chlorides on the rheological properties of suspensions of transition-metal oxides.—73-02872
Initial steps of corrosion in the steel/$Ca(OH)_2$+$Cl^-$ system—the role of heterogeneities on the steel surface and oxygen supply.—73-03492
Interaction of magnesium polyboride and zinc chloride.—73-16179
Interaction pathway of chloride ions with $\gamma$-$Al_2O_3$: surface acidity and thermal stability of the Cl/$\gamma$-$Al_2O_3$ system.—73-08892
Ionic conductivities of spinel-type quaternary lithium chlorides: phase diagrams of $LiCl$-$M^ICl$-$M^{II}Cl_2$ ($M^I$=Cu, Na; $M^{II}$=Mn, Cd, Mg).—73-05426
Neutron diffraction refinement of structure of nonlinear optical crystal of $Cs_2UO_2Cl_4$.—73-01755
Periodicity in change of crystallographic properties of the lanthanide dichlorides.—73-12647
Preparation and phosphate ion exchange properties of a hydrotalcite-like [HTAL] compound.—73-08710
Preparation of $SiCl_4$ from rice hull ashes: III, FTIR-PAS analysis of chlorination mechanism of rice hull ashes containing alkaline and alkaline-earth metal salts.—73-02969
Problematic points of testing for chloride ion content in sea sand for concrete.—73-10095
Properties of $CaCl_2$ hydrate with an inorganic powder: I, Electrical conductivity of $CaCl_2$·$nH_2O$ ($n$=6–7.35) with $\alpha$-$Al_2O_3$ powder.—73-12867
Radiative and nonradiative decay of electronic excitations in CsCl crystals.—73-17096
Rapid method for measuring the acid-soluble chloride content of powdered concrete samples.—73-10128
Refinement of the crystal structures of $Cu_6O_8InCl$ and $Cu_6O_8Cu_2Cl$ by neutron powder diffraction.—73-08721
Salt-occluded zeolites as an immobilization matrix for chloride waste salt.—73-01757
Selective regrowth of III-V epitaxial layers by low-pressure organometallic vapor phase epitaxy [OMVPE] using $CCl_4$.—73-07791
Sol-gel-derived AgCl photochromic coating on glasses.—73-14498
Solubility of the chlorides of copper, cadmium, and sodium in borate and aluminoborosilicate glasses.—73-14084
Structural study on the composite: mordenite with inorganic salt.—73-02455
Structures and crystal chemistry of magnesium chloride and cadmium chloride.—73-02469

**chlorination,**
Effect of sodium chloride on chlorination of a mixture of bismuth(III) sulfide and iron(III) oxide.—73-12576

**chlorine,**
Adsorption and thermal desorption of chlorine from GaAs(100) surfaces.—73-07377
Barrierless dimer breaking at semiconductor surfaces by chlorine atoms.—73-14782
Cold decomposition and potentiometric titration of chlorine in glass and raw materials.—73-05028
Compensation defects in CdTe:Cl samples grown by different techniques.—73-11116
Crystal structure of the chloraluminates of titanium(II), $Ti(AlCl_4)_2$, and refinement of the crystal structure of $AlCl_3$.—73-12563
Effects of chlorine-based gettering on the electrical properties of rapid thermal oxidation/nitridation dielectric films.—73-07309
Enhanced etching of Si(100) by neutral chlorine beams with kinetic energies up to 6 eV.—73-04318
Identification of the volatile reaction products of the $Cl_2$+GaAs etching reaction.—73-11256
Interactions in the system $Fe_2O_3$-$SO_2$-$Cl_2$ investigated by the mass spectrometric method.—73-16181
Interactions of a mixture of tin and antimony oxides with chlorine.—73-16183
Selective doping of *n*-type ZnSe layers with chlorine grown by molecular beam epitaxy.—73-04474
Structure of low-temperature (170 K) phase and piezoelectric properties of cesium tetrachloromercurate.—73-16336
Synthesis and thermal expansion of glasses and melts of the system Te-Cl.—73-14289

**chromates,**
Crystal growth and magnetic characterization of $Zn_{1-x}Mn_xCr_2O_4$ [$x$=0–1] single crystals.—73-07930
Crystal growth and structural study of the new series $Y(OH)CrO_4$, $Dy$-$Lu(OH)CrO_4$: crystal structure of $Er(OH)CrO_4$.—73-02177
Crystal structure of neodymium and europium chromate heptahydrate: synthesis, infrared spectra, and thermal behavior of lanthanoid chromate heptahydrates, $[Ln_2(CrO_4)_3(H_2O)_5]$·$2H_2O$ ($Ln$=La, Pr, Nd, Sm, Eu, Gd).—73-02203
Crystal structure of new pyroelectric $RbLiCrO_4$ at room temperature.—73-02207
Defect structure, nonstoichiometry, and phase stability of Ca-doped $YCrO_3$.—73-03085
Electrode and method of interconnection sintering on an electrode of an electrochemical cell.—73-11015
EPR of the thermally produced $CrO_4^{3-}$ in $CrO_4^{2-}$-doped $(NH_4)_3H(SeO_4)_2$ crystals.—73-02269
Fabrication and characterization of $NiCr_2O_4$ spinel.—73-07322
Frequency response analysis of the fast ion-conducting system cuprous iodide–silver chromate.—73-07326
Li-doped $LaCrO_3$ ceramics.—73-13117
Low-temperature preparation and characterization of pure-phase lanthanide chromates(V) by the citrate gels process.—73-05900
Magnetic ordering in disordered spinels $Zn_xMg_{1-x}FeCrO_4$.—73-07951
Mossbauer and magnetization study of the mixed spinel $CoFe_{2-x}Cr_xO_4$.—73-11667
Preparation of perovskite-type oxide, $LaCrO_3$, by thermal decomposition of $La[Cr(CH_2(COO)_2)_3]$·$6H_2O$.—*73-13198*
Solid solutions of ettringites: II, Incorporation of $B(OH)^{4-}$ and $CrO_4^{2-}$ in $3CaO$·$Al_2O_3$·$3CaSO_4$·$32H_2O$.—73-10155

**chrome,**
Change of spinel in magnesia chrome bricks used in vacuum-oxygen decarburization [VOD] refining furnaces.—73-07198
Chrome-corundum refractory in the packing for a glass furnace regenerator.—73-00787
Effect of ultrafine powder on properties of rebonded fused magnesia chrome refractories.—73-07207
Fabrication of quality magnesite-chrome brick.—73-04001
Government regulation increases for chrome-bearing hazardous waste.—73-17484
Influence of micropowders on microstructure and properties of synthetic magnesite-chrome clinkers.—73-04007
Magnesia chrome refractories—quality and performance.—73-10740
Magnesite chrome refractories and its usage in nickel converter.—73-14601
Reaction between chrome ore and slag.—73-00846
Use of water-granulated chrome slag as fine aggregate for concretes.—73-10187

**chromia,**
Acoustics of magnetoelectric antiferromagnetics: rhombohedral crystals.—73-11645
Change in pigment color in the system $CoO$-$Cr_2O_3$-$Al_2O_3$.—73-00899
Chromia on silica and alumina catalysts: surface structural consequences of interfacial events in the impregnation course of aquated Cr(111) ions.—73-16055
Coating of components with final impregnation with chromia or phosphate forming compound.—73-12353
Discharge of the raw materials used in the production of chromium-oxide-based products from bunkers.—73-01774
Effect of addition of chromium(VI) oxide on the formation of Tl-Sr-Ca-Cu-O 1212 phase.—73-04699
Effects of additives on friction and wear behavior of $Cr_2O_3$ coatings.—73-09585
Effects of surfactants on the tribological properties of a $Cr_2O_3$ coating.—73-06399
EPR investigation of chromium ions in $Ca_2SiO_4$-$Cr_2O_3$ and $Ca_3Si_2O_7$-$Cr_2O_3$ solid solutions.—73-16139
Friction and wear mechanisms of multilayered plasma-sprayed ceramic coatings.—73-09604
Impregnation and firing of $Al_2O_3$ compact with $CrO_3$ saturated solution.—73-02857
Improvement in tribological properties of chromium oxide coating at high temperature by solid lubricants.—73-09616
Reflectance spectroscopy of oxide films of $\alpha$-$Cr_2O_3$ and $\alpha$-$Fe_2O_3$.—73-08722
Resonant photoemission determination of the valence electronic structure of $Cr_2O_3$.—73-08723
Structural and physical characterization of the $Li_2O$:$P_2O_5$:$CrO_{1.5}$ ion-conducting glasses.—73-07360

**chromites,**
Brown spinel pigments based on zinc chromite, method of their production and use.—73-05148
Chromite.—73-12264
Citrate gel processing of the perovskite lanthanide chromites.—73-05707
Corundum-chromite refractories with improved thermal shock resistance.—73-00795
Effect of indirect and direct exchange interactions on magnetic structure of $CuFe_2O_4$ and $CuFeCrO_4$ ferrites.—73-15317
Effect of preparation method on chemical stability of sinterable calcium-doped lanthanum chromites.—73-16736
Fluxed lanthanum chromite for low-temperature air firing.—73-12367
Magnetic anisotropy of dysprosium and terbium orthochromites.—73-15332
Nanodisperse CrSi(O, N) thin films—conductivity, thermopower, and applications.—73-02646
NMR study of spin reorientation in $Ho_{0.07}Y_{0.093}CrO_3$.—73-16231
Refractories based on sintered and fused periclase chromite.—73-00852
Thermal expansion properties of A-site-deficient $La(Sr)CrO_3$.—73-08988
Thermal expansion properties of A-site-deficient $La(Sr)CrO_3$.—73-16630
Weak ferrimagnetism in neodymium ferrite chromites.—73-01484

**chromium oxide,**
Crystal structure of $Cr_6O_{21}$ determined from powder diffraction data: thermal transformation and magnetic properties of a chromium-chromate tetrachromate.—73-02192
Interfaces in a system of chromium oxide–duplex steel.—73-03608
Preparation of perovskite-type oxide, $LaCrO_3$ by thermal decomposition of $La[Cr(CH_2(COO)_2)_3]$·$6H_2O$ [at RT–1000°C].—73-02962
Structural study on $AgI$-$Ag_2O$-$CrO_3$ glass.—73-00412

**chromium,**
$K_R$-curve behavior in $Al_2O_3$-Cr ceramic-metal composites.—73-06812
Alumina–chromium carbide composite through an internal synthesis method.—73-02725
Ceramic film synthesis with highly energetic ions: II, Chromium nitride.—73-12935
Characteristics of chromium carbide layers produced on martensitic stainless steel using different chemical vapor deposition (CVD) techniques.—73-10201
Characteristics of the diffusion and drift of nonequilibrium carriers in $CdCr_2Se_4$.—73-03080
Characterization and oxidation resistance of hot-pressed chromium diboride.—73-17245
Chromium ion luminescence in semiconducting spinel $CdIn_2S_4$:Cr.—73-14807
$Cr^{3+}$ centers in $LiNbO_3$: experimental and theoretical investigation of spin Hamiltonian parameters.—73-16071
CrTlSrCaCuO and related superconducting systems.—73-04833
Crystal and magnetic structures of $Ca_2Cr_{0.5}Fe_{1.5}O_5$ at 2.1 K.—73-02174
Crystal and magnetic structures of hardened CrSe and $Mn_{0.1}Cr_{0.9}Se$.—73-16074
Crystallization of precursors to forsterite and chromium-doped forsterite.—73-05379
Cw lasing characteristics of high-$Cr^{4+}$ concentration forsterite.—73-16436
Degradation of CrSi(W)-O resistive films.—73-07293
Distribution of paramagnetic impurity in $LaSrAl_{1-x}Cr_xO_4$ and $YCaAl_{1-x}Cr_xO_4$ ceramics [$x$<0.15].—73-16113
Electronic structure of $Cr^{4+}$-center in yttrium aluminum garnet.—73-02260
Electronic structure of the channel compound $TlCr_5Se_8$: an XPS study.—73-05393
EPR study of chromosilicalite.—73-08616
Gas-pressure combustion sintering and properties of $Cr_3C_2$ ceramic and its composite with TiC.—73-05822
Gas-pressure combustion sintering and properties of $Cr_3C_2$ ceramic and its composite with TiC.—73-13071
Hall effect in ferromagnetic *n*-type semiconductor $HgCr_2Se_4$ in strong electric field.—73-14955
Heat-resistant materials.—73-10315
Improved mechanical properties of $Cr_3C_2$ using particulate SiC reinforcement.—73-09615
Influence of chromium on the oxidation state of an industrially melted amber glass.—73-14409
Influence of the impurity concentration on the microstructure of compound semiconductors—the example of ZnS:Cr optical spectra.—73-01209
Influence of the process of vapor phase epitaxy on clusters of electrically active defects in GaAs:Cr substrates.—73-14988
Internal reduction of chromium-doped $\alpha$-alumina.—73-06240
Interphases in $Si_3N_4$/Ni-Cr alloy joints.—73-03611
Kinetics of reaction between $Si_3N_4$ and Cr in $N_2$ atmosphere.—73-13857
Laser FIR magnetospectroscopy of $Zn_{1-x}Cr_xSe$.—73-15006
Li-doped $LaCrO_3$ ceramics.—73-03100
Metal-semiconductor transition in $Cr_{1-x}S$ ($x$≤0.12).—73-15040
Metallization of silicon carbide with chromium powder.—73-03616
New superconducting 1201-type phase $(Tl,Cr)Sr_2CuO_5$.—73-01613
Optical fluorescence from chromium ions in sapphire: a probe of the image stress.—73-05442
Optical properties and preparation of transparent glass-ceramics containing $Cr^{3+}$ ions.—73-03861
Optical properties of $Cr^{3+}$ in thin-film lead-based fluoride glass.—73-07059
Oxidation of $CrN_x$ hard coatings reactively sputtered at low temperature.—73-00255
Phase development and luminescence in chromium-doped yttrium aluminum garnet (YAG:Cr) phosphors.—73-16562
Phase development in the system Gd-Cr-S.—73-02374
Phase transition and thermal expansion of $LaCrO_3$ solid solutions.—73-16263
Preparation of $Yb_2Cr_2C_2$ and magnetic properties of the carbides $R_2Cr_2C_2$ (R=Yb, Ld–Lu) with $Ho_2Cr_2C_2$-type structure.—73-04639
Processing of chromium silicide–silicon carbide nanostructured composite by thermal conversion of spray-dried precursor powders.—73-05999
Quasi-continuous wave laser operation of $Cr^{4+}$-doped $Y_2SiO_5$ at RT.—73-16581

Radiative energy transfer from $Cr^{3+}$ to $Nd^{3+}$ in $LiNbO_3$:Nd,Cr.—73-11610
Segregation of chromium at the interface between Ni-Cr-Si-Ti brazing filler metal and $Si_3N_4$ ceramics.—73-00265
Sintered microcrystalline ceramic material.—73-09774
Specific features of structure and properties of $Na_3Cr_2(PO_4)_3$ crystals.—73-02437
Spectroscopy and energy levels of $Cr^{3+}$ in magnesium-doped lithium niobate.—73-04572
Static and dynamic characteristics of bulk and contact electrical resistivity in $CdCr_2Se_4$ under stochastic current instability.—73-15176
Superionic properties of semiconductor $Cr_{2-x}Se$ as a manifestation of a charge-transfer exciton phase.—73-15192
Synthesis and crystal structure of chromium polyphosphate, $Cr(PO_3)_3$.—73-02482
Synthesis of $(Cr_{1-x}Ti_x)O_3$ solid solution by laser-ignited vapor-phase reaction.—73-06085
Tensimetric investigation of solid solutions $Cr_{2.83}Fe_{0.1}Te_x$.—73-16363
Tetrahedrally coordinated $Cr^{5+}$ in $SrTiO_3$.—73-05510
Thermally stable chromium-exchanged zeolites and method of making [the] same.—73-02073
Thermodynamic analysis of the conditions of formation of the condensed phases of the system Cr-C-O-H by use of chrome carbonyl.—73-16375
X-ray diffractometry study of orthorhombic modification of $Li_3Cr_2(PO_4)_3$ at 293, 473, and 573 K.—73-02544
Yellow high silica glass.—73-00722

**circuit board,**
Ceramic circuit board with a curved lead terminal.—73-14743
Ceramic packages and ceramic wiring board.—73-11005
Distributed constant circuit board using ceramic substrate material.—73-01050
Functionally gradient circuit board.—73-10311
Glass powders for circuit boards.—73-00492
Influence of shrinkage mismatch between copper and ceramics on dimensional control of the multilayer ceramic circuit board.—73-03601
Influence of shrinkage mismatch between copper and ceramics on dimensional control of the multilayer ceramic circuit board.—73-10238
Method for manufacturing an oxide superconducting circuit board by printing.—73-11965
Method of manufacturing a multilayered ceramic circuit board containing layers of reduced dielectric constant.—73-14753
Method of manufacturing ceramic circuit board.—73-01060
Method of minimizing lateral shrinkage in a cofired, ceramic-on-metal circuit board.—73-11035
Multilayer wiring board.—73-11039
Process for fabricating a multilayer ceramic circuit board.—73-11043
Process of producing multiple-layer glass-ceramic circuit board.—73-11047

**circuits,**
Conception of grinding circuits assisted by an ordinater.—73-01769
Low-melting glasses for the potting of thick film microcircuits.—73-00654
Mathematical modeling of the effect of air ventilation on solids recycle rate and ball mill performance.—73-04930
Method of forming superconducting circuit.—73-01717
New packaging challenges posed by high-power CMOS.—73-04145
T-gate, Γ-gate, and air-bridge fabrication for monolithic microwave-integrated circuits by mixed ion-beam, high-voltage electron-beam, and optical lithography.—73-15197

**cladding,**
Laser cladding of high-temperature coatings.—73-06814

**classification,**
Classification and properties of various liquids.—73-16420
Evaluation of the effectiveness and the classification of multicomponent concretes.—73-03468
Functional classification of vitreous, vitrocrystalline, and ceramic materials.—73-03392
Powder classification technologies in ceramics.—73-01814
Proposed material-genesis classification of specialty clays.—73-01994
Refractory materials between traditional ceramics and advanced ceramics.—73-10766

**classifiers/classification,**
Air classification on an inclined moving grid.—73-01761
Clays of Saxony[, Germany].—73-12266
Comparative tests with classifiers: I.—73-12018
Refractories: traditional or advanced ceramics.—73-10763

**clays,**
$^{27}Al$ NMR spectroscopic investigations on intercalation in oxyhydroxyl aluminum cations in the interlayer space of hectorite.—73-02143
Activating the sintering process of the ceramic bodies based on loess-like loamy clays.—73-00585
Brickwork products.—73-03988
Calculation of refractoriness of ceramic products.—73-12113
Carbonization of polyfurfuryl alcohol prepared between the lamellae of saponite.—73-12933
Cement/clay-based segments made by compaction and sintering technologies.—73-03977
Characterization by physisorption of a new class of microporous adsorbents: pillared clays.—73-16419
Clay industry 1950-1990.—73-12265
Clays of Saxony[, Germany].—73-12266
Deflocculation behavior of clay suspensions with a high nonclay content.—73-02763
Deflocculation of concentrated aqueous clay suspensions with sodium polymethacrylates.—73-05729
Determination of the grog content in clay.—73-01892
Diffusion kinetics theory of parallel solid-phase processes at fuel containing ceramics burning.—73-15715
Effects of clays on fracture properties of cement-based materials.—73-03458
Electron spin resonance and nuclear magnetic relaxation dispersion studies of commercial clay minerals and zeolites.—73-05142
Extrusion properties of clay.—73-07191
Extrusion through a great cross-section area.—73-03978
Fast drying of perforated clay blocks.—73-05114
Flotation reagent as a clay substitute in enamel slips.—73-00234
Fluorided beidellite clay and process for preparing the clay.—73-12310
Glass-ceramics from altered basalt-clay mixtures.—73-14396
Hardening characteristics of some clay minerals.—73-02614
High-strength ceramic fiber board.—73-05218
Imogolite: a possible new type of shape-selective catalyst.—73-05171
Improved suction apparatus for plating clay specimens onto ceramic tiles.—73-12036
Influence of material composition on rheological properties of clay/water suspensions.—73-02870
Influence of the support in the selectivity of Ni/clay catalysts for vegetable oil hydrogenation.—73-16521
Large scale mixing—according to the mixing bed technique.—73-12040
MAS NMR and ir studies of pillared clays.—73-05434
Operational raw material control during clay mining.—73-12291
Physicochemical and mechanical properties of ceramic materials made from a Moroccan clay: I, Preparation, structural properties, and mechanical behavior.—73-10686
Practical approach of the use of dry steam injection in clay processing.—73-04941
Properties and characterization of $Al_2O_3$ and $SiO_2$-$TiO_2$ pillared saponite.—73-12664
Property beneficiation of clay raw materials.—73-12059
Proposed material-genesis classification of specialty clays.—73-01994
Relationship between properties of clays and additives for their slurries.—73-10894
Simple air-stream clay separator.—73-12062
Simple approach to technological control of clay-containing ceramic bodies.—73-08364
Situation of new types of Chinese building material and proposals for it.—73-13645
Structure and properties of confined liquids: a molecular model of the clay–water interface.—73-08974
Synthesis and characterization of titanium pillared clays: influence of the temperature of preparation.—73-03038
Synthesis of clay-based pigments.—73-07274
Use of local clays for vitrification of radioactive wastes.—73-01759
Vitrified clay pipes for clean water and a healthy environment.—73-03986
Zirconia-pillared clays and micas.—73-02001

**cleaners/cleaning,**
Amorphous silicon alloys on c-Si: influence of substrate cleaning and ion bombardment on film adhesion and microstructure.—73-09016
Automatic swabbing system is working well for Wheaton.—73-10498
Cleanability of slip-resistant tile.—73-00900
Cleanability of work surfaces in contact with food.—73-10204
Cleanability study of pyrolytic enamels.—73-13808
Cleaning by blasting with pellets of dry ice.—73-12117
Cleaning gases from polishing crystal glass components.—73-00597
Cleaning system for coolant in glass cutting industry.—73-12017
Cleaning the surface of $SrTiO_3$(100) and $LaAlO_3$(100) under moderate temperature condition by Bi adsorption/desorption treatment.—73-02747
Composition and method for cleaning greenware and wetting expelled silica dust.—73-01850
Dry surface cleaning of plasma-etched high electron mobility transistors [HEMT's].—73-11148
Ease of cleaning of ceramic tiles.—73-14652
Flue gas cleaning with limestone.—73-01783
Low-temperature cleaning processes for Si molecular beam epitaxy.—73-13120
New nonstick porcelain enameling systems.—73-10256
Photostimulated evaporation of $SiO_2$ and $Si_3N_4$ films by synchrotron radiation and its application for low-temperature cleaning of Si surfaces.—73-02921

**clinkers,**
Acceleration of the clinker formation process.—73-09801
Alteration of polished sections of free-lime-containing cement clinker by short-term atmospheric exposure.—73-00022
Burning cement clinker from the raw meal using barite and fluorspar as a combined additive.—73-09834
CaO clinker with improved antihydration property.—73-00782
Cements based on modified portland and sulfoaluminate-belite clinkers.—73-13690
Characterization of burning condition of cement clinker by X-ray diffractometry.—73-00035
Chemical composition and microstructures of sulfoaluminate cement clinker.—73-09851
Chemistry, structure, properties, and quality of clinker.—73-09853
Clinker formation and new processes.—73-09855
Clinker grindability and textures of alite and belite.—73-13692
Clinkerization through melting—a new approach.—73-09856
Composition of spinel clinker for teeming ladle casting materials.—73-14580
Development of aluminobelitic colored clinkers.—73-09889
Effect of energy conservation and environmental control measures on clinker properties.—73-09903
Effect of gypsum addition on the properties of clinkers with high $Na_2O$ content.—73-09906
Effect of increased magnesium oxide contents and mixture basicity upon clinker phases.—73-09909
Effect of $SO_3$ and MgO on phase relations and crystal chemical state of phases in belite–aluminoferrite clinkers.—73-09917
Effect of $SO_3$ on mineral formation and properties of clinkers.—73-09918
Effect of the combustion of coal mixed with limestone on the burning process of clinker.—73-09921
Effect of thermal treatment on the reactivity of clinker minerals produced from vertical shaft kiln.—73-09923
Evaluation of radiation-synthesized clinker.—73-09953
Formation of low-temperature portland cement clinker by using nontraditional aluminosilicate rock and mineralizer.—73-09969
Formation of portland cement clinker in low temperature and a rapid heating-up burning process.—73-09970
Forming mechanism of portland cement clinker under different burning conditions.—73-09971
Grate cooler performance optimization at Eiberg Zement.—73-09975
Growth of hydraulic activity of portland cement clinker as a result of using precalcining.—73-09977
Impact of nontraditional raw materials on the formation and properties of clinker.—73-09996
Industrial tests of belite clinker production and evaluation of properties of cements obtained with this clinker.—73-10000
Influence of burning atmosphere on distribution of minor and trace element in clinker and formation of brown color clinker.—73-10005
Influence of micropowders on microstructure and properties of synthetic magnesite-chrome clinkers.—73-04007
Influence of raw mix burnability on cement clinker.—73-03487
Influence of $SO_3$ in $C_2A_xF_{1-x}$-$C_{11}A_7CaF_2$-$C_2S$ system on formation of $C_{11}A_7CaF_2$.—73-10012
Interaction of structure and properties of sulfoferritic and sulfoaluminoferritic clinker melts.—73-13744
Interstitial material in oil well cements: evidence from X-ray microanalysis.—73-10020
Kinetics of the radiation-thermal $C_2S$ [dicalcium silicate] synthesis.—73-10024
Mechanism of 3CaO·$SiO_2$ prevention in presence of excess $SO_3$.—73-10037
Microscopy of portland cement clinker.—73-10046
Mineralizers, modifiers, and activators in the clinkering process.—73-10053
Morphology and microstructure features of clinker from vertical shaft kiln.—73-10058
Mossbauer and X-ray diffraction studies of two dry and hydrated portland cements and their clinkers.—73-00148
Negative effect of alkali on burning and properties of portland cement clinker and its improving measures.—73-10060
Operation control of the CKP-R pregrinding system.—73-04938
Operation of grate coolers and a method of evaluating their efficiency.—73-10072
Optimal parameters of clinker formation in a rotary kiln.—73-10073
Partial finish grinding: two-stage grinding of cement clinker.—73-00158
Peculiarities of the process of cement clinker formation by changing the interaction sequence of reacting components.—73-10077
Pendulum grate cooler with horizontal aeration of the clinker.—73-03513
Phase relations in the system $Ca_2SiO_4$-CaO-$CaSO_4$-$CaF_2$ relevant to cement clinkering.—73-10080
Phase transformations when synthesizing clinkers produced of technogeneous raw materials.—73-10081
Pore structure of clinker and its grindability estimated by different grinding types in mill.—73-10085
Preparation of low-clinker cement using cinder from fluidized bed furnace of power plant.—73-10092
Processing conditions of portland cement clinker as viewed from the fine textures of the constituent minerals.—73-10099
Quality control of portland cement clinker during operation by microscopy.—73-10117
Quality improvement in clinker using mineralizers/activators.—73-10118
Role of clinker liquid in promoting the clinkerization and its impact on clinker morphology and microstructure.—73-10141
Separation of the aluminate and ferrite phases from cement clinker by selective dissolution and their crystal structure refinement.—73-10149
Sintering mechanism of portland cement clinker with energy saving and early strength.—73-10154
Structure and properties of low-CaO contained clinker.—73-10168
Study and application on high-quality cement clinker calcining with low heat consumption in shaft kiln.—73-10169
Thermal treatment of cement raw materials through intensive heat exchange.—73-10180
Update on the properties of clinker and cement derived from industrial chemical wastes.—73-03551

**clusters,**
Arsenic cluster engineering for excitonic electrooptics.—73-11072
Cluster formation in the vapor produced by laser pulsing of the $Y_1Ba_2Cu_3O_7$ superconducting solid.—73-08001

Cluster size determination in the chemical vapor deposition of aluminum nitride.—73-17118
Effect of magnetic and nonmagnetic impurities of the carrier binding energy in Cu-O clusters.—73-11652
Evaluation of the catalytic activity of a high-surface-area, regular, porous solid formed from the clusters of clusters, $M^{II}_4O[(CO)_9Co_3CCO_2]_6$, M=Co, Zn.—73-05561
Growth of sodium clusters on the surface of Na β″-alumina crystals induced by electron bombardment.—73-09157
Kinetic model of vapor-deposited thin-film condensation: nucleation stage.—73-05887
Novel method to generate ionic clusters within zeolites.—73-16884
Quantum size effects in zinc oxide nanoclusters synthesized by reactive sublimation.—73-05462
Structure of metal-nonmetal clusters.—73-17202

**coal,**
Application of coal slag in outer wall tiles.—73-10792
Ceramic brick production making use of coal mining wastes of Ekibastuzsky basin.—73-00766
Effects of coal gangue additives on quality of clay brick.—73-10678
Once setting-firing of surplus heat firing perforated brick of coal gangue.—73-08354
Present state, tendency, and future of utilization of fly ash in China.—73-08498
Pulverized coal fueling for rotary cement kilns with rotor weight feeders.—73-01965
Unfired bricks from colliery spoil.—73-06729

**coatings,**
ß-tricalcium phosphate [ß-TCP] coating on titanium.—73-00210
Abrasion, erosion, and scuffing resistance of carbide and oxide ceramic thermal-sprayed coatings for different applications.—73-06734
Abrasion-resistant coatings for glass articles.—73-00724
Advanced layer systems and coating techniques for large-area glass coatings by means of high-rate sputtering.—73-07106
Advanced thermal barrier coated superalloy components.—73-03669
$Al_2O_3$ coating on MgO particles.—73-05687
Alkali corrosion-resistant coatings and ceramic foams having superfine open cell structure and method of processing.—73-05186
Aluminum nitride as a corrosion protection coating for steel: self-scaling porous electrode model.—73-00208
Anticorrosion coating for quartz glass.—73-00590
Apparatus and method for producing carbide coatings.—73-01841
Application of CPD coating to drying cars.—73-12107
Application of TiN-coated bushings in the standard method for indicating the wear characteristics of hydraulic fluids in vane pumps.—73-06739
Applications for ceramic coatings.—73-05155
Automobile glasses with heat-shielding surface coating.—73-03822
Ball and roller bearings and bearing components.—73-12447
Behavior of nucleation and growth of carbide layers on alloyed carbide particles in substrates in salt bath carbide coating.—73-09022
Bioapplications of diamondlike carbon [DLC] coatings.—73-13800
Biological and physical properties of apatite coatings.—73-08503
Boron-nitride-coated microcutting device.—73-10302
Bottle coating first for Europe.—73-08322
Boundary film for structural ceramic materials.—73-06741
Calculating the optical properties of coated glasses.—73-10419
Calculation of optimal mixtures for frit production.—73-15708
Carbon coating of ceramic materials by pyrolysis of polymeric-based systems.—73-16662
Carbon-fiber-reinforced composite material having a gradient carbide coating.—73-05289
Ceramic bonding method.—73-00279
Ceramic coating material for a microfuse.—73-04190
Ceramic composite coating material.—73-10305
Ceramic powder useful in the manufacture of green and densified fired ceramic articles.—73-05292
Ceramic sprayed coatings and their applications.—73-12320
Ceramic thermal barrier coating for rapid thermal cycling applications.—73-13914
Ceramic-coated fibers.—73-12349
Characteristics of carbon-coated optical fibers.—73-03823
Characterization and optical properties of thin films formed on TiN coatings during electrochemical treatments.—73-02558
Characterization of different conversion coatings on aluminum with spectroscopic ellipsometry.—73-13806
Characterization of laser-glazed plasma-sprayed yttria-stabilized zirconia coatings.—73-00215
Characterization of plasma-sprayed silicide intermetallic compound coatings.—73-06747
Characterization of $SiO_2$ films on glass substrate by sol-gel and vacuum deposition methods.—73-10506
Characterization of wear damages in coatings by optical profilometry.—73-08379
Chemical vapor deposition of very thin coatings on carbon fiber bundles.—73-09042
Chemically deposited $Bi_2S_3$-$Cu_xS$ solar control coatings.—73-04065
Chemically vapor deposited alumina coatings on high-speed steel cutting tools.—73-10203
Chromium-carbide-reinforced composite coatings for high-temperature hard-coat applications.—73-06750
Coated aluminum nitride powder and its preparation.—73-05294
Coated carbonaceous articles and method for making [the] same.—73-15983
Coated ceramic fiber system.—73-05205
Coated ceramic filler materials.—73-05206
Coated glass and method of manufacturing [the] same.—73-03911
Coated metal article.—73-03676
Coated metal article.—73-03677
Coating additives for improved mechanical reliability of optical fiber.—73-03778
Coating an oxide powder by spray drying.—73-05207
Coating composition for glass containers.—73-10622
Coating for improved retention of cBN in vitreous bond matrices.—73-09770
Coating for protecting a carbon-carbon composite from oxidative degradation.—73-03913
Coating materials assessment for carbon-carbon space structures.—73-12419
Coating of anatase titanium dioxide particles.—73-12352
Coating of apatite layer on surfaces of organic polymers by a biomimetic process.—73-09043
Coating of apatite layer on surfaces of organic polymers by a biomimetic process.—73-16676
Coating of nonoxide ceramics by interaction with metal powders.—73-02749
Coating thickness and surface roughness of TiN-coated high-speed steel in relation to coating functionality.—73-06752
Coatings for microelectronic devices and substrates.—73-12354
Coatings for $SiO_2$ optical fibers.—73-03914
Coloring aluminum flakes.—73-03678
Comparative dry wear behavior of hard coatings.—73-06755
Comparative study of the fretting wear of hard carbon coatings.—73-03246
Composition and structure of the intermediate layer on the boundary between metal and protective coating.—73-06760
Construction of antistatic floors coated with ceramics.—73-08387
Conversion coating on carbon/carbon composites with controlled microstructure.—73-15984
Cookware coating system.—73-03681
Cost-effective and environmentally sound chemical process for coating fine particulates.—73-16691
Cracking and delamination of coatings.—73-03252
Current status review: filtered arc evaporation.—73-15711
CVD carbide coatings on Blackglas–Nicalon (C) composites for oxidation protection.—73-10514
Debond coating requirements for brittle matrix composites.—73-13501
Degradation of plasma-sprayed alumina and zirconia coatings on stainless steel during thermal cycling and hot corrosion.—73-00219
Densification of plasma-sprayed ceramic coatings by HIP treatment and their cracking behavior.—73-02766
Deposition of stabilized zirconia onto metallic substrates using a dc thermionic triode ion plating technique.—73-10213
Deposition of Ti(C,N) coatings by arc evaporation.—73-10214
Deposition process of a ceramic coating on a metallic substrate.—73-10309
Development of tantalum pentoxide coatings by chemical vapor deposition.—73-15923
Diamond-coated body.—73-16711
Diamond-coated hard material, throwaway insert, and a process for the production thereof.—73-15990
Diamond-coated products.—73-05299
Diamondlike carbon [DLC] coatings on Ti-6Al-4V.—73-06769
Distribution and chemical states of ions around the interface between sol-gel-derived silicate films and substrates.—73-02775
Dry sliding wear of TiN-based ternary PVD coatings.—73-09571
Effect of active metal coatings on the mechanical properties of silicon-nitride-based ceramics.—73-10219
Effect of an internally conductive coating on the electron emission from glass tips.—73-00951
Effect of microstructure and hydrogen content on the characteristics of amorphous hydrogenated carbon protective coatings.—73-03137
Effect of plasma nitriding on the properties of (Ti, Al)N coatings deposited onto hot-work steel substrates.—73-03580
Effect of plasma-spray operating conditions on plasma jet characteristics and coating properties.—73-09084
Effect of rare-earth elements on microstructure and wear resistance of laser-remelted iron alloy coatings containing metalloids.—73-06776
Effect of SiC/BN double coating on fiber pullout in mullite fiber/mullite matrix composites.—73-02795
Effect of siliceous slurry coating on water tightness of cold joint.—73-09916
Effect of spraying parameters of the LPPS [low-pressure plasma spraying] method on the structure of ceramic coatings.—73-09098
Effect of substrate on optical characteristics of polarizationally isotropic coatings.—73-02588
Effects of additives on friction and wear behavior of $Cr_2O_3$ coatings.—73-09585
Elastic and dry sliding characteristics of [high-velocity oxyfuel] HVOF-sprayed $Al_2O_3$ and $Al_2O_3$-$TiO_2$ coatings.—73-09588
Electrical resistivity of oxide film coatings on glass.—73-07316
Electrical resistivity of plasma-sprayed titanium diboride coatings.—73-08858
Electrochemical fabrication of bioactive composite coatings on Ti6Al4V surgical alloy.—73-13832
Enamel coatings with improved working and aesthetic properties.—73-00226
Erosion of some HVOF [high-velocity oxy-fuel] sprayed coatings in fluidized bed circumstances.—73-09526
Evaluation methods for thermal spray coatings.—73-08399
Evaluation of high-emittance coatings in a large industrial furnace.—73-07211
Evaluation of optical properties of decorative coatings by spectroscopic ellipsometry.—73-12800
Evolution of hard coatings and base materials on cutting tool applications.—73-08531
Experimental approach to the analysis of the adhesion properties of SiC coatings deposited on steel substrates.—73-10227
Experimental/analytical investigation of plasma-sprayed alumina coatings.—73-09124
Ferroelectric thin coatings.—73-11577
Fiber coating of unbonded multilayers for toughening ceramic fiber-matrix composites.—73-12364
Field emission electron source employing a diamond coating.—73-04514
Fine-grained coating of vapor-grown diamond on metallic wire substrate.—73-13837
Fire-resistant barriers for composite materials.—73-02038
Formation and properties of laser coatings based on oxynitride ceramic.—73-13062
Formation of ceramic thin film on ceramic body.—73-12078
Fractal polyzirconosiloxane cluster coatings.—73-10233
Friction and wear behavior of electroless Ni-P coating.—73-09603
Friction and wear performances of [D] detonation-gun- and plasma-gun-sprayed ceramic and cermet hard coatings under dry friction.—73-06796
Friction characteristics of ceramic slurry and plasma-sprayed coatings.—73-09606
Future in multicolor-coated packaging.—73-10537
Gas turbine cooling.—73-10312
Gas turbine elements bearing coke inhibiting coatings of alumina.—73-03682
Glass-ceramic coatings for titanium aluminides.—73-06798
Glass-ceramic coatings for titanium-based metal surfaces.—73-10313
Glass-ceramic sol-gel coating of ceramic fibers.—73-16803
Glass-ferrite coatings on ceramics.—73-00495
Graded thermal barrier coatings [TBC's]: evaluation.—73-13841
Ground coats for chemical equipment.—73-13843
Guanidine-based vehicle/binders for use with oxides, metals, and ceramics.—73-04978
Hard material coatings on flat glass and their applications.—73-00637
Hard surfacing material for engine components and method for depositing [the] same.—73-10314
Heat-treatable sputter-coated glass systems.—73-10635
Heat-treatable sputter-coated glass.—73-00735
High-frequency leaky Lamb wave [LLW] measurement of elastic properties of coatings.—73-08404
High-pressure HVOF [high-velocity oxy-fuel]—an update.—73-08341
High-temperature coatings for the sheet glass.—73-14404
High-temperature-resistant structure.—73-12472
Hot end coating [analysis].—73-07137
Hydrolytic resistance of the surface of soda-lime glass coated with silica layer.—73-03792
Impact strength of glass coatings on prealuminized steel.—73-00240
Improving thermal efficiency with ceramic thermal barrier coatings [TBC's].—73-06804
India-stabilized zirconia coating for composites.—73-12476
Industrial diamond coating and method of manufacturing the same.—73-05304
Influence of deformation on the strength of enamel coatings.—73-00241
Influence of the substrate material on the effectiveness of coating in metal cutting.—73-13849
Influence of thermal conductivity of the spray powder on the adherence of plasma-sprayed ceramic coatings.—73-09182
Inhibiting coke formation by coating gas turbine elements with alumina.—73-03686
Inhomogeneous transparent optical coatings on transparent substrates [studied] by spectroscopic ellipsometry [SE].—73-12148
Intermittent carbon coatings for application in ceramic matrix composites.—73-08533
International Conference on Metallurgical Coatings and Thin Films.—73-17490
Interrelation of technology parameters and the quality of thin-layer coatings.—73-07041
Ion plating deposits of boron nitride, an FTIR structural characterization.—73-13106
Laboratory testing of porcelain coatings for home laundry.—73-13859
Laser cladding of high-temperature coatings.—73-06814
Laser melting of plasma-sprayed alumina coatings.—73-13860
Laser processing of sol-gel coatings.—73-10559
Lead-free glass coatings.—73-10914
Low-cost cathodic and conductive coating compositions comprising lightweight hollow glass microspheres and a conductive phase.—73-04213
Low-temperature ozonolysis of silicon and ceramic oxide precursor polymers to ceramic coatings.—73-15947
Low-temperature process for converting silica precursor coatings to ceramic silica coatings by exposure to ammonium hydroxide or an environment to which water vapor and ammonia vapor have been added.—73-05221
Mechanical properties and microstructural development during heat treatment of a plasma-sprayed thermal barrier coating: $ZrO_2$-8 wt% $Y_2O_3$.—73-06819
Metastable phases in yttrium oxide plasma spray deposits and their effect on coating properties.—73-02892

Method and apparatus for coating glassware.—73-10640
Method and apparatus for direct arc plasma deposition of ceramic coatings.—73-12480
Method and apparatus for forming high-critical-temperature superconducting layers on flat and/or elongated substrates.—73-11962
Method for coating a dielectric ceramic piece.—73-11027
Method for coating optical fibers.—73-03942
Method for continuously coating fibers.—73-01863
Method for fabricating oxide superconducting coatings.—73-15682
Method for forming a surface coating using powdered solid oxidants and parent metals.—73-03689
Method for forming carbide coating on various metals and their alloys.—73-00286
Method for measuring temperature-dependent stress and thermal expansion of coatings.—73-15818
Method for protecting articles from hydrogen absorption by application of an alumina coating.—73-03692
Method for repair and restoration of a ceramic thermal-barrier-coated substrate by providing an intermetallic coating.—73-03693
Method of coating carbon fibers with a carbide.—73-02113
Method of coating superconductors with inorganic insulation.—73-02050
Method of fabricating silicon carbide coatings on graphite surfaces.—73-16005
Method of forming coatings by plasma spraying magnetic cerment dielectric composite particles.—73-15380
Method of forming Si-O containing coatings.—73-14752
Method of forming water-repellent metal oxide film coated on glass substrate.—73-05230
Method of making a gas turbine blade having a duplex coating.—73-03695
Method of preparing vitreous ceramic composition suitable for coating ceramic articles.—73-15949
Method of printing a glass pane with a decorative coating reaching the peripheral face of the glass pane.—73-03951
Method of producing integral, hard nitride layer on titanium/titanium alloy.—73-13919
Microanalytical investigation of cement specimens with encased, chlor-tri-fluoroethane coated, continuous E-glass fibers.—73-00140
Microhardness variations in thermally sprayed coatings.—73-09647
Micromechanical properties of thermal barrier coatings using depth-sensing indentation.—73-06828
Microstructural and thickness uniformity of zirconia coatings produced by rf ion plating.—73-09477
Microstructural features related to corrosion initiation in titanium-aluminum nitride coated steel.—73-10254
Microstructural index for pores in thermal spray coatings.—73-08418
Microstructural investigation of κ-modification layers in CVD $\alpha$-$Al_2O_3$/κ-$Al_2O_3$ multilayer coatings.—73-03165
Microstructures of $Y_2O_3$-stabilized $ZrO_2$ electron beam–physical vapor deposition coatings on Ni-base superalloys.—73-09491
Microwave plasma CVD method for coating a substrate with high-thermal-conductivity diamond material.—73-05319
Modeling of the intrinsic stress in PVD coatings.—73-05930
Modular IBAD apparatus for continuous coating.—73-01870
Multilayer metal-coated diamond abrasives with an electrolessly deposited metal layer.—73-00003
Nanoindentation studies of thin-film-coated systems.—73-12838
New container coating technology is developed.—73-10569
New electroconductive ceramic powders.—73-14721
Nonoxide ceramic particles coated with zirconium oxide or hydrous oxide.—73-05322
Nonspecular reflector with diffusely reflecting superconductor and protection coating.—73-11982
Optical properties and equilibrium temperatures of titanium-nitride- and graphite-coated Langmuir probes for space application.—73-10259
Optical transmission spectra of doped $Bi_{12}TiO_{20}$ photorefractive crystals with antireflection coatings.—73-16560
Optimizing plasma-sprayed alumina titania coatings using statistical methods.—73-09228
Overcoating inorganic composition.—73-05236
Oxidation of $CrN_x$ hard coatings reactively sputtered at low temperature.—73-00255
Pack mixture composition for SiC pack cementation coating of carbonaceous substrates.—73-12504
Particle coating of silica fibers by aerosol and sol-gel processes.—73-09232
Passivating coating for metal oxide varistors.—73-11041
Performance of a copper-based composite coating for steel casting applications.—73-06837
Phosphate coating composition and method of applying a zinc-nickel-manganese phosphate coating.—73-00290
Phosphate coatings for metal surfaces.—73-00291
Plasma coating made from zirconium dioxide powder produced by the sol-gel technique.—73-02923
Plasma coatings of FeMoCrNiB alloy with amorphized structure.—73-09499
Plasma diagnostics of rf discharges used for the deposition of hydrogenated amorphous carbon coatings.—73-09242
Plasma spraying ceramics onto smooth metallic substrates.—73-06838
Plasma spraying of glass–polyamide composite coatings.—73-06839
Plasma-assisted deposition process for producing a thin layer on a substrate.—73-12091
Plasma-enhanced chemical vapor deposition process for producing an amorphous semiconductive surface coating.—73-01382
Plasma-sprayed $B_4C$ coatings in controlled fusion reactors.—73-09246
Plasma-sprayed $B_4C$ coatings in controlled fusion reactors.—73-13879
Plasma-sprayed ceramic thermal barrier coating for NiAl-based intermetallic alloys.—73-10335
Plasma-sprayed hydroxyapatite coatings for enhanced biocompatibility.—73-13880
Platinum coatings and glass industry.—73-14459
Powder feed composition for forming a refraction oxide coating, process used and article so produced.—73-10337
Powertrain component with adherent film having a graded composition.—73-03700
Preceramic composition and ceramic product.—73-05237
Preceramic composition and ceramic product.—73-05238
Prediction model to assist plasma and HVOF spraying.—73-16904
Preparation and characterization of coated SiC whiskers.—73-09249
Preparation of alumina-hydrate-coated SiC whiskers—effect of reaction condition on the morphology of coated body.—73-09256
Preparation of CdS-doped $SiO_2$ glass coating films by the sol-gel method.—73-14475
Preparation of ceramic-metal coatings.—73-13921
Preparation, properties, and chemistry of glass– and glass-ceramic–to–metal seals and coatings.—73-06842
Principles of development of protective coatings on refractories.—73-00842
Process for applying nitride layers to titanium.—73-10339
Process for forming a crack-free boron nitride coating on a carbon structure.—73-12509
Process for forming protective base coatings on metals.—73-00295
Process for producing a curved glass plate partially coated with a ceramic.—73-00757
Processing and investigation of tauboride-containing NiCrBTi-TiC plasma coatings.—73-10266
Processing effects on chemically vapor deposited SiC coatings on silicon carbide fibers.—73-13218
Processing variables in laser glazing plasma-sprayed thermal barrier coatings.—73-09282
Production of a hermetically coated optical fiber.—73-00759
Properties of alumina-based coatings deposited by plasma and high-velocity combustion processes.—73-09502
Properties of TiN, ZrN, and ZrTiN coatings prepared by cathodic arc evaporation.—73-09503
Property improvement of silicate ceramics by coating the structural grain with a matrix paste in a fluidized bed granulator.—73-10756
Protective coating for ceramic materials.—73-12400
Protective coating for nonoxide sintered fibers generated by in situ chemical reaction.—73-05333
Protective coats for high-temperature strain gages.—73-13888
Quantitative determination of through-coating porosity in thin ceramic physically vapor-deposited coatings.—73-06273
Quo vadis, thermal spray technology.—73-01825
Radio-frequency-sputtered cobalt oxide coating: structural, optical, and electrochemical characterization.—73-12874
Recording penetrative defects in glass enamel coatings.—73-00263
Refractories for use in firing ceramics.—73-00890
Refractory carbide coatings on carbon synthesized by fused slurry process.—73-06018
Refractory overcoat for semiconductor devices.—73-04531
Residual stress in thermally sprayed coatings.—73-09664
Review of 2-coat, single-fire porcelain enameling systems.—73-10273
Review of multicomponent and multilayer coatings for tribological applications.—73-08540
Silicon carbide filaments bearing a carbon layer and a titanium carbide or titanium boride layer.—73-02136
Silver chemical coating on ceramics.—73-00266
Silver coating on carbon and SiC fibers.—73-10275
$SiO_2$-based vitreous coatings obtained by sol-gel method.—73-10601
Sol-gel coating products.—73-14494
Sol-gel method for preparation of specific properties of coatings on alumina alloys with anodic oxidation.—73-03887
Sol-gel preparation of silica or silicate-$Me_xO_y$ coatings on metal substrates.—73-13899
Sol-gel processing of titanium-containing thin coatings: I, Preparation and structure.—73-03022
Sol-gel-derived AgCl photochromic coating on glasses.—73-14498
Stability of cermet coatings and their dependence on the distribution of elements.—73-00267
Static fatigue of metal-coated fibers.—73-14279
Strengthening coating for desks of silica alumina magnesia.—73-10772
Strengthening of soda-lime-silica glass by sol-gel- and melt-derived coatings.—73-00707
Stresses in multilayer combinations of sputter-deposited coatings of Ni, Ti, TiC+Ni, and $TiB_2$+Ni on coated carbon steel substrates.—73-00269
Structural change in plasma-sprayed alumina coating by laser melting: II, On pulsed mode treatment.—73-17011
Structural change in plasma-sprayed alumina coatings by laser melting: I, On continuous wave mode treatment.—73-05490
Structural changes of sol-gel-derived $TiO_2$-$SiO_2$ coatings in an environment of high temperature and high humidity.—73-00407
Structure and corrosion properties of PVD coatings in the system Si-Al-O-N.—73-06320
Structure and forming processes of coatings based on the oxides of iridium, titanium, and tin.—73-16330
Structure and mechanical properties of coatings produced by dynamic ion mixing.—73-17437
Structure and properties correlation dependence of titanium and silicon coatings obtained by sol-gel processing.—73-14103
Structure and properties of plasma-sprayed alumina coatings[—literature review].—73-02693
Structure of calcareous gunite coatings of the converter linings.—73-00872
Structure, mechanical properties, and oxidation behavior of nanolayered $MoSi_2$/SiC coatings.—73-06534
Substoichiometric zirconium nitride coating.—73-02141
Surface topography of polished and oxide-coated BK-7 glasses investigated by atomic force microscopy [AFM].—73-07081
Surface-coated cermet blade member.—73-10353
Synthesis and tribological properties of carbon nitride as a novel superhard coating and solid lubricant.—73-09683
Synthesis of functionally gradient NiCr-Al/MgO-$ZrO_2$ coatings by plasma spray technique.—73-06861
Taguchi design of experiment study of plasma-sprayed alumina coatings.—73-09368
Teer Coatings Ltd.: setting the new standards.—73-17508
Tensiometry and Auger electron spectroscopy studies of the surface of plasma-deposited silicon carbide coatings.—73-13460
Textured coatings from colloidal suspensions of faceted oxide microcrystals.—73-06112
Theory of dielectric interference coatings.—73-01038
Thermal barrier coating for metallic components.—73-00298
Thermal expansion of metallic and cermet coatings.—73-08987
Thermal stability of amorphous SiC fiber coated with oxide film.—73-17056
Thermally protective composite ceramic-metal coatings for high-temperature use.—73-10354
Thick coatings of doped synthetic silica glass by plasma impulse CVD.—73-00713
Thick sol-gel coating preparation by generation in situ metallic particles.—73-14521
Titanium and tantalum coatings on aluminum nitride.—73-10289
Transmission electron microscopy analysis of a $TiN_x$ substoichiometric CVD coating.—73-13461
Tribochemical aspects of producing binders for refractory coatings.—73-00881
Tribological investigation of physical vapor deposition TiN coatings paired with surface-treated steels for machine element applications.—73-06868
Tribological performance investigation of steels after various surface treatments, solid lubricant deposition and ceramic coatings.—73-13904
Ultrathin zircon coating and membrane.—73-12407
Versatile, cost-effective, strongly adherent, highly stable, wear-resistant coatings.—73-15975
Water jet coating removal applications: aircraft engines and beyond.—73-08370
Wear behavior of titanium coating combinations at elevated temperatures.—73-06875
Wear characterization and practical applications of thermal spray coatings in drilling applications.—73-06876
Wear-corrosion-resistant materials for mechanical components in harsh environments.—73-06878
Wear-resistant [BN] coating films and their coated articles.—73-16023
Wear-resistant coating for fuel cladding.—73-05249
X-ray microstructural analysis of thin polycrystalline coatings with $YBa_2Cu_3O_{7-x}$ coatings as example.—73-09521
X-ray residual stress analysis of a ceramic thermal barrier coating undergoing thermal cycling.—73-13610
Zirconia sol coating of single-crystal ceramic fibers.—73-09387

**cobalt oxide,**
Anomalously enhanced satellite in metastable atom electron spectrum of $LaCoO_3$.—73-12536
Change in pigment color in the system CoO-$Cr_2O_3$-$Al_2O_3$.—73-00899
CO adsorption at 77 K on CoO/MgO and NiO/MgO solid solutions: an FTIR study.—73-02164
CoO-NiO superlattices: interlayer interactions and exchange anisotropy with $Ni_{81}Fe_{19}$.—73-04595
Dependence of magnetic properties of $(Co,Fe)_3O_4$ film on microstructure control through phase separation.—73-11650
Effect of cobalt oxide base coats on the process parameters of direct-on porcelain enameling.—73-10220
Electrical switching of two-phase ZnO-$PrCoO_3$ threshold switching materials.—73-03140
Electrochemical and in situ X-ray diffraction studies of lithium intercalation in $Li_xCoO_2$.—73-02251
Formation of $LaCoO_3$ highly dispersed on $ZrO_2$.—73-16790
Influence of constituent metal cations in substituted $LaCoO_3$ on mixed conductivity and oxygen permeability.—73-04115
Influence of grain size and secondary phase on the fracture toughness of sintered MgO bodies: III, Addition of CoO.—73-17358
Junctions of Pr-Co-O thin films and semiconductive $BaTiO_3$ and their electrical properties.—73-15004
Magnetic specific heat and critical magnetic susceptibility of the diluted antiferromagnet $Co_pMg_{1-p}O$.—73-04625
Microstructure evolution in sintered CoO under electric fields.—73-13429
Phase transition from antiferromagnetic [AF] insulator to ferromagnetic metal in $La_{2-x}Sr_xCoO_4$—magnetization and NMR studies.—73-08696
Preparation and characterization of dispersed cobalt oxide supported on γ-$Al_2O_3$.—73-02675
Preparation of cobalt oxide powders by emulsion evaporation technique.—73-13185

Preparation of spherical $LiCoO_2$ powders by the ultrasonic spray decomposition and its application to cathode active material in lithium secondary battery.—73-16937
Preparation of spherical $LiCoO_2$ powders by the ultrasonic spray decomposition and its application to cathode active material in lithium secondary battery.—73-16938
Propagation of antiferromagnetic order across paramagnetic layers in CoO/NiO superlattices.—73-04641
Radio-frequency-sputtered cobalt oxide coating: structural, optical, and electrochemical characterization.—73-12874
Raman study of sodium borosilicate glass containing cobalt oxide.—73-00393
Spatially modulated antiferromagnetic order in CoO/NiO superlattices.—73-15364
Structure of sodium borosilicate glass with additions of cobalt oxide studied by Raman spectroscopy.—73-00417
Tracer diffusion and defect structure in Ga-doped CoO.—73-13370
Use of acetates as precursors for the low-temperature synthesis of $LiMn_2O_4$ and $LiCoO_2$ intercalation compounds.—73-03069

**cobalt,**
Band-edge magnetoreflectance and magnetization of $Cd_{1-x}Co_xTe$ [x=0.00383].—73-01084
Characterization of a sputtered amorphous W-C-Co coating annealed in air.—73-03564
Characterization of Co-substituted $YBa_2Cu_3O_7$ superconductors by Raman spectroscopy—application of Raman spectroscopy to high-$T_c$ superconductors: I.—73-15397
Characterization of tungsten carbide cobalt powders and HVOF [high-velocity oxy-fuel] coatings.—73-06748
Cluster spin glass ordering in diluted spinel $CoFe_{1-x}Al_{1+x}O_4$.—73-08576
Cobalt disilicide as dopant diffusion source for polysilicon gates in MOS devices.—73-04271
Comparative studies of microstructures, residual stress distributions, and wear properties for HVOF [high-velocity oxy-fuel] and APS [air-plasma-sprayed] WC-Co coatings of Ti6Al4V.—73-06756
Complex susceptibilities of Co-doped $YBa_2Cu_3O_{7-d}$ synthesized by the polymerized complex method.—73-15402
Cross relaxation and radiative recombination of $Co^{2+}$ ions in ZnS.—73-14819
Crystal structure of $Sc_6Co_{30}Si_{19}$.—73-02212
Crystallographic study of cobalt treatment on $\gamma$-$Fe_2O_3$.—73-04600
Determination of the minimum concentration of ferrofluid of $CoFe_2O_4$ required to orient liquid crystals.—73-07931
Diamond formation from the SiC-Co system under high pressure and high temperature.—73-02236
Effects of cation distribution on magnetic properties in cobalt ferrite.—73-07933
Electrical properties of ZnO/PrCo oxide multilayered composites.—73-04306
Epilayer-induced structural transition to bcc Co during epitaxial growth of Co/Fe superlattices.—73-16136
Epitaxial $CoSi_2$ formation on Si(001) from an amorphous $Co_{75}W_{25}$ sputtered layer.—73-05789
EPR characterization of Co impurities doping $Bi_4Ge_3O_{12}$ single crystals.—73-05394
Evaluation of the catalytic activity of a high-surface-area, regular, porous solid formed from the clusters of clusters, $M^{II}_4O[(CO)_9Co_3CCO_2]_6$, M=Co, Zn.—73-05561
Improving the technology for Gzhel porcelain decorated with underglaze cobalt pigments.—73-00913
Influence of deposition conditions on the morphology of sputtered W-C-(Co) films.—73-06808
Influence of stacking faults on $d^7$ internal transitions in ZnS:Co.—73-05421
Initial stages of sintering of nanostructured WC-7 wt% Co.—73-13850
Interactions in and interfacial structure of annealed Co/a-$Si_3N_4$ studied by HRTEM.—73-03605
Interface stoichiometry dependence of the Schottky barrier height of CoGa and GaAs.—73-07615
Internal photoemission of CoGa/GaAs Schottky barriers, possible injection of electrons into the L valley.—73-01221
Local environment of cobalt atoms in borosilicate glasses.—73-00368
Local surroundings of cobalt atoms in borosilicate glasses.—73-00369
Luminescence of tetrahedrally coordinated $Co^{2+}$ in zirconia.—73-08659
Magnetic abrasive finishing of WC-Co curved surfaces.—73-05907
Magnetic anisotropy of microcrystals of cobalt ferrite in a glass matrix.—73-01468
Magnetic anisotropy of microcrystals of cobalt ferrite in the matrix of a glass.—73-00370
Magnetic properties of $Co_xFe_{3-x}O_4$ during conversion from normal to inverse spinel particles.—73-04622
Magnetization step of isolated $Co^{2+}$ ions in hexagonal $Cd_{1-x}Co_xS$ and $Cd_{1-x}Co_xSe$.—73-15031
Mechanisms of hard alloy wear in frictional processes with polymers and composite materials.—73-03615
Metallike electrical resistivity and excess electrical resistivity of rare-earth cobaltites.—73-16541
Microstructure of Co ferrite films and Co ferrite/Zn ferrite double layered films prepared by plasma-enhanced MOCVD.—73-06258
Mossbauer and magnetization study of cobalt ferrite aluminates.—73-04629
Mossbauer and magnetization study of the mixed spinel $CoFe_{2-x}Cr_xO_4$.—73-11667
Mossbauer study of spin-reorientation in $YCo_4B$.—73-02334
Multicomponent hard coatings for WC-Co sintered carbides.—73-10255
New look at carbide tool life.—73-06835
New route for the synthesis of tungsten carbide-cobalt nanocomposites.—73-13876
Normal state behavior and microstructure in $YBa_2Cu_{3-x}Co_xO_y$ system.—73-01618
Optical absorption of $Co^{2+}$ ions in $HgGa_{2-x}In_xSe_4$ solid solution.—73-07702
Optical and electronic properties of cobalt-doped zinc oxide films prepared by the sputtering method.—73-02650
Optical properties of diluted magnetic semiconductor $Zn_{1-x}Co_xSe$.—73-15072
Oxide superconductor and process for producing the same.—73-11985
Pore structure of uniform spherical cobalt phosphate particles.—73-08705
Preparation and optical properties of transparent glass-ceramics containing cobalt(II) ions.—73-00532
Pressure-induced magnetic ordering in $CoSiF_6{\cdot}6H_2O$.—73-02406
Quarternary oxide phases $Ln_{4-x}Au_{4+x}Co_{2+y}Al_{2-y}O_{15}$: the structure of $Nd_{3.43}Ba_{4.42}Co_{2.23}Al_{1.77}O_{15}$ and $Y_2Sr_6Co_{2.08}Al_{1.92}O_{15}$.—73-02409
Resonant states formed by Co and Ni impurities in HgSe.—73-07774
Spectral properties of weakly ferromagnetic dielectric crystals $CoCO_3$ in nearly saturated paramagnetic state.—73-07356
Spray parameter effects on structure and wear properties of detonation gun sprayed WC+17% Co coatings.—73-06857
Structural characterization of laser-processed WC/Co layers.—73-10279
Structure and chemistry of Co in CoAPO-5 molecular sieves.—73-16328
Surface segregation in sodium germanate glass containing cobalt.—73-00418
Temperature dependence of the Hall angle in single-crystal $YBa_2(Cu_{1-x}Co_x)_3O_{7-\delta}$.—73-08248
Tool of cemented carbide for cutting, punching, or nibbling.—73-00301
WC-8 *t*-Co cemented carbide containing sheetlike WC phases.—73-06874

**coercivity,**
Effects of several kinds of anisotropy on the coercivity behaviors of iron oxides.—73-04608

**cofiring,**
Fabrication of a planar solid oxide fuel cell by tape casting and cofiring method.—73-10947

**coke,**
Change in properties of dinas parts in service in the lining of large coke ovens.—73-00785
Different forms of refractories for the service conditions in coke ovens.—73-00801
Effect of thermal cycling on the strength of dinas used in coke oven.—73-00809
Structural changes during the calcination of raw coke.—73-12695

**cold isostatic pressing,**
Effect on the forming property of ceramic powder by dynamic CIP.—73-02800
Forming of silicon carbide powder by cyclic CIP.—73-02836

**collectors,**
From workhouse to workhorse.—73-15727
Operating characteristics of a cartridge collector utilizing medium-pressure purge air.—73-01806

**colloids,**
Annealing of ion-implanted silver colloids in glass.—73-10495
Characterization techniques and properties of nonaqueous magnetic colloids.—73-07927
Colloid mills: theory and experiment.—73-04906
Densification and microstructure of sodium-doped colloidal mullite.—73-09442
Determination of particle properties from electroacoustic measurements.—73-08390
Effect of electrolyte on the gelation and aggregation of $SnO_2$ colloidal suspensions.—73-13004
Effect of water on the dispersion of colloidal alumina in cyclohexane solutions of aerosol OT.—73-13023
Generalized program to calculate interparticle interactions in a variety of suspension conditions.—73-09147
Model hydrous oxide colloids for particle electrophoresis.—73-08420
Reactions of hydrous titanium oxide colloids with strong oxidizing agents.—73-12673
Sol-gel: principles and applications.—73-13283
Synthesis and characterization of self-assembled hydrophobic monolayer coatings on silica colloids.—73-07181
Texturing of platelike ceramics by colloidal processing.—73-13320

**color centers,**
Crystals with the fluorite structure: synthesis, additive coloring, and photochemistry of color centers [CC's]: I, Growth of activated crystals and efficiency of radiative formation of color centers.—73-02757
Effect of iron on formation of color centers in cerium-containing silicate glasses.—73-00457
Photostimulated reorientation of color centers in silicate glasses.—73-14249
Piezospectroscopic study of anti-Stokes color centers in LiF.—73-02670

**color/coloring,**
Arrival of color sorting.—73-15707
Brown tetraxial.—73-07237
Calculation of physical decoloration at tank glass melting.—73-14333
Cause and prevention of orange glaze during firing of brown glaze.—73-10804
Changing colors in container furnaces.—73-10505
Chromium, cobalt, and iron as coloring elements for ceramic pigments.—73-10808
Color and selected properties of $PbO$-$BiO_{1.5}$-$GaO_{1.5}$ glasses.—73-07002
Color change of ferrite phase.—73-09857
Color development of glossy glazes for rapid and single fire processes.—73-00901
Color development using triaxial colors for rapid once-fired systems.—73-07239
Color matching in ceramic glaze systems.—73-08381
Color matching without computers.—73-08382
Color predictions and the economy.—73-06613
Coloring and refining of heat-resisting glasses.—73-10509
Coloring glass in processing flows.—73-00598
Crackle and stripping of powder-doped color porcelain.—73-10810
Determination of lead and copper content in surface layers of electrochemically colored glass.—73-00319
Development of artistic colored glazes fired in oxidizing flame.—73-10815
Effect of burning conditions and minor components on the color of portland cement clinker.—73-06649
Effect of the composition of the matrix of multichrome glass on its properties.—73-00467
Effect of zircon dissolution on the color stability of glazes.—73-07249
Environmental concerns spur development of lead-free colors.—73-03840
Etched engraving glaze for color-glaze wall and floor tiles.—73-10837
Fabrication of plum green glaze of Song Jun ware.—73-10842
Forecasting color trends in 1993-94.—73-06616
Forehearth colorant.—73-03920
Future in multicolor-coated packaging.—73-10537
High-temperature color glaze fired in tunnel kiln.—73-07259
Higher-chroma zircon colors for glaze applications.—73-07260
How glaze composition affects chrome-tin pinks.—73-10855
Mechanism of color difference generation during production of mosaic.—73-10867
Optimization of ratio of coloring components during the electric founding of ruby-colored selenide glass.—73-00382
Pass/fail tolerancing based on artificial intelligence and superellipsoids.—73-08431
Preparation of ceramic colors on a diopside base.—73-00921
Preparation of color mix for art porcelain.—73-10883
Production technology for color glass face brick.—73-10588
Red coloration of iron aventurine glazes.—73-10890
Reduction of pigment content in color slime for mosaic tiles.—73-10891
Simulation of glass colors on a computer screen.—73-08444
Sintered color glass tiles with rough sticking face.—73-10481
Small-scale melting furnace for colored glasses.—73-12243
Solid-state chemistry of thermally induced yellow coloring in synthetic hydrous titanium oxide from $TiCl_3$.—73-12685
Trichromatic coordinates determination of trace coloration in crystal glasses.—73-14302
Use of chromium, cobalt, and iron as coloring elements for ceramic pigments.—73-14672
Using polymer theory to study the relationship between the structure of silicate melt and the color stability of Cd(S,Se) crystals.—73-10904
What does Gzhel porcelain whiteness depend on.—73-10298
Which colors can and cannot be produced in ceramic glazes.—73-07279

**colorimetry,**
Color matching without computers.—73-08382
Fundamentals of colorimetry.—73-02611
Machine vision can keep quality high and production lines moving.—73-12159

**combustion synthesis,**
Analytical modeling of the propagation of a thermal reaction front in condensed systems.—73-05692
Analytical modeling of the propagation of thermal reaction front in condensed systems—correction.—73-12918
Apparatus for vapor-phase synthesis of diamond and method for vapor-phase synthesis of diamond.—73-05284
Characteristic TiC body fabricated by combustion synthesis using reactant compact with density of more than 80%.—73-05702
Characterization of dense combustion-synthesized $Ti_5Si_3$.—73-05367
Combustion synthesis of dense ceramic metal composites.—73-06753
Combustion synthesis of LiAl intermetallics.—73-06754
Combustion synthesis of TiC-$Al_2O_3$-Al and TiC-$Al_2O_3$-Ti ceramic-metal composites.—73-05713
Combustion synthesis, characterization, sintering, and microstructure of cordierite.—73-12949
Combustion synthesis/densification of ceramics and ceramic composites.—73-05714
Influence of reactant characteristics on the microstructures of combustion-synthesized titanium carbide.—73-09176
Synergistic effects of coupled combustion synthesis and vapor phase transport in the synthesis of advanced materials.—73-06076
Synthesis of lithium aluminate, mullite, and colored zirconia by a combustion process.—73-09360
Vapor phase reactions in the synthesis of ceramics.—73-06131

**combustion,**
Combustion control, the key to effective firing.—73-08466
Effect of the combustion of coal mixed with limestone on the burning process of clinker.—73-09921

Interim report on the development of a ceramic hot-gas fan.—73-02083
Modeling of the combustion chamber in glass-melting furnaces.—73-05123
Roller kilns with postcombustion for brick firing.—73-12242
Simultaneous production of cement and electrical power by fluidized bed combustion of pretreated gangue.—73-06716
Utilization of advanced combustion technology in kilns.—73-05137

**comminution,**
Application of defect statistics and fracture mechanics for the description of comminution processes.—73-12921
Comminution device for X-ray spectrochemical analyses.—73-12118
Influence of rheological parameters of the process of interparticle comminution in twin roll presses: I.—73-12037
Sample preparation and particle measurement.—73-05084

**compacts/compaction,**
Analysis for creep densification and grain growth of ceramic powder compacts.—73-09543
Break point in the pressure–density curve of magnesia prepared by the seawater magnesia process.—73-09025
Chemical aspects of forced SHS compaction.—73-16052
Compaction and sintering behavior of zirconia powders: I, Compaction response.—73-02750
Compaction mechanisms of ultrafine SiC powders.—73-02751
Compaction rate diagrams of a multicomponent atomized ceramic powder.—73-09044
Cracking, end-capping, and other defects in pressed ceramic compacts.—73-12961
Debinding behavior for injection-molded alumina compacts.—73-02761
Deep cup forming and improvement in dimensional precision of sintered compact from alumina granules.—73-16693
Effect of compaction pressure on the sinterability of submicron powders of tetragonal zirconia.—73-16725
Effects of powder processing on the characterization of magnesia derived from alkoxide precursors: II, Compaction and sintering behavior.—73-09106
Evolution of topology during simulated sintering of powder compacts.—73-03144
Explosive compaction of silicon nitride powder without additives using a water pressure medium.—73-02818
Fatigue test on polycrystalline diamond compacts.—73-09596
Green testing of pressed compacts.—73-09608
Hot-pressing after cold cyclic compaction of alumina powder matrix mixtures—effects of cold cyclic compaction.—73-09164
Importance of pore-grain boundary evolution in sintering kinetics.—73-03151
Ion-beam-induced compaction in glassy carbon.—73-09473
Macrokinetics of SHS compaction.—73-16857
Mechanical properties of partially dense alumina produced from powder compacts.—73-17388
Methodology for discrete numerical modeling of powder compaction processes.—73-05911
Model for the characterization of agglomerated ceramic powder compaction.—73-09213
Nonconventional pressure-assisted powder consolidation methods.—73-13153
Novel equipment for the study of the compaction of fine powders.—73-08426
Packing structure of powder compact [analyzed] by void-size distribution.—73-17179
Porosimeter as a means to measure the compactibility of powders.—73-08434
Pressureless sintering and HIPing of inhomogeneous ceramic compacts.—73-05991
Sintering property of green compacts of Si and TiC mixed powders in nitrogen.—73-03013
Stepped cup forming from alumina granula by press powder flow compaction.—73-17009
Transformations of nonautonomous phases and polycrystalline system compaction.—73-17065
Use of thermal energy in shock-wave compaction of ceramics and intermetallics.—73-06130

**composites,**
3-D composite fabrication through matrix slurry pressure infiltration.—73-17059
5.5 percent increase is forecast for composite shipments.—73-13620
Acoustic microscopy of ceramic-fiber composites.—73-03118
Adaptive numerical techniques for reactive vapor infiltration.—73-16652
Adhesion influence on the formation of physicomechanical properties of the glass-composite materials.—73-14131
Adhesive strength of glass composite materials in the contact region.—73-06993
Advances in Science and Technology, 2: Innovative Materials, Prospects and Problems in a Competitive Industrial Context (Proceedings of the International Conference on "Innovative Materials—Prospects and Problems in a Competitive Industrial Context," June 4-6, 1992, Modena, Italy)—73-17515
Aging of thin polyimide-ceramic and polycarbonate-ceramic composite membranes.—73-16406
$Al_2O_3$ and $ZrO_2$ composites with high-TiC contents fabricated by tailoring oxide powders.—73-09012
$Al_2O_3$(p)-6061Al composites under dry sliding conditions [studied] using scanning electron microscopy, energy-dispersive spectrometry, and X-ray diffractometry.—73-06737
Alkali-silicate admixture for cement composites incorporating pozzolan or blast-furnace slag.—73-13677
Alloy for HTSC composite conductors made of Au-Ag-Pd.—73-04829
AlN matrix composites fabricated via an infiltration and reaction approach.—73-12910
Aluminum metal matrix composites.—73-10300
Apparatus which comes in contact with molten metal and composite member and sliding structure for use in the same.—73-04027
Bacteriostatic and fungistatic glass powders.—73-00435
Bend strength versus tensile strength of fiber-reinforced ceramics.—73-06329
Bending fatigue behavior of unidirectionally reinforced SCS6/Ti-15-3.—73-03241
Bending strength and microstructure of $Al_2O_3$-$Y_2O_3$-MgO and $Al_2O_3$-$Y_2O_3$-$ZrO_2$-MgO composite ceramics.—73-06331
Bending strength and microstructure of $Al_2O_3$-$Y_2O_3$-MgO and $Al_2O_3$-$Y_2O_3$-$ZrO_2$-MgO composite ceramics.—73-13495
Carbide/metal composite material and a process therefor.—73-10303
Carbon dioxide laser cutting of a carbon-fiber–silicon carbide-matrix composite.—73-05697
Ceramic articles with a modified metal-containing component and methods of making [the] same.—73-03674
Ceramic composite body.—73-03908
Ceramic composite of aluminoborosilicate fibers coated with several layers.—73-05290
Ceramic composites by the sol-gel method—a review.—73-09031
Ceramic composites for extremely high-temperature applications.—73-12318
Ceramic composites survive severe thermal shocks.—73-15961
Ceramic composition.—73-02028
Ceramic fiber-reinforced silicon carboxide composite with adjustable dielectric properties.—73-14681
Ceramic fiber-reinforced silicon carboxide composite.—73-03909
Ceramic oxide supeconductive composite material.—73-04832
Ceramic sintered body and process for preparation thereof.—73-02030
Ceramic-metal composite substrate and method for producing the same.—73-03675
Ceramic/ceramic composite components advance furnace systems and processes.—73-05261
Cermet or ceramic/glass composites including self-reinforced ß-silicon nitride, and method of making [the] same.—73-05293
Characterization of electroconductive TiN/Al-O-N composites.—73-10921
Characterization of fine particles of ruthenium-alumina composites prepared by different methods.—73-03566
Characterization of interfaces in nickel-matrix composites.—73-06745
Chemical vapor deposited in situ composites in the system Ti-Si-C.—73-02744
Chemical vapor infiltration of $TiB_2$-matrix composites.—73-16674
Chemical vapor infiltration: dispersed and graded depositions for ceramic composite.—73-16675
Combustion gas corrosion resistance of heat-exchange materials and refractories for glass furnaces at high temperatures: II, Oxides and composites.—73-07200
Combustion synthesis of dense ceramic metal composites.—73-06753
Composite article and method.—73-03915
Composite ceramic material and method to manufacture the material.—73-12355
Composite dielectric for a semiconductor device and method of fabrication.—73-04193
Composite heat-insulating bodies and a method for producing [the] same.—73-10779
Composite material with carbon-reinforced fibers and its production.—73-12454
Composite materials consisting of $Li_2O$-$SiO_2$ [LS] crystals and $Na_2O$-CaO-$SiO_2$ [NCS] glass.—73-00311
Composite materials in medicine.—73-05164
Composite materials: new opportunities for industrial applications in construction and transportation.—73-09705
Composite of refractory material.—73-14638
Composite refractory materials.—73-12356
Composite substrate and process for producing the same.—73-04194
Composite superconductor-polymer material preparation for low-magnetic-field shielding.—73-04683
Composite with anisotropy in thermal conductivity by the combination of aluminum nitride and its polytypoids.—73-14685
Composites made by directed oxidation of Al alloy with aluminosilicate fibers.—73-10208
Computer-aided modeling tools for composite materials.—73-17469
Conduction mechanism in crystalline $InSe$-$In_6Se_7$ composite.—73-01109
Conductivity variations in composites of α-zirconium phosphate and alumina.—73-00943
Considerations for modeling the creep behavior of composite materials.—73-17255
Constructing material databases for CAE systems.—73-06564
Corrosion behavior of steel coated with thin-film TiN/Ti composites.—73-03570
Corrosion of magnesium matrix composites.—73-03571
Crack bridging models for fiber composites with slip-dependent interfaces.—73-09552
Crack growth resistance of SiC-SiC ceramic composite materials.—73-06351
Crack-fiber interaction in SiC fiber-reinforced glass matrix composite.—73-06202
Cracking and stress redistribution in ceramic layered composites.—73-09558
Creep of duplex microstructures.—73-17267
CVD SiC/Al composites produced by a vacuum suction casting process.—73-00216
Cyclic fatigue of ceramics: a fracture mechanics approach to subcritical crack growth and life prediction.—73-03256
Damage assessment and lifting of continuous-fiber-reinforced metal-matrix composites.—73-03257
Damage development in titanium metal-matrix composites subjected to cyclic loading.—73-03258
Damage mechanisms under tensile and fatigue loading of continuous-fiber-reinforced metal-matrix composites.—73-03259
Defects in squeeze-cast $Al_2O_3$/Al alloy composites and their effects on mechanical properties.—73-00218
Deformation and microstructure of $Al_2O_3$-particle-reinforced 6061 Al composite.—73-06764
Design for AE transducer by 1-3 piezoelectric composite.—73-15254
Design, analysis, and application of an improved push-through test for the measurement of interface properties in composites.—73-15786
Development of a high-performance $Si_3N_4$ material: using transient-liquid-phase and self-reinforcing technology.—73-16702
Development of a new composite material based on λ-$MnO_2$ and porous ceramics.—73-12980
Development of ceramic composite membranes for gas separation: III, Examination of membrane characteristics by the gas permeation model.—73-12981
Dielectric constant for binary piezoelectric 0-3 composites.—73-01400
Differences in fatigue and fracture behavior of woven-mat and acrylic binder SCS-6/Ti-15-3 composites.—73-13820
Dynamic fracture responses of $Al_2O_3$, $Si_3N_4$, and $SiC_w/Al_2O_3$.—73-06375
Effect of crack orientation on the fracture properties of composite materials.—73-09573
Effect of inclusions/oxides on the castability and tensile properties of four SiC particulate Al-Si-Mg composites.—73-06774
Effect of inhomogeneous particle distributions on the mechanical properties of metal matrix composites.—73-09578
Effect of interfacial properties on fracture toughness in fiber-reinforced ceramic composites.—73-13508
Effect of intergranular phase on mechanical properties of $Si_3N_4$-$Si_2N_2O$ composites.—73-13509
Effect of microstructure on the fracture toughness of a metal-matrix composite.—73-03269
Effect of processing and fiber coating on fiber-matrix interaction in mullite fiber–mullite matrix composites.—73-05768
Effect of SiC/BN double coating on fiber pullout in mullite fiber/mullite matrix composites.—73-02795
Effect of $Ta_2O_5$ matrix additions on the microstructure and mechanical properties of SiC fiber-reinforced lithia-alumina-silica composites.—73-17126
Effect of water-soluble polymer on the flexural strength and moisture sensitivity in MDF [macro-defect-free] cement composites.—73-03457
Effects of material properties and crush conditions on the crush energy absorption of fiber composite rods.—73-07018
Effects of reinforced content and shape on cavitation and failure in metal-matrix composites.—73-03277
Effects of SiC addition on the mechanical properties and sinterability of $TiB_2$-(2 mol% $Y_2O_3$-$ZrO_2$) composite.—73-02807
Effects of temperature and oxidation on the mechanical behavior of uncoated SiC-SiC composite materials.—73-06400
Elastic modulus and interface stress constraint of particle-reinforced composites.—73-12782
Elastic properties of two-phase composites.—73-08845
Electrical properties of ZnO/PrCo oxide multilayered composites.—73-11183
Electrochemical fabrication of bioactive composite coatings on Ti6Al4V surgical alloy.—73-13832
Electrochemical processing of metal-matrix composites.—73-06779
Electrolytic composite layers based on nickel with nickel oxide addition.—73-10944
Elevated-temperature fracture resistances of monolithic and composite ceramics using chevron-notched bend tests.—73-06403
Emerging technologies for the in situ production of MMC's.—73-06780
Enhancement of fracture toughness by residual stress in $Si_3N_4$ composites.—73-06404
Evaluation of adhesion strength in a Ti/$Al_2O_3$ composite.—73-00231
Evaluation of interfacial properties of fiber-reinforced ceramic composites using a mechanical properties microprobe.—73-03284
Evaluation of the interfacial mechanical properties of fiber-reinforced boron nitride matrix composites.—73-17311
Fabrication and characterization of CVD-deposited TiC-SiC composites.—73-02819
Fabrication and characterization of PZT/thermoplastic polymer composites for high-frequency phased linear arrays.—73-15261
Fabrication and characterization of SiC/6061 composites.—73-06788
Fabrication and mechanical properties of $C_f$/NiAl and $SiC_w$/NiAl composites.—73-03587

Fabrication and properties of (Y,Ce)-TZP/$Al_2O_3$ and Y-TZP/$Al_2O_3$ composites from fine powders prepared by a hydrolysis technique.—73-02821
Fabrication of ceramic composites by CVD/HP process.—73-16772
Fabrication of continuous fiber ceramic matrix composites via slurry routes.—73-02824
Fabrication of continuous-fiber-reinforced SiC matrix composites with gradient compositions.—73-09130
Fabrication of silicon-nitride-based composites by impregnation with perhydropolysilazane.—73-05805
Fabrication of silicon-nitride-based composites by impregnation with perhydropolysilazane.—73-13056
Factors controlling the sintering of ceramic particulate composites: II, Coated inclusion particles.—73-13057
Fastener Development Program for TMC [titanium matrix composite] applications.—73-13619
Fatigue crack growth in a fiber-reinforced titanium MMC at ambient and elevated temperatures.—73-03289
Fatigue crack propagation in SiC-continuous-fiber-reinforced Ti-6Al-4V alloy metal-matrix composites.—73-03290
Fiber pullout and fracture energy of C-fiber/C-matrix composites.—73-06420
Fiber pushout and interfacial shear in metal matrix composites.—73-06789
Fiber- and whisker-reinforced composites and method for making the same.—73-01855
Fiber-reinforced glass composite for protecting polymeric substrates.—73-00731
Fluormica-coated Nicalon fiber-reinforced glass-ceramic composites.—73-14381
Flying type composite magnetic head having Mn-Zn ferrite core.—73-01486
Foreseeing of fracture in CFGFRP composites by the measurement of residual change in electrical resistance.—73-12140
Formation of a ceramic composite by centrifugal casting.—73-04972
Formation of $Al_2O_3$ fiber-reinforced AlN/Al matrix composites by Al(Mg) melt nitridation.—73-06793
Formation of nanocrystalline Fe/SiC composite by mechanical alloying.—73-03589
Fracture and sliding in the fiber-matrix interface in ceramic composites.—73-06427
Fracture mechanics and mechanism of ceramic composites.—73-05819
Fracture resistance of silicon-carbide-platelet-reinforced alumina composite.—73-03298
Fracture toughness of SiC-whisker/$ZrO_2$/$Al_2O_3$ triple-phase composites.—73-06441
Friction and wear of self-lubricating composites at temperatures to 450°C in vacuum.—73-06443
FRP composite industry is cautiously optimistic about the future.—73-13623
Full-cell cracking mode in unidirectional brittle matrix composites.—73-03304
Gas turbine engine combustor fiber-reinforced glass-ceramic matrix liner with embedded refractory ceramic tiles.—73-15992
Glass composite materials [GCM's]—a new form of the radioactive waste's immobilization.—73-15700
Glass composites.—73-14392
Glass-doped ceramic matrix composites.—73-03928
Global outlook for reinforced glass composites.—73-06571
Grain-boundary conductivity of the system $Y_2O_3$-$Nb_2O_5$ composites.—73-00973
Grinding composites into shape.—73-03415
Growth of alumina/metal composites into porous ceramics by the oxidation of aluminum.—73-13844
Heat-resistant sintered hard alloy.—73-00281
High-flexural-strength ceramic fiber-reinforced silicon carboxide composite.—73-03931
High-speed joining of aluminum metal matrix composites using continuous wave and pulsed lasers.—73-00239
High-temperature behavior of salt-coated Nicalon-fiber-reinforced calcium aluminosilicate composite.—73-17342
High-temperature ceramic composite.—73-12370
High-temperature deformation behaviors of $SiC_p$/Al-14 Fe composites.—73-06800
High-thermal-conductivity diamond/nondiamond composite materials.—73-12474
Hot deformation of 6061 alumina composite materials.—73-06801
HTCC/LTCC use of multiple ceramic tapes in high-rate production.—73-15768
Hybrid microwave-assisted chemical vapor infiltration of alumina fiber composites.—73-16823
Hybrid whisker-fiber-reinforced glass-matrix composites with improved transverse toughness.—73-10447
Hysteresis measurements on ferroelectric composites.—73-11585
Improved composite flexible blanket insulation.—73-07215
In situ formation of metal-ceramic microstructures by partial reduction reactions.—73-06805
Incorporation of organic compound into silica matrix by a sol-gel process for NLO [nonlinear optical] applications.—73-05859
Inexpensive method for making ceramic composites.—73-02864
Infiltrated fiber-reinforced metallic and intermetallic alloy matrix composites.—73-03685
Inherent fallacy in composite interaction failure curves.—73-09624
Injection molding of ceramic composites.—73-01792
Interface compatibility in Nicalon-fiber-reinforced metal and ceramic composites.—73-03155
Interface of multiphase ceramic composites.—73-03156
Interface reaction of TiC particle-reinforced titanium composites.—73-10241
Interfacial debonding and fiber pullout stresses of fiber-reinforced composites: IX, A simple treatment of Poisson's effect for frictional interfaces.—73-09625
Interfacial debonding and fiber pullout stresses of fiber-reinforced composites: IX, A simple treatment of Poisson's effect for frictional interfaces.—73-09626
Interfacial debonding and fiber pullout stresses: III, Interfacial properties of cement matrix composites.—73-06680
Interfacial diffusion and reaction mechanisms in coated fiber-reinforced glass-ceramic composites.—73-14015
Interfacial mechanical properties of fiber-reinforced ceramic composites.—73-06464
Interfacial mechanical properties of fiber-reinforced ceramic composites.—73-13555
Internal stresses in $Si_3N_4$-based quasi-binary composites.—73-16523
Inverse shape replication method of making ceramic composite articles and articles obtained thereby.—73-10319
Ion microprobe investigations of interfacial phenomena in composites.—73-06810
Izod impact test for measuring the fracture energy of fiber-reinforced ceramics.—73-12153
Joining technique using multilayer lead-indium-gold composite deposited in high vacuum.—73-01226
Lanthanum phosphate-bonded composite nickel-rhodium electrodes for alkaline water electrolysis.—73-00990
Laser-assisted hot machining of ceramics and composite materials.—73-05891
Layered BN-coated/as-received unidirectional fiber CFCC's [continuous fiber ceramic composites] with enhanced mechanical performance.—73-17370
Layered metal intermetallic composites formed by reaction sintering.—73-05896
Low dielectric constant glass-ceramic composite controlled isolated porosity.—73-04128
Low-volume-fraction ceramic filled fluoropolymeric composite material.—73-12373
Lubricated rolling wear of SiC-whisker-reinforced $Al_2O_3$ composites against M2 tool steel.—73-06470
Magnetoplumbite compounds as a fiber coating in oxide/oxide composites.—73-16858
Manufacturing sintered body of silicon carbide by using SiC whiskers in a multiple heating step process.—73-02104
Material development in the $Si_3N_4$ system using glass-encapsulating HIPing: II.—73-09197
Matrix cracking and fiber bridging of carbon-fiber-reinforced carbon matrix composites.—73-06472
Measurement of properties of brittle matrix composites.—73-03323
Measurement of residual stresses in sapphire fiber composites using optical fluorescence.—73-06476
Mechanical characterization of Si-C(O) fiber/SiC (CVI) matrix composites with a BN interphase.—73-06478
Mechanical properties of a novel $Si_3N_4$–amorphous $Si_3N_4$ composite.—73-06479
Mechanical properties of an SiC-fiber-reinforced CVI-SiC composite.—73-03330
Mechanical properties of HIPed $Si_3N_4$-based materials for high-temperature long-term applications.—73-17385
Mechanical properties of phosphate glass-ceramic–316L stainless steel composites.—73-13868
Mechanical properties of spinel–silicon carbide whisker composites.—73-03337
Mechanical properties of whisker-reinforced cordierite glass-ceramic composites.—73-03338
Mechanics of tool wear during machining of advanced fibrous composites.—73-06487
Mechanofusion—a new technology for creating composite material.—73-02891
Metal matrix composite which utilizes a barrier.—73-10322
Metal matrix composites in the automotive industry: opportunities and challenges.—73-06823
Metal-electroactive ceramic composite actuators.—73-11633
Method for fabricating a ceramic fiber-reinforced composite material.—73-12377
Method for in situ tailoring the component of ceramic articles.—73-04985
Method for producing a ceramic product.—73-05313
Method for producing ceramic composite foams.—73-12379
Method for producing composite ceramic structures using dross.—73-03690
Method for producing composite ceramic structures.—73-04990
Method for producing zirconia-based sintered body.—73-12381
Method for reducing metal content of self-supporting composite bodies and articles formed thereby.—73-00288
Method for the ply-level elastic characterization of composite materials using thick tubular angle-ply specimens.—73-15819
Method of making ceramic composite articles.—73-03696
Method of making ceramic composites.—73-00289
Method of producing a composite diamond abrasive compact.—73-00002
Method of producing a composite oxide superconductive wire.—73-04853
Method of producing ceramic composite bodies.—73-10332
Method of producing fiber-reinforced and particle-dispersion-reinforced mullite composite material.—73-12386
Methods of producing ceramic and ceramic composite bodies.—73-05000
Microcrack toughening mechanism in brittle matrix composites.—73-06489
Micromechanical analysis of fiber crack propagation in composite materials due to transverse tensile loads.—73-09648
Micromechanical modeling of fiber/matrix interface effects in transversely loaded SiC/Ti-6-4 metal matrix composites.—73-00251
Micromechanics-based strength prediction methodology for notched metal-matrix composites.—73-03341
Microstructural characterization of composites via electrical measurements.—73-17154
Microstructural image analysis applied to fiber composite materials—a review.—73-08417
Microstructural study of the dislocation and precipitation distributions in an Al-Li-SiC composite during aging at 190°C.—73-06831
Microstructure and abrasive wear of composite layers formed by laser processing.—73-13873
Microstructure and properties of Nextel 610 fiber-reinforced ceramic and metal matrix composite.—73-17164
Microstructure and room temperature mechanical properties of spray-atomized and codeposited Al-12 wt% Si MMC's.—73-03620
Microstructure of (Nb,Ti)C-Ni composite.—73-06832
Microstructure of glass-fiber-reinforced water-resistant gypsum binder composites.—73-03499
Microstructure-property relationships in silicate-matrix composites.—73-03175
Microstructures of metal oxide composites formed by solid-state displacement reaction.—73-17174
Model for Hydro and Hydro-Abrasive Jet Machining of carbon fiber-reinforced plastic composites.—73-05928
Model of the nonlinear mechanical behavior of 2D SiC-SiC chemical vapor infiltration composites.—73-17400
Modeling of the elastic properties of fiber-reinforced composites: I, Orientation measurement.—73-08919
Modest turnaround forecast for fiberglass-reinforced composites.—73-13630
Molybdenum disilicide matrix composites reinforced with refractory metal fibers.—73-12500
Monitoring loads in fiber-reinforced composite materials.—73-12168
Mullite whisker-reinforced aluminum: novel metal matrix composites.—73-03625
Nature of failure and thermal properties of the composites based on glasses reinforced by high-strength fibers.—73-14231
New ceramic-based composites for electrical contacts.—73-00999
Nonlinear electromagnetic field response of high-$T_c$ superconducting microparticle composites.—73-08149
Notch effects in carbon matrix composites.—73-17406
Opportunities for advanced materials used in power transmission.—73-12328
Optical composite glasses from reactive deposition of chalcogenides in porous silica.—73-14449
Oxidation behavior of graphite/$B_4C$/SiC/$ZrB_2$ composite in dry and moist atmospheres.—73-06312
Oxidation behavior of graphite/$B_4C$/SiC/$ZrB_2$ composite in dry and moist atmospheres.—73-13481
Oxidation effects on Nextel-reinforced SiC.—73-17230
Oxidation of a composite material based on cubic boron nitride.—73-13484
Parametric study of a ceramic-fiber/inetal-matrix composite.—73-06836
Performance of ceramics and fiber composites under severe thermal shocks applied by energetic electron beams or accelerated plasmas.—73-05609
Phase characterization and grain size effects of nanophase $Y_2O_3$, $ZrO_2$, and $Y_2O_3$-$ZrO_2$ composites produced by the gas-phase condensation technique.—73-05446
Piezoelectric composite material.—73-01446
Piezoelectric composite material.—73-15304
Porous ceramic composite with dense surface.—73-10336
Potential application of natural minerals in ceramic and metal matrix composites.—73-13169
Powder processing of intermetallic-base composites.—73-13881
Precious metal catalysts utilizing composites of oxygen ion-conducting and inert support materials.—73-12394
Prediction of fracture and detection of fatigue in ceramic composites from electrical resistivity measurements.—73-09657
Preparation and microwave absorbing characteristics of Ni-Zn ferrite composite.—73-01479
Preparation and permeation characteristics of alumina composite membranes by CVD and evaporation-oxidation process.—73-13175
Preparation and properties of an SiC-fiber-reinforced glass-ceramic matrix composite.—73-00682
Preparation of alumina/aluminum composites by oxidation of aluminum.—73-00257
Preparation of composite particles by pulsed Nd-YAG laser decomposition of $[(CH_3)_2N]_4Ti$ to TiN-coat $TiO_2$, $Al_2O_3$, or $Si_3N_4$ powders.—73-02950
Preparation of mixed fiber composite structures.—73-10338
Preparation of SiC whisker-reinforced Al alloy composites by compocasting process.—73-03633
Process for preparing self-supporting bodies and products produced thereby.—73-00296
Process for preparing self-supporting ceramic composite bodies and bodies produced thereby.—73-10341
Process for producing composite materials with a metal matrix with a controlled content of reinforcer agent.—73-03701
Process for the preparation of a composite structure comprising a ceramic enamel layer and polyurethane layers.—73-10343
Processing and mechanical properties of laminated metal composites of Al/Al-25 vol% SiC and ultrahigh carbon steel/brass.—73-03634
Processing and properties of polymer-derived $Si_3N_4$ composites.—73-13217
Production of metal carbide articles.—73-05332
Properties of ORMOSIL with adding organic silane in TEOS system: I.—73-06272

Protective coating with reactive interlayer on reinforcement in silicon carbide composite.—73-12515
Prototype ceramic composite heat exchanger for use in incineration promises energy savings.—73-08523
R-curve behavior in $Al_2O_3$-$ZrO_2$-SiC whisker composite.—73-13582
Rapid infrared joining [RIJ] of titanium alloys and titanium matrix composites.—73-00261
Reactivity between BN composite ceramics and molten stainless steel.—73-00848
Reinforced alumina ceramic-metal bodies.—73-10345
Research and application of composite mineralizer in rotary kiln.—73-10139
Review of recent research [1982-1992] in the former Soviet Union on fibrous composites.—73-09748
Scanning ion microprobe analysis of composite materials.—73-03190
Science and technology in composite materials—composite ultrafine particles.—73-13896
Science and technology in composite materials—grain-boundary microstructure and magnetic properties of hard magnetic materials.—73-07975
Science and technology in composite materials—nanostructure-controlled magnetic materials.—73-04647
Science and technology in composite materials.—73-05634
Science and technology of composite materials—resin-bonded magnet.—73-04649
Science and technology of composites—fundamental theory on the strength of reinforced materials by long fibers.—73-17424
Self-diagnosis of fracture in CFGFRP composites and CFGFRP-reinforced concrete.—73-01928
Shaped ceramic composites with a barrier.—73-02068
Si-Ti-C-O fiber-reinforced SiC composites produced by reaction bonding.—73-16982
SiAlON ceramics: retrospect and prospect.—73-05274
Silicon carbide bodies and methods of making the same.—73-12518
Silicon carbide/SRBSN composites.—73-03194
Silicon oxycarbonitride by pyrolysis of polycyclosiloxanes in ammonia.—73-14559
Silicon-carbide-reinforced composite material.—73-02139
Silicon-carbide-reinforced reaction-bonded silicon carbide composite.—73-12525
Silicon-nitride-based composite with improved fracture toughness.—73-05340
Sintered ceramic-metal composite product and method of fabricating the same.—73-10350
Sol-gel coating process for the preparation of supported $TiO_2$ composite membranes.—73-03019
Sol-gel processing of fiber-reinforced ceramic shapes.—73-03021
Stability of interfaces in high-temperature metal matrix composites.—73-06858
Standardizing test methods for composite materials.—73-15849
Standards for computerization of composite material data.—73-06594
Status of metal matrix composite research and development in Japan.—73-06859
Status of R&D project on high-performance materials for severe environments.—73-05276
Strength and toughness of slip-cast fused-silica composites.—73-10484
Superconducting composite with multilayer patterns and multiple buffer layers.—73-04874
Superplastic behavior in a high strain rate range of 6061 aluminum composites reinforced with $Si_3N_4$ whiskers or particulates.—73-03646
Superplastic behavior in a high strain rate range of 6061 aluminum composites reinforced with $Si_3N_4$ whiskers or particulates.—73-10280
Superplasticity in ceramic and metal matrix composites and the role of grain size, segregation, interfaces, and second phase morphology.—73-09680
Superplasticity in ceramics and ceramic composites, and high strain rate superplasticity in metal matrix composites.—73-03647
Superplasticity in fine-grained ceramics and ceramic composites: current understanding and future prospects.—73-09681
Surface characterization of carbon fibers and interfacial properties of carbon fiber composites.—73-13454
Sustained load behavior of off-axis SCS-6/TIMETAL 21S composites.—73-10282
Synthesis and characterization of group VI metal silicide–silicon carbide compositions via solid-state displacement reactions of nanosize grains of $M_2C$ and silicon.—73-06078
Synthesis of composite materials by reactive plasma-spray processing.—73-06860
Synthesis of nanocrystalline materials of composite oxides based on $BaTiO_3$ by using stearic acid-sol method.—73-17042
Synthesis of whisker-reinforced mullite matrix composites using colloidal processing.—73-13314
Synthesis, processing, and phase evolution of TiN/$TiB_2$ composites from polymeric precursors.—73-06104
TEM observations of SiC-SiC composites with a carbon interphase layer annealed in air at high temperatures.—73-03205
Template synthesis and optical properties of small metal particle composite materials: effects of particle shape and orientation on plasmon resonance maxima.—73-06111
Tensile properties of cold-chamber die-cast ceramic particulate-reinforced ZA-8 composites.—73-06863
Testing and analysis of an advanced hypersonic structure.—73-10284
Texture measurement on materials containing platelets using stereology.—73-17211
Thermal conductivity of uniaxial coated fiber-reinforced composite with thermal barriers.—73-16621
Thermal decomposition of polyvinylbutyral [PVB]/PLZT, PMN dielectric powder composite.—73-01039
Thermal fatigue behavior of actively cooled divertor mockups with fiber composites as plasma interactive material.—73-05659
Thermal shock behavior of continuous fiber ceramic composites (CFCC's).—73-16631
Thermal shock of cracked composite materials with temperature-dependent properties.—73-05670
Thermal shock resistance and microstructure of sintered glass matrix composites.—73-14296
Thermal transport in SiC fiber-SiC matrix composites.—73-08993
Thermally induced micromechanical stresses in ceramic/ceramic composites.—73-05678
Thermodynamic analysis of Al-Mg-Si-C-O interactions in aluminum matrix composites.—73-06865
Thermoelastic analysis of composite CVD SiC fibers.—73-03367
Thermomechanical properties and microstructures of ZTA-$Al_2O_3$ whisker composites.—73-13605
Thermomechanical response of a crossply titanium matrix composite subjected to a generic hypersonic flight profile.—73-03656
Transverse thermal conductivity of a unidirectional fiber composite with fiber-matrix debonding: a calculation based on effective-medium theory.—73-12902
Turning of carbon and glass fiber hybrid cloth composite material.—73-04951
Ultrasonic evaluation of silicon carbide whisker-reinforced ceramic composites.—73-08453
Unexpected behavior of interfacial carbon in SiC/SiC composites during oxidation.—73-13491
Universal *R*-curve of crack propagation resistance in ceramic composites.—73-06548
Using rapid infrared forming to control interfaces in titanium matrix composites.—73-06871
Viscosities and sintering rates of a two-dimensional granular composite.—73-03072
Wear and friction of a unidirectional carbon fiber–glass matrix composite against various counterparts.—73-07102
Wrist pin having a ceramic composite core.—73-16024
$YBa_2Cu_3O_{7-x}$/$Y_2BaCuO_5$ composites: growth and characterization.—73-08279
Zeolite composite panel with humidity control property.—73-10193

**composition,**
Algorithm for calculating glass charge compositions.—73-00587
Application of forsterite ceramics and their production processes.—73-10918
Celadon glaze for Jun ware.—73-07238
Change of mass and composition in transformation processes.—73-16047
Characterization and material design of high-strength concrete with superior workability.—73-09848
Chemical treating composition for glass fibers having emulsified epoxy with good stability and the treated glass fibers.—73-00729
Chromite.—73-12264
Composition dependence of sheet glass properties (review).—73-00438
Composition of titanium boride synthesis products.—73-12555
Dependence of sheet glass properties on its composition—review.—73-00608
Development of a system of computing refractive index, mean dispersion, and density of silicate optical glasses based on their composition.—73-00322
Effect of glaze composition on the color and stability of chrome tin pink pigments.—73-07248
Effect of nature and composition of quaternary $A^{III}B^{V}$ solid solutions on formation of dislocation structure in epitaxial heterostructures.—73-01136
Effect of the composition of the matrix of multichrome glass on its properties.—73-00467
Employment of existing data sets of technical glasses for the development of new glass compositions using a modified simplex method of sequential optimization.—73-03728
Fixing of concrete composition and its correction.—73-13726
Improved sprayable insulation.—73-07216
Improvements in glass composition control techniques by simultaneous measurement of density and softening point.—73-10552
In situ compositional analysis of multielement thin films.—73-05055
Influence of cement composition on concrete durability.—73-00112
Influence of composition and processing on the properties of cordierite glass-ceramics.—73-00645
New data on natural and synthetic fenaksite.—73-15909
New materials set endurance records.—73-00253
Relationship between borosilicate glass composition, structure, and durability test response.—73-06965
Relationship between the composition and the reflection coefficient of thin films.—73-00542
Special purpose glasses continue to multiply.—73-06593
Use of a simplex-lattice experimental design for studying glasses.—73-07097
Use of two-phase standards of unknown compositions to determine calibration constants for powder XRD by linear regression.—73-16391

**compounds,**
High-pressure synthesis of "periodic compound" and its optical and electrical properties.—73-16816
Mullite ceramic compound.—73-12388
Preparation of spherical gadolinium compound particles.—73-13204
Superspace description of incommensurate intergrowth compounds and the application to inorganic misfit layer compounds.—73-05505
Trends in advanced materials data: regularities and predictions.—73-09753

**compressors/compression,**
Air compressors for the process industries.—73-04899
Compressibility measurements of ß- and ß''-alumina.—73-16064
Compressibility of SiC up to 68.4 GPa.—73-08828
Compressive testing of ceramics.—73-08385
Compressive testing of ceramics.—73-15782
Critical appraisal of limiting strain rates for compression testing of ceramics in split Hopkinson pressure bar [SHPB].—73-06361
Is your air power fit to face the competition.—73-04926
Novel method for measuring direct compressive properties of carbon fibers [CF's] using a micromechanical compression tester.—73-15826
Synthesis of the B1-type tantalum nitride by shock compression.—73-09365

**computers,**
Application and development of CAE/CAD [computer-aided engineering/computer-aided design] system in refractory industry.—73-14568
Application of a computer system for the repair pattern in torpedo cars.—73-14569
Application of computer to estimation of refractory wear and solidified-layer distributions in the blast-furnace hearth.—73-14570
Aspects of computer simulation of glass-forming melts.—73-13927
CAD procedures for design.—73-00006
CADCAM at Wedgwood.—73-03421
CAQ [computer-aided quality assurance]—a system concept for the glass industry and a part of computer-aided process control systems.—73-01764
Ceramic databases on STN.—73-09702
Computational materials science of cement-based materials.—73-06641
Computational nanotechnology.—73-05717
Computer modeling of the forming process.—73-03827
Computer programs for modeling diffusion-controlled processes.—73-13343
Computer simulating the stretching process on float glass.—73-14340
Computer simulation of fracture sequences in heterogeneous materials.—73-03247
Computer simulation of glass transition.—73-03717
Computer simulation study of thin-film formation process.—73-05719
Computer simulations of interfacial packing in concrete.—73-06642
Computer-aided design and manufacture (CAD/CAM) in plunger manufacture.—73-12019
Computer-aided imaging in ceramics.—73-08386
Computer-integrated finishing of slip-cast ceramics by industrial robots.—73-01768
Computing reliabilities of ceramic components subject to fracture.—73-12120
Computing reliabilities of ceramic components.—73-09550
Cone 1-3 computer glazes.—73-13666
CSJ-Net and ceramic titles.—73-09707
Current and future trends for efficient operator interfaces (or "If only they could talk").—73-01772
Data banks on the properties of ternary inorganic compounds as a basis for computer construction of new materials.—73-13613
Data compilation, analysis, and access: the role of the computer.—73-09709
Distance between operator and process increases—how to solve the problem.—73-01776
Example of computer control of glass-melting furnace.—73-05113
Glaze calculation software.—73-13670
Impact of modern software technology on the man-machine interface in process control systems.—73-01788
Introduction to database utilization.—73-09723
Lowenstein's rule in zeolite A: a computational study.—73-12624
Machinability of different dental materials for CAD/CAM systems.—73-06471
Multichip packaging in IBM—past, present, and future.—73-06580
Novel ceramic design techniques, craft, and computers.—73-03424
Optimizing the IS machine cycle.—73-15741
Personal computer-based simulation of laser interactions with materials.—73-13160
Possibilities of using computer-aided technologies in the glass industry.—73-14463
Practical application of rule- and knowledge-based system techniques to industrial processes.—73-01815
Prediction of inorganic compounds: experiences and perspectives.—73-09741
Retrieval of documents on ceramics by JOIS.—73-09747
Right display in the right place.—73-01829
Simulation of glass colors on a computer screen.—73-08444
Solidification process modeling: status and barriers.—73-09338
Structural analysis of new glass—computer-aided modeling of glass structure.—73-03812
Use of EDP [electronic data processing] for the development and selection of porcelain enamels.—73-10295
Use of personal computers to control ceramic processes.—73-12068
Using databases—in the author's case.—73-09756
Using databases—personal computer communication and CD-ROM peripheral.—73-09757
Utilization of Ceramic Abstracts CD-ROM version.—73-09758

**concentration,**
Burning moderate quicklime for aerated fly ash concretes in vertical kiln.—73-10706
**concretes,**
"Green Rust" [GR], iron solubility, and the role of chloride in the corrosion of steel at high pH.—73-06663
Accelerated carbonation of a blast-furnace cement concrete.—73-03431
Accuracy of test method for cement content in hardened concrete by sodium gluconate.—73-09802
AE properties of repeated bending load in mortar and concrete.—73-09808
Aggregate mixtures for least-void content for use in polymer concrete.—73-09809
Alkali-activated ground-granulated blast-furnace slag concrete: preliminary investigation.—73-00018
Alkali-aggregate reaction rim: $Na_2O$, $SiO_2$, $K_2O$, and CaO chemical distribution.—73-00020
All you want to know about lightweight aggregate concrete.—73-09813
Analyses of sodium- and potassium-rich droplets observed on the surface of alkali-silica reactive aggregates and on gel in polished thin sections.—73-09814
Application of backscattered electron imaging to concrete materials.—73-08375
Application of leak-proof concretes using fly ash.—73-09819
Application to field construction work of extremely early strength method and accuracy detection of materials control of concrete.—73-09821
Appraisal of steel corrosion threat with chlorides in reinforced concrete construction.—73-00026
Are small aggregates really better for making high-strength concrete.—73-06627
Assessment of the chemical and mineralogical composition of air-cooled blast-furnace slag for its use as concrete aggregate.—73-08491
Behavior of admixtures for pressed silicate concretes.—73-09827
Calcium hydroxide [CH] deposition in the near interfacial zone in plain concrete.—73-03438
Calculation of chloride diffusion coefficients in concrete from ionic migration measurements.—73-03439
Calculation of concrete humidity in reinforced concrete constructions.—73-13685
Capillary suction of water into concrete and the abnormal viscosity of the pore water.—73-06631
Carbonation and corrosion of rebars in salt contaminated OPC/PFA [ordinary portland cement/pulverized fly ash] concretes.—73-00029
Carbonation of autoclaved lightweight concretes [ALC's].—73-13686
Carbonation of concrete and the mechanism of moisture, heat, and carbon dioxide flow through porous materials.—73-06632
Cement savings in precast and monolithic concretes and reinforced concretes.—73-13689
Cement strength and concrete strength—an apparition or a dichotomy.—73-09839
Characteristics of carbonation of concrete used with ternary cement.—73-09845
Characteristics of fresh superplasticized concrete for vibrating compaction.—73-09846
Characterization and material design of high-strength concrete with superior workability.—73-09848
Characterization of natural zeolites and three kinds of inorganic admixtures for concrete.—73-13691
Chemical and pore change of ALC [autoclaved lightweight concrete] under carbonation accelerated test.—73-09850
Chemical identification of portland cements in New Zealand concretes: I, Characteristic differences among New Zealand cements in minor and trace element chemistry.—73-03442
Choice of coefficients of service conditions of heavy concrete $\gamma_{B2}$ considering all loadings.—73-00038
Choice of optimum compositions of soil-concrete mixtures.—73-00039
Coal combustion fly ash utilization in concrete formulation.—73-03444
Comparative study of latex-modified concretes and normal concretes subjected to freezing and thawing in the presence of a deicer salt solution.—73-00043
Comparison between the carbonation of OPC and PFA concrete in a mass concrete structure.—73-09859
Comparison of two methods for measuring the chloride ion permeability of concrete.—73-09860
Complement and synergism of fly ash, granulated basic slag, and silica powder.—73-09861
Computer simulations of interfacial packing in concrete.—73-06642
Concept of optimum designing of concretes.—73-13696
Concrete recycled.—73-13697
Concrete reinforced with up to 0.2 vol% of short carbon fibers.—73-06643
Concrete solutions.—73-03446
Concrete surface deterioration due to the expansion by the formation of jarosite.—73-00048
Concretes in low- and non-clinker cements.—73-13698
Consideration of bond between RCC [roller-compacted concrete] and cement-treated basecourse.—73-09865
Considerations for the deterioration of reinforced concrete structures.—73-09866
Consistency of high-strength concrete with high fineness granulated blast-furnace slag.—73-09867
Control of temperature rise of concrete using cooling aggregate and cooling water.—73-09869
Controlling method of setting time for low-heat cement concrete.—73-09800
Corrosion investigation of a reinforced concrete tunnel.—73-06644
Creep and shrinkage of ultra-rapid-hardening cement concrete.—73-09873
Damage evaluation of concrete in freezing and thawing process via spectral response of transverse elastic wave.—73-09879
Damage measurement in concrete via an ultrasonic technique: I, Experiment.—73-00054
Decomposition energy of fractal cracks propagating in concrete or rocks.—73-03447
Dependence of concrete durability on the dispersibility of portland cement, its concentration, and the absolute volumes of components of hardening mixes.—73-03450
Detection of ASR [alkali silica reaction] in opened fractures of damaged concrete.—73-09882
Deterioration of concrete structures due to alkali-dolomite reaction [ADR] in China.—73-13701
Determination of cement content in a concrete mix by heat flow measurement.—73-00057
Determination of water permeability coefficient of porous concrete for prefabricated drainage units.—73-09886
Development and application of multimeasured control of thermal-humid treatment of concrete.—73-00059
Development and evaluation of binders for high-strength concrete.—73-09887
Development of precision and bias statements for testing drilled cores in accordance with ASTM C-42.—73-09890
Development of solidification technique for recycling of concrete wastes by hydrothermal hot-pressing and its mechanical property.—73-15714
Diffusion of chlorides into concrete—influence of PFA [pulverized fuel ash] quality.—73-00064
Drying shrinkage of high-strength concrete.—73-09893
Dynamic behavior of concrete: influence of free water.—73-00066
Ecological balance of cement and concrete—comparison of ecologically relieving and burdening effects on the environment.—73-00069
Effect of both irradiation energy and annealing temperatures on Hall voltage of new concrete mixer.—73-00072
Effect of coarse aggregate quantity on fracture toughness of concrete.—73-13706
Effect of consolidating condition on compressive strength of concrete.—73-09902
Effect of electric current on concrete hardening.—73-13708
Effect of fly ash on the strength development of high-performance concrete.—73-03455
Effect of heat exposure on the thermoluminescence [TL] of concrete.—73-13709
Effect of micropore structure on autoclaved aerated concrete shrinkage.—73-00074
Effect of mixture proportion on zero-slump concrete for artifical fish reef.—73-09913
Effect of silica-containing additives on the properties of corundum concrete.—73-10723
Effect of temperature on stress relaxation of concrete at early ages.—73-09920
Effect of vibration on rheological properties of fresh concrete.—73-09926
Effective tensile Young's modulus of early aged concrete.—73-09929
Effects of degree of polymerization [DP] of water-soluble polymers on concrete properties.—73-03459
Effects of double mixing of high-quality grout for prestressed concrete.—73-09934
Effects of testing rates and age on ASTM C-1018 toughness parameters and their precision for steel-fiber-reinforced concrete.—73-09938
Effects of the ground granulated blast-furnace slag and fly ash on the low-heat-generating concrete.—73-09939
Efficient modified gypsum binder for manufacture of gypsum-concrete panels.—73-13715
Efficient modifier for concretes.—73-03462
Electrochemical extraction of chlorides from concrete: I, A qualitative model of the process.—73-13717
Electrochemical method of controlling the technological process during manufacture of gypsum and gypsum concrete products.—73-13718
Engineering properties of rubberized concrete.—73-03465
Estimation method by microwave for the deterioration depth of fire-damaged concrete.—73-09946
Evaluation of $AgNO_3$ solution spray method for measurement of chloride penetration into hardened cementitious matrix materials.—73-01895
Evaluation of concrete properties by use of elastic waves due to Schmidt hammer impact.—73-09950
Evaluation of cylinder size and capping method in compression strength testing of concrete.—73-09951
Evaluation of joint between the original concrete and the repair materials by ultrasonic testing method.—73-09952
Evaluation of the effectiveness and the classification of multicomponent concretes.—73-03468
Evaluation of the empirical dependence of electric resistance of concrete mixtures on temperature.—73-13721
Expansive mechanisms in concrete[—review].—73-09956
Experimental study on nondestructive crack depth evaluation by elastic wave method.—73-09958
Experimental study on water extraction sheet sheathings (performance and convertibility on a fiber-layered permeable sheet).—73-09959
Experimental study on workability and self-compacting property of high fluidized concrete.—73-09960
Experimental tests of soil-cement concrete with various water-reducing agents on heat of hydration, setting time, and strength.—73-09961
Extract from endod (Phytolacea dodecandra), a soap berry plant, in the making of concrete.—73-00089
Factors affecting use of calcium chloride in concrete.—73-06654
Features of nonlinear deformation of concrete at high levels of compression.—73-13722
Features of the preparation and transport of concrete mixes in modern binders.—73-13723
Fiber for secondary reinforcement.—73-00090
Field method for measuring the chloride content of concrete.—73-13725
Fixing of concrete composition and its correction.—73-13726
Flaw detection in concrete by the impact-resonance test.—73-09963
Flexural and shear behavior of concrete beams reinforced with 3-D continuous carbon fiber fabric.—73-00094
Flexural behavior of repaired reinforced concrete beams using FRP [fiber-reinforced plastic] and some kind of mortar.—73-09964
Formula for carbonation speed of fly ash concrete.—73-06659
Fracture toughness of autoclaved aerated concrete [AAC] products.—73-03473
Fundamental study on the durability of silica fume concrete in marine environment.—73-09973
Galvanic corrosion in repaired reinforced concrete slabs—an update.—73-03474
Gas concrete products with lime-containing binder based on solid wastes of soda industry.—73-00096
Heliothermal treatment of construction thermal-insulating keramzit concrete.—73-00099
High-efficiency cementless binders made of ash and slag wastes of thermal power stations and concretes based on them.—73-00100
How to get better curing.—73-09983
How to prevent strength reduction of concrete due to large size coarse aggregate by means of chemical admixture in 60-cm lifts.—73-09984
Hydrothermal reaction characteristics on the ALC [autoclaved lightweight concrete] of pitchstone-lime system—effect of the various pitchstone/CaO ratios.—73-03479
Improvement of concrete quality by making dense surface layer of concrete using permeable sheets.—73-09998
Improvement of the thermal-humid treatment of heavy concretes.—73-13735
Improving the composition and investigating the properties of modified zirconia concrete by hydration hardening for high-temperature linings.—73-00825
Increasing efficiency of concrete by admixture of modified lignosulfonates.—73-00109
Influence of aggregate size on fracture process zone of concrete detected with three-dimensional acoustic emission technique.—73-00111
Influence of composition and structure on crack resistance of keramzit concrete.—73-00113
Influence of condensed silica fume on the concrete strength.—73-00114
Influence of curing conditions on the permeability and durability of concrete. Results from a field exposure test.—73-03484
Influence of mass exchanging processes on forming of concrete structure under thermal-humid treatment.—73-00117
Influence of microfillers on enhancement of concrete strength.—73-06675
Influence of PFA [pulverized fly ash], slag, and microsilica on chloride-induced corrosion of reinforcement in concrete.—73-00118
Influence of regime of application of compressive load on long-term resistance of concrete.—73-00122
Influence of silica fume replacement of cement on physical properties and resistance to sulfate attack, freezing and thawing, and alkali-silica reactivity.—73-00123
Influence of slag content on the microstructure, permeability, and mechanical properties of concrete: I, Microstructural studies and basic mechanical properties.—73-03488
Influence of specimen size on compressive strength and elastic modulus of high-performance concrete.—73-06678
Influence of temperature and time on stresses in congealed concrete under thermal cycling.—73-00124
Influence of the age of concrete on the strength and rigidity of beams.—73-00125
Influence of the structure of cement stone with admixtures of microsilica and superplasticizers on concrete properties.—73-14598
Influences of various factors on physical properties of concretes heated to high temperature.—73-10017
Intensive separating technology for the production of concretes with a filled lime binder.—73-13742
Interrupted concrete curing.—73-00129
Ion diffusion in microcracked concrete.—73-03493
Keramzit concrete on keramzit gravel impregnated by solution of SDO.—73-13745
Lining of the oblique movement zone of a unit for dry quenching of coke after service.—73-00830
Manufacture of heat-insulating material—gypsum-cork concrete.—73-13748
Mathematical modeling of physicochemical characteristics of concrete in immobilization of radioactive wastes.—73-00131
Mathematical modeling of the dynamics of the concrete mix.—73-00132
Mathematics of concrete scaling.—73-03495
Mechanical properties of concrete materials reinforced with polypropylene or polyethylene fibers.—73-00134
Mechanical properties of very hard cement concrete.—73-00135
Mechanical property evolution during autoclaving process of aerated concrete using slag: I, Tobermorite formation and reaction behavior of slag.—73-13752
Mechanical property evolution during autoclaving process of aerated concrete using slag: II, Fracture toughness and microstructure.—73-13753
Method for the calculation of the chemical composition of the concrete pore solution.—73-13755

Method of calibration test for measuring density by RI gage.—73-12165
Microanalytical investigation of cement specimens with encased, chlor-tri-fluoroethane coated, continuous E-glass fibers.—73-00140
Microstructure of sand concrete.—73-03500
Microwave characteristics of fire-damaged high-strength concrete.—73-10052
Migration of ions in concrete due to cathodic protection current.—73-03502
Monolithic wall structures of porous concrete based on gypsum-containing materials.—73-00147
New-to-old concrete bonding: influence of sulfate type of new concrete on interface microstructure.—73-03505
Nucleation and pozzolanic factors in strength development of class F fly ash concrete.—73-00152
Optimization of properties of lightweight concrete by polymer admixtures containing amine.—73-00156
Peculiarities of destruction of lightweight concretes of class B15 on mixed fine aggregate.—73-00159
Peculiarities of separate preparation of concrete mixes.—73-00160
Permeability and microstructure of concrete: a review of modeling.—73-03515
PFA [pulverized fly ash] concrete: permeation properties of cover to steel reinforcement.—73-06694
PFA [pulverized fuel ash] concrete: exposure temperature effects on chloride diffusion.—73-13759
Phenomenological investigation of concrete deterioration in a median barrier.—73-00163
Plasticizer for concretes on the basis of heavy resins of pyrolysis.—73-00164
Polarizing microscope—a tool of interest for investigation on concrete; application to carbonation.—73-01924
Precision statement of ASTM C 457 practice for microscopic determination of air-void content and other parameters of the air-void system in hardened concrete.—73-06697
Preparation of reclaimed cement from waste concrete.—73-13764
Principle of the formation of efflorescence on the surface of autoclaved porous concrete products.—73-10094
Principles of the determination of concrete composition based on binders with low water consumption.—73-13766
Problematic points of testing for chloride ion content in sea sand for concrete.—73-10095
Production of activated mineral filler from ash and slag wastes of thermal power plants for the preparation of asphalt concretes.—73-05146
Production of concrete piles using cements with adjusted particle size distribution.—73-10103
Production of hume concrete pipes using cements [with] adjusted particle size distribution.—73-10104
Properties of concrete incorporating low quantity of cement and high volumes of ground granulated slag.—73-00173
Properties of concrete using low-heat cement containing large amount of belite.—73-10110
Properties of gas concretes containing high proportions of pfa (pulverized fly ash).—73-00174
Properties of high-strength concrete containing light-, normal-, and heavyweight aggregate.—73-06704
Properties of silica fume concrete and mortar.—73-13770
Properties of special concrete with super-low-heat-type ternary cement.—73-10115
Properties of zeolite as an air-entraining agent in cellular concrete.—73-06708
Protecting rebar in concrete.—73-06709
Put to the test.—73-00175
Quality of concrete incorporated with two types of ferronickel slag fine aggregates.—73-10119
R&D trends in cement and concrete.—73-13771
Rapid measurement method for superplasticizer (development of the odor concentration meter for concrete).—73-10127
Rapid method for measuring the acid-soluble chloride content of powdered concrete samples.—73-10128
Relative importance of deleterious reactions in concrete: formation of AAR [alkali aggregate reaction] products and secondary ettringite.—73-10138
Resource-saving effect of concrete modifiers.—73-00185
Role of surfactants in concrete and ceramic fields.—73-00186
Rubberized concrete behavior.—73-10144
Self-diagnosing performance for fracture in [carbon fiber–glass fiber-reinforced plastic] CFGFRP-reinforced concrete.—73-13775
Self-diagnosing performance for fracture in CFGFRP [carbon fiber–glass fiber-reinforced plastics]-reinforced concrete.—73-06714
Self-diagnosis of fracture in CFGFRP composites and CFGFRP-reinforced concrete.—73-01928
Simple and rapid method for determination of lignosulfonate admixture in concrete using a flow-injection analytical system.—73-10151
Sludge ash pellets as coarse aggregates in concrete.—73-06717
Small wall blocks of nonautoclave gas-ash concrete.—73-00189
Static modulus of elasticity of high-strength concrete from pulse velocity tests.—73-06720
Steel corrosion in concretes deteriorated by chlorides and sulfates: electrochemical study using impedance spectrometry and "Stepping Down the Current" method.—73-03540
Strength development and adiabatic temperature rise of concrete with crushed sand partly replaced by coal ash.—73-10165
Strength development of concrete cured at low temperature.—73-00193
Strength increase of concrete over time.—73-13781
Strength of concrete at the compression on very small flats.—73-13782
Sulfate reactions in concrete—microstructural and chemical aspects.—73-10171
Sulfur polymer concrete for high corrosion resistance.—73-10172
Summary of the results of laboratory inspections conducted by the Cement and Concrete Reference Laboratory.—73-10173
Technology and application of BauMix cellular concrete.—73-00196
Tensile strength of a water-setting (hydration-hardening) zirconium-dioxide-based concrete in the 300–2300 K range.—73-00197
Testing high-strength concrete compressive strength.—73-13788
Thermal properties of concrete from transient conduction of a thin slab.—73-06726
Thermophysical and operational properties of cellular concrete.—73-13789
Toughness indices of steel fiber-reinforced concrete [SFC] at subzero temperatures.—73-06728
Trends in cellular concrete application for construction.—73-13791
Use of complementary imaging techniques in concrete deterioration studies.—73-06730
Use of computed axial tomography for evaluation of concrete porosity.—73-10184
Use of dynamic nondestructive test methods to monitor concrete deterioration due to alkali-silica reaction.—73-10185
Use of fly ash in heat-cured concrete and the effect of postcuring storage regimes on strength, modulus of elasticity, and freezing-thawing durability.—73-10186
Use of refractory concrete based on silicate-natrium composite binders.—73-13792
Use of stainless steel slag in concrete.—73-03555
Use of superplasticizers in palm kernel shell aggregate concrete.—73-00203
Use of ultrasound technology to prepare polymer-impregnated concrete.—73-03556
Water movement within concrete due to drying under various temperature conditions.—73-10191
Ways of estimating surface concrete hydrophobization.—73-00206

**condensers/condensation,**
Ir spectroscopic investigation of condensation in $SiO_2$–sol-gel layers.—73-00360
Reverse reactions in the functional group kinetics of TMOS hydrolytic polycondensation.—73-06021

**conductance,**
Attainment of *p*-type conduction in ZnSe single crystals.—73-04249

**conductivity,**
Fluctuation conductivity and magnetoconductivity in 2/2/1/2-phase $Bi_2Sr_2CaCu_2O_{8+\delta}$ epitaxial films.—73-15473
Hierachical hopping in glasses.—73-14201
Instability of the conductivity due to electric disturbance of the electron-molecular equilibrium in the surface layers of CdS films.—73-01216
Ion-implantation–damage-created *n*-type conductivity in InP after high-temperature annealing.—73-07624
Protonic conduction in glasses.—73-14262
Surface conductivity of silicate glasses.—73-00552

**conductors,**
$Eu^{3+}$ probe-ion spectroscopy in the superionic conductor $Na_5YSiO_4O_{12}$: effects due to the dynamics of fused sublattice.—73-10946

**consolidation,**
In situ and rapid consolidation of fully dense $MoSi_2$.—73-09169
Nonconventional pressure-assisted powder consolidation methods.—73-13153
Novel consolidation method for engineered structural materials.—73-05935
Shock-compacted $Si_3N_4$ nanocrystalline ceramics: mechanisms of consolidation and of transition from α- to ß-form.—73-06037

**contacts,**
*I-V* characteristics of point contacts of untwinned $YBa_2Cu_4O_8$.—73-08098
Achievement of near-theoretical-minimum contact resistance to InP.—73-11061
Alcohol sensor by using a *p-n* semiconductor contact.—73-01070
Barrier layer at metal-ceramic interface in ferroelectric MIM [metal-insulator-metal] structures.—73-07870
Deformation and fracture by sharp rolling contacts.—73-09568
Experiments on the contact angle between mercury and hardened cement paste.—73-00088
HgTe contacts to *p*-HgCdTe.—73-07558
Interfacial reactions in Pt/InP contacts.—73-10242
Low noise ohmic contacts on *n*- and *p*-type GaSb.—73-07642
Low-resistivity contacts to high-$T_c$ superconducting materials.—73-01592
Magnetoresistivity of $A^4B^6$-based microcontacts.—73-15035
Metal Schottky barrier contacts to alpha 6H-SiC.—73-10251
Method of manufacturing an electrical contact for a superconductive ceramic.—73-11973
Molecular recognition by a *p-n* semiconductor contact.—73-01252
Molecular recognition by a *p-n* semiconductor contact.—73-11338
New ceramic-based composites for electrical contacts.—73-00999
Ohmic contacts to *p*-$CuInSe_2$ crystals.—73-07700
Recent developments in ohmic contacts for III-V compound semiconductors.—73-04466
Structural characterization of encapsulated Au/Zn/Au ohmic contacts to *p*-type GaAs.—73-11460
Ti/TiN/Ti contact metallization.—73-01388
Transport properties of a two-dimensional electron gas closely separated from an underlying $n^+$ GaAs layer: the fabrication of independent ohmic contacts using molecular beam epitaxial regrowth and in situ focused ion beams.—73-11488
True contact area on caryatid boundary of solid bodies.—73-17105

**containers,**
Apparatus for spraying glass containers.—73-12072
Bulk bag: filling and discharging—latest developments.—73-08323
Capacity up for high-quality perfume bottles.—73-10504
Ceramic materials for producing high-purity compounds of niobium and tantalum.—73-08492
Changing role of the glass bottle maker.—73-00592
Coating composition for glass containers.—73-10622
Comparison of the behavior of container glasses in concentrated aqueous solutions of LiCl, NaCl, KCl, and CsCl.—73-13946
Considerations on the optimization of the manufacturing process of super-lightweight glass bottles.—73-03828
Effect of lightweighting on the impact performance of glass containers: further discussions.—73-10522
European container glass industry.—73-09714
Examination of the surface of sparkling wine bottle cullet by means of ESCA, SEM, and EDS.—73-00340
Glass container promotion boosts soft drink sales.—73-13624
Hot-end handling on high-speed production lines.—73-10549
Improved container performance through strength enhancement coatings.—73-07142
Inspection of transparent containers.—73-01859
Machine for forming glass containers.—73-04980
Maintaining standards in container production.—73-14420
Method and apparatus for forming a mouth in a glass container.—73-03941
Modern container glass compositions.—73-03401
New container coating technology is developed.—73-10569
Parameters affecting the workability of container glass.—73-07159
Plunger assembly for forming glass containers.—73-12092
Product specifications: their importance to the business.—73-07165
Recessed label panels—another view.—73-10591
Refractory concerns within the glass container industry.—73-07220
Small-angle neutron scattering study of the microstructure in container glass in correlation with workability problems.—73-00702
Small-angle neutron scattering study of the microstructure in container glass in correlation with workability problems.—73-07075
Solutions found to high-speed transfer problems.—73-10605
Surface-treated glass for containers.—73-03893
Theoretical calculation of the hydrolytic surface resistance of glass containers.—73-14293
Thermoelastic contact damage on glass container surfaces.—73-14120
Trends in production and consumption of container glass.—73-03410
Using borax in the production of flat and container glass.—73-10615
XPS, EPMA, and XRD analysis of hot-end-coated glass containers.—73-00430

**controls,**
Characteristics of good forehearth control.—73-14336
Combustion control, the key to effective firing.—73-08466
Control modeling and regulation of thermal spraying process.—73-09048
Control of waste gas and air flows through a regenerative system on a cross-fired glass tank furnace.—73-01944
Electronic timing system for glassware-forming machines.—73-01853
Emission control for ceramic kilns.—73-01948
Example of computer control of glass-melting furnace.—73-05113
Impact of modern software technology on the man-machine interface in process control systems.—73-01788
Intelligent control strategies for the plasma spray process.—73-09185
Jet firing with pulse/proportional control (AM/FM).—73-08476
Jet firing with pulse/proportional control.—73-08477
Keeping noise under control.—73-12155
Melter control systems.—73-01956
Method and instrument for remote temperature control.—73-08411
Oxy-fuel firing for emissions control on a fiberglass melter.—73-15888
Process modification for $NO_x$ control.—73-03877
Quality assurance and control using flexible modular system technology—POLAB.—73-10116
RCS [rate-controlled sintering]—taking the mystery out of densification profiles.—73-15837
Set of standardized units for mechanism control systems.—73-01929
Shell scanning systems improve plant operations.—73-05086
Simple approach to technological control of clay-containing ceramic bodies.—73-08364
Spectrophotometry as a tool for redox process control.—73-00705
Use of gate R&R [repeatability and reproducibility] studies and their relationship to the testing of ceramic materials.—73-08455
Use of personal computers to control ceramic processes.—73-12068

Use of ultrasonic transmission for the control of the structure of fused cast blocks.—73-15860

**conversion,**
Economics drive the conversion of glass tanks to oxy-fuel.—73-08470
Influence of the basic compound chemical nature on the kinetics of γ-to-α-alumina conversion and the packaging of α-alumina.—73-16176

**conveyors,**
Ceramic conveyor belt.—73-15939
Conveying desulfogypsum with hose belt conveyors and shuttle-floor trough conveyors.—73-01770
Criteria for the optimization of screw feed conveyors.—73-01771
Flow properties of fine-grained bulk materials in troughed chain conveyors: II, Vertical conveying.—73-01782
Fully automated palletizer for Belgian glassworks.—73-10536
Heavy-duty bucket elevators with round steel chain as the traction element.—73-12033
Heavy-duty bucket elevators—a historical review with current state of development.—73-12034
Lehr belt switch improves plant's production efficiency.—73-12042
Mechanics of conveying bulk materials with bucket elevators.—73-12045
New developments in belt conveyor systems.—73-12048
New type of silo extractor for bulk materials with poor flow properties.—73-15739
Pneumatic conveying—a review: I.—73-15743
Pocket belt conveyor—a special vertical conveyor for the cement industry.—73-01811
Specifications for choosing a conveying system.—73-12064
Surveillance of conveyor belts with visual sensors.—73-04949
Throughput measurements in the nonmetallic minerals industry.—73-12067
Two-way transport on curved conveyor belt system.—73-01835

**coolants,**
Cleaning system for coolant in glass cutting industry.—73-12017

**coolers/cooling,**
Glassware forming machine with cooling system.—73-15767
Grate cooler performance optimization at Eiberg Zement.—73-09975
Interim report on the development of a ceramic hot-gas fan.—73-02083
New curved internal fittings for rotary and planetary coolers [of cement making rotary kilns].—73-10063
Operation of grate coolers and a method of evaluating their efficiency.—73-10072
Optimization of planetary cooler operation by accurately controlled injection of water.—73-00155
Pendulum grate cooler with horizontal aeration of the clinker.—73-03513
Rapid cool forehearth.—73-01826
Refined blow mold cooling.—73-15752
Size effect of electrocaloric cooling in strontium-titanate-based structure.—73-16595
Ways and means of optimizing reciprocating grate coolers.—73-03558

**copper oxides,**
Alcohol sensor by using a *p-n* semiconductor contact.—73-01070
Anderson localization is not the reason for the variation of high-$T_c$ superconductivity.—73-11687
Anisotropic magnetization and field-induced effects of CuO high-quality monocrystals.—73-05530
Antiferromagnetic transition temperature and spin correlations in quasi-two-dimensional spin-fermion model.—73-07989
Atomic layer and unit-cell layer growth of superconducting thin films by laser molecular beam epitaxy.—73-11691
BaO-1/2$Y_2O_3$-$CuO_x$ eutectic melting in air.—73-12540
Bipolaron model of high-$T_c$ superconductivity: a discussion of overdoping.—73-11696
Bose-Einstein condensation of paraexcitons in stressed $Cu_2O$.—73-16415
Calculation of Cu-2*p* resonant photoemission spectra in CuO.—73-05365
Ceramic-to-conducting-lead hermetic seal.—73-00280
Changes in surface and catalytic properties of the CuO/$Al_2O_3$ system induced by doping with MgO.—73-05535
Characterization of copper-zinc mixed oxide system in relation to different precursor structures and morphology.—73-02160
CO gas-sensing property of ZnO/CuO heterocontact ceramics.—73-01104
Comparative study of the low-temperature acoustic properties of CuO and $YBa_2Cu_3O_x$ ceramics.—73-08005
Comparison of the acoustic properties of CuO and $YBa_2Cu_3O_x$ ceramics at 5–310 K.—73-08006
Competition between structural and superconducting transition in (LaNd)-Sr-Cu-O.—73-04682
Compound oxide high-temperature superconducting material and a method for preparing [the] same.—73-11948
Copper oxide thin films grown by plasma evaporation method.—73-09050
Cryoconducting superconducting composites.—73-01513
Crystal chemistry and phase equilibrium studies of the $BaO(BaCO_3)_{\gamma}0.5R_2O_3$-$CuO_x$ systems in air: VI, R=neodymium.—73-16076
Crystallization of Bi-Ba-Cu-O nonconventional glasses.—73-13952
Cu(I) content in high-temperature superconducting materials [determined] using neocuproine.—73-15408
Dense melt-based ceramic superconductors.—73-11951
Deposition of copper oxide thin films on different substrates by pulsed excimer laser ablation.—73-12975
Doping dependence of local magnetic moments and antiferromagnetism in high-$T_c$ superconductors: asymmetry between electron and hole doping.—73-04696
Effect of CuO on the sintering and dielectric characteristics of $(Ba_{1-x}Sr_x)(Ti_{0.9}Zr_{0.1})O_3$.—73-05757
Effect of magnetic and nonmagnetic impurities of the carrier binding energy in Cu-O clusters.—73-11652
Effects of grain-boundary phases on the corrosion of ß-SiAlON in molten copper oxide.—73-00810
Effects of sorption leaching conditions and sorbent type on ZnO and CuO dissolution.—73-16467
Electric field gradient at copper nuclei in oxides.—73-02250
Electrical responses of Ln-Ba-Cu-O (Ln=Eu, Y), Ba-K-Bi-O, and Ba-Pb-Bi-O superconducting thin films to pulsed infrared radiation.—73-15449
Electrochemical oxidation of $La_2CuO_4$ and $La_{2-x}A_xCuO_4$ (A=Bi and Pb).—73-01538
Elementary excitations in the metallic $CuO_2$ planes of high-$T_c$ systems.—73-08056
EPR and AFMR of $Bi_2CuO_4$ in submillimeter wave region.—73-08864
EPR and AFMR of $Li_2CuO_2$ in submillimeter wave region.—73-02266
ESR study of CuO-doped cordierite.—73-05793
Exciton transport in $Cu_2O$: evidence for excitonic superfluidity.—73-17079
Flux quantization and pairing in 1-D CuO models.—73-16155
Formation of a superconducting $YbBa_2Cu_3O_x$ phase on an insulating $Yb_2BaCuO_5$ substrate prepared by the PMQ [plasma arc melting and rapid quenching] method.—73-01556
Gas detection utilizing the interface of a CuO/ZnO thin film.—73-01174
Growth of $DyBa_2Cu_3O_{7-\delta}$ thin films on vicinal (100)$SrTiO_3$ substrates.—73-06224
Influence of additives on the electrical properties of dense $SnO_2$-based ceramics.—73-12814
Influence of preparation procedure on some physical properties of BICUVOX ($Bi_2V_{0.9}Cu_{0.1}O_{5.35}$).—73-13099
Ionic model of some aspects of Cu NQR spectra in superconducting oxides.—73-01583
Layered copper oxides $(R_{1+x}Ce_{2-x})Sr_2Cu_2(M_{1-y}Cu_y)O_{11}$ wherein R is a rare-earth element and M is one or both of Pb and Tl.—73-04843
Low-energy spin fluctuations in $La_{2-x}Sr_xCu_{1-y}Zn_yO_4$ (x=0.14, y=0.012).—73-01591
Low-temperature synthesis and phase equilibria in the Y-Cu-O binary system.—73-08658
M-Tl-Ba-Cu-O high-temperature superconductors wherein M is selected from the group consisting of Ti, Zr, and Hf.—73-11960
Magnetic-field-induced weak ferromagnetic order in $Y_2CuO_4$.—73-07959
Magnetism and high-$T_c$ superconductors.—73-01596
Method for manufacturing oxide superconducting article.—73-01713
Microbridge spectrum of CuO.—73-16216
Molecular recognition by a *p-n* semiconductor contact.—73-01252
N-type oxide superconductor represented by the formula $Nd_x(Ce_yL_z)_2CuO_{4-\delta}$ (L=La, Mg, or a mixture of alkaline earth elements).—73-01725
New homologous series of lanthanum copper oxides.—73-02350
Oxidation kinetics of thin copper films studied by ellipsometry.—73-03631
Oxide superconducting material and process for producing the same.—73-11984
Oxide superconductor and manufacturing method thereof via HIP and controlling the oxygen partial pressure.—73-15689
Oxide superconductor and process for preparation thereof.—73-04861
Oxide superconductor having the formula $Pb_v(M_{1-x-y}Ce_xSr_y)_4Cu_{3-\delta}O_z$ where M is at least one rare-earth element.—73-04862
Oxide superconductors.—73-11987
Particulates in laser-deposited copper oxide films.—73-13159
Phase equilibria in the system $Y_2O_3$-$V_2O_5$-CuO-$Cu_2O$ in atmospheric air.—73-16251
Phase equilibrium in the $SrCO_3$-$Bi_2O_3$-CuO pseudoternary system.—73-16252
Phonon spectrum of copper oxide.—73-05458
Preparation of infinite layer of $Ca_{1-x}Sr_xCuO_2$ filaments by solution spinning method under ambient pressure.—73-15596
Process for making superconductor Tl-Pb-Sr-Ca-Cu-O films.—73-04866
Process for making superconductors and their precursors.—73-11990
Process for producing a superconducting thin film at relatively low temperature.—73-01734
Process for producing Bi-Ca-Sr-Cu-O, Tl-Ca-Sr-Cu-O, and Tl-Ba-Ca-Cu-O superconducting ceramics.—73-01736
Process for producing molded bodies from precursors of oxidic high-temperature superconductors.—73-04869
Properties of $Bi_2O_3$-CaO-SrO-CuO glasses.—73-15602
Properties of large area $ErBa_2Cu_3O_{7-x}$ thin films deposited by ionized cluster beams.—73-01642
Proximity-coupled $CuO_2$ planes in high-$T_c$ superconductors: evidence from pressure experiments up to 34 GPa on $Y_2Ba_4Cu_7O_{15.32}$.—73-08181
Reactions of copper and copper oxides with nitride ceramics (AlN, SiAlON, $Si_3N_4$) and oxide additives ($Al_2O_3$, $Y_2O_3$, $SiO_2$, MgO).—73-03230
Recent progress in high-$T_c$ superconductor research: unique and novel metallic state in doped $CuO_2$ plane.—73-15609
Resistive transition in $EuBa_2Cu_3O_{7-y}$ epitaxial thin films.—73-15611
Resonant photoemission vs Coster-Kronig Auger decay at the $L_{III}$ thresholds of Ni metal and CuO.—73-08724
Resonant X-ray emission spectroscopy in $La_2CuO_4$ and CuO.—73-01651
Sequential self-limiting growth of CuO on MgO(100) by chemical vapor deposition.—73-03001
Specific features of copper and nickel oxides obtained under extreme conditions by $CO_2$ laser irradiation of inorganic salts.—73-13448
Structural and optical characterization of CuO particulate solid films and the corresponding gels and xerogels.—73-08746
Subsolidus relations in the $La_2O_3$-CuO-CuO phase diagram and the $La_2O_3$-CuO binary join.—73-16342
Substitution effects on the thermoelectric power of $La_{2-x}Sr_xCu_{1-y}M_yO_4$ (M=Zn and Ni) and $YBa_2Cu_{3-y}Zn_yO_{7-\delta}$.—73-02697
Superconducting ceramic composition comprising (Pb,Cd)-Sr(Y,Q)-Cu-O, wherein Q is Ca or Sr.—73-15694
Superconducting ceramics.—73-01673
Superconducting correlations and ion dynamics in metal-oxide compounds.—73-08217
Superconductive optoelectronic device with the basic substance $C_2O$ of superconductive-conjugate photoconductivity.—73-01741
Superconductor structure.—73-01743
Surface morphology and crystal quality of in situ grown epitaxial $La_{2-x}Sr_xCuO_4$ thin films.—73-15642
Synthesis of new copper oxide superconductors at high oxygen pressure.—73-11926
Temperature-dependent anisotropy of normal-state magnetic susceptibility of metallic copper oxides.—73-08979
Thermally sprayed lead-containing thick layers.—73-04887
Thermochemistry of LiCuO, $Li_2CuO_2$, and $LiCu_2O_2$.—73-05514
Toward an understanding of the reaction sequences in brazed joints: investigation of the Ti-Cu-O ternary at 945°C.—73-00273
Transfer-integral expansion for the *d-p* model of the $CuO_2$ plane—ground state of the undoped system.—73-01696
Transport properties of $SrCuO_2$ thin films with artificially modulated structures.—73-15373
Weak-links effect in 123/Cu and 123/CuO composites.—73-15667
Wide composition range of T*-phase compound $Pr_{1.6-x}Y_xSr_{0.4}CuO_y$ ($0 \le x \le 0.6$).—73-15669
XPS study of a Cu-Al-O catalyst under $H_2$ or CO atmosphere.—73-12734

**copper,**
Auger electron spectroscopy, low-energy electron diffraction, and electron energy loss spectroscopy studies of Se overlayers grown on Cu(111) surfaces.—73-05362
Bulk magnetic properties of tetravalent silicon substituted in copper ferrite.—73-07926
Challenges and progress in the scale-up of $CuInSe_2$ thin-film photovoltaic technology.—73-07402
Characterization of Cu(Ga, In)$Se_2$ thin films and heterojunctions grown by close-spaced vapor transport.—73-16668
Characterization of epitaxial thin films by X-ray diffraction.—73-01889
Chinese copper red glazes.—73-10807
Comparative study of the crystal structure of synthesized $CuGa_{1-x}In_xTe_2$ compounds.—73-16058
Comparative study of $ZnO_x$ overlayers on Cu(311), Cu(110), and a high defect concentration Cu(111).—73-13811
Conditions for precipitation of copper phases in DWPF [Defense Waste Processing Facility] waste glass.—73-08290
Copper diffusion during copper cordierite cosintering.—73-06146
Copper or molybdenum metallization of ceramics by ion beam dynamic mixing.—73-03569
Copper or molybdenum metallization of ceramics by ion beam dynamic mixing.—73-10210
Copper-doped $SnO_2$ thin films for $PH_3$ detection.—73-16688
Copper-$TiB_2$ coatings obtained by plasma spraying reactive micropellets.—73-06761
Coprecipitation of copper(II) on hydrated zirconium oxide.—73-13813
Crack direction effects along copper/sapphire interfaces.—73-13814
Creation of a new In-based material by laser irradiation of chalcopyrite-type ternary semiconductors.—73-07425
Creep fracture experiments with planar sapphire-copper interfaces stressed in tension.—73-13815
Crystallochemical nature of copper-magnesium catalysts.—73-02224
$Cu_{0.5}RTe_2$ and $Cu_{0.5}RTe_{1.75}$ compounds (R=La or Nd).—73-02225
Decomposition of the spinel $CuAl_2O_4$.—73-16102
Determination and observation of electronic defect levels in $CuInSe_2$ crystals and thin films.—73-03089
Determination of Cu in the high-temperature superconductor $YBa_2Cu_3O_{7-x}$ by amperometric titration with sodium diethyldithiocarbamate.—73-01519
Determination of the crystal orientation of $CuInSe_2$ by Raman spectroscopy.—73-08598
Development of cast pipe for copper continuous casting.—73-10716
Distribution of electron density in the dioptase $Cu_6Si_6O_{18}{\cdot}6H_2O$ according to the results of precision X-ray diffraction investigation.—73-16112
Effect of $Cu^{2+}$ on the structural stability of synthetic hydroxyapatite.—73-08604
Effect of $Cu^+$ content on properties of $Bi_2Sr_2CaCu_2O_x$ glass.—73-07015
Effect of hydrostatic pressure on exciton absorption spectrum of microcrystals of CuI and CuBr in heterogeneous glass.—73-00456

Effect of indirect and direct exchange interactions on magnetic structure of $CuFe_2O_4$ and $CuFeCrO_4$ ferrites.—73-15317
Effect of iron oxides on the state of copper ions and photochromic properties of glasses.—73-00458
Effect of iron oxides on the state of copper ions and the photochromic properties of glass.—73-00459
Electrical charaterization of Cu-diffused *n*-GaAs epitaxial layers using optical deep transient spectroscopy.—73-11178
Electrical conduction of $La_2Cu_{1-x}Zn_xO_{4+\delta}$ at high temperature.—73-12788
Electronic conductivity and chemical diffusion coefficient of cadmium-doped cuprous iodide.—73-03093
Ellipsometric studies on the oxidation of thin copper films.—73-16491
Equilibrium and quenched states of the system Cu-Mn-O in air.—73-02271
Equilibrium defect behavior in α- and ß-CuI.—73-06159
ESR linewidths of hydrated $Cu^{2+}$ in zeolites.—73-05396
Exciton structure of the fundamental absorption edge of $CuInSe_2$.—73-07519
Experimental study of copper diffusion in $YBa_2Cu_3O_{7-x}$ polycrystals.—73-08070
Extinction coefficient of the cupric ion and the cuprous-cupric equilibrium in soda-lime-silica glasses.—73-13985
Fabrication and properties of isotypic heterostructures based on *n*-type $CuInSe_2$.—73-04341
Film thickness effects on the optical and electrical properties of Cu-$GeO_2$ thin cermet films.—73-06790
Fluorescence properties of $Cu^+$ ion in phosphate glasses of the $BaLiPO_4$-$P_2O_5$ system.—73-00482
Formation of $Cu_xS$ films through a chemical bath deposition process.—73-07535
Fracture at Cu/sapphire interfaces.—73-03590
Glass formation and ion conduction in the CuCl-$Cu_2MoO_4$-$Cu_3PO_4$ system.—73-07031
Growth and reactivity of $ZnO_x$ on Cu(111).—73-08633
High-pressure production and properties of the $CuMnO_3$ ferrimagnet.—73-01465
Homojunction diode of $CuInSe_2$ thin film fabricated by nitrogen implantation.—73-09163
Influence of arsenic vapor pressure during copper diffusion on deep level formation in silicon-doped gallium arsenide.—73-03600
Influence of $Cu^{2+}$ ion on magnetic moment and Curie temperature of $Zn_2$-X hexaferrites.—73-07941
Influence of heat treatment on microstructure and tensile properties of GlidCop dispersion-strengthened copper alloy.—73-13846
Instrumental considerations for acquiring quantitative Auger electron spectra.—73-01908
Ionic conductivity and structure of cuprous-halide-containing glasses.—73-14713
Kinetics of nonisothermal crystallization of $Bi_2Sr_2CaCu_2O_x$ glasses with different copper valence states.—73-00365
Luminescence of Cu(I) in strontium tetraborate.—73-02631
Magnetic properties of $xCuO(1-x)[Bi_2O_3$-$PbO]$ glasses.—73-07953
Magnetic properties of copper-magnetite nanocomposites prepared by ball milling.—73-04623
Magnetic properties of green dioptase $CuSiO_3$·$H_2O$ and black dioptase $CuSiO_3$ and magnetic structure of black dioptase.—73-15340
Mechanistic studies on the electrochemically lithiated spinel $LiCuVO_4$.—73-02326
Metal-insulator transition in a-GaSb:Cu.—73-04135
Metallic hole conduction in CuS.—73-02327
Meyer-Neldel rule in emission rates from defects in copper indium diselenide.—73-17086
Microanalysis of a copper-to-graphite solder bond.—73-00250
Microstructural modifications in Al-5.7 wt% Cu-30 vol% $Al_2O_3$ fibers during isothermal heat treatment.—73-06830
Optical constants of laser-deposited $CuGaSe_2$ films near the fundamental absorption edge.—73-11358
Optical spectra of copper ions in alkali-lime-silica glasses.—73-03747
Optical-constant heterojunctions formed from $CuInSe_2$ films.—73-04431
Performance of a copper-based composite coating for steel casting applications.—73-06837
Phase relations in the system Cu-Ho-O and stability of $Cu_2Ho_2O_5$.—73-05450
Photoacoustic spectroscopy of defect states in $CuInSe_2$ single crystals.—73-04434
Photoelectric properties of $CuInSe_2$.—73-05613
Photoelectric properties of In-*p*-$CuInSe_2$ Schottky diodes.—73-07715
Photosensitivity of In-*p*-$CuIn_xGa_{1-x}Se_2$ thin-film structures.—73-15100
Polarized micro-Raman spectra in $CuGaSe_2$.—73-01286
Preparation and characterization of Mn-doped sprayed *p*-$CuInS_2$ films.—73-07742
Preparation and conductivity measurement of the CuCl-$Cu_2MoO_4$-$CuPO_3$ glasses.—73-01014
Preparation and optical nonlinear property of sol-gel-derived Cu-$SiO_2$ thin films.—73-09250
Preparation and study of $CuXY_2$ (X=Ga, In; Y=Se, Te) thin films for solar cell applications.—73-15112
Preparation of copper indium diselenide by selenization of copper indium oxide.—73-09259
Preparation of copper-ruby glasses by sputtering and their optical properties.—73-03872
Preparation of copper-ruby glasses by sputtering and their optical properties.—73-10579
Reactions between $Bi_2Sr_2CaCu_2O_x$ superconducting oxide and metallic copper and their prevention.—73-04799
Reactions between $YBa_2Cu_3O_{7-x}$ superconducting oxide and metallic copper and prevention of them.—73-01645
Reactions of copper and copper oxides with nitride ceramics (AlN, SiAlON, $Si_3N_4$) and oxide additives ($Al_2O_3$, $Y_2O_3$, $SiO_2$, MgO).—73-03230
Refinement of the crystal structures of $Cu_6O_8InCl$ and $Cu_6O_8Cu_2Cl$ by neutron powder diffraction.—73-08721
Reliability study of TiN/AlCu/TiN interconnect in submicron CMOS process.—73-04469
Role of oxygen in microstructure development at solid-state diffusion-bonded Cu/α-$Al_2O_3$ interfaces.—73-13895
Self-pumped phase conjugation in Cu-doped potassium-sodium-strontium-barium niobate (KNSBN).—73-11613
Semiinsulating properties and photoluminescence quenching in Cu-diffused InP.—73-11444
Spectrophotometric determination of copper in glass after extraction of copper dithizonate on polyurethane foam.—73-06971
Structural features and diffusive motion of copper ions in $Ag_2Se$-$Cu_2Se$ superionic conductor alloys from NMR data.—73-17101
Structural modification with copper(I) iodide at pressures up to 27 kbar.—73-08751
Structural transformations in $Cu_7Te_4$ single crystals.—73-02456
Structural variants in the low-temperature ß-phase of stoichiometric cuprous selenide.—73-02457
Structure and electrical properties of $Cu^+$ ion-conducting oxyhalide glasses in the system CuI-$CuPO_3$-$Cu_2MoO_4$.—73-01028
Structure and properties at the ferroelectric/electrode interface between lead zirconate titanate and copper.—73-01434
Structure refinement of $TlCu_7Te_4$ from X-ray powder profile data.—73-02467
Superionic conducting glasses with $Cu^+$ ions.—73-14735
Superplasticity of Cu-doped $ZrO_2$ ($Y_2O_3$).—73-13598
Support effects in methanol synthesis over copper-containing catalysts.—73-02698
Synthesis and property of copper(II) hydrogen phosphate.—73-10175
Synthesis, single-crystal structure, and magnetic properties of orthorhombic $CuNb_2O_6$.—73-07980
Synthesis, structure, and properties of a new T* structure copper oxychloride of $MLnCuO_3Cl$ (M=Ca, Sr, and Ln=Nd, Sm, Eu, Gd).—73-02507
Synthesis, structure, and properties of the orthoborate $SrCu_2(BO_3)_2$.—73-02508
System $Bi_2O_3$-SrO-CuO—73-11929
TEM observation of Cu particles dispersed in sputtered $SiO_2$ film.—73-17210
Thermal behavior and oxidation mechanism of tetragonal manganite spinels $Cu_xMn_{3-x}O_4$, $0<x<1$.—73-02521
Thermal quenching of the residual conductivity of Cu-doped ZnSe crystals.—73-01352
Thermally conducting adhesive containing aluminum nitride.—73-12530
Thermodynamics and phase equilibria in the Ca-Cu-O system.—73-05517
Ultrafine copper particles grown in a glass-ceramic.—73-07186
Ultraviolet optical absorptions of semiconducting copper phosphate glasses.—73-07853
Using copper ore tailing to fabricate exterior wall tile once-fired at low temperature.—73-14673
Valency of copper in 123 oxides.—73-04825
Vanadium- and copper-containing glasses for use as filters for light sources intended for use with night vision devices.—73-00765
Vitrification in the system Ge-Se-Cu and investigation of the physicochemical properties of glasses.—73-00425
X-ray, transport, magnetic, Mossbauer, and catalytic studies of the system $Zn_{1-x}Cu_xMnFeO_4$.—73-08796
XPS study of zinc oxide thin film growth on copper using zinc acetate as a precursor.—73-00278

**coprecipitation,**
Coprecipitation of two insoluble products of chemical reactions.—73-16689
Guanidine oxalate: a new reagent for coprecipitation in the synthesis of multicomponent ceramics.—73-05837
Mossbauer study of Co-Zn ferrites prepared by coprecipitation techniques.—73-07966
Preparation of $CaSiO_3$ powders by coprecipitation method and their sinterability.—73-02949
Properties of hexaferrite $Co_2Y(Ba_2Co_2Fe_{12}O_{22})$ prepared by coprecipitation method.—73-04643
Synthesis of pigments according to the method of coprecipitation.—73-07275
Synthesis of PLZT ceramics by the coprecipitation method and the effects of grinding on synthesis and sintering behavior of powders.—73-06094
YBCO oxalate coprecipitation in alcoholic solutions—correction.—73-15673
YBCO oxalate coprecipitation in alcoholic solutions.—73-11946

**cordierite,**
Batch compositions for cordierite ceramics.—73-15934
Behavior of talc in formation of cordierite ceramics.—73-17109
Characteristics of cordierite-$ZrO_2$ composites fabricated by the multiphase sol-gel route.—73-06193
Characterization of crystallization in cordierite glasses by means of optical and electron microscopy.—73-13936
Combustion synthesis, characterization, sintering, and microstructure of cordierite.—73-12949
Copper diffusion during copper cordierite cosintering.—73-06146
Cordierite and mullite-containing kiln furniture with low thermal expansivity.—73-10711
Cordierite substrates.—73-12358
Cordierite–aluminum titanate honeycomb ceramics.—73-08508
Cordierite–$ZrO_2$ and cordierite–$Al_2O_3$ composites obtained by sonocatalytic methods.—73-12958
Determination of activation energies for the crystallization of a cordierite-type glass.—73-03783
Effect of prehydrolysis on the structure of a complex alkoxide as a cordierite precursor and their crystallization behavior.—73-08607
ESR study of CuO-doped cordierite.—73-05793
Expansion reduction of cordierite.—73-12363
Fabrication of low-thermal-expansion, high-porosity cordierite body.—73-05213
Fabrication of thin deck based on cordierite-bonded fireclay.—73-07213
Features of production of cordierite glass-ceramics applicable for hardening.—73-00626
Glass powder which is crystallizable to yield a sintered glass-ceramic containing hexagonal cordierite as the principal crystalline phase.—73-03924
Glass-ceramics of the cordierite system—the effects of $TiO_2$ addition.—73-14397
Hardening of glass-ceramics.—73-00638
Heat capacity of hydrous cordierite above 295 K.—73-08634
Heterogeneous crystallization in cordierite glasses.—73-14000
Hot-pressed cordierite glass-ceramics.—73-00500
Influence of composition and processing on the properties of cordierite glass-ceramics.—73-00645
Kinetics of crystal nucleation on the surface of cordierite glass.—73-14024
Kinetics of sintering and crystallization of glass powders of cordierite composition.—73-16847
Machining of cordierite ceramics by $CO_2$ laser.—73-05905
Machining of cordierite ceramics by $CO_2$ laser.—73-16856
Mechanical properties of glass and polycrystalline ceramic with cordierite composition.—73-17384
Mechanical properties of whisker-reinforced cordierite glass-ceramic composites.—73-03338
Mechanical properties of whisker-reinforced cordierite glass-ceramic composites.—73-10455
Microscopic characterization of sol-gel-processed cordierite.—73-13417
Nature of nucleation sites at cordierite glass surfaces.—73-14049
Obtaining cordierite glass-ceramics suitable for strengthening.—73-00673
Phase transformation and mechanical properties of $B_2O_3$-doped cordierite derived from complex alkoxide.—73-09237
Preparation and thermal evolution of the microstructure of sol-gel-derived cordierite and cordierite-zirconia powders.—73-03185
Preparation and water permeation property of bimodal porous cordierite ceramics.—73-02941
Preparation and water permeation property of bimodal porous cordierite ceramics.—73-13180
Preparation of cordierite ceramics by the sol-gel process and their properties.—73-09260
Preparation of cordierite ceramics by the sol-gel process and their properties.—73-16921
Relationship between structure, synthesis temperature, and thermal expansion of cordierite.—73-09301
Selecting aluminosilicate aggregates added to cordierite.—73-07222
Silicon carbide whisker-reinforced cordierite.—73-08524
Sinterability and electrical conductivity of some $TiSi_2$/glass systems.—73-16989
Sintering and crystallization of cordierite glass powders.—73-14491
Sintering and infrared radiation property of $Mn^{2+}$-substituted cordierite solid solutions.—73-16991
Sintering and thermal characterization of cordierite–aluminum nitride composites.—73-13261
Sintering of the cordierite glass-ceramics.—73-10599
Spray-dried homogeneous cordierite and MLAS [Mg-Li aluminosilicate] glass-ceramic powders.—73-10606
Structurally characterizing a cordierite glass-ceramic by X-ray diffraction and X-ray absorption spectroscopy.—73-03764
Synthesis and characterization of cordierite glass-ceramics for low firing temperature substrate: II, Properties of cordierite glass-ceramics containing $CeO_2$.—73-10992
Synthesis and characterization of cordierite glass-ceramics for low-firing-temperature substrate: I, Crystallization and shrinkage behavior of MgO-$Al_2O_3$-$SiO_2$ glass powders.—73-00709
Synthesis and characterization of cordierite glass-ceramics for low-firing-temperature substrate: III, Fabrication substrates by tape casting process.—73-14738
Synthesis of cordierite powder by spray drying.—73-13302
Temporary melt phases—importance for applications of cordierite-mullite kiln furniture.—73-04022
Texture and properties of cordierite glass-ceramics at elevated temperature.—73-14291
Thermal and electrical properties of alkoxy-derived cordierite ceramics.—73-12887
Thermal conductivity of a particulate-diamond-reinforced cordierite matrix composite.—73-12890

**cores,**
Control of "black core."—73-15783
Oxidation of black core during the firing of ceramic ware: II, Process kinetics.—73-14565
Oxidation of black core during the firing of ceramic ware: III, Influence of the thickness of the piece and the composition of the black core.—73-15742
Synthesis of highly leachable gel-derived alumina ceramic cores.—73-17038

**corrosion resistance,**
Alkali corrosion-resistant coatings and ceramic foams having superfine open cell structure and method of processing.—73-05186
Aluminum nitride as a corrosion protection coating for steel: self-scaling porous electrode model.—73-00208

Appraisal of steel corrosion threat with chlorides in reinforced concrete construction.—73-00026
Combustion gas corrosion resistance of heat-exchange materials and refractories for glass furnaces at high temperatures: II, Oxides and composites.—73-07200
Corrosion of fusion-cast alumina refractories by silicate melts.—73-03996
Corrosion protection and lubrication during forming of sheet steel.—73-10211
Corrosion resistance in cast-stone materials.—73-03219
Corrosion resistance of boron carbide powders.—73-16434
Corrosion resistance of stone cast materials.—73-03220
Corrosion resistance of stone castings.—73-03221
Corrosion stability of cast stone.—73-03222
Corrosion-resistant coatings ($Al_2O_3$) produced by metallorganic chemical vapor deposition using aluminum–tri-sec-butoxide.—73-06762
High corrosion-resistant magnesite chrome refractories for RH degassing lower vessel.—73-00818
Hydrothermal corrosion of hexagonal boron nitride.—73-09527
Molten glass corrosion resistance of immersed combustion-heating tube materials in soda-lime-silicate glass.—73-10744
Properties of inorganic corrosion inhibition admixtures in steel-containing OPC mortars: I, Chemical properties.—73-10112
Properties of inorganic corrosion inhibition admixtures in steel-containing OPC mortars: II, Electrochemical properties.—73-10113
Put to the test.—73-00175
Refractory-oxide corrosion resistance in molten high-lead silicate glasses.—73-00858
Stress corrosion of cement mortars in ammonium sulfate solution.—73-03541

**corrosion,**
"Green Rust" [GR], iron solubility, and the role of chloride in the corrosion of steel at high pH.—73-06663
Basic studies of the corrosion of SiC by silicate melts.—73-03212
Carbonation and corrosion of rebars in salt contaminated OPC/PFA [ordinary portland cement/pulverized fly ash] concretes.—73-00029
Chloride-induced corrosion of reinforcing steel.—73-03443
Concrete surface deterioration due to the expansion by the formation of jarosite.—73-00048
Corrosion and mechanical degradation of silicon nitride in a gas turbine environment.—73-13467
Corrosion behavior of mullite ceramics in water at 300°C.—73-03213
Corrosion behavior of mullite ceramics in water at 300°C.—73-13468
Corrosion behavior of silicon carbide ceramics in caustic alkaline solutions at high temperature.—73-13469
Corrosion behavior of silicon nitride ceramics in aqueous solutions: I, Effects of testing condition and various corrosive solutions.—73-03214
Corrosion behavior of silicon nitride ceramics in aqueous solutions: II, Weight loss and bending strength tested in boiling sulfuric acid.—73-03215
Corrosion behavior of silicon nitride ceramics in aqueous solutions: II, Weight loss and bending strength tested in boiling sulfuric acid.—73-13470
Corrosion behavior of silicon nitride ceramics in aqueous solutions: III, Corrosion behavior in hot sulfuric acid and microstructure of corroded layer.—73-03216
Corrosion behavior of silicon nitride ceramics in aqueous solutions: III, Corrosion behavior in hot sulfuric acid and microstructure of corroded layer.—73-13471
Corrosion behavior of sliding materials in $NH_3$-$H_2O$ solutions at high temperature.—73-03217
Corrosion behavior of steel coated with thin-film TiN/Ti composites.—73-03570
Corrosion behavior of steel in high-alumina cement mortar samples: effect of chloride.—73-00052
Corrosion degradation behavior of [93 wt%] alumina ceramics in hot sulfuric acid.—73-06305
Corrosion degradation behavior of [93 wt%] alumina ceramics in hot sulfuric acid.—73-17219
Corrosion inhibitor surface chemistry studied by core and valence band photoemission.—73-09441
Corrosion investigation of a reinforced concrete tunnel.—73-06644
Corrosion of magnesium matrix composites.—73-03571
Corrosion of sintered high-purity mullite in molten KF salt.—73-03218
Corrosion of sintered high-purity mullite in molten KF salt.—73-13472
Corrosion phenomena of medieval stained glasses.—73-14149
Corrosion test for BOF [basic oxygen steelmaking furnaces] tap hole refractories.—73-00793
Corrosive effect of nitrate solutions on portland cement mortars.—73-00053
Effect of temperature on the corrosion of refractories in glass melts (review).—73-00806
Effect of temperature on the corrosion of refractories in glass melts—review.—73-00807
Effects of grain-boundary phases on the corrosion of ß-SiAlON in molten copper oxide.—73-00810
Galvanic corrosion in repaired reinforced concrete slabs—an update.—73-03474
Hydrochloric acid corrosion of ZBLAN fluoride glasses.—73-06924
In vitro investigations of implant material solubility.—73-17224
Influence of corrosive media on ceramic insulators.—73-09529
Influence of temperature on the service life of rebars.—73-13740
Influence of the degree of pore saturation on the resistivity of concrete and the corrosion rate of steel reinforcement.—73-03489
Initial steps of corrosion in the steel/$Ca(OH)_2$+$Cl^-$ system—the role of heterogeneities on the steel surface and oxygen supply.—73-03492
Long-term corrosion of glass by groundwater.—73-10388
Maximum rate of aqueous corrosion of glass.—73-14222
Metal corrosion caused by thermal insulating calcium silicate products and corrosion prevention measures.—73-10742
Modeling of the corrosion of cement paste by deionized water.—73-03503
Phenomenological investigation of concrete deterioration in a median barrier.—73-00163
Protecting rebar in concrete.—73-06709
Relation between corrosion rate of magnesia refractories by molten slag and penetration rate of slag into refractories.—73-04018
Role of particle contamination in the corrosion of electronic materials and devices.—73-09537
Static plate corrosion test, a novel method for the reproducible determination of the corrosion rate of refractories by glass melt.—73-14625
Steel corrosion in concretes deteriorated by chlorides and sulfates: electrochemical study using impedance spectrometry and "Stepping Down the Current" method.—73-03540
Surface-chemical study on stress corrosion of glass in aqueous solutions: II, Influence of alkali metal ions.—73-00419
XPS investigations of corroded manmade mineral fibers.—73-14128

**corundum,**
Baddeleyitic-corundum ramming refractories made from waste raw materials.—73-10702
Chrome-corundum refractory in the packing for a glass furnace regenerator.—73-00787
Comparative quality characteristics of fused cast baddeleyite-corundum and corundum refractories.—73-14579
Controlling the solidification process of baddeleyite-corundum products.—73-03995
Corrosion of fusion-cast alumina refractories by silicate melts.—73-03996
Corundum ceramics with improved mechanical strength.—73-16690
Corundum ceramics with low sintering temperatures.—73-12960
Corundum hydraulically hardening compound with addition of titanium slag for steel ladle vacuum degassers.—73-00794
Corundum-chromite refractories with improved thermal shock resistance.—73-00795
Crystal habits of corundum single crystals grown in cryolite flux.—73-02179
Determination method of fracture crack propagation rate in ceramics.—73-06372
Development of ceramic lining materials for granulated blast-furnace slag systems.—73-10717
Development of corundum brick with low $SiO_2$ content and its applications.—73-14585
Effect of microcoolers on the structure and properties of melt-cast baddeleyite-corundum refractories.—73-00802
Effect of microcoolers on the structure and properties of melt-cast baddeleyite-corundum refractories.—73-00803
Effect of phenol formaldehyde oligomer additive composition and structure on sintering and characteristics of corundum materials.—73-02792
Effect of silica-containing additives on the properties of corundum concrete.—73-10723
Effects of $TiO_2$ on microstructure and properties of zirconia corundum materials.—73-13392
Effects of ultrafine $SiO_2$, $Al_2O_3$, and $Cr_2O_3$ powders on character of ultralow cement corundum castables.—73-10726
Evaluation of the efficiency of refining molten metals by filtration.—73-04000
Formation and sintering of corundum-rutile composite powders prepared from alkoxides.—73-05811
Magnetoplumbite-corundum phase equilibria in the system Sr-Fe-Al-O at 1100°C.—73-05433
Modeling of point defects in corundum crystals.—73-17088
Mullite corundum ceramic material with broadening sintering temperature range.—73-13143
Mullite-corundum ceramics with eutectic additions from the BaO-CaO-$SiO_2$ system.—73-07344
Positions of 3-valent and 4-valent titanium ions in [corundum] lattice.—73-16275
Properties of suspensions of electrocorundum and materials based on it.—73-01017
Properties of suspensions of electrocorundum and materials based on it.—73-03346
Radiation-stimulated change in the surface of corundum single crystals and optical functions in the vacuum ultraviolet region.—73-05625
Refractory products for production of amorphous metals and alloys.—73-04017
Rheological and technological properties of corundum-zirconia suspensions.—73-02996
Strong corundum-based ceramic "Sikor."—73-00871
Thermal shock resistance of zirconia corundum mullite–silicon carbide (ZCM-SiC) composites.—73-07226
Thermomechanical properties and thermal shock resistance of reaction-sintered zirconia-corundum-mullite materials.—73-04025
Titanium nitride coatings created by nitriding titanium dioxide coatings on corundum cutting tools.—73-03063
Tribochemical activation of polycrystalline alumina and zirconia in aqueous suspensions.—73-03066
Vacancy topography in corundum, grown in sets with graphite thermal units by horizontal directed crystallization technique, and control over vacancy structure of crystals.—73-03071
Variation of the chemical composition of molten cryolite ($Na_3AlF_6$) flux during the growth of single corundum crystals.—73-16392
Warm pressing as a forming process for ceramics: II, Application.—73-00882

**cost reduction,**
Decreasing power costs in operation of electric furnaces and kilns.—73-05106
Resource-saving effect of concrete modifiers.—73-00185

**cost,**
Furnace costs compared for nine different melters.—73-08472
Minimizing glass batch costs through linear programming.—73-07152
Scandia.—73-12295

**couplers/coupling,**
Indirect coulomb effect: a new coupling mechanism between vortex pancakes in neighboring superconducting layers.—73-15512
Measurement of photorefractive coupling constant of $BaTiO_3$ using the varying interaction length method.—73-05064
Phonon anomalies above $T_c$ in $YBa_2Cu_4O_8$ and $YBa_2Cu_3O_{7-\delta}$ superconductors: an effect of coupling to spin excitations.—73-01627
Two-wave coupling and self-pumped phase conjugation at near-ir wavelengths in $BaTiO_3$.—73-09003

**crack bridging,**
Asymptotic analysis of crack bridging by ductile fibers.—73-03238
Crack face bridging tractions in monolithic spinel.—73-06346
Effects of crack size on crack propagation behavior and experimental verification of cyclic fatigue mechanism of sintered silicon nitride.—73-06392
Scanning acoustic microscopy observations of high-temperature crack-bridging mechanisms in alumina.—73-03350
Simple approximations for bridged cracks in fibrous composites.—73-17429

**crack growth resistance,**
Attempt at measuring the crack extension resistance of ceramics by fracture test in bending.—73-03239
Crack growth resistance model for fiber-reinforced ceramic materials.—73-06349
Crack growth resistance of ceramic composite.—73-06350
Crack growth resistance of SiC-SiC ceramic composite materials.—73-06351
Crack wake effects on MgO fracture resistance.—73-06355
Crack-growth resistance of in-situ-toughened silicon nitride.—73-09556
Crack-resistance curve and cyclic fatigue in ceramic materials.—73-06356
Features of measurement of the crack resistance of ceramics by the indentation method.—73-13531
Improving the crack resistance of zirconium dioxide.—73-03311
Influence of composition and structure on crack resistance of keramzit concrete.—73-00113
Lifetime of HIPed silicon nitrides at elevated temperatures.—73-06468
Memory effect and invariance of *R*-curves of crack propagation resistance in ceramics.—73-09645
Reliability issues of a crack-resistant passivation layer process for submicron nonvolatile memory technology.—73-03883

**crack growth,**
Acoustic emission [AE] amplitude analysis in crack growth studies during thermal shock of ceramics.—73-05527
Behavior and test method of subcritical crack growth at elevated temperatures in ceramics.—73-15779
Controlled crack growth testing of brittle materials.—73-15784
Crack deflection at bimaterial interfaces.—73-06345
Crack growth behavior of sintered silicon nitride subjected to cyclic loading.—73-06347
Crack growth in zirconia-bearing ceramics under cyclic loading.—73-06348
Crack propagation behavior in gas-pressure-sintered silicon nitride.—73-06353
Crack propagation in alumina during in situ straining by TEM.—73-03251
Cycle and crack length dependence of crack growth characteristics in silicon nitride.—73-09566
Damage assessment and lifting of continuous-fiber-reinforced metal-matrix composites.—73-03257
Determination of crack growth parameters and validation of a $v$-$K_1$ relation from statistical and dynamic experiments.—73-03261
Dislocation mechanism of acoustic emission during crack growth in a crystal.—73-17277
Dislocation-controlled stable crack growth in Mo and MgO.—73-09570
Effect of chemical interaction on Barenblatt crack profiles in brittle solids.—73-16454
Effect of residual stress due to Knoop indentation on subcritical crack growth [SCG] behavior in ceramics.—73-06389
Effect of surface charge on subcritical crack growth [SCG] in glass.—73-03787
Electric-field-induced fatigue crack growth in piezoelectrics.—73-11570
Elevated-temperature slow crack growth of silicon nitride under dynamic, static, and cyclic flexural loading.—73-17306
Fatigue crack growth behavior of alumina plasma-sprayed stainless steel.—73-03588

Fatigue crack growth behavior of large crack in silicon nitride.—73-17319
Fatigue crack growth in a fiber-reinforced titanium MMC at ambient and elevated temperatures.—73-03289
Fatigue crack growth of silicon nitride at 1400°C: a novel fatigue-induced crack-tip bridging phenomenon.—73-06417
Fatigue crack propagation and failure prediction for toughened ceramics under cyclic loads.—73-06418
Fatigue crack propagation in SiC-continuous-fiber-reinforced Ti-6Al-4V alloy metal-matrix composites.—73-03290
Fluid-assisted fatigue crack growth in $Si_3N_4$.—73-17322
Generation and propagation behavior of laser-induced thermal cracks.—73-05571
Generation and propagation behavior of laser-induced thermal cracks.—73-16500
Generation of secondary cracks in tempered soda-lime-silica glass.—73-03790
Grain size effect on high-temperature fatigue crack growth in polycrystalline $Al_2O_3$.—73-17340
In situ observations of unstable and stable crack propagation and *R*-curve behavior in thermally loaded disks.—73-06455
Indirect method for the determination of $da/dN$-$\Delta K$ curves.—73-06458
Influence of variable-amplitude loading on cyclic fatigue crack growth in silicon nitride.—73-17362
Measurement methods of crack extension in HTGR graphite.—73-12161
Mechanics of crack growth in layered materials.—73-06486
Molecular orbital study of an environmentally enhanced crack growth process in silica.—73-17402
Multiple crack propagation under thermal load.—73-06493
Recent developments in the modeling of crack growth in ceramics with transformation behavior.—73-09661
Slow crack growth in sapphire fibers at 800° to 1500°C—correction.—73-17432
Slow crack growth of mullite ceramics.—73-06524
Stable crack growth in polycrystalline magnesia under monotonic and cyclic loads.—73-09673
Statistical analysis of lifetime predictions for ceramics exhibiting a transition in fatigue crack growth behavior.—73-06526
Statistical study of the effect of subcritical crack growth on thermal shock resistance.—73-05643
Subcritical crack growth [SCG] of macro- and microcracks in ceramics.—73-06535
Subcritical crack growth in continuous-fiber-reinforced ceramic composites.—73-09679
Tensile fatigue crack growth of polycrystalline magnesia.—73-06536
Thermal fatigue and subcritical crack growth in ceramics.—73-05658
Thermal shock behavior of ceramic materials—modeling and measurement.—73-05664
Transformation driving force for indentation cracking in zirconia ceramics.—73-03372

**cracks/cracking,**
Actual contribution of crack deflection in toughening platelet-reinforced brittle-matrix composites.—73-06322
Application of weight function method for crack analysis in thermal stress fields.—73-06325
Charges on moving cracks in nonpolar dielectrics.—73-14683
Cleavage cracks in iceland spar.—73-17117
Combined buckling and cracking of films.—73-03245
Correlation between crack tortuosity and fracture toughness in cementitious material.—73-05032
Crack detection in ceramic bearings by acoustic emission [AE] signals.—73-09553
Crack healing of alumina with a residual glassy phase: strength, fracture toughness, and fatigue.—73-17259
Crack interaction with dislocation ensembles of various types.—73-17260
Crack patterns: generalized Laplacian structures.—73-06352
Crack propagation behavior in gas-pressure-sintered silicon nitride.—73-13497
Crack propagation behavior of polycrystalline alumina under static and cyclic load.—73-09554
Crack-shape–wake-area effects on ceramic fracture toughness and strength.—73-17262
Cracking and debonding of microlaminates.—73-09557
Cracking and delamination of coatings.—73-03252
Cracking and stress redistribution in ceramic layered composites.—73-09558
Cracking behavior of sol-gel films.—73-02756
Decomposition energy of fractal cracks propagating in concrete or rocks.—73-03447
Delamination, fiber bridging, and toughness of ceramic matrix composites [CMC's].—73-06370
Determination of crack velocity as a function of stress intensity from static fatigue data.—73-17275
Effect of grain size on the stress and velocity fields ahead of a crack in a material which deforms by Coble creep.—73-06382
Effect of powder characteristics on injection molding and burnout cracking.—73-09086
Experimental study on nondestructive crack depth evaluation by elastic wave method.—73-09958
Flat and rising *R*-curves for elliptical surface cracks from indentation and superposed flexure.—73-06423
Formation mechanism of glaze cracking and its influencing factors.—73-10848
Formation mechanism of pressing cracks on ceramic body.—73-09137
Formation of macro- and microcracks during machining of ceramics.—73-05814
Formation of pressing cracks of sillimanite compacts and its mechanical analysis.—73-09140
Fracture behavior of CVD SiC-coated graphite: II, Conditions for the onset of multiple cracking.—73-06432
Full-cell cracking mode in unidirectional brittle matrix composites.—73-03304
Healing of cracks in glass.—73-07033
Indentation studies on $Y_2O_3$-stabilized $ZrO_2$: II, Toughness determination from stable growth of indentation-induced cracks.—73-09618
Intelligent structural ceramics.—73-05172
Matrix cracking in fiber-reinforced ceramics.—73-09628
Matrix cracking in unidirectional ceramic matrix composites under quasi-static and cyclic loading.—73-06473
McClintock's statistics and strength safety factor for ceramics.—73-06474
Method and some results of the investigation of *R*-curves in ceramics.—73-09646
Multiple matrix cracking in brittle matrix composites.—73-06494
Nature of cracks forming in glass insulators of electrical connectors.—73-00252
Pores and cracks in cemented waste and concrete.—73-03519
Precracking parameters for ceramic single-edge-precracked-beam [SEPB] specimens.—73-06501
Removal of cracks and pinholes on once-fired outside wall tiles.—73-07271
Removal of explosive crack of lime in coal gangue brick by dripping water.—73-10690
Role of cracks in the nonlinear deformation and fracture behavior of polycrystalline ceramics.—73-06513
Sharp crack self-healing in $CaCO_3$.—73-02686
Static fatigue crack propagation behavior of glass in a vacuum.—73-10483
Steady-state matrix cracking of ceramics reinforced by aligned fibers and transforming particles.—73-03356
Stress corrosion cracking in a unidirectional ceramic-matrix composite.—73-06531
Stress-corrosion cracking at ceramic-metal interfaces.—73-00268
TEM direct observation of the crack propagation in ceramics.—73-13459
Transverse cracking in a fiber-reinforced ceramic matrix composite.—73-06543
Void growth ahead of a dominant crack in a material which deforms by Coble creep.—73-06549

**creep,**
Analysis for creep densification and grain growth of ceramic powder compacts.—73-09543
Comparative study of existing and newly proposed models for creep deformation and life prediction of $Si_3N_4$.—73-17250
Comparison of flexure creep behavior of silicon nitride between static and cyclic loading at elevated temperature.—73-17251
Comparison of the creep and creep rupture performance of two HIPed silicon nitride ceramics.—73-06344
Considerations for modeling the creep behavior of composite materials.—73-17255
Correlated flux creep through columnar defects in $YBa_2Cu_3O_7$ crystals.—73-15406
Creep and creep rupture of an advanced silicon nitride ceramic.—73-09559
Creep and stress rupture behavior of an advanced silicon nitride: I, Experimental observations.—73-09560
Creep and stress rupture behavior of an advanced silicon nitride: II, Creep rate behavior.—73-09561
Creep and stress rupture behavior of an advanced silicon nitride: III, Stress rupture and the Monkman-Grant relationship.—73-09562
Creep behavior of SiC-fiber-reinforced hot-pressed $Si_3N_4$ composites.—73-03253
Creep behavior of silicon nitride determined from curvature and neutral axis shift measurements in flexure tests.—73-17265
Creep deformation of whisker-reinforced alumina.—73-09563
Creep of duplex microstructures.—73-17267
Creep of Mg-PSZ at room temperature.—73-06358
Creep of MgO-rich spinel single crystals.—73-06359
Creep of yttrium aluminum garnet single crystals.—73-09565
Creep processes in SiAlON ceramics.—73-03254
Creep rupture map of engineering fine ceramics.—73-06360
Creep variability of SiAlON ceramics.—73-03255
Creep viscosity of glass-matrix composites near the percolation threshold.—73-10426
Creeping and temperatures in the forming gob.—73-03829
Effect of grain size on creep in mullite ceramics.—73-06378
Effects of fine SiC particles on the creep of MgO at high temperatures.—73-06395
Effects of microstructural instability on the creep behavior of Si-C-O (Nicalon) fibers in argon.—73-03276
Effects of oxidation and creep damage mechanisms on creep rupture behavior in HIPed silicon nitrides.—73-17299
Elevated temperature behavior of sintered silicon nitride under pure tension, creep, and fatigue.—73-17303
Experimental evidence for Harper-Dorn creep in Mn-Zn ferrite.—73-17314
Finite element modeling of creep deformation in fiber-reinforced ceramic composites.—73-06421
Generic model for creep rupture lifetime estimation on fibrous ceramic composites.—73-06445
High-temperature creep of MgO single crystals with <100> axis at low stresses.—73-06450
High-temperature creep of MgO single crystals with <100> axis at low stresses.—73-17344
High-temperature properties of monolithic ceramics.—73-09612
Improvement of creep resistance of sintered silicon nitride by hot isostatic exudation of intergranular glass.—73-02858
Improvement of tensile creep displacement measurements.—73-17352
Lifetime prediction for ceramic tubular components.—73-17372
Methodology to predict creep life for advanced ceramics using continuum damage mechanics.—73-17396
Predicting creep behavior of silicon nitride components using finite element techniques.—73-17411
Prediction of creep reliability of ceramics: some approximate engineering techniques.—73-17412
Self-heating vs quantum creep in bulk superconductors.—73-15618
Stress-relaxation tests used to determine the elevated temperature creep parameters of structural ceramics.—73-06532
Tensile creep and creep rupture behavior of monolithic and SiC-whisker-reinforced silicon nitride ceramics.—73-03362
Tensile creep behavior and damage accumulation in an SiC fiber/RBSN matrix composite.—73-09685
Tensile creep behavior of alumina under static and cyclic loading.—73-17441
Tensile creep in an in-situ-reinforced silicon nitride.—73-17442
Thermally activated flux creep in a bismuth-based bulk material.—73-11934
Theta approach to creep of structural ceramics.—73-13606
Void growth ahead of a dominant crack in a material which deforms by Coble creep.—73-06549

**cristobalite,**
Constraints on the structure and dynamics of the ß-cristobalite polymorphs of $SiO_2$ and $AlPO_4$ from $^{31}P$, $^{27}Al$, and $^{29}Si$ NMR spectroscopy to 770 K.—73-16068
First-principles studies on structural properties of ß-cristobalite.—73-16154
Further investigation of the stabilization of ß-cristobalite.—73-05407
Low-frequency floppy modes in ß-cristobalite.—73-16200
New preparation method of raw materials for high-purity and heat-resistant quartz glass.—73-02904
Relationship between thermal expansion and X-ray intensity of quartz and cristobalite in electroporcelain bodies.—73-12877
Transformation from quartz to α-cristobalite.—73-12726

**critical current density,**
Anisotropy of magnetic $J_c$ for YBaCuO superconductor prepared by melt-texture-growth (MTG) process.—73-11688
Anisotropy of the transport critical current in $YBa_2Cu_3O_{1-\delta}$(110) films.—73-04672
Characterization of critical current for high-$J_c$ single-crystal $YBa_2Cu_3O_y$ thin films on $LaAlO_3$ deposited by dc magnetron sputtering.—73-01502
Critical current density and magnetization decay in oxygen-deficient YBCO.—73-11709
Critical current irreversibility and possible $J_c(H)$ modification of oxide superconductors.—73-04687
Critical currents of ceramic superconductors induced by pulsed magnetic fields.—73-11713
Critical state of the weakly coupled 2-D superconductor $Bi_2Sr_2CaCu_2O_8$.—73-11714
Effects of electron irradiation on $J_c$ of $Y_1Ba_2Cu_3O_x$ superconductors.—73-04708
Effects of reducing and oxidizing thermal treatments on the transport critical current density in epitaxial $Bi_2Sr_{3-x}Ca_xCu_2O_{8+y}$ films.—73-01537
Influence of silver base on $J_c$ measurement of oxide superconductors.—73-04744
$J_c$ and flux pinning of Ag-sheathed Bi(2223) tape at 15–77 K.—73-04750
$J_c$ behavior and the distribution of 211 particles in melt texture growth (MTG) YBCO.—73-04751
$J_c$ in ceramic HTS.—73-08118
$J_c$ of a sample of melt-grown YBCO.—73-15525
Mechanical processing of high-$J_c$ BSCCO superconductors.—73-01601
Nonlinear pressure dependence of the transport $J_c$ in BSCCO 2223 tapes.—73-04778
Optimization of critical current density of bulk YBCO superconductor prepared by coprecipitation in oxalic acid.—73-08154
Oriented grained Y-Ba-Cu-O superconductors having high critical currents and method for producing [the] same.—73-11983
Review of the critical current densities and magnetic irreversibilities in high-$T_c$ superconductors.—73-08191
Sample size dependence of the critical current density in polycrystalline $YBa_2Cu_3O_{7-\delta}$.—73-11895
Transport critical current densities in shock-loaded and thermally processed $YBa_2Cu_3O_7$.—73-01699
Transport critical currents in ultrafine-grained high-temperature superconductors.—73-08263
Vortex fluctuations in the cuprate superconductor $Bi_2Sr_2CaCu_2O_8$.—73-15665
Weak links and critical current density in $Bi_2Sr_2CaCu_2O_x$ thin films.—73-01703
XRD study of high-$J_c$ $YBa_2Cu_3O_{7-\delta}$ bulk material grown by melt-textured growth (MTG) method.—73-04826

**critical fields,**
Fluctuation effects in the vicinity of the second critical field in high-$T_c$ superconductors.—73-01554
Upper critical magnetic field $H_{c2}$ of $YBa_2Cu_3O_{7-\delta}$ compounds.—73-08272

**crucibles,**
Apparatus for growing single crystals.—73-12340
Clay-graphite refractory crucibles containing variable amounts of silicon carbide.—73-00789
Evaluation of plasma-arc-sprayed refractory metal crucible coatings for containing molten ceramic oxides.—73-06787
Pressing of crucibles with an elastic die.—73-01819
Refractory products for production of amorphous metals and alloys.—73-04017

**crushing,**
Hammer crusher of automatic spray discharge.—73-12032
**cryogenics,**
Putting a chill into the new HTS application.—73-15605
**cryolite,**
Variation of the chemical composition of molten cryolite ($Na_3AlF_6$) flux during the growth of single corundum crystals.—73-16392
**crystal chemistry,**
Crystal chemistry and electrical study of $Na_xNbTi(PO_4)_3$ [0≤x≤2].—73-02176
Crystal chemistry of copper-based oxide superconductors and related compounds—an approach to the material design.—73-04689
Crystal chemistry of NaP zeolites.—73-08583
Crystallochemical analysis of superionic state in copper and silver halogenides.—73-16101
Incommensurate two-layer structures with complex crystal chemistry: minerals and related synthetics.—73-05420
**crystal growth,**
Apparatus for growing single crystals.—73-12340
Characterization of Bridgman crystal growth using radiographic imaging.—73-12116
Crystal growth and color centers of yttria-stabilized cubic zirconia (YSCZ) single crystals.—73-12421
Crystal growth of apatite on seeds of calcium salts.—73-12559
Crystal growth of compounds of Zn, Co, and Li sulfates with carbamide.—73-16079
Diamond synthesis by acetylene flame.—73-12986
Growth and characterization of $Bi_{12}(Si_{1-x}Ti_x)O_{20}$ mixed crystals.—73-05572
Growth and characterization of photorefractive $BaTiO_3$ single crystal.—73-05828
Growth of $Al_2O_3$ single crystals by the Czochralski method.—73-05830
Growth of $Al_2O_3$ single crystals by the Czochralski method.—73-13079
Growth of $LiNbO_3$ crystals by Czochralski technique.—73-04554
Growth of $MgTa_2O_6$ single crystals by floating zone method and their optical properties.—73-05574
Growth of oxide crystals for optical applications.—73-05832
Growth of oxide crystals for optical applications.—73-13083
Growth of PZT crystal by using PbO-KF-$PbCl_2$ flux.—73-05834
Hydrothermal growth of calcite single crystals in nitrate solutions.—73-05850
In situ optical monitoring of two-dimensional crystal growth in layer-by-layer chemical vapor deposition of $YBa_2Cu_3O_x$.—73-15508
Measurement of calcite growth rate in seeding continuously stirred tank crystallizer.—73-13749
Moving temperature gradient heat pipe furnace element.—73-15735
Moving-gradient furnace with constant-temperature cold zone.—73-12231
Rare-earth applications in III-V crystal growth technology.—73-04463
Real-time optical diagnostics for epitaxial growth.—73-01927
Simulations and experiments of SiC heteroepitaxial growth on Si(001) surface.—73-13255
Single-crystal growth of $A_xMg_{x/3}Ti_{2-x/3}O_4$ (A=K, Rb, Cs) and synthesis of priderite by a compositional-structural change process from those crystals.—73-12683
Single-heater, three-zone furnace.—73-15891
**crystal structure,**
Aluminum nitride.—73-12255
Application of Dirichlet polyhedra for calculating valence balance in crystal structures.—73-15698
Atlas of zeolite structure types.—73-05360
Crystal structure and hydration of belite.—73-09876
Crystal structure and spin-glass behavior in R-type $BaFe_{4-2x}Sn_{2+x}Co_xO_{11}$ ($x$=1.1) hexagonal ferrites.—73-02183
Crystal structure of $(NH_4)_3Zr_2F_9SO_4{\cdot}2H_2O$ and its potassium analog.—73-02186
Crystal structure of a new quaternary ferrite: $Ba_{12}Fe_{28}Ti_{15}O_{84}$.—73-02187
Crystal structure of anatase-type $TiO_2$-$SnO_2$ solid solution prepared by CVD.—73-02189
Crystal structure of $Cr_8O_{21}$ determined from powder diffraction data: thermal transformation and magnetic properties of a chromium-chromate tetrachromate.—73-02192
Crystal structure of $Cs_3CdBr_5$ and $(NH_4)_{2.34}Rb_{0.66}ZnBr_5$.—73-16083
Crystal structure of $K_2Gd[Si_6O_{15}]$.—73-16085
Crystal structure of $K_2Mn_2[P_2O_7]F_2$. Crystal chemistry of diorthophosphates of Fe and Mn.—73-02196
Crystal structure of new native Na, Ba, Mn fluorosilicate.—73-16086
Crystal structure of new natural fluorocarbonate $Na_3Ca(Mn,Ca)(CO_3)_3F$.—73-02205
Crystal structure of new ring Na, K silicate, $Na_{16}K_2[Si_{18}O_{56}(OH)_{18}]{\cdot}38H_2O$.—73-16090
Crystal structure of revdite, $Na_{16}[Si_4O_6(OH)_5]_2$-$[Si_8O_{15}(OH)_8](OH)_{10}{\cdot}28H_2O$.—73-16094
Crystal structure of taikanite, $Sr_2BaMn_2[Si_4O_{12}]O_2$.—73-16096
Crystal structure of the cesium bronze $Cs(Mo_{0.95}W_{0.05})_7O_{21}$.—73-02215
Determination of two-electron crystal field parameters in some neodymium compounds.—73-08600
Electron microscopy study of incommensurate intergrowth structures "$MTS_3$."—73-06214
Features of the crystal structure of $KTiOPO_4$ and $KFeFPO_4$ at 110 K.—73-05399
Flexibility of the RHO framework: a comparison of the Rb-exchanged zeolite and the novel composition $Rb_{24}Be_{24}As_{24}O_{96}{\cdot}3.2D_2O$.—73-05402
Fragmentary approach in searching for new compounds.—73-08630
Fully hydrated laumontite: a structure study by flat-plate and capillary powder diffraction techniques.—73-08632
Influence of the B/N ratio on the elaboration of cubic boron nitride.—73-16175
Influence of van der Waals forces on crystalline structure.—73-02295
Introduction to physical properties of incommensurate structures: from modulated to composite structures.—73-12611
Madelung constant of the tetragonal $K_2NiF_4$-type oxides.—73-08660
Modulated structure of new natural member of hollandite family.—73-16221
Modulated structures in high-$T_c$ superconductors: an electron microscopy study.—73-04775
Modulated structures of bismuth-based superconductors.—73-04776
Paracrystals[—literature review].—73-12645
Possibilities of symbolic description and systematic derivation of high-$T_c$ superconductor-like structures.—73-01633
Pressure-induced rock salt phase of aluminum nitride: a metastable structure at ambient condition.—73-08713
$PrO_{2n-2}$ [$n$=7, 9, 10, 11, 12] series of oxides and the structure of $Pr_{24}O_{44}$: an investigation by high-resolution electron microscopy.—73-02407
Rare-earth cuprates with structures radiated to $NaCuO_2$.—73-02418
Refined crystal structure of $Er_2O_3$.—73-02422
Structural study of epitaxial $BaTiO_3$ crystals.—73-08755
Superspace description of incommensurate intergrowth compounds and the application to inorganic misfit layer compounds.—73-05505
**crystalline materials,**
Determination of the $c/a$ ratio of a submicrometer-sized crystal of tetragonal barium titanate by synchrotron radiation.—73-16109
Determining the crystal phases in ceramic pigments by X-ray diffraction analysis.—73-08391
Enamels with crystalline inclusions for use at high temperatures (high-temperature enamels).—73-00229
Growth of emerald crystals by the flux evaporation method in $MoO_3$-$B_2O_3$ system.—73-16809
Inner mechanical stresses and electrical breakdown of crystalline dielectrics.—73-14710
Irreversibility line of monocrystalline $Bi_2Sr_2CaCu_2O_8$: experimental evidence for a dimensional crossover of the vortex ensemble.—73-15524
Method for production of needlelike crystalline particles.—73-12382
Microwave field effects on ionic transport in ionic crystalline solids.—73-06168
NMR studies of cation ordering in crystalline silicates.—73-03745
Properties of crystalline graphite.—73-00844
Use of two-phase standards of unknown compositions to determine calibration constants for powder XRD by linear regression.—73-16391
**crystallinity,**
Etching effect of substrate on crystallinity of oriented platinum thin film.—73-00230
**crystallites,**
Classification of intercrystalline boundaries.—73-16056
Connected cadmium selenide nanocrystallite networks.—73-04275
Vacancy emission from intercrystallite boundary.—73-17215
**crystallization,**
Crystallization and stability of the $Bi_2Sr_2CaCu_2O_x$ superconductor.—73-11718
Crystallization behavior in precursor-modified sol-gel lead titanate powders.—73-04543
Crystallization behavior of multicomponent nonalkali silicate glasses.—73-03718
Crystallization kinetics of CaO-MgO-$Al_2O_3$-$SiO_2$ glass system using thermal analysis.—73-00314
Crystallization mechanism of zeolite ZSM-5: I, Kinetic compensation effect for the synthesis with some diamines.—73-09053
Crystallization of fluoride glasses.—73-00315
Crystallization of glasses of the mixed structural network.—73-13954
Crystallization of $Na_{1-x}Zr_{2-x}Nb_x(PO_4)_3$ ($0<x<1$) series under hydrothermal conditions.—73-08591
Crystallization of zeolite ZSM-39 studied by $^{13}C$ and $^{29}Si$ MAS-NMR spectroscopy.—73-12567
Crystallization of ZSM-5 zeolite under microgravity.—73-12568
Crystallization process of $Fe_{73.5}Cu_1Nb_3Si_{13.5}B_9$.—73-04598
Crystallization process of zeolite ZSM-5 and zeolite ZSM-35 in a special autoclave.—73-05726
Crystallization sequence of barium osumilite and MAS osumilite glass-ceramics with low thermal expansion.—73-06900
Dependences of titanium silicide properties on the ratio of silicon to titanium used for electron-beam coevaporation onto heated substrates.—73-05736
Effect of ultrastructure on crystallization of mullite.—73-05775
Effects of electron radiation and gas isostatic treatment on the crystallization of glasses.—73-14368
Effects of zirconia on crystallization of glasses with lepidolite composition.—73-14370
Experimental study of the precrystallization process in the amorphous fast ionic conductor $0.6AgI$-$0.25Ag_2O$-$0.15P_2O_5$.—73-00967
Factors influencing the crystallization of tobermorite from CSH gel.—73-03469
Glass-ceramics: an overview.—73-14400
Increase of distribution coefficient of microimpurities in microconcentration regions during melt crystallization (trapping effect). Heterovalent systems[—review].—73-12602
Influence of $TiO_2$ crystallization and transformation on the opacification of holloware.—73-00242
Kinetics of photostimulated crystallization in multichromic glass.—73-14214
Method for determining the peak temperatures for crystallization center formation and crystal growth rates in glass crystallization.—73-15817
Nanocrystalline materials obtained by controlled crystallization of metallic glasses.—73-14435
Nonequilibrium crystallization of noncrystalline solids: explosive crystallization modeling.—73-06945
Nonequilibrium crystallization, critical cooling rate, and transformation diagrams.—73-07156
Nonisothermal differential scanning calorimetry technique for studying crystallization in glass-forming melts.—73-14054
Nonsteady-state time lag in binodal phase separation and in crystallization of glass-forming melts.—73-14055
Numerical model for isothermal and nonisothermal crystallization of liquids and glasses.—73-14447
Preparation of barium titanate particles by crystallization of glass.—73-02945
Relationship between crystallization and surface characteristics in MgO-BaO-$SiO_2$-$B_2O_3$ glass.—73-00395
Spectroscopic measurements of stress relaxation during thermally induced crystallization of amorphous titania films.—73-12881
Synthesis and characterization of cordierite glass-ceramics for low-firing-temperature substrate: I, Crystallization and shrinkage behavior of MgO-$Al_2O_3$-$SiO_2$ glass powders.—73-00709
Theoretical experimental method for evaluating the limiting stressed state of cast-melted refractories on crystallization and annealing.—73-00879
Zeolite crystallization [analyzed] using Avrami transformation methods.—73-12740
**crystallography,**
Crystal structure analysis of major constituent phases in ordinary portland cement.—73-09875
Crystallographic evaluation of ZnSe crystals by X-ray diffraction.—73-05380
Uses of crystallographic databases and bibliographies.—73-09755
**crystals,**
Accurate analysis of noncollinear acoustooptic interaction in $TeO_2$ crystal.—73-08800
Application of planar microlens arrays to liquid crystal devices.—73-14133
Approach to iron-red crystalline glaze.—73-10798
Asymmetry of the screw dislocation core structure in cadmium sulfide crystals.—73-11075
Characteristic surface and maximum invariant components of $B_{\Delta M}$ tensor of spin Hamiltonian of $Mn^{2+}$ ions in crystals of calcite, magnesite, and dolomite.—73-02159
Decreasing lead exposure from lead crystal by sol-gel coating.—73-00606
Deformation characteristics of cubic zirconia monocrystals.—73-13502
Description of electron, X-ray, and neutron Bragg scattering in crystals of superionic conductors.—73-14686
Determination of vacancy migration volume in ionic crystals from data on electrical conductivity of mixed crystals.—73-17076
Disclination splitting and crystal-glass transformation under mechanical alloying.—73-14352
Discrete variational $X_\alpha$ (DV-$X_\alpha$) method studies on energy levels and vibrational structure of $MgF_2$:$V^{2+}$ crystals.—73-12572
Dislocation mechanism of acoustic emission during crack growth in a crystal.—73-17277
Double-phase conjugation in $Bi_{12}TiO_{20}$ photorefractive fiberlike crystal.—73-12770
EPR of $Ce^{3+}$ ions in $KMgF_3$ crystal.—73-16140
Grain-boundary structure and strength of SiC bicrystals.—73-03148
Hydroxyl defects and electrodiffusion (sweeping) in natural quartz crystals.—73-09411
Ionic conductivity of crystals subjected to radiation and mechanical processing.—73-04125
Large surface area of $SiO_2$-coated fibrous crystals of alumina after heating at >1573 K.—73-13114
Local vibronic instability of low-symmetry centers.—73-16199
Luminescence of $K_3[Re(CN)_4O_2]$ crystals.—73-12828
Magnetoreflection of birefringent crystals.—73-16534
Measurements of principal refractive indices and their thermal coefficients of $LiNbO_3$ crystals heavily doped with magnesium.—73-11588
Metallographic and fracture surface investigations of metal-ceramic bicrystals.—73-06825
Method of synthesizing single diamond crystals of high thermal conductivity.—73-16006
Model of mosaic crystal with dynamically scattering blocks.—73-02331
Optical breakdown of lithium niobate crystals doped with ions of transition elements.—73-04562
Paracrystals[—literature review].—73-12645
Phase diagram and enhanced electrical transport in KBr-NaBr mixed crystals.—73-02375
Photon-grated hole burning in $BaSO_4$:$Sm^{2+}$ crystals.—73-12658
Piezogyration in quartz enantiomorphic crystals.—73-01426
Pore preference in elastically anisotropic cubic crystals.—73-17095
Raman scattering [RS] of light by surface polaritons [SP's] coherently excited on a rippled BeO crystal.—73-12667

Relaxation processes during microindentation of ionic crystals.—73-16587
Rotational invariant pattern recognition with the method of circular harmonics using a $BaTiO_3$ crystal.—73-08965
Secondary compensation effect on conductivity of ionic crystals.—73-01023
Spectra and intensity parameters of $Li_6Y(BO_3)_3$:$Nd^{3+}$ laser crystal.—73-02689
Structural levels of destruction of ionic crystals under dynamic loading.—73-17436
Surface electron traps in alkali halide, [gallium arsenide], and metal oxide crystals.—73-16347
Synthetic imogolite paracrystals.—73-06105
Temperature effect of two-beam coupling efficiency in Ce:Fe:$LiNbO_3$ crystals.—73-15293
Theory and practice in the prediction of new materials.—73-09750
Thermally stable porous crystals from montmorillonite: I, Preparation and properties of Al and Zr pillared montmorillonites.—73-13324
Thermally stimulated luminescence excitation spectra and electronic excitation relaxation branching in $Y_3Al_5O_{12}$ crystals.—73-16635
Thermodynamic equilibria in two-phase, elastically stressed ionic crystals.—73-12721
Thermopiezoelectricity in noncentrosymmetric crystals.—73-15295
Transmissive effect in $BaTiO_3$ self-pumped phase conjugators.—73-09001
Ultraviolet absorption edge of $LiNbO_3$ crystal from solid-liquid congruent point composition.—73-11628
Variety of crystal glasses.—73-13648

**cullet,**
Cullet sorter investment pays off for UK glass recycler.—73-15710
Energy-saving cullet preheater.—73-10526
From workhouse to workhorse.—73-15727
Glass cullet preheating modeling.—73-03847
How increased cullet levels affect energy usage.—73-03849
Proposal for an international quality standard for cullet.—73-01993
Quality cullet is required for fiberglass, too.—73-03880
Thermomechanical properties of silicate glass as a function of the batch-to-cullet ratio.—73-00712

**cuprates,**
$^{63}Cu$ nuclear spin-lattice relaxation study for low-temperature structural transition in $(La_{1-x}Ba_x)_2CuO_4$ around $x$=0.06.—73-08595
3-D correlation in high-$T_c$ copper oxides.—73-08259
Ac conductivity in $La_2CuO_4$.—73-08799
Anharmonic phonon structure in the tunneling conductance of Bi cuprates.—73-15385
Anisotropy of thermopower and electric conductivity in single-crystal $EuBa_2Cu_3O$ at hydrostatic pressures up to 12 kbar.—73-07985
Anomalous $x$ dependence of $T_c$ and possibility of low-temperature structural phase transition in $La_{2-x}Sr_xCuO_{0.99}M_{0.01}O_4$ (M=Ni, Zn, Ga).—73-11690
Anomalous pressure dependence of the $La_2CuO_4$ superexchange interaction: an evidence of band antiferromagnetism.—73-15390
Anomalous thermoelectric power of $Bi_{1.6}Pb_{0.5}Sr_{1.9-y}La_yCu_{1.05}O_z$.—73-02553
Antiferromagnetic resonance in $Nd_2CuO_4$.—73-08553
Calculation of variations of magnetic peak fields of high-$T_c$ superconductors.—73-04677
Can Anderson-Luttinger liquid theory be considered relevant to cuprate superconductors.—73-01498
Charge transfer investigation: X-ray photoelectron spectroscopy on superconducting $Tl_2Ca_2Ba_2Cu_3O_{10}$.—73-01503
Charge-transfer spectrum and its temperature dependence in $La_2CuO_4$.—73-08820
Comparison of band structures of $La_2CuO_4$ and $Nd_2CuO_4$.—73-08578
Computation of antiferromagnetic properties of orthorhombic $CaCuO_2$.—73-07420
Computational study of hole species in models of the cuprate superconductors.—73-15403
Correlations between the structural distortion of LaCuO lattice and the resulting physical properties.—73-05376
Crystal field in $Nd_2CuO_4$.—73-08584
Crystal field Raman scattering in $Nd_2CuO_4$.—73-16078
Crystal structure and Mossbauer spectroscopy of $Y_2SrFeCuO_{6.5}$, a double-layer perovskite intergrowth phase.—73-02182
Crystal structure of $BaCuO_2$.—73-02190
Crystal structure of $Bi_2Sr_2CuO_6$: a structure based on periodic crystallographic shear planes in the "2201" structure.—73-08587
Crystal structure of $La_{1.85}Ba_{0.15}CaCu_2O_{6+y}$ determined by neutron powder diffraction.—73-08588
Crystal-field phonon interaction and in-plane charge transfer in $NdBa_2Cu_3O_{7-\delta}$.—73-04691
Cu $K_\beta/K_\alpha$ intensity ratios of some Cu compounds and high-$T_c$ superconducting cuprates.—73-15407
Cu charge fluctuations and anomalous behavior in the phonon spectrum of $La_2CuO_4$.—73-08594
Dc magnetization measurements in $Eu_2CuO_4$:$Gd^{3+}$.—73-04602
Dependence of lattice parameters and $T_c$ on the hole concentration determined by precise measurement of the oxygen content of $M_xLa_{2-x}CuO_{4-y}$ (M=Ba, Sr, Ca).—73-01517
Determination of high-frequency pseudosurface mode velocity in high-$T_c$ superconducting $RBa_2Cu_3O_{7-\delta}$ (R=Tm, Er, Ho, Dy, Gd, Eu, Sm, Nd, Pr) single crystals by Mandelstamm-Brillouin light scattering spectra.—73-01520
Determination of the oxygen content in superconducting and related cuprates using temperature-programmed reduction.—73-01521
Diffusion coefficients of oxygen in $Nd_2CuO_{4-\delta}$.—73-03091
Diminishing sign anomaly and scaling behavior of the mixed-state Hall resistivity in $Tl_2Ba_2Ca_2Cu_3O_{10}$ films containing columnar defects.—73-15419
Dipole-active phonon spectrum in $Nd_2CuO_4$ single crystals.—73-02238
Dopant microdomains and magnetic fluctuations in $La_{2-x}Sr_xCuO_4$.—73-01454
Doping-, pressure-, and temperature-dependence of Hall coefficients in high-$T_c$ cuprates.—73-11727
Effect of Anderson disorder on the correlation functions and binding energy of excess carriers in a $Cu_4O_8$ cluster.—73-05544
Effect of vortex fluctuations on $^{205}Tl$ spin-lattice relaxation in mixed states of $Tl_2Ba_2CuO_6$.—73-15439
Effects of the substitution of Zn for Cu in the spin-Peierls cuprate $CuGeO_3$: the suppression of the spin-Peierls transition and the occurrence of a new spin-glass state.—73-12578
Elastic and magnetic properties of $La_2CuO_{4-\delta}$ single crystals.—73-08843
Electric resistance and estimate of skin effect in samarium cuprate single crystals.—73-08846
Electrical resistivity of the as-grown $Gd_{1.92}Ce_{0.08}CuO_4$ single crystal under pressure.—73-16482
Electron-hole asymmetry in the phase diagram of $Ln_{2-x}^{3+}M_xCuO_4$ compounds.—73-02256
Electron-hole asymmetry in the phase diagram of $Zn_{2-x}M_xCuO_4$ compounds.—73-02257
Electronic structure and chemical bond of (Y, La, Sc)-BaCu(O, F) superconductors [studied] by quantum chemistry.—73-04714
Electronic structure of $La_2CuO_4$ in the self-interaction-corrected density functional formalism.—73-08863
Electronic transitions of Ho in $Pb_2Sr_2HoCu_3O_8$ observed by inelastic neutron scattering.—73-04715
Energetics of $La_{2-x}Sr_xCuO_{4-y}$ solid solutions ($0 \le x \le 1$).—73-02264
Energy dispersion in the singlet correlated impurity band in layered cuprates.—73-16492
Energy distribution of gaps in $GdBa_2Cu_3O_7$.—73-08057
Energy gap, susceptibility, and damping in superconducting cuprates.—73-15457
Enhancement of the superconducting transition temperature of $TlSr_2CaCu_2O_7$ by yttrium and vanadium substitutions.—73-01545
Evidence for new phases in Ln-doped $La_{1.875}Ba_{0.125}CuO_4$ (Ln=Nd, Sm).—73-08620
Experimental and theoretical investigation of the temperature dependence of $La_2CuO_4$ sublattice magnetization.—73-05563
Experimental investigation of magnetic resonance in $Nd_2CuO_4$.—73-08624
Fermi surface [FS] and electronic structure of $Nd_{2-x}Ce_xCuO_{4-\delta}$.—73-16152
Ferromagnetic phase in $SmBa_2Cu_3O_{6+x}$ at low temperatures.—73-16153
Field dependence of the magnetic ordering of Cu in $Ru_2CuO_4$ (R=Nd,Sm).—73-05568
Fine structure of $I$-$V$ characteristics and microwave response of high-$T_c$ films on insulating substrates.—73-01553
Formation and decomposition of $BaCuO_{2.5}$ prepared from a mixture of nitrates.—73-02831
Formation of a new series of 1222 layered cuprates $MSr_2(LnR)_2Cu_2O_y$ [M=Ti, Nb, Ta; Ln=Pr, Nd; R=Ce, Th].—73-02276
Frequency shifts of optical phonons due to size-effect-induced charge transfer in $Tl(Ba_{1-x}Sr_xLa)CuO_5$.—73-15488
Giant suppression of flux-flow resistivity in heavy-ion-irradiated $Tl_2Ba_2Ca_2Cu_3O_{10}$ films: influence of linear defects on vortex transport.—73-09408
Glass microstructure and initial crystallization of $Pb_{0.32}Bi_{1.68}Sr_{1.75}\text{-}Ca_2Cu_3O_x$.—73-06922
Have we known the mechanisms of high-temperature superconductivity for a long time.—73-11780
Heavy-fermion-like excitations in metallic $Nd_{2-y}Ce_yCuO_4$.—73-16503
Hypersound studies of the electron-doped $Ln_{2-x}CeCuO_4$ and hole-doped $La_{2-x}M_xCuO_4$ high-$T_c$ single crystals.—73-11792
Improvement of the critical magnetization currents in $La_{1.85}Sr_{0.15}CuO_4$ by hydrogen treatment.—73-12811
Influence of Ca on the irreversibility line of $YSr_2Cu_{2.67}Ti_{0.33}O_{6+y}$.—73-11802
Influence of the size of alkaline-earth cations on the structural distortion and transport properties of the semiconducting 1212-type cuprates $TlBa_{2-x}Sr_xLnCu_2O_7$.—73-04368
Internal field and EPR in $Sm_{1.995}Gd_{0.005}CuO_4$ crystals.—73-08644
Ir and Raman spectra of the new $Ba_{1.5}Sr_{0.5}CuO_{3+\delta}(CO_2)_y$ carbocuprate.—73-02308
Localization of carriers of Y-doped $CaCuO_2$ films prepared by an organometallic chemical vapor deposition method.—73-15535
Localization of spin excitations and disruption of long-range order in weakly doped $La_2CuO_4$.—73-05431
Low rf loss, bondable ohmic contacts on $Tl_2Ba_2CaCu_2O_{8-\delta}$ for microwave devices.—73-01590
Low-frequency spin dynamics in undoped and Sr-doped $La_2CuO_4$.—73-15539
Luttinger Fermi surface of metallic gap spectral weight in $Nd_{1.85}Ce_{0.15}CuO_{4-\delta}$.—73-15543
Magnetic and crystal structure of [polycrystalline] rare-earth cuprates $R_2BaCuO_5$ [R=Dy, Ho, Er, Tm, Yb].—73-16205
Magnetic dilution of $La_{1.85}Sr_{0.15}CuO_{4-\delta}$ in $K_2NiF_4$-type diamagnetic $LaSrAlO_4$.—73-07950
Magnetic flux quantization in the repulsive electron correlation model for high-$T_c$ cuprate superconductivity.—73-08127
Magnetic neutron scattering in single-crystal $Bi_2CuO_4$.—73-05432
Magnetic order of Pr ions in $PrBa_2Cu_2O_6$.—73-16207
Magnetic ordering of $Dy^{3+}$ sublattice in tetragonal single crystal $DyBa_2Cu_3O_{6.2}$.—73-16206
Magnetic ordering of Sm in $Sm_2CuO_4$.—73-07952
Magnetic orientation phase transition in $Gd_2CuO_4$: resonance, magnetic, and acoustic investigations.—73-07336
Magnetic phase diagram of lightly doped $La_{2-x}Sr_xCuO_4$ from $^{139}La$ NQR.—73-15336
Magnetic properties of $Eu_2CuO_4$ single crystals.—73-15338
Magnetic properties of extended $t$-$J$ model: I, Static properties.—73-02639
Magnetic resonance and magnetic ordering in the oxygen-deficient $RBa_2Cu_3O_x$ superconductors.—73-04762
Magnetic structure and resonance properties of $Nd_{22}CuO_4$.—73-08662
Magnetization and spin-wave velocities in $La_2CuO_4$.—73-07962
Magnetoelastic properties of rare-earth cuprates $R_2Cu_2O_5$ [R=Tb–Lu, Y].—73-17374
Many-body effects in X-ray photoemission and high-$T_c$ superconductivity of cuprate superconductors.—73-11826
Mechanism of introduction of yttrium ions into barium cuprates, $Ba_2Cu_3O_y$.—73-01602
Metal semiconductor transition and spin glass properties of $La_{(2-1/6)}Ba_{(1+1/3)}Mn_{1-x}Cu_xO_3$.—73-12833
Microstrains and domain sizes in Bi-Cu-O superconductors: an X-ray diffraction peak-broadening study.—73-01605
Mossbauer study of $^{57}Fe$-doped $La_{2-x}Sr_xCuO_4$: local magnetic properties in the semiconducting, superconducting, and normal metallic regions of the phase diagram.—73-08671
Neutron powder diffraction study of the phase $Sr_3Pb_3CuO_{12}$.—73-02348
Neutron structural studies of superconducting $Bi_2Sr_2CuO_{\sim 6}$ and $Bi_{2-x}Pb_xSr_{1.8}La_{0.2}CuO_{6+\delta}$ ($x$=0 and 0.2).—73-15565
New homologous series $Sr_{n-1}Cu_{n+1}O_{2n}$ [$n$=3,5..] found in the SrO-CuO system treated under high pressure [6 GPa at 1373–1573 K].—73-02351
New superconducting 1201-type phase (Tl,Cr)$Sr_2CuO_5$.—73-01613
NMR evidence for common magnetic behavior in double layered superconducting cuprates.—73-08146
NMR of Cu and Pr in the two-phase compound $Pr_{1.85}Ce_{0.15}CuO_{4-y}$.—73-05440
NMR study of local structure in metallic $La_2Cu_{4+\delta}$.—73-16230
Nonsuperconducting oxide $TlBa_2LaCu_2O_7$ with 1212 structure.—73-16233
Novel anomalous contribution to the Hall effect in some high-$T_c$ compounds.—73-01619
Novel Raman-active electronic excitations near the charge-transfer gap in insulating cuprates.—73-10979
Optical conductivity of $La_{2-x}Sr_xCuO_4$ and soft electronic modes.—73-16554
Oxide superconducting compositions containing antimony.—73-01623
Oxygen content, microstructure, and $T_c$ variation of $La_{1.84}Sr_{0.16}CuO_y$.—73-15574
Phase separation and finite size scaling in $La_{2-x}Sr_xCuO_{4+\delta}$ ($0 \le x, \delta \le 0.03$).—73-15578
Phonon Raman scattering study of $Nd_{2-x}Ce_xCuO_4$.—73-05457
Photoinduced reflection of light in single crystal of $La_2CuO_{4+y}$.—73-11861
Polarized $K$-Cu XANES of epitaxial $Nd_{1.85}Ce_{0.15}CuO_4$ thin films irradiated by $He^+$ ions.—73-01629
Polaron contribution to the ir optical response of $La_{2-x}Sr_xCuO_{4+\delta}$ and $La_{2-x}Sr_xNiO_{4+\delta}$.—73-15583
Possible superconductivity and microstructural investigation in $Y_{1-x}Ca_xSrCu_{2.6}Fe_{0.4}O_{6+z}$ ($x$=0, 0.1).—73-01635
Preparation and characterization of Tl-Ba-Ca-Cu-O superconducting films by spray pyrolysis and Tl-diffusion technique.—73-04788
Preparation of high-$T_c$ superconductors by a plasma-arc melting and rapid quenching method [PMQ].—73-01638
Pressure effect on the superconducting transition temperature of $Dy_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$.—73-04793
Quasi-particle decay effects in the superconducting density of states: evidence for $d$-wave pairing in the cuprates.—73-15607
Rare-earth cuprates with structures radiated to $NaCuO_2$.—73-02418
Role of charge transfer in formation of X-ray and X-ray photoelectron spectra of Cu(II) compounds.—73-05474
Scanning tunneling microscopy of defect structures and growth spirals in bulk single crystals of the high-$T_c$ superconductor $Pb_2Sr_2(Y, Ca)Cu_3O_{8+\delta}$.—73-01654
Size effect on variable-range-hopping transport in $PrBa_2Cu_3O_{7-x}$.—73-15622
Soft X-ray Cu$L$ spectra and copper-oxygen bond covalency in high-$T_c$ superconductors.—73-08199
Space group and phonon symmetry of $(RE1Ba_2Cu_3O_7)_m(RE2Ba_2Cu_3O_7)_n$ superlattices.—73-05482
Spin waves in single-crystal $Bi_2CuO_4$ [investigated] by inelastic neutron scattering.—73-08737
Spin-glass state in amorphous $Bi_2CuO_4$.—73-16311
Spin-orbit coupling and spirals in doped $LaCuO_4$.—73-08738
Spin-spin correlation in the quantum critical regime of $La_2CuO_4$.—73-15628
$Sr_6Nd_3Cu_8O_{17}$: an intergrowth of the 123-phase and rock-salt-type structure.—73-02441
Structural and crystal field studies on a single crystal of $PrBa_2Cu_3O_{7-\delta}$.—73-15631
Structural neutron diffraction study of an $Nd_2CuO_{4-\delta}$ single crystal.—73-05494

Structural origin of holes in the Tl-O single rock-salt layer superconductor $TlSrRCuO_5$ (R=La, Nd).—73-01667
Structural peculiarities of two layered cuprates, $NdSrCuO_{3.5}$ and $Nd_{1.8}Sr_{1.2}Cu_2O_{6-\delta}$.—73-02450
Structure and superconducting properties of $Pr_{1-x}Ca_xBa_2Cu_3O_{7-\delta}$, $PrBa_{2-x}La_xCu_3O_{7-\delta}$, and $Pr_{1-x}Ca_xBaLaCu_3O_{7-\delta}$.—73-01670
Structure of the mixed-valence lithium cuprate $Li_3Cu_2O_4$ by powder neutron diffraction.—73-05504
Superconducting properties of $HoBa_2Cu_3O_7/SrTiO_3/HoBa_2Cu_3O_7$ heterostructures.—73-01676
Superconductive La-Sr cuprate stability in NaF hydrothermal solutions at high temperature and pressure.—73-01677
Superconductivity and antiferromagnetic ordering in $(Gd,R)_{1.85}Ce_{0.15}CuO_4$ with R=Pr and Sm.—73-04812
Superconductivity of $La_{2-x}Nd_xCuO_{4\pm\delta}$ prepared under high oxygen pressure: suppression of the phase separation seen in $La_2CuO_{4+\delta}$.—73-01680
Superconductivity of $NbSr_2Nd_{2-x}Ce_xCu_2O_{10-\delta}$ [0.3≤x≤0.7].—73-04815
Superconductors with quasi-localized pairs: bismuthates and $A^{IV}B^{VI}$ semiconductors doped by $III^B$ metals.—73-01681
Supramagnetic behavior in $Nd_{2-x}Ce_xCu(^{57}Co)O_4$.—73-15370
Synthesis and properties of the cuprates of cesium and sodium.—73-02488
Synthesis of the cuprates of lanthanum and yttrium under the conditions of high pressures and temperatures.—73-01685
Systematic evolution of temperature-dependent resistivity in $La_{2-x}Sr_xCuO_4$.—73-08243
Temperature and doping dependence of the magnetic susceptibility in the cuprates.—73-05648
Temperature dependence of penetration depth and surface resistance of $Nd_{1.85}Ce_{0.15}CuO_4$.—73-16610
Temperature dependence of the low-energy electronic Raman scattering in $Tl_2Ba_2CaCu_2O_8$ single crystals.—73-02515
Terrace structures in $DyBa_2Cu_3O_{7-x}$ grown in a magnetic field.—73-03208
Thermal expansion mismatch and intergrowth types in the system $La_{2-x}Nd_xCuO_4$.—73-01690
Thermogravimetric analysis and defect models of the oxygen nonstoichiometry in $La_{2-x}Sr_xCuO_{4-y}$.—73-15656
Thin films of $(RE)Ba_2Cu_3O_7$ [RE=Y, Pr, Eu, Gd, Ho] epitaxially grown in situ by excimer laser ablation: structural and superconducting behavior.—73-01693
$Tl_2Ba_{2-x}Sr_xCuO_6$: a system exhibiting a compositionally controlled superconductor–metal transition.—73-01695
Toward a unified magnetic phase diagram of the cuprate superconductors.—73-15659
Ultrasonic spectroscopy of an $La_2Cuo_4$ Crystal in the vicinity of the tetra-ortho phase transition.—73-08786
Ultraviolet photoluminescence [UVPL] of high-$T_c$ superconductors.—73-01701
Universal magnetic properties of $La_{2-x}Sr_xCuO_4$ at intermediate temperatures.—73-15374
Universal relationship between $T_c$ and hole content in *p*-type cuprate superconductors.—73-15662
Unusual electronic structure in $PrBa_2Cu_3O_7$.—73-16390
Using multiple small-angle neutron scattering technique to study porosity parameters of high-$T_c$ ceramics.—73-15663
Weak ferromagnetism induced by the external field above $T_c$ in $Gd_2CuO_4$.—73-04662
XAS and XPS study of electronic structure of the trivalent cuprate $La_2Li_{0.5}Cu_{0.5}O_{4-\delta}$.—73-05525

**curing,**
Combined effects of alkali-silica reaction [ASR] and secondary ettringite deposition [SED] in steam-cured mortars.—73-09858
Effect of curing in air on synthesis of Si-Ti-C-O fiber.—73-05758
Effects of curing temperature on strength development and heat of hydration of super-low-heat cement.—73-09932
How to get better curing.—73-09983
Influence of curing conditions on the permeability and durability of concrete. Results from a field exposure test.—73-03484
Influence of initial curing on sulfate resistance of blended cement concrete.—73-10009
Interrupted concrete curing.—73-00129
Strength development of concrete cured at low temperature.—73-00193

**currents,**
Barocurrents in piezoelectrics with diffusion conductance mechanism.—73-15249
Cross-talk coupling between two filamentary currents in *n*-GaAs under longitudinal magnetic field.—73-07428
Current states of high-$T_c$ superconducting ring in Aaronov-Bohm configuration.—73-15410
Excess dark current due to saw damage in semiinsulating GaAs.—73-14898
Influence of dislocations on dark current of multicrystalline silicon $n^+$-*p* junction.—73-16516
Isothermal and thermally activated currents in $CaGa_2S_4$:Eu single crystals.—73-01225
Photo- and electron-beam-induced currents from epitaxial $YBa_2Cu_3O_x$ metal-insulator-superconductor (MIS) structure in the normal state.—73-15580
Rising currents in convection in a basin oven.—73-08485
Thermionic reverse current in GaAs surface-barrier structures.—73-01353
Threshold phenomena in nonlinear currents upon metallization of Si(001).—73-16641

**cutting tools,**
Advanced ceramics as cutting tool materials: I, An overview.—73-12312
Advanced ceramics as cutting tool materials: II, State of the art and developments.—73-12313
Cemented carbide body used preferably for abrasive rock drilling and mineral cutting.—73-12449
Ceramic cutting tool with chip control.—73-15980
Ceramic Cutting Tools: Materials, Development, and Performance.—73-17516
Ceramic tool wear when machining austempered ductile iron.—73-06338
Ceramic tools stand up to composites.—73-05159
Ceramic whisker-reinforced cutting tool with preformed chipbreakers for machining.—73-02032
Chisel insert [made of WC] for rock bits.—73-15982
Coated cement carbides and processes for the production of [the] same.—73-12451
Costing carbide indexable drills.—73-05262
Cubic boron nitride-base sintered ceramics for cutting tool.—73-15988
Cutting insert for a rotary cutting tool.—73-02092
Cutting insert for a rotary cutting tool.—73-12458
Cutting performance of titanium-carbide-based cermet nitrified during the course of sintering.—73-13816
Cutting performance of white ceramic tools having high strength.—73-17269
Cutting tools with wire EDM [electrical discharge machining].—73-04907
Diamond film cutting tool.—73-15989
Diamond tools for rock drilling, metal cutting, and wear part applications.—73-05298
Evaluation of zirconia-toughened alumina tool inserts during machining of high-strength steel.—73-17313
Evolution of hard coatings and base materials on cutting tool applications.—73-08531
High-strength tungsten carbide material for use in earth-boring bits.—73-10317
Hot hardness of ceramic cutting tools using depth of penetration measurements.—73-08405
Influence of the substrate material on the effectiveness of coating in metal cutting.—73-13849
Method for manufacturing a cutting tool insert made of a silicon nitride body.—73-12485
New concept of semiproduct clamping in processes of utility glassware finishing.—73-14436
New tough, exceptionally wear-resistant, diamond-based composite for cutting tools.—73-15967
Optimization of the composition of nitridic ceramic tool material by tribotechnical tests.—73-02084
Performance of TiN-, Ti(C,N)-, and (Ti,Al)N-coated cutting tools.—73-10260
Properties of CVD-coated cemented carbides affected by those of substrate.—73-13887
Replacement of transmission mechanism of green brick cutter.—73-12187
Rock bit with cobalt alloy cemented tungsten carbide inserts.—73-10346
$Si_3N_4$ ceramic cutting tool materials and their applications.—73-05273
Single-point machining technology of a supersmooth surface using a flying tool.—73-15755
Structure and bonding of highly stressed vitrified bonded cutting tools.—73-13657
Superabrasive wheels in the toolroom.—73-15973
Surface-coated hard material for cutting tools or wear-resistance tools.—73-03702
Titanium nitride coatings created by nitriding titanium dioxide coatings on corundum cutting tools.—73-03063
Tool of cemented carbide for cutting, punching, or nibbling.—73-00301
Try hard turning.—73-05281
Wear characteristics and cutting performance of diamond coated ceramic tools.—73-03376
Wear mechanism of ceramic tools.—73-09693
Whisker-reinforced composites for cutting tools with improved performance.—73-05250

**cutting,**
Apparatus for cutting molten glass for forming glass products.—73-01843
Cutting characteristic of ceramics.—73-12965
Device for and method of detecting positioning marks for cutting ceramic laminated body.—73-01851
Effects of roller diameter and taper angle on glass cutting.—73-01778
Erosion and abrasive water jet cutting of ceramics.—73-05792
High-pressure benefits of water jet cutting.—73-14403
New cutting named "Goban-Wari" of glass plates with "elastic working."—73-14437
Precision crack-off of ceramics.—73-06500

**cyclic fatigue,**
Crack propagation behavior of sintered silicon nitride under cyclic load at elevated temperature (effect of stress ratio).—73-17261
Crack-resistance curve and cyclic fatigue in ceramic materials.—73-06356
Cyclic fatigue behavior of pressureless-sintered silicon nitride in rotating bending test.—73-06364
Cyclic fatigue of ceramics: a fracture mechanics approach to subcritical crack growth and life prediction.—73-03256
Cyclic fatigue of electrically poled piezoelectric ceramics.—73-06365
Effect of grain size on the cyclic fatigue behavior of sintered $Al_2O_3$ under rotary bending.—73-06381
Fatigue crack propagation and failure prediction for toughened ceramics under cyclic loads.—73-06418
Indirect method for the determination of $da/dN$-$\Delta K$ curves.—73-06458

**cyclones,**
Conversion of a four-stage cyclone preheater to a VA-PASEC precalciner system.—73-00050
Synthesis in a nontransferred arc thermal plasma cyclone reactor.—73-06084

**cylinders,**
Coalescence of two viscous cylinders by capillarity: I, Theory.—73-02561
Coalescence of two viscous cylinders by capillarity: II, Shape evolution.—73-02562
Flow and fracture of glass cylinders pressed between parallel plates.—73-14188
Fracture modes in initially cracked concentric cylinders.—73-17329
Magnetic shielding studies using cylinders of $YBa_2Cu_3O_{7-x}$ prepared by isostatic compression.—73-15546
Method of making a cylinder head or other article with cast in situ ceramic tubes.—73-04995

**damage,**
α-decay damage effects in curium-doped titanate ceramic containing sodium-free high-level nuclear waste.—73-15697
Arc-jet testing of damaged RCC-3 repaired using preceramic polymers.—73-12412
Ceramic Restoration.—73-06601
Characterization of damage onset in glass-ceramic matrix composites angle-ply laminates.—73-03244
Characterization of subsurface damage in ceramic matrix composites by confocal scanning laser microscopy.—73-03125
Damage assessment and lifting of continuous-fiber-reinforced metal-matrix composites.—73-03257
Damage caused by an oblique particle impact to ceramics.—73-17270
Damage determination and strength prediction of machined ceramics by X-ray diffraction techniques.—73-06366
Damage development in titanium metal-matrix composites subjected to cyclic loading.—73-03258
Damage in aligned-fiber SiC/Al quantified using a laboratory X-ray tomographic microscope.—73-00217
Damage introduction in GaAs/AlGaAs and InGaAs/InP heterojunction bipolar transistor structures during electron cyclotron resonance plasma processing.—73-07432
Damage measurement in concrete via an ultrasonic technique: I, Experiment.—73-00054
Damage mechanisms under tensile and fatigue loading of continuous-fiber-reinforced metal-matrix composites.—73-03259
Deterioration of mortar by chemical and physical action.—73-13702
Direct optical observation of hydrogenation-induced damage in GaAs.—73-01129
Effect of grain size on Hertzian contact damage in alumina.—73-13507
Estimation method by microwave for the deterioration depth of fire-damaged concrete.—73-09946
Gate oxide damage [studied] in an electron cyclotron resonance argon plasma.—73-08876
Grinding damage of ceramics and its effects on mechanical properties.—73-05826
Hydrothermal damage of ion-exchanged A-type zeolite cation-directed mechanisms of phase transformation.—73-12597
In situ study on the generation of radiation damage in cubic-zirconia in the high-voltage electron microscope.—73-03152
Injection-related damage in metal-oxide-silicon tunnel diodes.—73-05585
Ion mill damage in *n*-HgCdTe.—73-07623
Laser-induced damage in LN [$LiNbO_3$] crystals.—73-11586
Micromechanical analysis of damage mechanisms in ceramic matrix composites during mechanical and thermal cycling.—73-03340
Modelization of damage by abrasion.—73-09654
Particle impact damage of engineering ceramics.—73-06498
Radiation damage effects in alumina.—73-05624
Radiation damage in $SiO_2$/Si induced by low-energy electrons via plasmon excitation.—73-07759
Reactive-ion-etching-induced damage to $SiO_2$ and $SiO_2$-Si interfaces in polycrystalline Si overetch.—73-07763
SEM studies of material damage in alumina ceramics by angular single and multiple particle impacts.—73-06280
Simple technique for observing subsurface damage in machining of ceramics.—73-08443
Statistical theory of ceramic damage and fracture.—73-09674
Thermal damage by erosion and cracking under pulsed irradiation.—73-05655

**damping,**
Material damping studies on carbon-carbon composites.—73-09474
Mechanical dampers using piezoelectric composites.—73-01419
Quasi-particle damping in $Bi_2Sr_2CaCu_2O_8$ and $Bi_2Sr_2CuO_6$.—73-08183

**databases,**
Canadian database of mortar cube strength: the move toward a Canadian performance standard for portland cement.—73-09836
Ceramic databases on STN.—73-09702
Constructing material databases for CAE systems.—73-06564
CSJ-Net and ceramic titles.—73-09707
Data banks on the properties of ternary inorganic compounds as a basis for computer construction of new materials.—73-13613
Data compilation, analysis, and access: the role of the computer.—73-09709
Data logging devices for the ceramic industry.—73-05105
Databases in materials science and engineering: an international approach.—73-06566
Designing glass material systems using a database.—73-03389
Glass fact database INTERGLAD.—73-09717
Introduction to database utilization.—73-09723
Materials design for glass and expert database system.—73-03799

NACSIS-IR database for academic conferences of the Ceramic Society of Japan.—73-09730
Retrieval of documents on ceramics by JOIS.—73-09747
Silicon nitride tensile strength database from Ceramic Technology Program Processing for Reliability Project.—73-17428
Standards for computerization of composite material data.—73-06594
Thermodynamics database MALT2.—73-09751
Trends in advanced materials data: regularities and predictions.—73-09753
Uses of crystallographic databases and bibliographies.—73-09755
Using databases—in the author's case.—73-09756
Using databases—personal computer communication and CD-ROM peripheral.—73-09757
Utilization of Ceramic Abstracts CD-ROM version.—73-09758
Zeofile: a stack of zeolite structure types.—73-08797

**dating,**
Ceramic chronology and chronometric dating: stratigraphy and seriation at La Blanca, Guatemala.—73-06610

**dealkalization,**
Dealkalization of container glass surface.—73-00317

**debonding,**
Micromechanical aspects of fiber debonding and frictional sliding in brittle matrix composites.—73-09649

**decay,**
Considerations for the deterioration of reinforced concrete structures.—73-09866
Decay function Kohlrausch exponent for the electrical modulus of mixed alkali glasses.—73-00445
Deterioration of cement mortars immersed in NaCl and $CaCl_2$ solution.—73-09883

**decomposition,**
Decomposition energy of fractal cracks propagating in concrete or rocks.—73-03447
Decomposition of iron spinel under low oxygen partial pressure.—73-02226
Decomposition of synthetic ettringite by carbonation.—73-03448
Direct observation of preceramic and organic binder decomposition in 2-D model microstructure.—73-13388
Effects of decomposition reactions on the densification of $Si_3N_4$.—73-13029
Microstructures and mechanical properties of $TiO_2$-doped alumina ceramics owing to decomposition of formed $Al_2TiO_5$.—73-17173
Pulsed laser-induced photochemical decomposition of GaAs(110) studied with time-resolved photoelectron spectroscopy using synchrotron radiation.—73-07750
Single-crystal $SrTiO_3$ produced by the method of metallorganic decomposition.—73-09321
Solid-phase decomposition of GaAs as a result of laser bombardment at threshold density.—73-15165
Spinodal decomposition in zirconia–yttria ($ZrO_2$-$Y_2O_3$) alloys.—73-08739
Stoichiometry- and bond-structure-dependent decomposition of trimethylgallium on As-rich GaAs(100) surfaces.—73-07812
Surface phase decomposition in $Bi_2Sr_2CaCu_2O_y$ single crystals.—73-08234
Thermal decomposition of polyvinylbutyral [PVB]/PLZT, PMN dielectric powder composite.—73-01039

**decoration,**
Archaic plastic vases from Isthmia.—73-09776
Ceramics decoration and environmental protection.—73-00897
Decoration of self-glazing ceramic tiles.—73-00903
Evolving world of glass and ceramic decorating.—73-09782
Fast single-fire decoration firing allows automation and energy savings.—73-00906
Improvement of the technology of article decoration with gold.—73-00912
Improving gold decorating techniques.—73-00642
Influence of mesh fabric on screen printing.—73-10555
Inks for the marking or decoration of objects, such as ceramic objects.—73-03426
Method for making glass beads with surface decoration.—73-10565
Method of printing a glass pane with a decorative coating reaching the peripheral face of the glass pane.—73-03951
New possibilities for decorating glass, ceramics, and porcelain.—73-00917
New wine in ancient wineskins: the evidence from Attic vases.—73-09791
Noble-metal-containing overglaze color composition for ceramics.—73-03427
Overview of current glass decorating techniques.—73-10571
Process for producing decorated glass-ceramic articles with treatment with an acid prior to decorating and devitrifying.—73-03428
Production of glass-ceramic plates for decoration by sintering process.—73-10587
Recognizing new technology—the fast firing of decorated ware using natural gas open flame kilns.—73-10889
Screen printing a glass pane with a decorative coating including blowing away or sucking printing ink from the edge of the glass pane.—73-03429
Three decades of expanding decorating horizons.—73-03425

**dedusting,**
Problems of dedusting and cleaning of operation zones of working machines and conveying devices.—73-12057

**defects,**
Adding fishscale-resistant agent to eliminate fishscale in enamelware.—73-03561
Analysis technique for glaze surface defects and its applications.—73-08373
Analyzing and avoiding fishscale phenomena in porcelain enameling.—73-13798
Annealing of $As_{Ga}$-related defects in LT [low-temperature] GaAs: the role of gallium vacancies.—73-14773
Annealing study of nickel point defects in high-pressure synthetic diamond.—73-03076
Annealing-induced defect clustering at $Ni_{1-x}O$-Y-partially stabilized $ZrO_2$ interfaces.—73-03077
Antiphase boundaries in GaAs layers.—73-01079
Application of defect statistics and fracture mechanics for the description of comminution processes.—73-12921
Application of laser scattering to the detection of surface and subsurface defects in $Si_3N_4$ components.—73-15777
Atomic-scale simulation of interface defect formation in the initial stages of thin-film growth.—73-06139
Boron and its "hazy behavior."—73-00306
Bulk defects [observed] by STM and spectroscopy: arsenic antisite defects in GaAs.—73-14788
Calculations for defects formed on diamond surfaces.—73-06140
Causes and prevention of defects during ceramic forming.—73-02734
Characterization and depth profiling of $E'$ defects in buried $SiO_2$.—73-09391
Characterization of III-V materials by optical interferometry.—73-07407
Characterization of interface defects in oxygen-implanted silicon films.—73-06142
Chemically induced defects in oxynitride glasses.—73-03714
Contribution of a nitrogen-related defect in the NEXAFS [near-EXAFS] spectra of thin $Si_3N_4$ films.—73-06145
Crazing on whitewares having both an engobe and a glaze.—73-07241
Deep-level defects in GaAs grown from a molten Ga-Bi solution.—73-01119
Defect chemistry of perovskite compound $Sr(Fe_{0.5}Nb_{0.5})O_3$.—73-06148
Defect equilibrium in HgTe.—73-07436
Defect reduction in semiconductor manufacturing: a case study of $BPO_4$ elimination in BPSG films.—73-04279
Defect solid solution $Na_{7/8}(Fe_{7/8-x}^{III})(Ti_{9/8-2x}{}^{IV}Sb_x{}^{V})$.—73-03084
Defect structure and electrical properties of $Y_3Al_5O_{12}$ and $Y_3Al_5O_{12}$:$Nd^{3+}$ single crystals.—73-00945
Defect structure of congruently melting lithium niobate.—73-09394
Defect structure of strontium titanate thin films.—73-09395
Defect structures in single-crystal TiC.—73-09396
Defect study by HREM of the hydrated sodium ß''-alumina-like ferrite and derived (Li, Zn) spinel ferrite.—73-01451
Defects in GaAs bulk crystals and multilayers caused by In diffusion.—73-04280
Defects in squeeze-cast $Al_2O_3$/Al alloy composites and their effects on mechanical properties.—73-00218
Defects induced by electron bombardment and substrate doping in $SiO_2$ thin films.—73-06149
Depth profiling of oxygen vacancy defect generation in buried $SiO_2$.—73-06150
Detection of subsurface defects in machined silicon nitride ceramics by optical scattering methods.—73-06205
Determination of native defect concentrations and deviation from stoichiometry in silicon carbide.—73-06151
Development of interstitial-free porcelain enameling steel.—73-13819
Distribution of flatness deviations in float glass ribbon.—73-14353
Eagle eye on float line defects.—73-10520
Effect of edge defects on strength of plate glass subject to lateral bending.—73-00454
Effect of external fields on mass-transport and defect-related phenomena.—73-13348
Effect of illumination on the properties of paramagnetic defects in variable-composition films of hydrogenated amorphous SiC.—73-11156
Effect of substrate defects on the properties of high-$T_c$ superconducting thin films.—73-08040
Electrical characteristics of Ar ion sputter-induced defects in epitaxially grown *n*-GaAs.—73-07484
Electronic structure of defects in amorphous silicon nitride.—73-06158
EPR structural study on hydrothermally aged yttria-doped tetragonal zirconia polycrystals.—73-08615
Equilibrium concentration of inherent defects in vitreous silicon dioxide.—73-13979
Evaluation of critical defect size of ceramics based on *R*-curve method.—73-06407
Everything you ever wanted to know about glass container defects.—73-10529
Evidence for substitutional-interstitial defect motion leading to DX behavior by donors in $Al_xGa_{1-x}As$.—73-07512
Evidence for trigonal symmetry of the metastable state of the EL2 defect in GaAs.—73-09403
Experimental and statistical characterization of brittle composites.—73-09594
Failure analysis of glazes and bodies using electron microscopy.—73-01898
Features of defect formation in active region of GaAlAs/GaAs epitaxial heterostructures for solar cells under alternating heat effects.—73-03094
Features of the recombination kinetics of paramagnetic defects during vitrification of molten silicates in external magnetic fields.—73-00627
First observation of EL2-like defect levels in annealed [low-temperature] LT GaAs.—73-14927
Flux-flop in high-temperature superconducting crystals with columnar defects.—73-04727
Formation and annealing of radiation defects during proton bombardment of *p*-type $Pb_{0.76}Sn_{0.24}Te$ films.—73-07532
Glass edge quality and strength.—73-00490
Glaze defects and dry application processes.—73-10851
High-resolution electron microscopy study of defects in high-oxygen-pressure $YBa_2Cu_4O_8$.—73-01568
High-zirconia fused-cast refractories: a solution to defect and corrosion problems in special glasses.—73-00821
How small size defects in fine ceramic materials can we see by radiography.—73-01904
HRTEM study of planar defects and polytypes in $MgSiO_3$.—73-09461
Identification of defects in glass.—73-14003
Impurity structural defects in CdTe single crystals.—73-03096
Influence of defects on relaxation in high-$T_c$ superconductors.—73-04743
Influence of irradiation conditions on the defect formation processes in *n*-type GaAs.—73-01205
Influence of mobile defects on the characteristics of a metal-semiconductor contact in the case of CdS crystals.—73-14983
Influence of radiation defects on the energy gap in $YBa_2Cu_3O_{7-x}$ as measured with the help of Andreev reflection effect.—73-11803
Influence of the excess pressure of the vapors of the components on the ensemble of point defects in CdS crystals.—73-06162
Infrared study of $OH^-$ defects in $KTiOPO_4$ crystals.—73-13355
Interactions of wide-band-gap single crystals with 248-nm excimer laser radiation: III, The role of cleavage-induced defects in MgO.—73-09412
Interface properties and deep level defects in $Ta_2O_5$ grown on Si by plasma-enhanced liquid-source CVD.—73-04122
Interfacial point defects in heavily implanted silicon germanium alloys.—73-09413
Localized behavior of metallic contamination in fine ceramic silicate bodies.—73-01795
Luminescence profiling investigation of the transformation of defects in CdTe crystals by brief annealing.—73-04391
Machinability of different dental materials for CAD/CAM systems.—73-06471
Method of inspecting the structural defectiveness of pyrocerams.—73-01913
Microdesigned interfaces: new opportunities for materials science.—73-02895
Microphotoluminescence and Raman scattering study of defect formation in diamond films.—73-03102
Microstructural examination of extended crystal defects in silicon selective epitaxial growth [SEG].—73-17155
Modeling of point defects in corundum crystals.—73-17088
Molecular dynamics study of vacancy-like defects in a model glass: dynamical behavior and diffusion.—73-14043
Molecular dynamics study of vacancy-like defects in a model glass: static behavior.—73-14044
Monte Carlo investigation of the role of coulomb interactions on thermodynamic properties and defect structure of $Mi_{1-\delta}$ cubic oxides.—73-05438
Nature of point defects generated during diffusion of acceptor impurities in SiC.—73-09417
Nature of point defects generated in GaAs by pulsed laser radiation.—73-01255
New mechanism of inhomogeneous broadening in optical spectra of deep defects in dielectric glasses.—73-14234
Nonimpact generation of defects in quartz crystals.—73-06169
Optically detected magnetic resonance studies of low-temperature InP.—73-15076
Origins and elimination of oval defects in GaAs layers grown by molecular beam epitaxy.—73-01268
Paramagnetic defect analysis in uv-lamp-induced chemical vapor deposited a-$SiO_2$ films.—73-06170
Paramagnetic defect kinetics in yttria-stabilized zirconia.—73-03105
Paramagnetic nitrogen defects in silicon nitride.—73-06171
Paramagnetic point defects in $SnO_2$ and their reactivity with the surrounding gases—interaction of oxygen lattice centers with vapor-phase $H_2O_2$, air, inert and combustile gases, as revealed by EPR spectroscopy.—73-13360
Phase-transition-induced defect formation in III-V semiconductors.—73-15087
Point defect modeling of $La_2CuO_4$-based superconductors.—73-04786
Point defects in lithium triborate ($LiB_3O_5$) crystals.—73-03107
Postradiation defects in neutron-irradiated pyrolytic boron nitride.—73-13364
Quantitative study of the contribution of deep and shallow levels to the compensation mechanisms in annealed InP.—73-11409
Radiation- and thermally induced defects in $SrTiO_3$.—73-16583
Recognition of subsurface defects in machined ceramics by application of neural networks to laser scatter patterns.—73-15841
Recording penetrative defects in glass enamel coatings.—73-00263
Resonant energy band of radiation defects in *p*-type $Pb_{1-x}Sn_xTe$ ($x$=0.2) alloy irradiated with electrons.—73-03110
Role of defect interaction in boundary mobility and cation diffusivity of $CeO_2$.—73-17098
Role of structural defects and oxygen ion migration in the catalytic activity of $La_2O_3$.—73-13366
Servo-mechanical load frame for in situ, noninvasive, imaging of damage development.—73-15844
Silicon and nitrogen dangling bond point defects in PECVD silicon oxynitride thin layers.—73-06175
Spectroscopy of the simplest intrinsic defects in γ-irradiated NaF crystals.—73-03112
Statistical treatment of the sintering defect model and ceramic morphology development.—73-09341
Structural evidence of water-induced relaxation of the Frenkel defect in $Na^+$ ß-alumina.—73-06176

Structure defects in epitaxial InAs films.—73-01325
Structure of $Au^{2+}$ ion-irradiation-induced defects in high-$T_c$ superconductors.—73-04809
Submillimeter EPR evidence for the As antisite defect in GaAs.—73-15188
Subthreshold production of cation Frenkel defects in α-$Al_2O_3$.—73-03114
Synthesis and structural characterization of defect spinels in the lithium manganese oxide system.—73-07364
Temperature formation of structural defects in the interface of GaAs Schottky barrier.—73-11478
Thermally assisted shorts removal process for glass-ceramic product using an rf field.—73-11055
Transmission electron microscopy of defect cascades in $YBa_2Cu_3O_{7-\delta}$ produced by ion irradiation.—73-08262
Troubleshooting defects in porcelain enamel powder systems.—73-13905
Tunneling microscopy of point defects on GaAs(110).—73-11490
Unique tile glaze concept—free of pinholes.—73-07277
Vacancy-type defects in crystalline and amorphous $SiO_2$.—73-09428
Variable energy positron beam characterization of defects in as-grown and annealed low-temperature-grown GaAs.—73-15224
X-ray study of silicon distortion on deposition of diamondlike films.—73-05524

**deflocculation,**
Deflocculation behavior of clay suspensions with a high nonclay content.—73-02763
Deflocculation of concentrated aqueous clay suspensions with sodium polymethacrylates.—73-05729
Influence of deflocculants on the characteristics of alumina bodies obtained by slip casting.—73-05865

**deformation,**
Characterization by atomic force microscopy of nanometer-scale plastic damage in SiC single crystals after being sintered by hot isostatic pressing.—73-09547
Creep deformation of aluminum nitride at high temperature.—73-13500
Deformation and damage of ceramics by a sharp indenter.—73-06368
Deformation and toughness of α-silicon nitride single crystals.—73-06369
Deformation potentials of PbTe.—73-01120
Deformation, structure, and properties of ceramics and crystals of high-$T_c$ superconductors.—73-08015
Design of a hot tensile stage for an ultra-high-voltage electron microscope and its application to in situ deformation of sapphire at 1620 and 1720 K.—73-05036
Effect of liquid-forming additives on low-temperature superplastic deformation of alumina.—73-02583
Evidence of plastic deformation on slow crack growth of borate glass.—73-06410
Features of nonlinear deformation of concrete at high levels of compression.—73-13722
High-temperature plastic deformation and luminescence properties of GaAs.—73-16506
Inelastic deformation of strip glass in a molten metal.—73-07144
Influence of deformation on the strength of enamel coatings.—73-00241
Influence of the thermally induced plasticity and residual stresses on the deformation of SiC/Al composites.—73-03602
Large local deformations under high-temperature loading of LiF crystals.—73-16528
Lattice deformation by diffusive atomic displacement at melting temperature of elements.—73-17084
Model for interface reaction control in superplastic deformation of nonstoichiometric ceramics.—73-09652
Model for the complex deformation of sheet glass.—73-00666
Model of the process of complex deformation of sheet glass.—73-00667
Refractive and hydrotropic properties of $LiNbO_3$ crystal upon twisting.—73-02680
Role of grain boundaries in high-temperature deformation.—73-09666
Role of plastic deformation in the structure formation of ceramic materials.—73-03000
Role of the metallic phase in high-temperature deformation of titanium-carbide-based ceramics.—73-09667
Slip and twinning in sapphire (α-$Al_2O_3$).—73-05639
Structure of deformed polycrystalline zirconium carbide.—73-12704
Tensile deformation of nanostructured $TiO_2$ at low temperatures.—73-13601
Time-resolved optical spectroscopy of MgO crystals deformed by uniaxial compression.—73-16384
Volterra principle in calculating sheet glass deformation.—73-00580

**degassing,**
Compounds for semidry hot repair of the lining of the legs of a circulation vacuum degasser.—73-00790
Degassing behavior of glass specimens from various industrial glass-melting tanks.—73-00607
Degassing behavior of optical glasses.—73-10515

**degradation,**
Accelerated degradation mechanisms in amorphous silicon thin-film transistors.—73-04054
Characterization of the degradation processes in $SiO_2$-Si structure by means of electrolyte-insulating-semiconductor systems.—73-05025
Destructive processes in silicon carbide refractories in a high-temperature gas flow.—73-03997
Deterioration of concrete structures due to alkali-dolomite reaction [ADR] in China.—73-13701
Effects of grain size on the degradation phenomena of PZT ceramics.—73-01406
Impact ionization, degradation, and breakdown in $SiO_2$.—73-06161
Initial polymer degradation as a process in the manufacture of carbon-carbon composites.—73-09183
Parametric study of a ceramic-fiber/metal-matrix composite.—73-06836
Surface degradation and Vickers indentation hardness of glazed ceramic tiles.—73-07273
Transmission electron microscopy and high-resolution transmission electron microscopy studies of the early stages in the degradation of $YBa_2Cu_3O_{7-\delta}$ superconductor in water vapor.—73-01698

**dehydration,**
$Ca(H_2PO_4)_2{\cdot}H_2O$ dehydration under equilibrium conditions.—73-16039
Dehydration and rehydration of magadiite and kenyaite.—73-02229
Dehydration and rehydration of magadiite and kenyaite.—73-12764
Dehydration processes of gyrolite.—73-16104
Influence of temperature, particle size, and humidity on the gypsum dehydration process—investigations in a Cahn thermobalance.—73-10016
Kinetics of $Ca(H_2PO_4)_2{\cdot}H_2O$ thermal dissociation.—73-16191
Structural modifications induced by dehydration in the zeolite gismondine.—73-08752

**dehydroxylation,**
Dehydroxylation of vitreous silica.—73-13958

**demixing,**
Entrainment and demixing in subsonic argon/helium thermal plasma jets.—73-09119
Kinetic demixing profile calculation in oxide solid solutions under a chemical potential gradient.—73-02311

**densification,**
Anisotropic densification during sintering of glass powder compacts.—73-09018
Ceramic substrate for sputtered alloy film developed with required as-sintered density for use in construction of video heads.—73-12321
Combustion synthesis/densification of ceramics and ceramic composites.—73-05714
Densification behavior of high-purity $Al_2O_3$ and $Al_2O_3$-15 vol% $ZrO_2$.—73-02765
Densification of gel-derived celsian glass.—73-03830
Densification of plasma-deposited silicon nitride films by hydrogen dilution.—73-12971
Densification of silica gels by hydrothermal hot-pressing.—73-09059
Densification of superconducting $Ba_2YCu_4O_8$ ceramics by two-stage sintering.—73-15411
Densification process of pottery body for building construction: III, Influence of minor additives on the densification of pottery body.—73-00904
Densification process of pottery body for building construction: IV, Effect of particle size of feldspar on densification.—73-05734
Densification process of pottery body for building construction: IV, Effect of particle size of feldspar on densification.—73-14649
Dielectric properties and densification by HIP for low-loss microwave dielectrics.—73-04077
Economic process for rapid densification of ceramics, metals, and functionally gradient materials.—73-15718
Evaluation of the densification characteristics of nanocrystalline materials.—73-05795
Heat treatment of SiAlON ceramics densified with higher atomic number rare-earth and mixed yttrium/rare-earth oxides.—73-02849
Improved densification and mullitization by seeding of reaction-sintered mullite with a sol-gel-derived precursor.—73-16832
Low-temperature densification of silicon nitride nanoglasses.—73-16850
Microwave densification of porous silica gel.—73-05916
Pressureless densification of ceramic matrix composites: analytical model.—73-05990
Time dependence of AlN densification by plasma sintering.—73-06121
Time dependence of AlN densification by plasma sintering.—73-13325

**density,**
Density of low energy states in vitreous silica: specific heat and thermal conductivity down to 25 mK.—73-14151
Effects of impregnation on the manufacture of high-density carbon materials.—73-16752
Empirical density estimation of green body formed by uniaxial press.—73-13046
Equilibrium-state density profiles of centrifuged cakes.—73-05791
Intergranular link nature in $YBa_2Cu_3O_{7-x}$ ceramics and their dependence on sample density.—73-01580
Method of calibration test for measuring density by RI gage.—73-12165
Nature of glass transition and the excess low-energy density of vibrational states in glasses.—73-14048
Nondestructive measurement of localized density of sintered materials—especially grinding wheels.—73-01921
Origin of density gradients in sintered ß-silicon carbide parts.—73-16890
Use of a mathematical model in predicting the density of glass for controlling a tank furnace.—73-07187
Use of a model for predicting glass density for control of a glass furnace.—73-10613

**dental ceramics,**
$Al_2O_3$- and $ZrO_2$-modified dental glass-ceramics.—73-14316
Application of silica-sol investment to dental castable ceramics.—73-16657
Biomaterials for dental surgical implants.—73-15919
Bonding of porous machinable ceramic with castable glass-ceramic by the melt infiltration technique for dental applications.—73-12926
Ceramic bracket with coated base.—73-05197
Coated orthodontic archwire.—73-10307
Combination metallic ceramic orthodontic bracket.—73-05209
Dental ceramic material with a relatively low processing temperature.—73-12361
Dental material in powder form, process for its preparation and use.—73-03916
Dental refractory model materials.—73-12362
Dissolution of dental zinc phosphate cement in organic acid solutions.—73-16451
Glass orthodontic bracket.—73-03922
Glass-ceramic and artificial dental crown formed therefrom.—73-02040
Hardening material for medical and dental use.—73-02042
In vitro differentiation and mineralization in the presence of hydroxyapatite.—73-06231
Ivory-colored zirconia sintered body, process for its production and its use.—73-05220
Kinetics of isothermal phase transformations in a dental porcelain.—73-16192
Machining ceramic materials for dental restorations.—73-05903
Mechanical properties of the ceramic-metal bonding of a gold-platinum dental alloy and chemical characterization of the interface.—73-13869
Medical or dental hardening compositions.—73-10639
Nucleation and crystallization behavior of a glass-ceramic as a dental veneer in the $CaO$-$SiO_2$-$P_2O_5$ system.—73-14058
Orthodontic bracket formed from porcelain fused to metallic material.—73-03699
Phosphate-bonded dental cements.—73-15929
Silica investment prepared for dental purposes: effect of cristobalite content on mechanical properties.—73-17427

**depolarization,**
Depolarization of vibrational modes in $CdGa_2Se_4$ crystals.—73-01123

**deposition,**
Aluminum nitride deposition using an AlN/Al sputter cycle technique.—73-01043
Ceramic film synthesis with highly energetic ions: II, Chromium nitride.—73-12935
Characterization of electron cyclotron resonance plasmas optimized for the deposition of polycrystalline diamond films.—73-05703
Codeposition of α-alumina particles from acid copper sulfate bath.—73-07289
Cyclic deposition of diamond: experimental testing of model predictions.—73-12967
Dependences of titanium silicide properties on the ratio of silicon to titanium used for electron-beam coevaporation onto heated substrates.—73-05736
Deposition of polycrystalline diamonds in a dc plasma jet of $Ar/H_2/CH_4$.—73-09064
Deposition of transparent $ZrO_2$ on polyetherimide using a KrF excimer laser.—73-02769
Deposition rates in direct current diode sputtering.—73-05739
Diamond deposition with Ar-CO-$H_2$ plasma jet at reduced pressure.—73-02774
Effects of deposition mechanisms in the modeling of forced-flow/temperature-gradient chemical vapor infiltration [FCVI].—73-05778
Electrochemical deposition of calcium-deficient apatite on stainless steel substrate.—73-06778
Electrochemical deposition of calcium-deficient apatite on stainless steel substrate.—73-13831
Electron cyclotron resonance microwave discharge for oxide deposition using tetramethylcyclotetrasiloxane.—73-02812
Energetic carbon deposition at oblique angles.—73-13047
Filament-assisted pulsed laser deposition of epitaxial $PbZr_xTi_{1-x}O_3$ films: morphological and electrical characterization.—73-11579
Fluorspar.—73-12272
Formation of atomic beams and dynamics of in situ superconducting film growth by pulsed laser deposition.—73-11769
Forming of alumina powder by electrophoretic deposition.—73-02835
GaAs deposition on the (100) and (110) planes of gold by electrochemical atomic layer epitaxy: a low-energy electron diffraction, Auger electron spectroscopy, and scanning tunneling microscopy study.—73-07542
Gas-phase kinetics during microwave plasma-assisted diamond deposition: is the hydrocarbon product distribution dictated by neutral-neutral interactions.—73-13070
High rate electrophoresis process for ceramic-coated fibers.—73-12081
Jet vapor deposition of nanostructure composite materials.—73-05883
Kinetics and mechanism of silicon dioxide deposition through thermal pyrolysis of tetraethoxysilane.—73-09188
Large-area deposition of superconducting $YBa_2Cu_3O_x$ films by plasma flash evaporation.—73-08121
Laser chemical deposition of aluminum oxide from the gas phase of beta-diketonate complexes.—73-16849
Laser deposition of Y-Ba-Cu-O on $ZrO_2$-coated sapphire substrates.—73-04754
Limitations on AES quantitative analyses of plasma-deposited ceramics.—73-08408
Method and apparatus for direct arc plasma deposition of ceramic coatings.—73-12480
Method for deposition of hexagonal diamond using hydrogen plasma jet.—73-01864
Method for treating diamonds to produce bondable diamonds for depositing [the] same on a substrate.—73-12491

Method of forming shaped superconductor materials by electrophoretic deposition of superconductor particulate coated with fusible binder.—73-01716
Novel deposition technique for switchable vanadium sesquioxide ($V_2O_3$) thin films.—73-02910
Optical absorption spectroscopic diagnostics during sputter deposition of Y-Ba-Cu oxide.—73-11849
Plasma sputter deposition systems: plasma generation, basic physics, and characterization.—73-04940
Plasma-assisted deposition process for producing a thin layer on a substrate.—73-12091
Prevention of alumina deposition in submerged nozzles.—73-00840
Process for depositing a different thin film on an oxide superconductor.—73-01729
Process for depositing aluminum nitride (AlN) using nitrogen plasma sputtering.—73-04228
Proposition of a novel reactive sputter deposition system for synthesizing multicomponent materials.—73-04945
Pulsed excimer laser deposition of ferroelectric thin films.—73-11607
Pulsed laser deposition (PLD) of oriented bismuth titanate films for integrated electronic applications.—73-11608
Pulsed laser deposition of heteroepitaxial thin Pt films on MgO(100).—73-03637
Pulsed laser deposition of SiC films on fused silica and sapphire substrates.—73-07749
Reactive pulsed laser deposition of thin TiN films.—73-02992
Sandwich-geometry $YBa_2Cu_3O_{7-\delta}$/Au/Nb SNS [superconductor/normal-conductor/superconductor] devices.—73-08192
$SiF_4$-$N_2$-$H_2$ plasmas for the deposition of fluorinated silicon nitride films.—73-06041
Silicon nitride deposited at very low silane pressures using electron cyclotron resonance plasmas.—73-06044
$SiO_2$ deposition as a byproduct of $SF_6$ plasma in an electron cyclotron resonance reactor.—73-13270
Technology and application of filamentless rf ion sources in ion beam sputter deposition.—73-04950
Temperature fluctuations during the deposition of InSb films.—73-09372
Transport of sputtered species in plasma sputter deposition systems.—73-06127

**deposits,**
Andalusite—the Hillsborough deposit.—73-08490
Gypsum.—73-12279

**design,**
Advances in the design of toughened ceramics.—73-03234
Application of a quantitative polyhedral analysis to the design of ceramic oxides.—73-12537
Application of the Taguchi method of experimental design to improving ceramic processing.—73-04900
Bulk bag: filling and discharging—latest developments.—73-08323
CAD procedures for design.—73-00006
CADCAM at Wedgwood.—73-03421
Calculation on design of small shaft kiln for firing bricks.—73-08463
Combinatorial optimization approach to molecular design.—73-05711
Computational fluid dynamics assist lehr design.—73-10511
Computer-aided design and manufacture (CAD/CAM) in plunger manufacture.—73-12019
Concept of optimum designing of concretes.—73-13696
Criteria for evaluation of silo design codes.—73-12020
Criteria for the optimization of screw feed conveyors.—73-01771
Design methodology for manufacturing glass cathode ray tubes.—73-03831
Design of hybrid films composed of inorganic and organic materials with desired properties.—73-14831
Design of positive-pressure moisture exclusion dryers using once setting and firing processes.—73-12213
Design, construction, and first experiences with a production line of plasterboards.—73-00056
Designing an extruder with allowance for the properties of ceramic extrusion compounds: Va.—73-12126
Designing ceramic components for structural applications.—73-12322
Designing for manufacturing—an update.—73-04909
Designing with Speckle-Stains.—73-06614
Developing methods and a technology for strengthening glass-ceramics for design purposes.—73-00610
Development of a ceramic exterior for thermos coffeepots.—73-10814
Doghouse.—73-08469
Evaluation of a multichip module (MCM) thermal design tool—a three-chip MCM thermal mock-up as a case study.—73-04097
EVOP [evolutionary operation process] design for process optimization.—73-13834
Examples of up-to-date silo design.—73-01780
Experimental design for improved ceramic processing, emphasizing the Taguchi method.—73-04920
Furnace bottom design considerations.—73-07214
Furnace design for melting spectacle glasses.—73-01953
Furnace design in hours with combustion simulation.—73-15875
Lehr stackers: taken seriously at last.—73-10560
Machining ceramic materials for dental restorations.—73-05903
New trends of intermetallics development—summary report of the symposium held in Sendai, Japan.—73-10257
Novel ceramic design techniques, craft, and computers.—73-03424
Optimizing the design of kiln furniture arrangements.—73-01964
Principles of processing for technical ceramics: II.—73-12056
Probabilistic methods for ceramic component design and implications for standards.—73-17417
Split reflections from broken mirrors: symmetry breaking in the making of material microstructures.—73-06283
Theoretical approach of optimum design for a plate of functionally gradient materials [FGM's] under thermal loading.—73-03652
Waste glass design based on property composition functions.—73-08315

**desorption,**
Temperature-programmed desorption [TPD] as a surface characterization method of ceramic powders.—73-08448

**desulfurization,**
Fossil plant $SO_2$ control: FGD [flue gas desulfurization] materials guidelines and software.—73-09716
Modified ZnO absorbents for low-temperature gas desulfurization.—73-08518

**detectors,**
Bias-switched dual-band HgCdTe infrared photodetector.—73-07391
Effect of dislocations on the electrical and optical properties of long-wavelength infrared HgCdTe photovoltaic detectors.—73-07462
High-speed photodetector applications of GaAs and $In_xGa_{1-x}As$/GaAs grown by low-temperature molecular beam epitaxy.—73-14964
Jet vapor deposition of lead zirconate titanate (PZT) for thin-film pyroelectric detectors.—73-04557
Operating characteristics of SAW gas detectors.—73-04423
Optimization of superconducting tunnel-junction-based X-ray detectors.—73-11852
Picosecond $YBa_2Cu_3O_{7-\delta}$ detector for far-infrared radiation.—73-11864
SiC uv photodetectors.—73-04480
Ultrafast semiinsulating InP:Fe-InGaAs:Fe-InP:Fe MSM photodetectors: modeling and performance.—73-01360

**detergent,**
Effect of current laundry detergents on porcelain enamel surfaces.—73-13826

**deuterium,**
Calorimetric study of the deuteration effect on the phase behavior in $Rb_3H(SeO_4)_2$ and $Rb_3D(SeO_4)_2$: II, Heat capacities at very low temperatures.—73-16042
Cold nuclear fusion induced in $KD_2PO_4$ single crystals by a ferroelectric phase transition.—73-15699
Crystal structure of $TiFe_{1.16}V_{0.84}D_{1.9}$.—73-12564
Decomposition of monohydride and eutectoid transformation in Ti-H (D) system.—73-13656
Generation of neutrons in high-temperature superconducting $YBa_2Cu_3O_{7-\delta}D$ stimulated by a superconducting phase transition.—73-15490
HD and $D_2$ layers physiosorbed on MgO studied by NMR.—73-09459
Low-temperature magnetoelastic properties of dilute Jahn-Teller $D_xY_{1-x}VO_4$ crystals.—73-08904
Neutronographic investigation of the deuteride $Tb_3Ni_6Al_2D_{6.5}$.—73-12637
Possibility of "cold nuclear synthesis" in the deuterated ceramic $YBa_2Cu_3O_{7-x}$ in the superconducting state.—73-01634
X-ray study of the ordering behavior in the low-temperature phase of $Cs_3D(SeO_4)_2$.—73-08795

**device,**
Device application of diamonds.—73-12422
Dry-process, through-wafer via holes for GaAs power devices.—73-11149
Fabrication of lateral resonant tunneling devices.—73-14909
Method of driving piezoelectric bimorph device and piezoelectric bimorph device.—73-01443
Via hole process for GaAs monolithic microwave-integrated circuit using two-step dry etching.—73-11506

**devitrification,**
Alumina as a devitrification inhibitor during sintering of borosilicate glass powders—correction.—73-00588
Devitrification of $Li_2O$-$5GeO_2$ glass.—73-00323
Devitrification of the grain boundary glassy phase in a high-alumina ceramic substrate.—73-17122
Devitrifying cupola slag for use in abrasive products.—73-09766
Factors affecting the rate of devitrification of fused silica powder.—73-02829
Partial devitrification of sintered silicon nitride during static fatigue testing.—73-06268
Surface-induced devitrification of glasses: the influence of elastic strains.—73-07180

**diagrams,**
Screening diagram for nondestructive inspection.—73-06516

**diamagnetism,**
Diamagnetic susceptibility and magnetic flux creep in $YBa_2Cu_3O_x$.—73-08019
Field enhancement of the diamagnetic onset temperature in a $YBa_2Cu_3O_{0.645}$.—73-04724

**diamonds,**
*K*-edge absorption analysis of hydrogenated diamondlike carbon films [a-C:H].—73-02310
Abrasion protective and thermal dissipative coating for jet engine components leading edges.—73-10299
Adsorption of H, $CH_3$, $CH_2$, and $C_2H_2$ on 2×1 restructured diamond (100)—theoretical study of structures, bonding, and migration.—73-02142
Annealing study of nickel point defects in high-pressure synthetic diamond.—73-03076
Apparatus for vapor-phase synthesis of diamond and method for vapor-phase synthesis of diamond.—73-05284
Article comprising regions of high-thermal-conductivity diamond on substrates.—73-05285
Attempt to grow diamond phase carbon films from an organic solution.—73-09021
Behavior of the synthetic diamond in the propagating wave of self-propagating high-temperature synthesis.—73-16659
Bioapplications of diamondlike carbon [DLC] coatings.—73-13800
Bonded wafer process incorporating diamond insulator.—73-04509
Bonding diamond to metal in electronic circuits.—73-13801
Calculations for defects formed on diamond surfaces.—73-06140
Carbon diffusion in uncoated and titanium nitride coated iron substrates during microwave plasma-assisted chemical vapor deposition of diamond.—73-12928
Ceramic Cutting Tools: Materials, Development, and Performance.—73-17516
Ceramic grinding with self-sharpening diamond wheels.—73-05699
Characteristics and origin of the 1.681-eV luminescence center in chemical vapor deposited diamond films.—73-02556
Characterization of electron cyclotron resonance plasmas optimized for the deposition of polycrystalline diamond films.—73-05703
Characterization of ion-beam-induced surface modification of diamond films by real-time spectroscopic ellipsometry.—73-02743
Characterization of magnetron-sputtered diamondlike thin films for optical coatings in ir.—73-13375
Chemistry of hydrogen on diamond(100).—73-05369
CNDO [complete neglect of differential overlap] parameterized cluster model calculations of transition metals in diamond.—73-06144
Coated orthodontic archwire.—73-10307
Comparison of techniques for producing diamondlike carbon coatings.—73-12952
Comparison of three techniques for depositing DLC [diamondlike carbon] films at temperatures between 25° and 100°C.—73-16680
Complementary semiconductor device using diamond thin film and the method of manufacturing this device.—73-11513
Complex carbides in synthetic diamond crystals produced at *≈5.5 GPa.—73-08579*
Composite diamond grain and method for production thereof.—73-05295
Conversion of fullerenes to diamond.—73-15985
Current research problems and opportunities in the vapor phase synthesis of diamond and cubic boron nitride.—73-02759
Cutting insert for a rotary cutting tool.—73-02092
CVD diamond by alternating chemical reactions.—73-12459
CVD diamond for coating twist drills.—73-05296
CVD diamond or diamondlike carbon for chemical-mechanical polish etch stop.—73-02093
Cyclic deposition of diamond: experimental testing of model predictions.—73-12967
Defects in chemical-vapor-deposited diamond films [studied] by cross-sectional cathodoluminescence.—73-13386
Deformation behavior of shock-synthesized diamond powder under high pressures and high temperatures.—73-09058
Deposition of diamond/TiN composite film on tool steel substrate.—73-03572
Deposition of polycrystalline diamonds in a dc plasma jet of $Ar/H_2/CH_4$.—73-09064
Deposition, characterization, and device development in diamond, silicon carbide, and gallium nitride thin films.—73-05740
Development of a power electronics multichip module on synthetic diamond substrates.—73-04072
Device application of diamonds.—73-12422
Diamond and diamondlike films.—73-12423
Diamond and diamondlike layers.—73-12982
Diamond and its preparation by chemical vapor deposition method.—73-05297
Diamond and silicon carbide heterojunction bipolar transistor.—73-11517
Diamond chemical vapor deposition (CVD) via microwave-excited plasma from water-ethanol solutions.—73-05741
Diamond crystal growth apparatus.—73-04971
Diamond deposition using an *X-Y* stage in a dc plasma jet chemical vapor deposition.—73-02773
Diamond deposition with Ar-CO-$H_2$ plasma jet at reduced pressure.—73-02774
Diamond field effect transistor with a particular boron distribution profile.—73-04512
Diamond film cutting tool.—73-15989
Diamond film semiconductors.—73-11137
Diamond film synthesis by MWCVD and its application to cutting tools.—73-16708
Diamond formation from the SiC-Co system under high pressure and high temperature.—73-02236
Diamond grinding of silicon nitride ceramic.—73-05742
Diamond grown on single-crystal beryllium oxide.—73-03129
Diamond growth in subatmospheric dc plasma-gun reactors.—73-12983
Diamond growth in turbulent oxygen-acetylene flames.—73-12984
Diamond growth on turbostratic carbon by hot filament chemical vapor deposition.—73-12985
Diamond heterojunction diode.—73-11518
Diamond materials with enhanced heat conductivity.—73-12462
Diamond rectifying contact with undoped diamond layer.—73-11519
Diamond Schottky-gate-type field effect transistor.—73-11520
Diamond semiconductor device having a non-doped diamond layer formed between a BN substrate and an active diamond layer.—73-11521
Diamond synthesis by acetylene flame.—73-12986
Diamond synthesis by sputtering.—73-16709
Diamond synthesis via a low-pressure solid-state source process.—73-09069

Diamond thin films synthesized by a multinozzle oxyacetylene chemical vapor deposition method.—73-16710
Diamond thin-film growth by microwave plasma chemical vapor deposition and investigation by scanning tunneling/force microscopy and scanning electron microscopy.—73-09070
Diamond tools for rock drilling, metal cutting, and wear part applications.—73-05298
Diamond, industrial.—73-12267
Diamond-coated body.—73-16711
Diamond-coated hard material, throwaway insert, and a process for the production thereof.—73-15990
Diamond-coated products.—73-05299
Diamond-membrane-based X-ray masks.—73-16712
Diamondlike amorphous carbon films prepared by rf sputtering in argon.—73-09071
Diamondlike amorphous carbon films prepared by rf sputtering in argon: electron-assisted investigations.—73-12987
Diamondlike carbon {DLC] coatings on Ti-6Al-4V.—73-06769
Diamondlike carbon thin film protected hologram and method of making [the] same.—73-12463
Difficulties in estimating the rheological properties of diamondlike films by means of nanoindentation tests.—73-08395
Direct conversion of graphite into hexagonal diamond under high pressure.—73-16714
Direct observation of atomic images of ultrathin diamond and diamondlike films.—73-03130
Distribution and morphology of diamond deposited on wire substrate by microwave plasma CVD.—73-13821
Early stages of growth of crystalline, diamondlike films on Si(100) by pulsed laser evaporation of graphite.—73-02778
Effect of atomic hydrogen and oxygen on diamond growth.—73-03134
Effect of boron doping on the surfaces of diamond thin films.—73-05754
Effect of grain size on wire electrical discharge machining of polycrystalline diamond {PCD}.—73-05759
Effect of graphite carbon films on diamond nucleation by microwave-plasma-enhanced chemical vapor deposition.—73-09079
Effect of oxygen on filament activity in diamond chemical vapor deposition.—73-02789
Effect of pretreatment in a fluidized bed upon diamond synthesis of particles by chemical vapor deposition.—73-09089
Effect of radio frequency substrate biasing in the deposition of diamondlike carbon films in an electron cyclotron resonance discharge.—73-02794
Effect of reaction pressure on the nucleation behavior of diamond synthesized by hot-filament chemical vapor deposition.—73-16739
Effect of the chemical nature of transition metal substrates on chemical vapor deposition of diamond.—73-06777
Effects of nitrogen trifluoride on the growth and properties of plasma-enhanced chemical vapor deposited diamondlike carbon [DLC] films.—73-05781
Electrical characterization of semiconducting diamond thin films and single crystals.—73-04303
Electrical conductivity and photoluminescence of diamond films grown by downstream microwave plasma CVD.—73-16475
Electrical conductivity of diamond up to 1200°C.—73-07314
Electrical properties of boron-doped polycrystalline diamond films.—73-12789
Electrical properties of boron-implanted homoepitaxial diamond films.—73-16478
Electrical resistivity of diamond films grown by thermal plasma CVD.—73-02604
Electrochemical activity of boron-doped polycrystalline diamond thin-film electrodes.—73-04090
Electrochemical dressing of bronze-bonded diamond grinding wheels.—73-04915
Electrochemical patterning of amorphous carbon on diamond.—73-09111
Electron drift mobility in DLC [diamondlike carbon] thin films.—73-12794
Electron-beam penetration and free-carrier generation in diamond films.—73-08861
Energetic carbon deposition at oblique angles.—73-13047
Erosion resistance of diamond coatings.—73-06783
Evaluation of ohmic contacts formed by $B^+$ implantation and Ti-Au metallization on diamond.—73-06786
Fabrication of amorphous diamond films.—73-13054
Fatigue test on polycrystalline diamond compacts.—73-09596
Field emission electron source employing a diamond coating.—73-04514
Fine-grained coating of vapor-grown diamond on metallic wire substrate.—73-13837
Formation of highly uniform and dense diamond microcrystal thin films using a combustion flame surrounded by an inert gas flow.—73-09139
Formation of semiconductor diamond.—73-15236
Formation processes of materials at high pressure.—73-16796
Free-standing diamond sheet and method and apparatus for making [the] same.—73-05301
Friction and wear of plasma-deposited diamond films.—73-13542
Gas-phase chemistry in a direct current plasma jet diamond reactor.—73-13069
Gas-phase kinetics during microwave plasma-assisted diamond deposition: is the hydrocarbon product distribution dictated by neutral-neutral interactions.—73-13070
Graphite as a substrate for diamond growth.—73-13076
Growth and morphological changes of chemically vapor deposited diamond in the presence of argon.—73-16806
Growth of diamond films by high rate thermal plasma CVD.—73-02845
Handbook of Carbon, Graphite, Diamond, and Fullerenes: Properties, Processing, and Applications.—73-06603
Hardness and elastic modulus of diamond and diamondlike carbon [DLC] films.—73-05575
Helix-type traveling wave tube structure with supporting rods covered with boron nitride or artificial diamond.—73-05302
Helix-type traveling wave tube structure with supporting rods covered with boron nitride or artificial diamond.—73-10316
High-pressure/high-temperature piston-cylinder apparatus.—73-00282
High-thermal-conductivity diamond-coated fiber articles.—73-12473
High-thermal-conductivity diamond/non-diamond composite materials.—73-05303
High-thermal-conductivity diamond/nondiamond composite materials.—73-12474
Homoepitaxial growth of diamond by an advanced hot-filament chemical vapor deposition method.—73-09162
Hydrogen atom recombination on tungsten and diamond in hot-filament-assisted deposition of diamond.—73-13090
Improvement in the thermal oxidation resistance of chemical-vapor-deposited diamond films.—73-09528
Industrial diamond coating and method of manufacturing the same.—73-05304
Industrial diamonds, diamond and cBN products, diamond and diamondlike films—emerging applications and markets.—73-09721
Interaction of hydrogen and water with diamond (100): infrared spectroscopy.—73-09468
Interface characterization of chemically vapor deposited diamond on titanium and Ti-6Al-4V.—73-10240
Interface structure between diamond film and silicon substrate.—73-13407
Internal stress analysis in diamond films formed by dc plasma chemical vapor deposition.—73-13409
Ion beam fabrication of diamond probes for a scanning tunneling microscope.—73-05881
Ion channeling in textured polycrystalline diamond films.—73-09472
Laminated diamond substrate.—73-02100
Laser chemical vapor deposition of fluorinated diamond thin films for solid lubrication.—73-08534
Laser reflective interferometry for in situ monitoring of diamond film growth by chemical vapor deposition.—73-01909
Laser-enhanced synthesis and processing of diamond films from liquid hydrocarbons.—73-02885
Linear thermal expansion coefficient and biaxial elastic modulus of diamondlike carbon [DLC] films.—73-08900
Low-energy ion doping of growing diamond by CVD.—73-02102
Low-pressure diamond synthesis for electronic applications.—73-07335
Mechanical properties of hydrogenated hard carbon films.—73-09639
Metal/intrinsic diamond/semiconducting diamond junction diodes fabricated from polycrystalline diamond films.—73-01245
Metallization of diamond substrates for multichip module applications.—73-04137
Method and apparatus for in situ measuring filament temperature and the thickness of a diamond film.—73-01941
Method and apparatus for producing diamond thin films.—73-05307
Method for brazing tungsten carbide particles and diamond crystals to a substrate and products made therefrom.—73-05308
Method for consolidating diamond particles to form high-thermal-conductivity article.—73-05309
Method for deposition of hexagonal diamond using hydrogen plasma jet.—73-01864
Method for fabricating diamond films on nondiamond substrates and related structures.—73-12481
Method for forming diamond films by plasma jet CVD.—73-05311
Method for growing a diamond thin film on a substrate by plasma-enhanced chemical vapor deposition.—73-02109
Method for heteroepitaxial diamond film development.—73-02111
Method for manufacturing a diamond thrust bearing.—73-05312
Method for producing CVD diamond film substantially free of thermal-stress-induced cracks.—73-12487
Method for producing diamond films.—73-12488
Method for producing flat CVD diamond film.—73-05314
Method for treating diamonds to produce bondable diamonds for depositing [the] same on a substrate.—73-12491
Method of doping single-crystal diamond for electronic devices.—73-11530
Method of forming electronic devices utilizing diamond.—73-04522
Method of manufacturing a diamond heat sink.—73-12495
Method of producing a composite diamond abrasive compact.—73-00002
Method of synthesizing diamond.—73-05318
Method of synthesizing single diamond crystals of high thermal conductivity.—73-16006
Methods for coating adherent diamond films on cemented tungsten carbide substrates.—73-02118
Microhardness and Young's modulus of diamond and diamondlike carbon films.—73-13572
Micropatterned diamond substrates.—73-13416
Microphotoluminescence and Raman scattering study of defect formation in diamond films.—73-03102
Microstructure of sintered polycrystalline diamond/cemented tungsten carbide doped with Si-Ti-B.—73-06260
Microstructures of diamond films deposited on (100)silicon wafer by microwave plasma-enhanced chemical vapor deposition.—73-06261
Microwave diamond synthesis with high-oxygen hydrocarbons—(carbon dioxide, oxygen).—73-16868
Microwave plasma CVD method for coating a substrate with high-thermal-conductivity diamond material.—73-05319
Model of diamond growth in low-pressure premixed flames.—73-13140
Monte Carlo simulation for dissociation of hydrogen during electron-assisted chemical vapor deposition of diamond.—73-13142
Morphology of diamond in radio-frequency thermal plasma CVD.—73-03179
Multilayer metal-coated diamond abrasives for sintered metal-bonded tools.—73-03697
Multilayer metal-coated diamond abrasives with an electrolessly deposited metal layer.—73-00003
Nanoscale processing with a scanning tunneling microscope (STM) under atmospheric or reduced pressure.—73-16877
New nickel-related optical absorption in high-pressure synthetic diamond.—73-08925
New technique for material synthesis by utilizing shock wave interaction and its application to the synthesis of B-C-N system.—73-16879
New tough, exceptionally wear-resistant, diamond-based composite for cutting tools.—73-15967
New type of artificial diamonds and the physical-chemical fundamentals of their creation.—73-12437
Novel phases in shock-compacted mixtures of diamond and boron nitride.—73-16234
Nucleation and growth of diamond films on Ni-cemented tungsten carbide: effects of substrate pretreatments.—73-16885
Nucleation and growth of diamond in detonation products.—73-09225
Nucleation and growth of diamond on Si, Cu, and Au substrates.—73-03180
Nucleation control of diamond films by microlithographic patterning.—73-02119
Nucleation of diamond during hot-filament chemical vapor deposition.—73-02911
Nucleation of diamond on silicon, SiAlON, and graphite substrates coated with an a-C:H layer.—73-02912
Nucleation of diamond particles by hot filament chemical vapor deposition.—73-16886
On-machine electrodischarge truing for metal bond diamond grinding wheels for ceramics.—73-04937
Particle- and photoinduced conductivity in type-IIa diamonds.—73-08944
Performance of metal-bonded single-layer diamond abrasive tool.—73-03632
Photoemission study of diamond (100) surface.—73-08700
Plasma arc apparatus for producing diamond semiconductor devices.—73-04530
Plasma diagnostics of a dc arcjet chemical vapor deposition diamond reactor.—73-12860
Plasma-assisted chemical vapor deposition of diamond by hollow cathode arc discharge.—73-13166
Polarization-induced transformation of ionization potentials of 3*d* ions into their impurity levels in diamond-type semiconductors.—73-15106
Postetching of diamond thin films in a hydrogen-oxygen atmosphere.—73-05952
Potential role of atomic carbon in diamond deposition.—73-13170
Precision form truing and dressing for aspheric ceramic mirror grinding.—73-04942
Preparation and characterization of polycrystalline diamond films and epitaxial diamond films.—73-05958
Preparation of diamond and diamondlike thin films.—73-05325
Preparation of diamondlike carbon films by ECR plasma CVD with an additional negative bias.—73-16922
Preparation of textured diamond films on Si substrates by hot-filament chemical vapor deposition.—73-09270
Pressure transducer utilizing diamond piezoresistive sensors and silicon carbide force collector.—73-11639
Process for making metallized vias in diamonds substrates.—73-14759
Process for the selective deposition of thin diamond film by gas phase synthesis.—73-12511
Properties and Growth of Diamond.—73-17536
Properties of diamond film by chemical vapor deposition.—73-09284
Protective film on sliding members and method of forming [the] same.—73-10344
Radiative heat transfer in hot-filament chemical vapor deposition diamond reactors.—73-13224
Raman scattering in diamond film prepared by hot-filament chemical vapor deposition.—73-12668
Rapid synthesis of diamond film by dc plasma CVD.—73-06009
Reactive deposition of diamond and Si carbide films by hydrogen plasma etching of graphite and Si in the rf plasma jet.—73-02991
Reactive-flow simulation of the hot-filament chemical vapor deposition of diamond.—73-13234
Recent progress and application of synthesized diamond (present status and future of vapor phase deposition of diamond).—73-02086
Rectifying contact formation with indium on polycrystalline *p*-type hot-filament chemical-vapor-deposited diamond utilizing molecular ion implantation.—73-07355
Relation between the dislocations in chemically vapor-deposited diamond and the linewidth of the Raman spectrum.—73-05473

Residual stresses in polycrystalline diamond compacts.—73-13584
Rf plasma-assisted chemical vapor deposition of diamondlike carbon: physical and mechanical properties.—73-17422
Role of hydrogen and oxygen in diamond synthesis using carbon dioxide–methane gas mixtures.—73-13240
Role of oxygen in the electron cyclotron resonance plasma-assisted chemical vapor deposition of diamond films.—73-09309
Scaling laws for diamond chemical vapor deposition: I, Diamond surface chemistry.—73-13244
Scaling laws for diamond chemical vapor deposition: II, Atomic hydrogen transport.—73-13245
Schottky barrier height and negative electron affinity of titanium on (111)diamond.—73-07787
Selective area deposition of diamond on 4 in Si wafers.—73-13248
Selective growth and characterization of doped polycrystalline diamond thin films.—73-09313
Selective growth of diamond using an iron catalyst.—73-13249
Semiconductor device having differently doped diamond layers.—73-04533
Sequential deposition of diamond from sputtered carbon and atomic hydrogen.—73-13250
Single crystal diamond wafer fabrication.—73-11547
Structural distortions in diamond from coherent anti-Stokes Raman spectroscopy data.—73-16322
Substantially transparent free-standing diamond films.—73-05345
Superabrasives for grinding alloys.—73-03416
Surface acoustic wave device.—73-11548
Surface charge screening and Fermi level pinning on a synthetic, boron-doped diamond.—73-07823
Surface reaction kinetics of gas-phase diamond growth.—73-03031
Surface topographical variation of single-crystalline diamond grown in Co-$H_2$ plasma.—73-03203
Synthesis and study of diamond-oxide systems on the basis of ultradispersed diamonds.—73-16353
Synthesis of diamondlike carbon (a-C:H) films by hybrid plasma CVD—effects of ion beam injection energy on film deposition.—73-03046
Synthesis of diamondlike carbon (a-C:H) films by hybrid plasma CVD—effects of ion-beam injection energy on film deposition.—73-13303
Synthetic Diamond: Emerging CVD Science and Technology (Electrochemical Society Series).—73-17538
Temperature control and measurement for diamond single crystal in ultrahigh vacuum.—73-17053
Temperature dependence of species concentration near the substrate during diamond chemical vapor deposition.—73-09371
Temperature dependence of the Young's modulus [YM] of diamond thin film prepared by plasma chemical vapor deposition.—73-03360
Temperature-dependent mobility in single-crystal and chemical-vapor-deposited diamond.—73-03115
Thermal conductivity of a particulate-diamond-reinforced cordierite matrix composite.—73-12890
Thermal expansion of chemical vapor deposition grown diamond films.—73-16628
Thermal oxidation characteristics of chemical vapor deposited diamond films.—73-03232
Thermal reaction of Ta thin films with polycrystalline diamond.—73-10285
Thermally stable dense electrically conductive diamond compacts.—73-04237
Thermostability of diamondlike carbon films.—73-16640
Thin-film diamond derby.—73-03657
Thinning a diamond body by means of molten rare-earth-containing alloys.—73-16021
Time-dependent evolution of the structure and chemical bonds in diamondlike carbon films generated by the hot filament chemical vapor deposition method.—73-16383
Tool flank wear in single-point diamond turning.—73-06539
Tribological properties of polished diamond films.—73-09688
Tribology of amorphous diamond films grown or modified by ion implantation.—73-03661
Use of an ultrasonic resonance technique to measure the in-plane Young's modulus of thin diamond films deposited by a dc plasma jet.—73-01935
Use of diamond substrates for implementing 3-D MCM's [multichip modules].—73-04182
Versatile, cost-effective, strongly adherent, highly stable, wear-resistant coatings.—73-15975
Vertical diamond field effect transistor.—73-11550
Wear characteristics and cutting performance of diamond coated ceramic tools.—73-03376
Wear mechanisms of ultrahard, nonmetallic cutting materials.—73-06551
X-ray absorption study of diamond films grown by chemical vapor deposition.—73-02540
X-ray study of silicon distortion on deposition of diamondlike films.—73-05524

**diaphragm,**
New generation of diaphragms in tube mills for cement grinding.—73-12049

**diaspore,**
Textural changes of materials containing diaspore through firing.—73-00878

**diatomite,**
Adsorption properties of local diatomites.—73-12253
Diatomite.—73-12268

**dielectric materials/dielectrics,**
Advances in dielectric ceramics.—73-14678
BaO-x-$TiO_2$ dielectric ceramic composition.—73-04188
Ceramic capacitors, actual situation, and tendencies.—73-00936
Ceramic composition.—73-11003
Ceramic materials of improved dielectric constants, and capacitors fabricated therefrom.—73-11004
Ceramic Transactions, Volume 32: Dielectric Ceramics: Processing, Properties, and Applications.—73-09762
Charges on moving cracks in nonpolar dielectrics.—73-14683
Cog dielectric with high K.—73-01047
Composite dielectric for a semiconductor device and method of fabrication.—73-04193
Composition for making multilayer ceramic substrates and dielectric materials with low firing temperature.—73-01048
Crystal growth inhibitor for glassy low-dielectric inorganic composition.—73-04196
Dense-sintered and porous glass-ceramic dielectrics.—73-07294
Dielectric ceramic body including $TiO_2$ dispersion in crystallized cordierite matrix phase, method of producing the same, and circuit board using the same.—73-04199
Dielectric ceramic composition and multilayer microwave device employing the same.—73-04200
Dielectric ceramic composition containing ZnO-$B_2O_3$-$SiO_2$ glass, method of preparing the same, and resonator and filter using the dielectric ceramic composition.—73-11010
Dielectric ceramic composition containing ZnO-$B_2O_3$-$SiO_2$ glass.—73-04201
Dielectric ceramic composition for high-frequency use and dielectric material.—73-04202
Dielectric ceramic composition used for producing dielectric resonator or filter for microwave application.—73-11011
Dielectric ceramic composition.—73-04203
Dielectric ceramic composition.—73-11012
Dielectric ceramic compositions and microwave devices using the same.—73-04204
Dielectric ceramic compositions.—73-04205
Dielectric ceramic compositions.—73-04206
Dielectric ceramics.—73-01049
Dielectric properties and densification by HIP for low-loss microwave dielectrics.—73-04077
Dielectric resonator or filter for microwave application, and method of producing the dielectric resonator of filter.—73-14745
Dielectric resonators for quasi-microwave filters.—73-07300
Dielectric/semiconductor interfaces.—73-10932
Distribution of electric resistance of dielectric semiconductive ceramics.—73-01130
Effects of chlorine-based gettering on the electrical properties of rapid thermal oxidation/nitridation dielectric films.—73-07309
Electroceramics and process for making the same.—73-14748
Far-infrared reflection spectra of dielectric ceramics for microwave applications.—73-04101
Formation of device-quality metal-insulator-semiconductor structures with oxide-nitride-oxide [ONO] dielectrics by low-temperature plasma-assisted processing, combined with high-temperature rapid thermal annealing.—73-04104
High-dielectric ceramic composition.—73-04210
High-temperature dielectric property measurements of engineering ceramics.—73-05052
High-temperature superconductor support structures for dielectric resonator.—73-15679
High-voltage ceramic dielectric material of $(100-x)(Sr_{1-y-z}Mg_yPb_z)$-$TiO_3$-x$Bi_2O_3$-3$TiO_2$ system.—73-07328
Inner mechanical stresses and electrical breakdown of crystalline dielectrics.—73-14710
Low-dielectric inorganic composition for multilayer ceramic package.—73-04214
Low-dielectric, low-temperature-fired glass-ceramics.—73-04215
Low-dielectric-constant interlayer insulation for multilevel metallization.—73-04129
Low-fire Bi-based dielectric ceramics for microwave use.—73-07334
Low-fire X7R compositions.—73-11024
Low-permittivity ceramic dielectrics.—73-10967
Low-temperature silicon nitride: a promising dielectric in semiconductor technology.—73-10969
Low-temperature sintering low-dielectric inorganic composition.—73-11025
MCM-D substrate fabrication cost model: comparing dry etch, wet etch, and photosensitive dielectrics.—73-04131
Method for coating a dielectric ceramic piece.—73-11027
Method for production of nonreducible dielectric ceramic composition.—73-01057
Method for the controlled formation of voids in doped glass dielectric films.—73-11033
Method for the determination of the thermal transport properties of submicron-thick dielectric films with the use of an analytical expression.—73-10972
Method of fabricating high-dielectric constant oxides on semiconductors using a GE buffer layer.—73-14751
Method of forming Si-O containing coatings.—73-14752
Method of manufacturing dielectric block filters.—73-04221
Method of producing low-temperature-firing dielectric ceramic composition containing $B_2O_3$.—73-11036
Microstructure and microwave characteristics of Ba[(Mg, Co)$_{1/3}$Nb$_{2/3}$]$O_3$-based dielectrics.—73-00995
Microwave dielectric ceramic composition.—73-01061
Microwave dielectric ceramic composition.—73-14754
Microwave dielectric ceramics—an overview.—73-10974
Models for breakdown-resistant dielectric and ferroelectric ceramics.—73-07900
New theory for the dielectric breakdown of solid dielectrics.—73-01000
New theory of dielectric breakdown of solid dielectrics.—73-10977
Nonreducible dielectric ceramic composition.—73-01062
Nonreducible dielectric ceramic composition.—73-04226
Nonreducible dielectric ceramic composition.—73-14757
Nonreducing dielectric ceramic composition.—73-04858
Novel method for measuring the thermal conductivity of submicrometer thick dielectric films.—73-08427
Preparation process of high-permittivity material.—73-01063
Process for manufacturing a ceramic wiring substrate having a low dielectric constant.—73-11044
Pulsed-laser-deposited metal-oxide-based superconductor, semiconductor, and dielectric heterostructures and superlattices.—73-04796
Self-aligned stacked gate EPROM cell using tantalum oxide control gate dielectric.—73-11050
Silicon nitride for application as the gate dielectric in MOS devices.—73-04232
System of dielectric ceramic compositions suitable for microwave applications.—73-11054
Temperature-stable lead-relaxor-based ceramic dielectrics with chemical inhomogeneity.—73-10995
Theory of dielectric interference coatings.—73-01038

**dielectric properties,**
Ac conductivity and dielectric relaxation studies in AgI-based fast ion-conducting glasses.—73-00929
Dielectric and piezoelectric properties of $x$Pb(Al$_{2/3}$W$_{1/3}$)$O_3$-(1-$x$)- Pb(Zr$_{0.52}$Ti$_{0.48}$)$O_3$ ceramic system.—73-08834
Dielectric anomaly in layered $TlInS_2$ crystal at transition to incommensurate phase.—73-16444
Dielectric polarization relaxation measurement in $\alpha$-$SiO_2$ by means of a scanning electron microscope technique.—73-07298
Dielectric properties of (Pb$_{1-x}$X$_x$)(Zr$_{0.7}$Ti$_{0.3}$)$O_3$ (X=Ca, Sr, Ba) ceramics.—73-14691
Dielectric properties of ferroelectric ceramic material in the system $SrTiO_3$ ($K_{0.5}Bi_{0.5}$)$TiO_3Bi_2O_3$·3$TiO_2$ at low frequencies: I, Dielectric constant, dissipation factor, temperature, and frequency characteristics of capacitor.—73-11562
Dielectric properties of $Li_{2-x}Na_xGe_4O_9$ crystals.—73-16445
Dielectric properties of Ni-doped (Ba, Sr)$TiO_3$ ceramics at very low frequencies.—73-16446
Dielectric properties of tetragonal lanthanum-modified lead zirconate titanate ceramics.—73-07879
Dielectric property measurement of ceramic bodies.—73-05040
Dielectric relaxation of porous glass.—73-03784
Dielectric relaxation of Vycor-type borosilicate glass.—73-03785
Effect of $Bi_2O_3$ on dielectric properties and temperature characteristics of [$BaTiO_3$]$_{0.9}$+[$BaZrO_3$, $SnO_2$, $La_2O_3$, $ZrO_2$]$_{0.1}$.—73-10935
Effect of excess MgO on dielectric electrostrictive properties of 0.99Pb(Mg$_{1/3}$Nb$_{2/3}$)$O_3$ 0.01Pb(Mn$_{2/3}$W$_{1/3}$)$O_3$.—73-12772
Effect of excess $WO_3$ on the dielectric properties of Pb(Fe$_{2/3}$W$_{1/3}$)$O_3$ [PFW] ceramics.—73-14695
Elevated temperature dielectric property measurements: results of a parallel measurement program.—73-05044
Forced translational vibration of 90° domain walls and the dielectric dispersion in ferroelectric ceramics.—73-07891
High-frequency dielectric constant of barium titanate.—73-16504
Microwave dielectric properties of CaO-added (Ba, Pb)O-$Nd_2O_3$-$TiO_2$ ceramics.—73-07343
New metallized ceramic coaxial probe for high-temperature broad band dielectric property measurements.—73-05072
New self-oscillating, self-heating microwave active dielectrometer.—73-05074
Temperature dependence of the dielectric function of silicon using in situ spectroscopic ellipsometry.—73-16613

**dies,**
Apparatus for producing dies for extruding ceramic honeycomb bodies.—73-15763
Die for ceramic tiles.—73-15766
Dome-shaped extrusion dies.—73-12076
Method for producing dies for extruding ceramic honeycomb.—73-04991
New die designing for refractory testing bar.—73-04933
Silver-glass die attach paste.—73-00763

**differential scanning calorimetry,**
Accurate measurement of heat capacities using oscillating DSC (differential scanning calorimetry).—73-12101
Self-referencing DSC (differential scanning calorimetry).—73-12192
Technique for differential scanning calorimetry (DSC).—73-12201

**differential thermal analysis,**
DTA instrumentation for high-temperature materials characterization.—73-05041
MKTA-2500 microanalyzer for engineering monitoring.—73-08419
Modified STA-409/3/6 thermobalance for digital processing of T, DTA, and TG curves.—73-01917

**diffraction,**
Diffraction and two-beam coupling in GaAs along the [111] direction.—73-11139
Interpretation of L-$Ta_2O_5$-type diffraction patterns in terms of a 1-D shift lattice.—73-08646
Nondegenerate diffraction on transient gratings in InSb.—73-15057
Valence band densities-of-states of $TiO_2$(110) from resonant photoemission and photoelectron diffraction.—73-02720

**diffusion,**
$^{129}$Xe and $^{13}$CPFG NMR study of the intracrystalline self-diffusion of Xe, $CO_2$, and CO.—73-09430
Anisotropic oxygen diffusion in hexaaluminate.—73-03075

Be diffusion at the emitter-base junction of graded AlInAs/GaInAs heterojunction bipolar transistors.—73-07389
Boron diffusion through thin gate oxides: influence of nitridation and effect on the $Si/SiO_2$ interface electrical characteristics.—73-07394
Computer programs for modeling diffusion-controlled processes.—73-13343
Contaminant diffusion barrier for a ceramic oxide superconductor coating on a substrate.—73-11949
Control of As diffusion using ultrathin metal passivating layers at GaAs(100) surfaces.—73-07423
Corona discharge-stimulated transverse diffusion of silver in glassy As-Se films.—73-00603
Critical reappraisal of ion diffusion through cement-based materials: I, Sample preparation, measurement technique, and interpretation of results.—73-09874
Diffusion and adsorption studies on hardened cement paste and the effect of carbonation on diffusion rates.—73-03452
Diffusion in cementitious materials: I, Comparative study of chloride and oxygen diffusion in hydrated cement pastes.—73-00063
Diffusion measurements in ceramic-polymer suspensions.—73-09072
Diffusion of aluminum, scandium, and gallium ions into lithium niobate single crystals.—73-06152
Diffusion of silver into glasses of the silver-arsenic-selenium-tellurium system.—73-00324
Diffusion of sorbates in zeolites by the frequency response method: particle shape and anisotropic effects.—73-09400
Diffusion of sulfur, selenium, and bismuth in HTSC $YBa_2Cu_3O_{7-\delta}$ and $(Pb_xBi_{1-x})_2Ca_2Sr_2Cu_3O_y$ ceramics.—73-03092
Diffusion phenomenon in Y-Ba-Cu-O superconductors.—73-01523
EELS study of oxygen diffusion in aluminum nitride.—73-06155
Effect of Fe/Ni/Ti interdiffusion on the microstructure of direct-on enamel on steel.—73-06772
Effect of proton irradiation and annealing on the diffusion length in indium phosphide.—73-11161
Estimation of the contribution of various components of the ion-exchange interdiffusion coefficient.—73-00337
Influence of arsenic vapor pressure during copper diffusion on deep level formation in silicon-doped gallium arsenide.—73-03600
Interdiffusion in alkali ion sorption by hydrous stannic oxide: mechanism and effect of co-ion.—73-06164
Internal friction and oxygen diffusion in $xNa_2O(1-x)B_2O_3{\cdot}2SiO_2$ [x=0.3–1] glasses: I, Internal friction.—73-00356
Internal friction and oxygen diffusion in $xNa_2O(1-x)B_2O_3{\cdot}2SiO_2$ glasses: II, Oxygen diffusion.—73-00357
Ion diffusion in microcracked concrete.—73-03493
Measurement of diffusion of PVA through pores of an $Al_2O_3$ compact.—73-05909
Measurement of diffusion of PVA through pores of an $Al_2O_3$ compact.—73-12830
Method for determining the barodiffusion coefficient of liquid in ceramic suspension, describing its behavior on pouring into a porous form.—73-09208
Method for determining the effective diffusion coefficient of liquid in the system mold–body–suspension.—73-08412
New material—quartz light-diffusing glass.—73-00671
Numerical analysis of through-diffusion experimental results.—73-03508
Oxygen self-diffusion in rutile under hydrothermal conditions.—73-09418
Raman spectrometric determination of the oxygen self-diffusion coefficients in oxides.—73-17097
Self-diffusion of oxygen in PLZT ceramics.—73-04570
Sulfur self-diffusion coefficients in $In_2S_3$, $CdIn_2S_4$, and $AgIn_5S_8$ single crystals.—73-17102
Superplastic diffusion bonding in ceramics.—73-06072
Theory of oxygen tracer diffusion along grain boundaries and in the bulk in two-stage oxidation experiments: I, Formulation of the model and analysis of type A and C regimes.—73-06177
Thermal and electronic diffusion close to a grain boundary.—73-08449

**diffusivity,**
Composition dependence of lithium diffusivity in lithium niobate at high temperature.—73-13342
Experimental measurements of the phonic diffusivity of semitransparent materials up to 800 K.—73-12137

**dinnerware,**
Cookware coating system.—73-03681
Technical innovations in dinnerware manufacturing.—73-04048
U.S. dinnerware industry: marching to a stronger beat.—73-14671

**diodes,**
2-D nonisothermal finite element simulation of laser diodes.—73-15220
Calculation of the dynamic characteristics of an SiC impact diode.—73-07396
Diamond heterojunction diode.—73-11518
Diode structures from amorphous low-temperature [LT] GaAs.—73-14835
Diode with a ferroelectric cathode.—73-07881
Dynamics characteristics of high-power pulses generated in GaAs/AlGaAs superluminescent diodes.—73-01132
Dynamics of switching in Si and GaAs *p-i-n* diodes.—73-07458
Effect of epitaxial realignment on the leakage behavior of arsenic-implanted, as-deposited polycrystalline Si–on–single-crystal Si diodes.—73-04288
Efficient green-emitting SiC diodes.—73-07477
Electric and dielectric properties of barium titanate Schottky barrier diodes.—73-07311
Electrical and chemical stability of $Al/SiN_x/InP$ metal-insulator-semiconductor diodes with gas-phase polysulfide exposure on InP.—73-07480
Electrical and optical characterization of *p*-type ZnSe for diode laser structures.—73-04301
Electrical and photoelectric properties of Pd-*p*-*p*$^+$-InP diode structures and changes in these properties in a hydrogen atmosphere.—73-07483
Electrical characterization of interface *p*$^+$-Si-poly/Ni-*c*-Si obtained by LPCVD deposition of heavily in situ boron-doped films.—73-07312
Electron-beam diodes using ferroelectric cathodes.—73-01407
Elimination of phase noise of pulsed laser diodes in electrooptic sampling systems.—73-15260
Excess currents as a result of trap-assisted tunneling in double barrier resonant tunneling diodes.—73-07515
Frequency noise reduction in visible InGaAlP laser diodes by different optical feedback methods.—73-14931
Gallium nitride group compound semiconductor laser diode.—73-01374
Growth and characterization of ZnTe:Na: *p*-AlSb diodes.—73-04350
Gunn diodes made of *n*-InGaAs/*n*$^+$-InP heterostructures.—73-07556
High-temperature (74°C) cw operation of 634-nm InGaAlP laser diodes utilizing a multiple quantum barrier.—73-11248
High-temperature Au-SiC-6H Schottky diodes.—73-01186
Influence of growth temperature on the photoresponse of low-temperature-grown GaAs:As *p-i-n* diodes.—73-14980
Injection-related damage in metal-oxide-silicon tunnel diodes.—73-05585
Interface of the polycrystalline silicon contacted diode formed with a stacked amorphous silicon film.—73-14996
Light-emitting diodes made from SiC bombarded with fast electrons.—73-07637
Metal/intrinsic diamond/semiconducting diamond junction diodes fabricated from polycrystalline diamond films.—73-01245
Multiplication of photocurrent in Pd-$SiO_2$-*n*(*p*)-Si diode structures.—73-11341
Photoelectric properties of In-*p*-$CuInSe_2$ Schottky diodes.—73-07715
Progress in optical function devices using two-section laser diodes/amplifiers.—73-15122
Reproducible growth and application of AlAs/GaAs double barrier resonant tunneling diodes.—73-11419
Role of emitter states in magnetotunneling through double-barrier resonant-tunneling diodes at high magnetic fields.—73-07777
Schottky diodes on *n*-type InP with $CdO_x$ interfacial layers grown by the adsorption and oxidation method.—73-11438
Self-aligned bend waveguide AlGaInP visible laser diode with small beam astigmatism.—73-11441
Self-consistent calculations of carrier distribution and energy bands in InGaAs/InP *p-i-n* diodes.—73-04475
Si heterojunction diodes with a thin beta-SiC layer prepared with gas layer source molecular beam epitaxy.—73-04166
Silicon carbide diode operating at avalanche breakdown current density of 60 kA/cm$^2$.—73-12878
Silicon carbide light-emitting diode and a method for the same.—73-01386
Temperature dependence of the impedance of a diode with an inhomogeneous base made of an overcompensated semiconductor.—73-01344
Thermal behavior of visible AlGaInP-GaInP ridge laser diodes.—73-01349

**diopside,**
Development of glazed tiles using inferior diopside.—73-14650
Diopside opal.—73-10826
Energy-saving mechanism of diopside in glazed tiles.—73-10836
Fabrication of low-temperature and -expansion opacified glaze using diopside.—73-14655
Glass-ceramic biomaterials based on the fluorapatite-anorthite and fluorapatite-diopside systems.—73-02013
Influence of viscosity on the crystallization of some anorthite-diopside glass precursors.—73-00647
Mossbauer study of the hematite phase formed during synthesis of ferri-diopsides.—73-02335
Phase formation and properties of electrical porcelain in the presence of diopside additive.—73-01008
Preparation and characterization of diopside powder by several methods from solution.—73-02930
Preparation of ceramic colors on a diopside base.—73-00921
Use of diopsides of various mineralogical compositions in silicate production technology.—73-15914
Using diopside in the production of high-alumina ceramics.—73-02019

**dipoles,**
Deceleration of magnetic dipoles interacting with $YBa_2Cu_3O_x$ superconductors.—73-01514
Dielectric relaxation in dipole glasses, and thermal relaxation and the glass transition in systems with a maximum relaxation time.—73-07010
Self-trapped state and phonon localization in $TiO_3$ quantum dot with a dipole layer.—73-01313
Soft modes in RADP dipole glass.—73-03811

**discharge,**
Discharge density increase for high-rate magnetron sputtering.—73-05744
Power dissipation mechanisms in radio-frequency-driven silane discharges: the influence of discharge geometry.—73-05954

**disks,**
Present status and future of optical and magnetic disks (including those of glass substrates).—73-15362

**dislocations,**
Crack interaction with dislocation ensembles of various types.—73-17260
Dislocation activity, stable crack motion, and the warm-prestressing effect in magnesium oxide.—73-13504
Dislocation detection using polarization-resolved photoluminescence.—73-07448
Dislocation structures around Vickers indents in 9.4 mol% $Y_2O_3$-stabilized cubic $ZrO_2$ single crystals.—73-03131
Dislocation substructures in plastically deformed AlN.—73-09444
Dissociation of dislocations in $YBa_2Cu_3O_{7-\delta}$.—73-04695
Electron microscopic study of partial dislocations in textured Y-Ba-Cu-O superconductors.—73-11745
Formation and electrical effects of process-induced dislocations in HgCdTe.—73-07533
Generation and dissociation of dislocations in $YBa_2Cu_3O_{7-\delta}$ single crystals and deformed oriented powders.—73-08088
Influence of dislocations generated by laser radiation on electrophysical properties and luminescence of *p*-type CdTe.—73-01201
Interaction between dislocations and phonons in LiF crystals.—73-16177
Long-range effect in GaAs single crystals with different dislocation densities.—73-07639
Microstructural study of the dislocation and precipitation distributions in an Al-Li-SiC composite during aging at 190°C.—73-06831
Misfit accommodation and dislocations in heteroepitaxial semiconductor layers: II–VI compounds on GaAs.—73-07674
Relation between the dislocations in chemically vapor-deposited diamond and the linewidth of the Raman spectrum.—73-05473
Screw dislocation annihilation by cross gliding as dynamic relaxation mechanism.—73-17099
Self-diffusion along dislocations in single-crystal MgO.—73-09420

**disorder,**
Disorder and diffusional motion of cations in magnetite, $Fe_{3-\delta}O_4$, studied by Mossbauer spectroscopy at high temperatures.—73-12573
Disordering induced by impurity diffusion in ZnSe-based superlattices and optical waveguides fabricated by disordering.—73-07451
Effect of disorder in oxygen sublattice on Raman spectra of $YBa_2Cu_3O_x$ crystals. Experiment and calculations.—73-15425
Order-disorder and magnetic clusters in some mixed-metal perovskites.—73-04633

**dispersants/dispersion,**
Analysis of the sedimentation curve obtained during express-analysis of the dispersion (granulometric composition) of refractory powders.—73-00774
Chemical synthesis of metal nanoparticles dispersed in alumina.—73-13807
Dispersion of magadiite particles.—73-13389
Effectiveness of a dispersant for the thickening of alumina slurries while retaining the fluidity.—73-09102
Physical origin of the temperature dependence of chromatic dispersion in fused silica.—73-00530
Polyvinyl butyral [PVB] as a dispersant for barium titanate in a nonaqueous suspension.—73-16900

**display devices,**
Constructions and optical characteristics of multicolor or full-color ACTFEL display devices.—73-16427
Thin glass for LCD: review of the specifications.—73-14298

**disproportionation,**
Toluene disproportionation over ZSM-5 zeolite: effects of crystal size, silicon-to-aluminum ratio, activation method, and pelletization.—73-03065

**dissolution,**
Dissolution kinetics of E-glass fiber in different basic solutions.—73-10362
Dissolution of a simple glass: IV, Behavior in saturating and saturated systems.—73-10364
Dissolution of amorphous aluminosilicate zeolite precursors in alkaline solutions: I, Kinetics of the dissolution.—73-12574
Dissolution of sparingly soluble inorganic compound in aqueous suspension containing ion-exchange resin: VII, Calorimetric measurement of dissolution of portland cement and its related compounds.—73-13705
Dissolution of sparingly soluble inorganic compound in aqueous suspension containing ion-exchange resin: VIII, Hydration products of tricalcium silicate ($Ca_3SiO_5$).—73-16717
Effect of humic acids on the dissolution of nuclear waste glasses.—73-08295
Effect of zircon dissolution on the color stability of glazes.—73-07249
Kinetics of zeolite dissolution: III, Dissolution of synthetic mordenite in hot sodium hydroxide solutions.—73-12620
Oscillations in the dissolution kinetics of silica glass in tris-buffered aqueous media.—73-00383

**distribution,**
Nature of the distribution of remelted glass mass in a glass ribbon.—73-07155

**dolomite,**
Chemical separation of MgO from dolomite ore.—73-01979
Dolomite.—73-12269
Experimental and natural mimetic dolomitization of aragonite.—73-15902
Measures to inhibit alkali-dolomite reaction.—73-13750
Wear mechanism of fused dolomite–graphite brick.—73-07229

**domains,**
$^{59}$Co NMR from magnetic domains in $Y_2Co_{14}B$ and $Gd_2Co_{14}B$.—73-11648
Domain formation by impurity dipoles in $KNbO_3$ single crystals.—73-03132
Domain size modeling in $YBa_2Cu_3O_{7-\delta}$ powders and powdered single crystals by means of X-ray diffraction.—73-08024
Domain wall clamping in ferroelectrics by orientation of defects.—73-01404
Domain wall of ferroelastic $BiVO_4$ studied by TEM.—73-03133
Dynamic domain structure of ferroelectric-semiconductor $Sn_2P_2S_6$.—73-14846
Equilibrium size of domains in ferroelectric ceramics.—73-01409
Ferroelectric domain structure and array of tetragonal and rhombohedral phase in PZT ceramics at MPB [morphotropic grain boundary] composition.—73-15263
Grain core–grain shell structure and domain of $BaTiO_3$ ceramics.—73-05411
HREM observation of domain boundaries in tetragonal zirconia.—73-06227
Light diffraction on domain structure in $Ba_2NaNb_5O_{15}$ and $Gd_2(MoO_4)_3$ crystals.—73-15270
Nature of centers of domain wall fixing in nonstoichiometric ferrite-garnet films.—73-01475
Phonon scattering from ferroelectric domain walls: phonon imaging from KDP.—73-15277
Photoproduction of needlelike domains in lithium niobate crystals.—73-17181
Size estimation of ordered domains in $Pb(Mg_{1/3}Nb_{2/3})O_3$ ceramics.—73-11614
"Wrong" bond interactions at inversion domain boundaries in GaAs.—73-07863
**donors,**
Identification and active energies of shallow donor in cubic SiC.—73-08884
**dopants/doping,**
110-K $Bi_2Sr_2Ca_2Cu_3O_y$ superconductors by Pb and Sb doping.—73-04780
Cation dopant sites in metal oxides [studied] by EXAFS and computer simulation techniques.—73-12543
Cd(S, Se, Te)-doped glasses: structure and optical properties.—73-14794
Close-spaced vapor transport combined with free evaporation for doping of semiconductor thin films.—73-07414
Compensation modes in counterdoped rutile.—73-02166
Conduction mechanism and defect structure of acceptor- and donor-doped $SrTiO_3$.—73-03082
Control of leakage resistance in $Pb(Zr,Ti)O_3$ thin films by donor doping.—73-16430
Controlled *p*- and *n*-type doping of homo- and heteroepitaxially grown InSb.—73-11120
Cross-sectional imaging of doped layers in epitaxial gallium arsenide films by scanning tunneling microscopy.—73-11125
Crystal structure of gadolinium- and yttrium-doped barium cerate.—73-12561
Crystallinity of ZnS:Tb,F thin films and characteristics of green-color thin-film electroluminescent devices prepared by rf magnetron sputtering.—73-12963
Dielectric relaxations in $SrTiO_3$ doped with $La_2O_3$ and $MnO_2$ at low temperatures.—73-16448
Effect of dopant on electrical properties of sintered SiC.—73-02578
Effect of dopants on zirconia stabilization—an X-ray absorption study: I, Trivalent dopants.—73-05384
Effect of dopants on zirconia stabilization—an X-ray absorption study: II, Tetravalent dopants.—73-08605
Effect of dopants on zirconia stabilization—an X-ray absorption study: III, Charge-compensating dopants.—73-08606
Effect of Sb doping on point defect ensemble in MOVPE GaAs.—73-14855
Effect of various dopants on the dielectric properties of barium strontium titanate.—73-04081
Effects of dopants on dynamic behavior of dislocations and mechanical strength in InP.—73-07470
Effects of F doping and Cl doping on formation and superconductivity of the 1212-type phase $TlSr_2CaCu_2O_7$.—73-04709
Effects of Mn dopant and Mn-La codopant on the sintering behavior and electrical properties of barium titanate.—73-04294
Effects of substitution for Cu in $CuO_2$ planes with dopants of different electron configurations in $YBa_2Cu_3O_7$.—73-08047
Electronic field of $Ti^{4+}$, $Zr^{4+}$, and $Ge^{4+}$ dopings upon the physical properties of $In_2O_3$ and Sn-doped $In_2O_3$ ceramics: application to new highly transparent conductive electrodes.—73-07321
Energy transfer in Tm:Eu-codoped fluorozirconate fiber.—73-02610
Er doping in silicon by pulsed laser irradiation.—73-04324
$Er^{3+}$-doped silicon prepared by laser doping.—73-04326
Erbium-doped semiconductor thin films prepared by rf magnetron sputtering.—73-04329
Examination of $12CaO{\cdot}7Al_2O_3$ phase doped with magnesium, iron, and titanium oxides.—73-16144
Excited-state absorption in the infrared emission domain of $Nd^{3+}$-doped $Y_3Al_5O_{12}$, $YLiF_4$, and $LaMgAl_{11}O_{19}$.—73-08867
Field ionization mechanism for a high refractive nonlinearity in heavily doped *n*-GaAs.—73-14925
Fluorescence mechanisms and dynamics of $Tm^{3+}$ singly doped and $Yb^{3+}$, $Tm^{3+}$ doubly doped glasses.—73-06918
Fluoride glasses with dysprosium and europium dopants: their low-temperature and magnetic field dependence of Rayleigh and Brillouin scattering.—73-03789
Fracture toughness and time-dependent strength behavior of low-doped silicon nitrides for applications at 1400°C.—73-06438
Grain-boundary defect chemistry of acceptor-doped titanates: space charge layer width.—73-06160
Growth and characterization of ZnTe:Na: *p*-AlSb diodes.—73-04350
Growth and optical properties of doped bismuth titanate.—73-02613
Influence of temperature on infrared-to-visible conversion in tellurite glass doped with erbium and ytterbium.—73-03793
Infrared reflectance spectra of doped $BaTi_4O_9$.—73-02296
Interpretation of tweed contrast from the $YBa_2Cu_3O_{7-\delta}$ system.—73-04747
Ir cross-section measurements for crystals doped with $Er^{3+}$, $Tm^{3+}$, and $Ho^{3+}$.—73-08895
Low-loss rare-earth-doped single-mode fiber by sol-gel method.—73-07147
Magnetotransport and magnetooptical properties of δ-doped InSb.—73-08911
Mechanical properties of doped zirconia ceramics.—73-09637
Method of doping porous glass preforms.—73-00743
Morphology and composition of the oxidized layer in $Si_3N_4$-based material.—73-09530
Neutron scattering investigation of the structure of semiconductor-doped glasses.—73-11346
Optical gain in glass fiber doped with rare-earth ions.—73-03806
Optical studies of doping effect on anisotropy of zinc sulfide crystals.—73-16239
Piezoelectric, pyroelectric, and dielectric properties of La- and Sm-doped PZT ceramics.—73-15282
Praseodymium dioxide doping of $In_{1-x}Ga_xAs_yP_{1-y}$ epilayer grown with liquid phase epitaxy.—73-04447
Preparation of thin high-$T_c$ superconducting films doped by metal ions.—73-15598
Rare-earth-doped glass fiber lasers and amplifiers.—73-03810
Reactive deposition of W-, Mo-, and V-doped $SnO_2$ films.—73-05626
Relationship between the internal bias field and the tetragonal structure of PZT ceramics containing low manganese additions.—73-11611
Role of nitrogen in the intergranular glass phase of $Si_3N_4$ on high-temperature applications and wear.—73-12676
Selective growth and characterization of doped polycrystalline diamond thin films.—73-09313
Simultaneous impurity doping with Zn and Se in AlGaInP by MOVPE.—73-04482
Substitution effects on the thermoelectric power of $La_{2-x}Sr_xCu_{1-y}M_yO_4$ (M=Zn and Ni) and $YBa_2Cu_{3-z}Zn_zO_{7-\delta}$.—73-02697
Substrate orientation effects on dopant incorporation in InP grown by metallorganic chemical vapor deposition.—73-01331
TEM analysis of grain boundary in $Y_2O_3$-$Nd_2O_3$-doped silicon nitride.—73-03204
TEOV doping of gallium arsenide.—73-04536
**drawing,**
Airborne laboratory apparatus draws glass fibers.—73-14315
Characterization of the optical fiber drawing process.—73-10507
**drilling,**
Hotter refractories increase the risk of downward drilling.—73-10735
Influence of defocus length on hole features in laser drilling of ceramics.—73-16836
Technology in pulsed Nd:YAG laser drilling of an Al-Li-based/SiC metal matrix composite.—73-06109
**dry pressing,**
Body preparation for dry-press forming of production tile.—73-12014
Method for preparing a ceramic oxide material.—73-05222
**dry processing,**
20 years of production of $UO_2$ by the integrated dry route—a BNFL [British Nuclear Fuels plc] perspective on dry conversion.—73-08311
Dry grinding technology in Italian ceramic companies.—73-12024
Dry preparation of powders for dust pressing.—73-12025
**dryers/drying,**
Application of CPD coating to drying cars.—73-12107
Design of positive-pressure moisture exclusion dryers using once setting and firing processes.—73-12213
Development of fast dry-fast technology.—73-12214
Developments in drying technology.—73-12216
Dielectric property measurement of ceramic bodies.—73-05040
Drying experience: some thoughts on drying as we move into winter.—73-05110
Drying of boehmite gel fibers.—73-03833
Drying of ceramic materials shaped by unidirectional pressing: I, Kinetic model.—73-12992
Dynamic simulation of drying process of perforated clay brick.—73-07190
Fast drying and firing process of heavy clay with bars dryer and bars kiln.—73-10682
Fast drying of perforated clay blocks.—73-05114
Fuel savings in industrial drying operations by the Vapormid process.—73-05117
Heat recuperation system in the Hollohaza Porcelain Factory [Hungary].—73-00910
Importance of the flow technology for the drying of ceramic products.—73-12035
Influence of tunnel dryer system on drying homogeneity.—73-12226
Mathematical modeling simulation for segregation of PVA during drying.—73-16859
Mathematical simulation for segregation of PVA during drying.—73-05908
Mechanism of drying creep of cement-based materials: diffusion processes and microcracking.—73-10038
Method of operative control by drying asbestos ore in shaft furnaces.—73-01798
Mixed drying uhf/hot air for the sanitary ceramics industry.—73-10869
Plugging into drying and firing productivity.—73-12237
Practical experience with a plant for fluidized bed granulate drying for pressed ceramic bodies.—73-01816
Process for rapidly drying a wet, porous gel monolith.—73-01876
Process to increase the drying rate of a glaze for ceramics.—73-10915
Rapid drying of non-load-bearing perforated bricks.—73-10688
Rhythm drying—what is it? How can it help you.—73-12240
Rotary dielectric drying of ceramic honeycomb ware.—73-05141
Sorbent-bed crop-drying system.—73-12330
**ductility,**
Enhancement of tensile ductility in nanograin superplastic ceramics through control of interface chemistry.—73-03280
Improvement of ductility of ceramic-rich region in functionally gradient materials [FGM's] by metal fiber premixing.—73-03598
Thermomechanical processing [TMP] and ductility enhancement of a 6061 Al-$Al_2O_3$ metal matrix composite.—73-03655
**durability,**
Canonical correlation of waste glass compositions and durability, including pH.—73-08286
Contribution to comparability of in vitro and in vivo manmade mineral fiber (MMMF) durability experiments.—73-10424
Dependence of concrete durability on the dispersibility of portland cement, its concentration, and the absolute volumes of components of hardening mixes.—73-03450
Designing ceramic components for durability.—73-06567
Effect of radiation treatment on durability of light guides.—73-00461
Influence of cement composition on concrete durability.—73-00112
Influence of electric field strength on cement durability.—73-00115
Method to minimize error in determining chemical durability of optical and laser glasses.—73-03801
Prediction of durability of glass articles under the action of variable loading.—73-00531
**dust,**
Bricks containing electric arc furnace dust.—73-03987
Effects of kiln dust addition to portland and blended cements.—73-13713
Operating characteristics of a cartridge collector utilizing medium-pressure purge air.—73-01806
Particulate collection for thermal spray processes.—73-08355
Pelletizing and recycling of dust from and to a lead glass furnace.—73-07160
Possibilities of decreasing dust releases in transportation and firing of refractory raw material as the result of local dust removal.—73-01812
Recovery of lead-containing dust when melting crystal glass.—73-14485
Recycling of electrostatic precipitator dust from glass furnaces.—73-07169
Recycling of filter dust from electrostatic precipitators in the glass industry.—73-10592
Treatment of filter dusts from glass furnaces for reuse or safe disposal.—73-14522
Utilization of dust from Raymond mill.—73-10905
**dye,**
Liquid-phase-deposited $SiO_2$ film with incorporated organic dye.—73-03855
Preparation and third-order optical nonlinearity of organic dye-doped glasses.—73-03867
Preparation and third-order optical nonlinearity of organic dye-doped glasses.—73-10575
**dysprosium,**
Alignment ratio of magnetically aligned high-$T_c$ superconducting $Y_1Ba_2Cu_3O_{7-x}$ and $Y_{0.5}Dy_{0.35}Ba_2Cu_3O_{7-y}$ thick films.—73-15384
Anisotropy of low-temperature vibrational characteristics illustrated by example of thermal conductivity of ferroelastic $CsDy(MoO_4)_2$.—73-16032
$DyAlO_3$: a more promising refrigerant than $Dy_3Al_5O_{12}$.—73-01455
$DyBa_2Cu_3O_{7-x}$ superconducting thin films with (103) and (013) orientations grown on (001)MgO MBE.—73-04698
Growth of $DyBa_2Cu_3O_{7-x}$ thin films on vicinal (100)$SrTiO_3$ substrates.—73-06224
High-temperature phase transitions in $CsDy(MoO_4)_2$.—73-02283
Lattice dynamics and specific heat of layered $CsDy(MoO_4)_2$ crystals.—73-16193
Magnetic ordering of $Dy^{3+}$ sublattice in tetragonal single crystal $DyBa_2Cu_3O_{6.2}$.—73-16206
Magnetism and superconductivity in $Bi_2Sr_2Ca_{1-x}Dy_xCu_2O_{8+\delta}$.—73-04763
Manifestations of periodic superstructure in $CsDy(MoO_4)_2$.—73-16209
Peculiarities of low-temperature lattice dynamics of layered crystals $CsR(MO_4)_2$ (R=Dy,Gd).—73-08689
Process for preparing superconductors and compositions useful therein.—73-04868
Reactive coevaporation of DyBaCuO superconducting films: the segregation of bulk impurities on annealed MgO(100) substrates.—73-08185

Surface step density oscillation during the growth of $YBa_2Cu_3O_{7-x}$ and $DyBa_2Cu_3O_{7-x}$ superconducting thin films.—73-08235
System ZnS-$Dy_2S_3$.—73-02513
Terrace structures in $DyBa_2Cu_3O_{7-x}$ grown in a magnetic field.—73-03208
Two symmetry modifications of $DyBa_2Cu_3O_x$ single crystals.—73-08271

**economics,**
East European cement industry: looking for investment and modernization.—73-03453
Economics of advanced self-propagating, high-temperature synthesis materials fabrication.—73-04911
Germany's ceramic industry after unification.—73-03393
Politics, economics, and ceramic continuity at Gordion in the late second and first millennia B.C.—73-00013
Possibilities and limits of porcelain enameling processes—economics and environmental compatibility.—73-10262
Present and future economic outlook for European Community (EC) glassmakers.—73-13635

**education,**
Englishman's experiences with American glass.—73-13617
Extracurricular science enrichment program—a 35-year success story.—73-03391
Faculty of the Glass and Ceramic Machines of the Machine and Textile Institute [Liberec, Czech Republic].—73-15725
Intensive teacher training.—73-06577
Is the quality of American students really declining.—73-17491
Multimedia tutorial on phase equilibria diagrams.—73-06581
Ph.D. in glass science—a new graduate degree program at Alfred University.—73-17498
Report on PEI technical activities at the PEI Technical Forum.—73-17502
Research and competitiveness: the problems of a new rationale.—73-09745
Research and education in Glass and Ceramics Institute in the Institute of Chemical Technology, Prague [Czech Republic].—73-06590
Research-intensive universities in the U.S.—73-03405
Training and development.—73-10611
Training for the 21st century.—73-10612
Virginia Tech fosters elementary classes.—73-03411
Working environment: "better safe than sorry."—73-06599

**efficiency,**
Electronic upgrade for air efficiency.—73-15723
Maximizing materials utilization—a panel session.—73-13865

**efflorescence,**
Limiting efflorescence and leaching in facing brick masonry—causes, reduction through technological measures, additives, and posttreatment.—73-07192
Principle of the formation of efflorescence on the surface of autoclaved porous concrete products.—73-10094

**elastic constants,**
High-temperature elastic constants of yttrium aluminum garnet.—73-08880
Holographic evaluation of elastic constants.—73-15803
Inhomogeneity of internal stresses and X-ray elastic constants of ceramic materials.—73-12819
Third-order elastic constants of high-temperature superconductors $YBa_2Cu_3O_7$.—73-01694

**elastic properties,**
Approximate evaluation of the elastic interfacial stresses in thin films with application to high-$T_c$ superconducting ceramics.—73-01494
Effects of elastic inhomogeneity and residual thermal stress on fracture toughness [analyzed] by the equivalent inclusion method.—73-13515
Elastic anomalies of barium titanate.—73-08609
Elastic moduli of glasses in the $Li_2O$-$Na_2O$-$Nb_2O_5$-$SiO_2$ system.—73-00472
Elastic moduli of $TiB_2$.—73-08844
Elastic properties of two-phase composites.—73-08845
High-frequency leaky Lamb wave [LLW] measurement of elastic properties of coatings.—73-08404
High-temperature elastic moduli and internal frictions of α-SiC ceramic.—73-05576
Materials characterization at high temperatures using laser ultrasound.—73-12160
Static modulus of elasticity of high-strength concrete from pulse velocity tests.—73-06720

**elasticity,**
Effective elastic moduli of porous ceramic materials—comment.—73-17297
Effective elastic moduli of porous ceramic materials—reply to comment.—73-17298
Elasticity and thermal expansion anomalies of anisotropic high-$T_c$ superconductors.—73-15447
Elasticity of single-crystal $MgAl_2O_4$ spinel up to 1273 K by Brillouin spectroscopy.—73-08512

**electrets,**
Transport of detrapped charges in thermally wet-grown $SiO_2$ electrets.—73-13371

**electric field,**
Contactless electromodulation investigations of surface/interface electric fields in semiconductor microstructures.—73-11118
Destruction of ferroelectric ceramics in electric and stress fields.—73-15255
Effect of electric field on magnetostatic wave attenuation in ferromagnetic semiconductor $HgCr_2Se_4$.—73-14848
Effect of external fields on mass-transport and defect-related phenomena.—73-13348
Effect of strong electric field on conductivity of high-$T_c$ superconducting ceramics of YBaCuO system.—73-15434
Electric field effect in a superconducting film device.—73-15448
Electric field gradient at copper nuclei in oxides.—73-02250
Importance of the Lorentz force in electrically heated glass melts.—73-12225
Influence of electric field strength on cement durability.—73-00115
Mechanism for electric field effects observed in $YBa_2Cu_3O_{7-x}$ films.—73-15552
Parameters of electric field gradient tensor in copper sites of $YBa_2Cu_3O_{7-x}$ lattices.—73-15575
Photoreflectance characterization of GaAs as a function of temperature, carrier concentration [CC], and near-surface electric field.—73-11390

**electrical components,**
Method for obtaining via patterns in ceramic sheets.—73-11031
Method of fabricating ceramic laminated electronic component.—73-04219

**electrical conductivity,**
Ac conductivity in $B_2O_3$-$Li_2O$ films.—73-00930
Antistatic flooring.—73-14642
Asymmetry of the percolation electrical conductivity of compensated *n*-type InP.—73-14778
Conductive properties in ß″-alumina ceramics by complex impedance analysis.—73-00941
Conductivity in insulators due to implantation of conducting species.—73-00942
Electric conductivity of Na and Ag forms of A and X zeolites: effect of cluster formation on the conductivity.—73-04083
Electrical conduction in calcium yttrium titanium cobalt oxide, $Ca_{1-x}Y_xTi_{1-x}Co_xO_3$ ($x \leq 0.15$).—73-02597
Electrical conduction mechanism in recrystallized SiC.—73-02809
Electrical conduction mechanism in recrystallized SiC.—73-12787
Electrical conduction of $La_2Cu_{1-x}Zn_xO_{4+\delta}$ at high temperature.—73-05556
Electrical conductivities of low-alkali and alkali-free glasses and glass-ceramics.—73-00955
Electrical conductivities of $YBa_2M_3O_y$ (M: Fe, Co) system.—73-02598
Electrical conductivity and mixed alkali effect in $K^+$/$Rb^+$ ß″-$Al_2O_3$ ceramics.—73-00956
Electrical conductivity measurements of binary solutions of molten alkaline-earth fluorides.—73-00957
Electrical conductivity of a glass-ceramic.—73-08853
Electrical conductivity of diamond up to 1200°C.—73-07314
Electrical conductivity of glasses of the system $2PbO{\cdot}SiO_2$-$Pb(Hal')_2$-$Pb(Hal'')_2$.—73-00473
Electrical conductivity of glasses of the systems $2PbO{\cdot}SiO_2$-$Pb(Hal', Hal'')_2$.—73-00474
Electrical conductivity of glasses of the systems $2PbO{\cdot}SiO_2$-$PbHal_2$ (Hal=Cl, Br, I).—73-00475
Electrical conductivity of glasses of the systems $2PbO{\cdot}SiO_2$-$PbHal_2$ (Hal=Cl, Br, I).—73-00476
Electrical conductivity of hardened cements for different temperatures.—73-09942
Electrical conductivity of plasma-sprayed yttria-stabilized zirconia.—73-08854
Electrical conductivity of tellurium-deficient cadmium telluride.—73-11179
Electrical conductivity, defect equilibrium, and oxygen vacancy diffusion coefficient of $La_{1-x}Ca_xAlO_{3-\delta}$ single crystals.—73-09402
Electrical properties of $Sb_2O_3$-SrO-$V_2O_5$ glasses and crystallized ones.—73-00477
Flat aggregate–portland cement paste interfaces: I, Electrical conductivity models.—73-00092
High-temperature electrical conductivity of perovskite $La_{0.98}Sr_{0.02}MnO_3$.—73-12809
Measurement of electrical conduction in *c*-axis-oriented ZnO.—73-01239
Mixed ionic-electronic conductors for oxygen separation and electrocatalysis.—73-04222
Model of electric conductivity of thick-film resistors: I, Piezoresistivity.—73-10975
Model of electric conductivity of thick-film resistors: II, Simple computer model.—73-10976
Nonohmic conductivity, fluctuations, and dimensional crossover in YBaCuO.—73-01616
Particle- and photoinduced conductivity in type-IIa diamonds.—73-08944
Structural aspects of protonic conductivity.—73-16320
Temperature dependence of the electric conductivity of unfired porcelain mixture.—73-10994

**electrical conductors,**
Automotive glass thick film conductor paste.—73-11001
Automotive glass thick film conductor paste.—73-11002
Ceramic [conductive] material and process for its production.—73-14742
Conductive material and process for preparing the same.—73-04195
Electrically conductive high-strength dense ceramic.—73-14747
Electrically conductive material.—73-01052
Fibrous electrically conductive filler and process for producing the same.—73-04207
Laminated glass with an electroconductive layer.—73-14545
Thermally stable dense electrically conductive diamond compacts.—73-04237
Via paste compositions and use thereof to form conductive vias in circuitized ceramic substrates.—73-11057

**electrical insulation/electrical insulators,**
Bonded wafer process incorporating diamond insulator.—73-04509
Insulating member and electric parts using the same.—73-11022
Moisture expansion in the lobes of isostatically pressed high voltage insulators.—73-01800
Semiconductor device having protective insulating film.—73-04231
Technical progress of insulators for electric power transmission and substation.—73-07365

**electrical properties,**
Anisotropy of electrical properties in α-$Fe_2O_3$ ceramics.—73-16410
Capacitance-voltage characteristics of thin-film structures made of *n*-type GaAs.—73-01091
Defect structure and electrical properties of $Y_3Al_5O_{12}$ and $Y_3Al_5O_{12}$:$Nd^{3+}$ single crystals.—73-00945
Effect of electromagnetic radiation on alternating current losses in high-$T_c$ superconductors.—73-08030
Effect of ethanol on electrical properties of $SnO_2$.—73-11152
Effects of bias-temperature cycling on electrical characteristics of YBCO/YSZ/Si Su/S capacitors.—73-04082
Effects of processing on electrical properties of $YBa_2Cu_3O_7$ films: I, Postdeposition anneal process.—73-04710
Electrical characterization of interface $p^+$-Si-poly/Ni-c-Si obtained by LPCVD deposition of heavily in situ boron-doped films.—73-07312
Electrical properties of *p*-type ZnSe single crystals.—73-08050
Electrical properties of layered $MnGaInS_4$ single crystals.—73-14868
Electrical properties of low-temperature [LT] GaAs grown by molecular beam epitaxy and migration-enhanced epitaxy.—73-14869
Electrical properties of MgO-doped ß-alumina ceramics prepared from the metal alkoxides.—73-00958
Electrical properties of molecular beam epitaxial GaAs grown at 300–450°C.—73-14870
Electrical properties of $PbTiO_3$ single crystals grown from PbO-$Cu_2O$ flux method.—73-16479
Electrical properties of silicon nitride thin films fabricated by ECR PECVD at room temperature.—73-04087
Electrical properties of tantalum-based composite oxide films.—73-04088
Electrical properties of thin reoxidized dual-layer oxides.—73-07315
Electrical properties of Y-type hexagonal ferrite.—73-15320
Hall effect and resistivity characterization of doped, electrodeposited CdSe.—73-01181
Influence of intercalation of Li and Ba on the electrical properties of InSe.—73-14982
Influence of laser annealing on the electrical properties of MIS structures based on GaAs.—73-04365
Interpretation of electrical data of phase-separated glasses.—73-00506
Measurement of the current transcient in $Ta_2O_5$ films.—73-08913
Mixed conductivity of the Nasicon phase $Na_{2+x+y}Zr_{1-y}Fe_y^{III}Fe_{1-x+y}^{II}(PO_4)_3$ [$y$=0 at $0 \leq x \leq 1$ or $x+y$=1 at $0 \leq y < 0.5$].—73-00997
Modeling the electrical characteristics of polycrystalline varistors using individual grain-boundary properties.—73-11319
New ceramic-based composites for electrical contacts.—73-00999
Peculiarities of the electrical properties of polycrystalline α-$PbSnF_4$ in frequency range $10^2$..$6{\cdot}10^{10}$ Hz.—73-02661
Phase relationships and electrical properties of $Ti_3O_5$, $CrTi_2O_5$, and the pseudobrookite-type systems $Mg_xTi_{3-x}O_5$ and $Li_xTi_{3-x}O_5$.—73-05452
Processing kinetics and grain-boundary electrical properties of electroceramics via impedance spectroscopyy [IS].—73-03186
Role of microstructure in the electrical properties of GaAs grown at low temperature [LT].—73-15151
Sintering and electrical properties of titania- and zirconia-containing $In_2O_3$-$SnO_2$ (ITO) ceramics.—73-04169
Temperature-dependent studies on the electrical properties of pyrolytic ZnO thin films prepared from $Zn(C_2H_3O_2)_2$.—73-08980
Thermal and electrical properties of $Ag_2O{\cdot}xB_2O_3$ ($Al_2O_3$, $Ga_2O_3$)·(1.5–$x$)$P_2O_5$ glasses.—73-00554
Thermal oxidation and electrical properties of silicon carbide metal-oxide-semiconductor structures.—73-01350

**electrical resistance,**
Distribution of electric resistance of dielectric semiconductive ceramics.—73-01130
Effects of measurement condition on electric resistance in cement mortar specimens.—73-09937
Electrical heating resistance using resistive elements made of carbon/carbon composite material.—73-01051
Evaluation of the empirical dependence of electric resistance of concrete mixtures on temperature.—73-13721

**electrical resistivity,**
Ceramic properties of hard porcelain in relation to mineralogical composition and microstructure: V, Electrical resistivity.—73-00937
Electrical resistivity as a control parameter for glass manufacturing process: I.—73-03838
Electrical resistivity of lanthanum–manganite-based complex oxides.—73-16481
Microstructure effects on humidity-sensitive electrical resistivity of carbon fibers.—73-16544
Temperature dependence of the electrical resistivity of reactively sputtered TiN films.—73-02702
Ti/TiN reactive sputtering: plasma emission, X-ray diffraction, and modeling.—73-00271

**electrical resistors,**
Film-type electrical resistor combination.—73-04208
Process for manufacturing a voltage nonlinear resistor.—73-01065
Resistor composition.—73-11049
Resistor element [including insulating ceramic substrate].—73-14761
Resistor paste and ceramic substrate.—73-04230
Voltage nonlinear resistor.—73-11058

**electricity,**
Design of electrically heated forehearth and its application.—73-05107
Destruction of halogenated hydrocarbons accompanied by generation of electricity.—73-00946
Electric melting of glass.—73-01947
Electrical heating of glass-toughening furnaces.—73-12217
Electricity potential in the ceramics industry.—73-13616
Future of the glass industry—electric melting.—73-14389
Glass melt current and homogenizing in electric tank furnaces.—73-15876
Influence of divided electric boosting on the distribution of temperatures and on flowing.—73-15882
Middle- and small-scale electric glass-melting furnaces.—73-05121
New developments in electric furnaces.—73-05125
New method of the calculation of a power field in the melting tank of an all-electric glass-melting furnace.—73-15887

**electroceramics,**
Ceramic materials in the system MgO-$SiO_2$-$Al_2O_3$-$ZrO_2$.—73-03777
Ceramic Transactions, Volume 41: Grain Boundaries and Interfacial Phenomena in Electronic Ceramics.—73-17521
Electroceramics and process for making the same.—73-14748
Processing kinetics and grain-boundary electrical properties of electroceramics via impedance spectroscopy [IS].—73-03186
Research needs and opportunities in highly conducting electroceramics.—73-01020

**electrochemistry,**
Electrochemical response of $YBa_2Cu_3O_{7-x}$ as a function of oxygen content.—73-01539

**electrochromic materials,**
Effect of temperature on a complementary $WO_3$-Prussian blue electrochromic system.—73-01137
Electrochromic materials: metal oxide nanocomposites with variable optical properties.—73-12793
Electrochromism in Nb-V and Cr-V mixed oxides.—73-04092
Solid-state electrochromic variable transmission windows.—73-00545

**electrochromic properties,**
All-solid-state electrochromic device: I, Electrophoretic deposition film of proton conductive solid electrolyte.—73-00932
All-solid-state electrochromic device: II, Characterization of transition metal oxide thin films for counterelectrodes.—73-00933

**electrodeposition,**
Cadmium chalcogenide semiconducting thin films prepared by electrodeposition from boiling aqueous electrolytes.—73-11088
Characterization of electrodeposited gels on the tungsten heater coil.—73-03565
Electrodeposition of lead dioxide from nitrate and other media.—73-05787
Molten salt electrodeposition of refractory metal carbide: II, Mechanism and nucleation studies.—73-06834
Synthesis of superconductive thin films of $YBa_2Cu_3O_{7-x}$ by a nonaqueous electrodeposition process.—73-08241

**electrodes,**
Advanced design electrode holders can make a difference.—73-01942
All-solid-state electrochromic device: II, Characterization of transition metal oxide thin films for counterelectrodes.—73-00933
Application of electrochemical passivation methods for molybdenum electrodes in industrial glass tanks.—73-15866
Characteristics of gate electrode for $WSi_2$/CVD-Si/$SiO_2$.—73-07286
Chronoabsorptometric determination of adsorption isotherms for cytochrome *c* on tin oxide electrodes.—73-10923
Crack opening behavior of artificial graphite electrodes in thermal shock test.—73-02565
Crack opening behavior of artificial graphite electrodes in thermal shock test.—73-10928
Current density and temperature distribution along a horizontal electrode in an all-electric glass-melting furnace.—73-12212
Effect of YSZ addition to solid oxide fuel cell electrodes on electrical performance.—73-00953
Effects of electrode geometry and polarity on the occurrence of negative peaks in optical transient current spectroscopy applied to semiinsulating gallium arsenide.—73-11171
Effects of supporting electrolyte and zeolite Co cation on the electrochemical response of zeolite-modified electrodes.—73-07310
Electrochemical activity of boron-doped polycrystalline diamond thin-film electrodes.—73-04090
Electrochemical and surface properties of a metal carbonitride-oxide composite electrode.—73-00960
Electrode and method of interconnection sintering on an electrode of an electrochemical cell.—73-11015
Electrode assembly for glass-melting furnace.—73-12249
Electrode of nickel oxide intercalated with lithium ions and electrochromic devices which incorporate such an electrode.—73-11016
Electrode properties of TaC metal matrix composites.—73-07318
Electrode system $O_2$/Pt‖$ZrO_2$:8$Y_2O_3$ investigated by impedance spectroscopy.—73-04094
Glass electrode.—73-14750
Glass melting.—73-05138
Glass pH electrodes.—73-11017
Glass pH electrodes.—73-11018
High-$T_c$ superconducting device with weak link between two superconducting electrodes.—73-01707
Industrial experience with a cathodic electrochemical method to reduce the molybdenum electrode corrosion.—73-08474
Influence of alternating current parameters on corrosion of heating electrodes in molten glass.—73-15881
Influence of magnetic field on the self-bias potential on a radio-frequency-powered electrode in radio-frequency plasma.—73-09174
Influences of length of nipple on effective strength of socket at the joint of artificial graphite electrodes.—73-17363
Judgments of macroscopic crack initiations of artificial graphite electrodes in fracture toughness test.—73-17367
Lanthanum phosphate-bonded composite nickel-rhodium electrodes for alkaline water electrolysis.—73-00990
Mechanism of YSZ/metal, $O_2$ electrode [studied] by the application of harmonics current measurement.—73-04134
Mechanism of YSZ/metal, $O_2$ electrode [studied] by the application of harmonics current measurement.—73-14717
Method for forming electrode for electrical connections to oxide superconductor.—73-01710
Method for making a piezoelectric stack.—73-04582
Ohmic contact electrodes for *n*-type semiconductor cubic boron nitride.—73-11536
Ohmic interactions within electrode ensembles.—73-04147
Optimum loading of molybdenum electrodes in corrosive glass melts.—73-12236
Oxygen evolution on $BaSn_{1-x}Sb_xO_3$ ($0 \le x \le 0.15$) perovskite electrode.—73-14722
Piezoelectric/electrostrictive element having auxiliary electrode disposed between piezoelectric/electrostrictive layer and substrate.—73-11638
Preparation of $Y_2O_3$-doped $CeO_2$ ceramics for pH electrode.—73-01015
Process for producing ceramic capacitors with thinner electrodes.—73-04229
Reference electrode assembly and process for constructing.—73-01067
SHS extrusion of electrode materials and their application for spark alloying of steel surfaces.—73-13898
Solid oxide fuel electrodes and process for producing the same.—73-04235
Solid oxide fuel electrodes and process for producing.—73-14763
Solution flow rate effects on the response time of selective electrodes having iodide and bromide functions.—73-14732
Spectroscopic ellipsometry of carbon electrodes during electrochemical activation.—73-15171
Stability of zinc oxide electrodes fabricated by dual ion beam sputtering.—73-01026
Stress analysis of nipple in the joint of artificial graphite electrodes.—73-03357
Superconducting device composed of oxide superconductor material.—73-01739
Surface stability of bismuth-ruthenium oxide electrodes.—73-07363

**electrodischarge machining,**
EDM in new places.—73-15719
EDMing ceramics and composites.—73-15720
Effect of grain size on wire electrical discharge machining of polycrystalline diamond [PCD].—73-05759
Electrical discharge machining of advanced ceramics.—73-04914

**electroluminescence,**
Electrochemically induced characteristic luminescence of metal ions at anodic valve metal oxides.—73-04091
Electroluminescence [EL] and photoluminescence [PL] of ZnS crystals.—73-01150
Electroluminescent performance of porous silicon.—73-16484

**electroluminescent materials,**
Chemical analysis of electroluminescent SrS:Ce films.—73-16051
Constructions and optical characteristics of multicolor or full-color ACTFEL display devices.—73-16427
Effects of oxygen on electroluminescent characteristics of ZnS:TbOF and ZnS:TmOF devices.—73-11173
Electroluminescence in $ZnS_{1-x}Te_x$:$CeF_3$ thin-film devices.—73-02605

**electrolytes,**
Application of glass-ceramic Nasicon-based composite electrolytes in galvanic cells for detection of sulfur oxides in gases.—73-14680
Characterization of the *n*-$TiO_2$/electrolyte interface through photoelectrochemical measurements.—73-12753
Construction and operation of fuel cells based on the solid electrolyte $BaCeO_3$:Gd.—73-00944
Defect cluster model for ion migration in solid electrolytes.—73-03083
Effect of bismuth oxide addition on the electrical properties of zirconia magnesia solid electrolytes.—73-07304
Electrical and surface properties of thin film of Li glass solid electrolyte.—73-10942
Electrochemical devices based on single-component solid oxide bodies.—73-11013
Electromotive force measurement of mullite ceramics as oxygen solid electrolyte.—73-04095
Electromotive force measurement of mullite ceramics as oxygen solid electrolyte.—73-14704
Exploring the feasibility of producing $CeO_2$-SrO-based solid electrolytes.—73-00968
Fracture toughness of doped bismuth oxide electrolytes.—73-09602
Hydroxyapatite particles prepared by electrocrystallization from aqueous electrolytes.—73-05851
Ion-conducting glasses—potential solid electrolytes for dry cell batteries.—73-00983
NaOH production from ceramic electrolytic cell.—73-11040
Physical and chemical properties of the solid electrolytes consisting of $ZrO_2$ stabilized partially with a mixture of $Y_2O_3$-$Yb_2O_3$-$Sc_2O_3$.—73-01009
Properties of solid-state electrochromic cells using $Ta_2O_5$ as electrolyte.—73-14725
Solid electrolyte fuel cells.—73-04234
Solid electrolyte probes for magnesium, calcium, and strontium in molten aluminum.—73-04171
Solid electrolytes on the basis of the $Li_2O$-$La_2O_3$ system.—73-14730
Solid electrolytes on the basis of the $Li_4SiO_4$-$Li_3NbO_4$ system.—73-14731
Solid electrolytes with high ionic conductivity.—73-04172

**electromagnetic properties,**
Effects of additives on electromagnetic properties in EMI noise filters for high-frequency region.—73-04606
Effects of gamma radiation on electromagnetic properties of $YBa_2Cu_3O_x$ by melting texture growth (MTG).—73-11738
Electric field strength/power density and temperature measurements in an electromagnetic field.—73-05043
Electromagnetic wave dispersion in semiconductor-dielectric structures at frequencies below the plasma frequency.—73-04308
Low-frequency electromagnetic losses on high-$T_c$ $YBa_2Cu_3O_{7-\delta}$ superconductors in magnetic fields up to $H_{c1}$.—73-15538
New electromagnetic separators.—73-01477

**electromechanical properties,**
Nonlinearities of the mechanical and piezoelectric coefficients during mechanoelectrical conversion in spark generators.—73-11591

**electron beam,**
Electron-beam surface modification: state of the art (review).—73-10225
Using coherent illumination to extend HRTEM resolution: why we need an FEG-TEM for HREM.—73-05096

**electron diffraction,**
Energy-filtered electron diffraction [ED] from silica thin films.—73-06217

**electron microscopy,**
Advanced electronic material systems: characterization by electron microscopy.—73-06185
Analysis of grain-boundary composition—recent development of analytical transmission electron microscopy.—73-05019
Analytical electron microscopy of thin films and interfaces.—73-13373
Application of automated electron microscopy (AEM) to individual particle analysis.—73-05021
Ceramic materials: microstructural and interface analysis as a prerequisite for the optimization of microstructure: II, High-voltage and high-resolution electron microscopy (HVEM and HREM) for ceramic materials.—73-06191
Design of a hot tensile stage for an ultra-high-voltage electron microscope and its application to in situ deformation of sapphire at 1620 and 1720 K.—73-05036
High-resolution electron microscopy of precycled samples of a sintered silicon nitride.—73-17143
High-resolution electron microscopy on superconducting $YBa_2Cu_3O_7$ thin films.—73-04734
Interest of limiting voluntarily the resolution in HREM studies of materials.—73-06236
Reflection electron microscopy study of thin-film growth.—73-06276
Role of electron microscopy on the research of materials and its future aspects.—73-05083
Sample preparation technique for electron microscopic determination of the structure of glass-ceramics (exchange of experience).—73-08440
Sample tilting mechanism and transfer system for high-temperature thin-film deposition and ultrahigh vacuum photoelectron emission microscopy [PEEM].—73-05085
Surface structure [observation] by ultrahigh vacuum scanning electron microscopy.—73-06295

**electron paramagnetic resonance,**
Electron paramagnetic resonance measurements on activated silicon nitride powders.—73-09114
Process of low-temperature annealing of ceramics [studied] by the method of electron paramagnetic resonance and magnetostatics.—73-05994

**electron probes,**
Electron microprobe techniques for in situ glaze analysis.—73-15794

**electron spectroscopy,**
Analysis of grain-boundary composition—recent development of analytical transmission electron microscopy.—73-05019
Electron spectroscopic analysis of multicomponent thin films with particular emphasis on oxides.—73-06215

**electron traps,**
Deposited silicon nitride with low electron trapping rates.—73-07295
Effects of nitridation temperature on the electron trap characteristics of nitrided-oxide metal-oxide-semiconductor capacitors.—73-07474
Electronic trapping mechanisms in an irradiated single crystal of quartz.—73-08612
Surface electron traps in alkali halide, [gallium arsenide], and metal oxide crystals.—73-16347

**electronic conduction,**
Mixed conduction in ß-alumina-type materials: a critical review.—73-14719
Potential measurements using mixed ionic electronic conductors as probes.—73-01011

**electronic equipment,**
Design, fabrication, and characterization of a hot electron vacuum transistor.—73-11132

**electronic packaging,**
Ceramic package for memory semiconductor.—73-04510
Ceramic packages and ceramic wiring board.—73-11005

Ceramics—their use as microoelectronic packaging materials.—73-04062
Guide hole sleeves for boat transports supporting semiconductor device assemblies.—73-11523
Integrated circuit package.—73-11023
Method of forming oxide isolation.—73-01058
Sintered body of aluminum nitride.—73-04233

**electronic properties,**
Changes in the electronic properties of Si-$SiO_2$ system due to laser irradiation.—73-01093
Electronic and ionic trapping at domain walls in $BaTiO_3$.—73-17078
Electronic conduction in highly anisotropic systems.—73-07320
Electronic properties and their relations to optical properties in rare-earth-doped III-V semiconductors.—73-04313
Electronic properties of low-temperature [LT] InP.—73-14881
Electronic properties of Sb monolayers on III-V(110) surfaces determined by resonance Raman scattering.—73-11189
Implications of the nuclear quadruple frequency in high-$T_c$ cuprates.—73-08100
Submicron InP transferred electron devices.—73-07819
Theory of electronic properties of amorphous silicon-carbon alloys: effects of short-range disorders.—73-16616

**electronic structure,**
Anisotropy of the electronic states around Cu in $Bi_2Sr_2CaCu_2O_{8+x}$.—73-05356
Calculation of the electronic structure of *sp* elements in ß-$Si_3N_4$ with correlation to solubility and solution effects.—73-02154
Current issues in nanoelectronic modeling.—73-16435
Electron density distribution in $CdCr_2S_4$ and $CdCr_2Se_4$ crystals: precise X-ray diffraction study.—73-02254
Electronic and spin state of high-valent iron oxides studied by a DV-Xα cluster method.—73-02258
Electronic structure and bonding in metallocarbohedrene $Ti_8C_{12}$.—73-16132
Electronic structure of a metal-insulator interface.—73-00963
Electronic structure of Bi-Sr-(Ca)-Cu-O systems.—73-05392
Electronic structure of fullerenes and fullerides: artificial atoms and their solids.—73-16134
Electronic structure of rutile ($TiO_2$).—73-13394
Electronic structure of silicon nitride studied by both soft X-ray spectroscopy and photoelectron spectroscopy.—73-13395
Electronic structure of the high-$T_c$ superconductor $Ba_2YCu_3O_{8.9}$.—73-15454
Electronic structure of $Ti_8C_{12}$ cluster.—73-08611
Electronic structure of vanadium oxide clusters in layered perovskite compounds $Sr_{n+1}V_nO_{3n+1}$ ($n$=1, 2, 3).—73-08054
Electronic structure of $YBa_2Cu_3O_{7-x}$ single crystals [studied] by λ-modulation optical technique.—73-15455
Geometric and electronic structure of epitaxial iron silicides.—73-05409
Intelligent materials in electronics.—73-06575
Interband electronic structure of α-alumina up to 2167 K.—73-05423
Relativistically parametrized extended Hueckel calculation of net charges on atoms in $YBa_2Cu_3O_7$.—73-08187
Resonant photoemission determination of the valence electronic structure of $Cr_2O_3$.—73-08723
STM study of the electronic density of states in the superconducting phase of $Bi_2Sr_2CaCu_2O_8$.—73-08207
Surface-induced modifications in the electronic structure of $YBa_2Cu_3O_{7-δ}$.—73-15643
XAS and XPS study of electronic structure of the trivalent cuprate $La_2Li_{0.5}Cu_{0.5}O_{4-δ}$.—73-05525

**electronics,**
Advanced electronic material systems: characterization by electron microscopy.—73-06185
Applications of ceramic superconductors in electronics.—73-07991
Design of 21st-century electron devices with intelligent materials.—73-04544
Electric cells with self-supporting porous ceramic plate.—73-14746
GaAs electronics in the marketplace.—73-07541
Heat flow simulation—the innovative potential of mathematical simulation of heat balances for electronic parts.—73-02615
Market trends in electronic materials.—73-09728
Metallic powders and thick film materials for electronic applications.—73-04136
Overview of U.S. government advanced packaging programs.—73-06585
Pouring on band.—73-01813
Recent development and the outlook for electronic ceramics: surge in electronic materials continues: I.—73-13640
Targeting low-cost high volume MCM [multichip modules] applications.—73-06596

**electrons,**
Breakdown of the semiclassical description of hot-electron dynamics in $SiO_2$.—73-09390
Distribution of electron density in magnetite $Fe_3O_4$ as a result of a precision X-ray diffraction investigation.—73-11651
Nonthermalized distribution of electrons in ps time scale in GaAs.—73-07697
Polaronic conduction of electrons in α-$Mn_3O_4$ slightly doped with Li.—73-12862
Vacuum emission of hot electrons from insulating and semiconducting films.—73-11501
Wigner solid vs incompressible Laughlin liquid: phase diagram derived from time-resolved photoluminescence.—73-08791

**electrooptic properties,**
New materials for optoelectronic devices.—73-07692

**electrooptics,**
Active device and active matrix display having ferroelectric layer as active layer.—73-11630
Electrooptic switching structure on III-V semiconductors using the coherent coupling of radiation modes.—73-14884
Neural computers and networks based on nonlinear optical devices.—73-06583
System and method for producing electrooptic components integratable with silicon-on-sapphire circuits.—73-01447

**electrostatic processes,**
Trends in automatic electrostatic enamel application.—73-00274

**electrostatic spraying,**
Electrostatic spraying: the three-zone model.—73-13833

**elements,**
Atomic radii of the elements.—73-01886
Determination of minor elements in high-purity mullite by acid decomposition associated with a microwave oven/ICP-AES.—73-15787
GRIN elements with large geometry.—73-05825

**ellipsometry,**
Analysis of critical points in semiconductor optical functions from in situ and real-time spectroscopic ellipsometry [SE].—73-16408
Applications of in situ ellipsometry to microwave electron cyclotron resonance plasma processes.—73-07382
Applications of spectroscopic ellipsometry to microelectronics.—73-15778
Broadband spectroscopic ellipsometry based on a Fourier transform spectrometer.—73-12112
$CaF_2$ growth on Si, a-$SiO_2$ [studied] by in situ spectroscopic ellipsometry.—73-17111
Characterization of radiative surface modes and anisotropy in Ag/$SiO_2$ multilayers, by visible and ir ellipsometry.—73-13378
Effect of anisotropy on microellipsometry in the Ti/$TiO_2$ system.—73-13824
Electron cyclotron resonance etching of semiconductor structures studied by in situ spectroscopic ellipsometry.—73-14879
Ellipsometric characterization of hydrogen-rich oxynitride films.—73-16490
Ellipsometric characterization of InP-based quantum well structures.—73-14885
Ellipsometry study of nonuniform lateral growth of ZnO thin films.—73-17132
Extension of spectroscopic ellipsometry to the far infrared.—73-12138
Far-ir spectroscopic ellipsometer.—73-12139
Fastest real-time spectroscopic ellipsometry [RTSE]: applications and limitations for in situ and quality control.—73-15798
Ferrite surface treatments [investigated] by spectroscopic ellipsometry.—73-13397
Hydrogen diffusion and reaction processes in thin films investigated by real-time spectroscopic ellipsometry [SE].—73-17145
In situ ellipsometric study of As capping and low-temperature [LT] molecular beam epitaxy GaAs growth and implications for the low-temperature critical thickness.—73-11264
In situ investigation by ir ellipsometry of the growth and interfaces of amorphous silicon and related materials.—73-13402
In situ real-time ellipsometric study of the growth of rf plasma-deposited amorphous hydrogenated silicon oxynitride thin films.—73-05857
In situ spectral ellipsometry for real-time thickness measurement: etching multilayer stacks.—73-07583
Influence of temperature and pressure on the structure of remote plasma-enhanced chemically vapor deposited $SiO_2$ investigated by spectroscopic ellipsometry.—73-17147
Inhomogeneous transparent optical coatings on transparent substrates [studied] by spectroscopic ellipsometry [SE].—73-12148
Ir ellipsometry of the highly anisotropic materials α-$SiO_2$ and α-$Al_2O_3$.—73-12615
Ir phase-modulated ellipsometer using a Fourier transform spectrometer for in situ applications.—73-12150
Ir spectroscopic ellipsometry: instrumentation and applications in semiconductors.—73-12151
Ir spectroscopy ellipsometry: instrumentation and results.—73-12152
New developments in spectroellipsometry: the challenge of surfaces.—73-15823
Nondestructive characterization of III-V alloy multilayer structures using spectroscopic ellipsometry.—73-15058
Photoellipsometry determination of surface Fermi level in GaAs(100).—73-07719
Photoellipsometry: a modulation spectroscopy method applied to *n*-type GaAs.—73-12174
Polysilicon and SIMOX characterization using spectroscopic ellipsometry.—73-04150
Real-time ellipsometry [study] of the growth of amorphous and microcrystalline silicon thin films combining glow discharge decomposition and uv light irradiation.—73-17191
Real-time monitoring and control during MOVPE growth of CdTe using multiwavelength ellipsometry.—73-15839
Real-time spectroscopic ellipsometry for characterization of nucleation, growth, and optical functions of thin films.—73-15840
Regression calibration method for rotating element ellipsometers.—73-12184
Spectroellipsometry characterization of directly bonded silicon-on-insulator structures.—73-15170
Spectroscopic ellipsometry [SE] characterization of the index profile in inhomogeneous thin films.—73-12196
Spectroscopic ellipsometry [SE] under external excitation.—73-12197
Spectroscopic ellipsometry [SE]: a new tool for on-line quality control.—73-12198
Spectroscopic ellipsometry: a useful tool to determine the refractive indices and interfaces of $In_{0.53}Al_{0.48}As$ and $In_{0.53}Al_xGa_{0.47-x}As$ on InP in the wavelength range from 280 to 1900 nm.—73-15172
Spectroscopic ir ellipsometry of [100]- and [001]-oriented $YBa_2Cu_3O_{7-δ}$ films.—73-11903
Techniques for ellipsometric measurement of the thickness and optical constants of thin absorbing films.—73-12202
Thin epitaxial films of wide gap II-VI compounds studied by spectroscopic ellipsometry.—73-15206
Thin films of transparent electronic materials [studied] by phase-modulated spectroellipsometry.—73-15856

**emission,**
Adsorptive and catalytic flue gas purification of exhaust gases from cement plants: laboratory and small-scale experiments.—73-00017
Atmosphere protection in the glass industry and its relation to new legislation.—73-06558
Directional emissivities of semitransparent media: cases of dihedron, infinite cylinder, and cone.—73-07012
Dry scrubbing: controls kiln emissions.—73-15871
Emission characteristics of metal-oxide-semiconductor electron tunneling cathode.—73-11192
Emission control for ceramic kilns.—73-01948
Emission control on a USA glass fiber furnace.—73-12218
Emission control technology from Sweden.—73-15724
Emission limits of air pollution and their legal background for the glass industry in the 18 EC and EFTA countries with reference to the values in Japan and the U.S.—73-03390
Emission line intensities in an rf sputtering glow discharge system.—73-05788
Emission properties of fused cast refractories in the ir region.—73-00812
Emission spectra and morphology of carbon films by ECR plasma CVD.—73-03141
Eu and Yb excitation mechanisms in ZnS, CaS, SrS, and InP.—73-04331
Findings on blue-emitting luminophore based on (Ba, $Eu^{2+}$)Mg aluminate.—73-02275
Furnace emission challenge to French glassmakers.—73-14388
Influence of optical phonon emission by holes on the hot cw luminescence linewidth.—73-07597
Keeping stack emissions and you within the law.—73-05060
Measurement of angular emissivity of coated flat glass: extension of the angular range up to 85°.—73-14223
Methods for reducing deep level emissions from ZnSe grown by organometallic vapor phase epitaxy.—73-04403
Minimization of $NO_x$ emissions with improved fuel combustion: controlled pulsated combustion.—73-08480
New developments in monitoring particulate emissions.—73-15736
Oxy-fuel firing for emissions control on a container melter.—73-08481
Oxy-fuel firing for emissions control on a fiberglass melter.—73-15888
Piezospectroscopy of screw dislocation emission in CdS.—73-17094
Problems of gaseous emissions of mercury from cement plants.—73-10097
Pump-probe charge-integrating investigation of trap emission kinetics in ultrathin MOS capacitors.—73-04159
RECLAIM [Regional Clean Air Incentives Market]—California's guarantee for cleaner air.—73-17501
Reducing $NO_x$ emissions.—73-03882
Reduction of dioxin in connection with the use of waste-derived fuels in the cement industry.—73-10133
Reduction of emissions and energy consumption in rotary kilns by means of a technology for peak combustion.—73-12238
Regenerative burners and the glass industry.—73-08484
Rise of oxy-fuel system from small to large [glass-melting] furnaces.—73-12241
Sampling of trace constituents in the clean gas coming from rotary cement kilns.—73-00187
Stimulated emission from electron-hole plasmas in MOVPE-grown ZnSe epilayers.—73-07811
Vacuum emission of hot electrons from insulating and semiconducting films.—73-11501
Will a natural gas "cracker" technique reduce $NO_x$ emissions.—73-12246

**emissivity,**
Emissivity as a method of surfaces and thin-film analysis.—73-03142
Relationship of emissivity of refractories to temperature and wavelength.—73-04019
Total emissivities of refractories in vacuum.—73-10777

**emittors/emittance,**
Experimental and theoretical determination of gate-to-emitter stray capacitances of field emitters.—73-11206
Ion-space-charge initiation of gated field emitter failure.—73-12824

**enameled ware,**
Method for increasing chemical resistance of porcelain enamels, especially titanium porcelain enamels: I.—73-10252

**enameling metals,**
Conversion of enameling steels from ingot cast to continuous cast.—73-13812
Enameling of titanium-stabilized steel.—73-00228

**enamels/enameling,**
Adding fishscale-resistant agent to eliminate fishscale in enamelware.—73-03561
Adherence of enamel to steel.—73-03562

Bismuth-containing lead-free glass enamels and glazes of low silica content.—73-03672
Bismuth-containing lead-free glass enamels and glazes of low silica content.—73-14675
Cleanability study of pyrolytic enamels.—73-13808
Comparative examinations of classic bonding oxides in ground coat porcelain enamels: I.—73-10206
Comparative examinations of classic bonding oxides in ground coat porcelain enamels: II.—73-10207
Conversion of enameling steels from ingot cast to continuous cast.—73-13812
Current status of enameling in the U.S.—73-10212
Diagnostics and monitoring for vitreous enameling.—73-10217
Enamel coatings with improved working and aesthetic properties.—73-00226
Enamel–metal bonding strength with different firing cycles.—73-00227
Enameling of titanium-stabilized steel.—73-03585
Enamels for glass and toxicity problems caused by heavy metals.—73-10525
Enamels with crystalline inclusions for use at high temperatures (high-temperature enamels).—73-00229
Flotation reagent as a clay substitute in enamel slips.—73-00234
Increasing the stability of enamel slips for composite coatings.—73-06807
Influence of deformation on the strength of enamel coatings.—73-00241
Interaction of chemical elements in enamel frits.—73-03738
Lead-free enamel compositions for the decoration of low-expansion glass-ceramics.—73-14546
Manipulator for applying powder enamels.—73-08349
Means of raising the quality of white titanium enamels.—73-06817
Method of forming glass having a $Zn_2SiO_4$ enamel layer thereon.—73-10642
Model of hydrogen behavior in enameling-grade steels: I, Theory.—73-03623
Model of hydrogen behavior in enameling-grade steels: II, Application.—73-03624
Opacified enamel for direct-on enameling on unpickled steel plate.—73-10334
Predicting the optimum sizes of fillers in enamel slips.—73-00256
Problems with enameling cast-iron articles.—73-06844
Process for the preparation of a composite structure comprising a ceramic enamel layer and polyurethane layers.—73-10343
Prognosis of optimal size of filler in enamel slips.—73-00260
Recording penetrative defects in glass enamel coatings.—73-00263
Recovering and reusing enamel waste.—73-13893
Recycling and environment protection in the porcelain enamel industry.—73-13641
Relaxation properties of enamel slips.—73-06851
Stressed enamel for easy breaking ampoules.—73-03761
Structure of $CO_3^{3-}$ center in tooth enamel.—73-16335
Trends in automatic electrostatic enamel application.—73-00274
Vitreous or porcelain enamel and enameling steels.—73-03663
X-ray control of white titanium enamel production.—73-06880

**encapsulation,**
Ceramic container.—73-12012
How encapsulation controls drilling in tank bottoms.—73-10736
Microencapsulation: the creation of synthetic fine particles with specified properties.—73-13135

**energy conservation,**
Applying energy-saving technique of water in oil for the glass tank furnace.—73-05101
Comparative study on energy-saving technologies for glass furnaces.—73-03825
Dartington's experience with saving energy.—73-14347
Dutch glassmaker's survey of energy-saving technology.—73-10518
EEC finances energy saving.—73-17475
Effect of energy conservation and environmental control measures on clinker properties.—73-09903
Efficiency in glass quenching.—73-00620
Energy efficiency in the ceramic industry.—73-17476
Energy efficiency of furnaces for firing ceramics.—73-05112
Energy reduction by z-type checker blocks in regenerators.—73-00813
Energy saving in forehearths.—73-15873
Energy savings and the features of unshaped refractories.—73-14590
Energy savings in the brick and tile industry.—73-04916
Energy-saving presses.—73-04917
Energy-saving properties of sol-gel dip-coated indium tin oxide films on a glass pane.—73-00478
Fuel savings in industrial drying operations by the Vapormid process.—73-05117
Heat recuperation system in the Hollohaza Porcelain Factory [Hungary].—73-00910
How increased cullet levels affect energy usage.—73-03849
Minimizing energy consumption in kilns by the SCAP system.—73-05122
New technologies for the rational use of energy in the ceramic industry.—73-04935
New ways of energy management to increase productivity of energy in the [cement] factory.—73-00151
PLM on course to cut energy consumption.—73-14460
Possible ways of energy conservation in cement manufacture.—73-03520
Production of cement requiring low energy expenditure—an industrial test.—73-00171
Rational use of energy in the European Community (EC) glass industry.—73-13639
Reduction of tunnel kiln energy consumption in the brick and tile industry.—73-00772

**energy gap,**
Energy gap and surface structure of $YBa_2Cu_3O_{7-x}$ probed by STM.—73-08058
Image of the energy gap anisotropy in the vibrational spectrum of a high-temperature superconductor.—73-15506
Superconducting energy gap in $Bi_2Sr_2CaCu_2O_8$ observed by high-resolution photoemission spectroscopy.—73-15634
Temperature dependence of the energy gap in $Bi_2Sr_2CaCu_2O_8$ superconductors by high-resolution EELS.—73-08247

**energy,**
Calculation of $4f^65d$ energy levels of $Eu^{2+}$ ion in KX (X=Cl, Br, I) crystals.—73-08560
Covalence corrections on ionic model total energy for $YBa_2Cu_3O_7$.—73-11707
Department of Energy's research and development program for the glass manufacturing industry.—73-07115
Development of experimental energy methods of fracture mechanics for certification of ceramics[—review].—73-08393
Efficient method for calculating quasi-particle energies in semiconductors.—73-04298
Energy characteristics of hydrogen-treated Y-Ba-Cu-O high-$T_c$ superconductors.—73-15456
Energy dependence of $E'$ spin production in X-irradiated vitreous $SiO_2$.—73-06910
Energy transfer in the mechanical alloying process in the collision regime.—73-16762
Energy usage in firing ceramics and melting glass.—73-08471
Environmental and energy issues in the glass industry.—73-07125
Excitation energy transfer of $Nd^{3+}$-$Yb^{3+}$-$Er^{3+}$ in several glasses.—73-03730
Grinding of ceramic materials: a model for energy consumption and force transformation.—73-05827
Impact of energy codes on the glass industry.—73-07141
Influence of energy reflected from the target on thin-film characteristics.—73-05866
Investing for tomorrow—assistance from the EEO.—73-03398
New technologies for the rational use of energy in the ceramics industry.—73-04936
Point defect structures and energetics in Si using an empirical potential.—73-06172
Proof about molecular bearings.—73-16575
Rf-assisted process heating.—73-01969
Spectroscopic and dynamic characteristics of energy transfer of $Nd^{3+}\rightarrow Yb^{3+}$ and $Yb^{3+}\rightarrow Er^{3+}$ in aluminate glasses.—73-03759
Temperature dependence of the binding energy of Wannier-Mott excitons in quantum wells.—73-07829
Useful new indicators for glass-melting tank furnaces.—73-15892

**engineers/engineering,**
Consider a career in technical sales.—73-17472
Is the quality of American students really declining.—73-17491

**engines,**
Ceramic port liners.—73-05204
Gas turbine elements bearing coke inhibiting coatings of alumina.—73-03682
Hard surfacing material for engine components and method for depositing [the] same.—73-10314
High-temperature gasket.—73-02044
High-temperature turbine engine structure.—73-10318
Method of forming tappet of the kind having ceramic seat plate.—73-03694
NASP engine materials/structures update synopsis.—73-13631
Powertrain component with adherent film having a graded composition.—73-03700
Slidable ceramic member and method of manufacturing [the] same.—73-02140
Wrist pin having a ceramic composite core.—73-16024

**enstatite,**
Enstatite ceramics: a multicomponent system via sol-gel.—73-13048
HRTEM study of planar defects and polytypes in $MgSiO_3$.—73-09461
Phase stability of chemically derived enstatite ($MgSiO_3$) powders.—73-16261

**enthalpy,**
Chemical, phase, and enthalpy balance of changes in the preheated batch for Eutal glass: II, Determination of phase and enthalpy changes.—73-00596
Enthalpy of formation of alkali borosilicate glass.—73-00335

**entropy,**
Entropy of mixed state of the superconducting ceramic $Bi_2Sr_2Ca_2Cu_3O_x$.—73-15460
Entropy of $YBa_2Cu_3O_{7-\delta}$ mixed state.—73-01546
Transported entropy in zirconia with 3–12 mol% yttria.—73-06181

**environment,**
California's environmental challenges to glassmakers.—73-10502
Ceramics Transactions, Volume 39: Environmental and Waste Management Issues in the Ceramic Industry.—73-17524
Current trends in environmental protection legislation in the Federal Republic of Germany and in Europe.—73-03388
Drying experience: some thoughts on drying as we move into winter.—73-05110
Ecological balance of cement and concrete—comparison of ecologically relieving and burdening effects on the environment.—73-00069
Environmental and energy issues in the glass industry.—73-07125
Environmental effects on wear and friction of toughened zirconia ceramics.—73-09591
Environmental protection in the glass industry—program of waste management.—73-17477
Environmental protection through and for ceramics.—73-02011
Environmental question in the glass industry.—73-03841
Environmental regulations of the manufacture and use of cement-based products.—73-03466
Green [environmentally conscious] ceramics manufacturing.—73-17485
Influence of environment on strength of ceramics.—73-03316
Local environment of cobalt atoms in borosilicate glasses.—73-00368
Reducing environmental pollution by using fly ash as a raw meal component.—73-03527
Status of R&D project on high-performance materials for severe environments.—73-05276
Variations of water absorption rate and porosity with depths from an exposed concrete surface: effects of exposure conditions and cement type.—73-10190

**epitaxy,**
Analytical and chemical techniques in the study of surface species in atomic layer epitaxy.—73-05020
Atomic layer epitaxy [ALE] in InP using trimethylindium and tertiarybutylphosphine.—73-04244
Atomic layer epitaxy [ALE] of CdTe-ZnTe and CdTe-MnTe superlattices.—73-04245
Atomic layer epitaxy for heterostructures.—73-07386
Atomic layer epitaxy of AlAs and $(AlAs)_m(GaAs)_n$.—73-04246
Atomic level epitaxy of 3C-SiC by low pressure vapor deposition with alternating gas supply.—73-06190
Degree of epitaxy in high-$T_c$ thin films [determined] by Raman spectroscopy.—73-01515
Elemental vapor transport epitaxy [EVTE] of II-VI semiconductors.—73-04316
Growth and characterization of device-quality GaAs produced by laser-assisted atomic layer epitaxy using triethylgallium.—73-04348
Growth of $BaZrO_3$ epitaxial seed layer by magnetron sputtering.—73-13080
Growth of $PbSe_{0.78}Te_{0.22}$ lattice matched with $BaF_2$.—73-05412
In situ generated arsine radicals for gallium arsenide homoepitaxy.—73-04363
Initial stages of epitaxial growth of silicon on Si(100)-2×1.—73-01214
Laser-assisted atomic layer epitaxy of GaP in chemical beam epitaxy.—73-04379
Layer-by-layer epitaxial growth of GaN at low temperatures.—73-05893
Microscopic mechanisms of accurate layer-by-layer growth of beta-SiC.—73-06246
Microscopic theory of epitaxial film growth on vicinal surfaces.—73-05912
Molecular layer epitaxy of GaAs.—73-01251
Real-time optical diagnostics for epitaxial growth.—73-01927
Selected-area epitaxy of CdTe.—73-07790
Surface chemistry and kinetics of GaAs atomic layer epitaxy [ALE].—73-01333
Surface evolution during molecular beam epitaxy deposition of GaAs.—73-07824
Surface photoabsorption study of the laser-assisted atomic layer epitaxial [ALE] growth process of GaAs.—73-04494
Surface reactions in atomic layer epitaxy of GaAs [studied] using trimethylgallium by reflectance difference spectroscopy and mass spectroscopy.—73-01337
Ultrahigh vacuum atomic layer epitaxy of CdTe.—73-04503

**equations,**
Equilibrium-state density profiles of centrifuged cakes.—73-05791

**equilibrium,**
Equilibrium of the protonic species in hydrates of some heteropolyacids at elevated temperatures.—73-00964
Equilibrium parameters of deep bulk levels in InSb.—73-04323
Equilibrium processes in the gas phase during silicon carbide sublimation.—73-12582
Heterogeneous equilibrium between $YBa_2Cu_3O_{7-\delta}$ and oxygen gas studied by a kinetic approach.—73-05414

**equipment,**
Applying spray drying to ceramics.—73-04901
Batch treatment plant for container glass.—73-07109
Ceramics in the equipment for metal transformation—interest in an electroerodable ceramic material.—73-02006
Comparison and selection of two kinds of pneumatic clutches.—73-12119
Creaton chooses Keller equipment for new tile production plant.—73-12122
Fine and ultrafine milling.—73-04921
Ground coats for chemical equipment.—73-13843
J. C. Steele & Sons: Preeminence through excellence.—73-03399
Operational variables of redundant equipment in transport systems.—73-04939
Possibilities of utilization of ceramic techniques in mechanical industries.—73-05177
Responding to the challenge.—73-15754
Speedfam-Spitfire Machine Tool Group: the first in flat part machining.—73-03407
Successful Ceramitec.—73-17505

**erbium oxide,**
Refined crystal structure of $Er_2O_3$.—73-02422

**erbium,**
0.55 μm and 1.55 μm emissions of $Er^{3+}$-doped glasses.—73-14313
1.54-μm photoluminescence of erbium-implanted hydrogenated amorphous silicon.—73-04422
Annealing studies of Er-implanted GaAs and the excitation mechanism of Er in GaAs.—73-04240
Blue upconversion luminescence of $Er^{3+}$ ions in vitroceramics doped with $Yb^{3+}$ under ir excitation.—73-05534
Characterization of $Ca_{1-x}Er_xFe_{2+x}$ solid solution thin films grown on Si(100) substrates.—73-03123
Comparison of threshold energy of selectively excited $YAlO_3$:Er and YAG:Er lasers.—73-08826
Compositional dependence of upconversion luminescence of trivalent erbium ions in fluorozirconate glasses: II, Alkaline-earth fluoride dependence.—73-10423
Controlled atomic spontaneous emission from $Er^{3+}$ in a transparent $Si/SiO_2$ microcavity.—73-16431
Correlation of electrical, structural, and optical properties of erbium in silicon.—73-04277
Distributed Er-doped optical fibers.—73-07013
Effect of the $Er^{3+}$ concentration on the luminescence of $Ca_{1-x}Er_xF_{2+x}$ thin films epitaxially grown on Si(100).—73-04292
Efficiency $Er^{3+}$-doped fluorozirconate fiber amplifier.—73-07020
Electrical and optical properties of Yb-, Er-doped GaAs.—73-04302
Electronic properties of epitaxial erbium silicide.—73-02607
Electronic structure of epitaxial erbium silicide films on Si(111).—73-02261
Er doping in silicon by pulsed laser irradiation.—73-04324
Er luminescence in Si—a critical balance between optical activity and pumping efficiency.—73-04325
$Er^{3+}$-doped silicon prepared by laser doping.—73-04326
Er-doped GaAs for high-speed photoconductor applications.—73-04327
Erbium-doped gallium arsenide: a self-organizing low-dimensional system.—73-04328
Erbium-doped semiconductor thin films prepared by rf magnetron sputtering.—73-04329
Exchange-relativistic interactions and anisotropy of circular magnetooptics in Er and Ho orthoferrites.—73-15323
Excitation and relaxation processes of impact excitation emission of $Er^{3+}$ ions in InP.—73-04337
Features in the acoustic properties of $ErFeO_3$ in second-order phase transitions.—73-07935
Film/substrate thermal boundary resistance for Er-Ba-Cu-O high-$T_c$ thin films.—73-11764
Frequency upconversion in $Er^{3+}$- and $Yb^{3+}/Er^{3+}$-doped silica fibers.—73-00488
Growth of Er-doped Si films by electron cyclotron resonance [ECR] plasma-enhanced chemical vapor deposition.—73-04351
High concentrations of erbium in crystal silicon by thermal or ion-beam-induced epitaxy of erbium-implanted amorphous silicon.—73-04354
Ic compatible processing of Si:Er for optoelectronics.—73-04359
Impact excitation of Er-doped GaAs and the rare-earth sites in III-V compound semiconductors.—73-04360
Lattice location and photoluminescence of Er in GaAs and $Al_{0.5}Ga_{0.5}As$.—73-04380
Luminescence study of the intra-4*f* emissions from GaAs:(Er+O) and $Al_xGa_{1-x}As$:(Er+O).—73-04394
Magnetic and Mossbauer effect study of $Er_2Fe_{17}C_2$.—73-07948
Magnetic properties of $Y_{1-x}Er_xBa_2Cu_3O_{7-\delta}$ compounds.—73-04761
MOCVD erbium sources.—73-04407
MOCVD growth and properties of erbium-doped GaAs.—73-04408
Mode-locking of the 1.66-μm transition of an Er:$YAlO_3$ laser.—73-07676
Negative nonlinear absorption effects in erbium-yttrium aluminum garnets.—73-12839
Neutron spectroscopic evidence for cluster formation and percolative superconductivity in $ErBa_2Cu_3O_x$.—73-15564
NMR of $^{27}Al$ in mixed $Y_xEr_{1-x}AlO_3$ crystals [x=1, 0.93, and 0.9].—73-16229
Optical direct and indirect excitation of $Er^{3+}$ ions in silicon.—73-04428
Origin of photoluminescence from $Er^{3+}$ centers in erbium-doped GaAs and $Al_{0.4}Ga_{0.6}As$ grown by MBE.—73-11369
Oxygen-enhanced 1.54-μm photoluminescence of $Er^{3+}$ in silicon.—73-04433
Photoluminescence study of energy transfer processes in erbium-doped $Al_xGa_{1-x}As$ grown by MBE.—73-04441
Polarized absorption spectra and intensities of $Er^{3+}$ in sodium beta-double-prime alumina crystals.—73-12861
Properties of large area $ErBa_2Cu_3O_{7-x}$ thin films deposited by ionized cluster beams.—73-01642
Rare-earth-doped glass fiber lasers and amplifiers.—73-03810
Red, green, and blue upconversions in erbium-doped fluorozirconate glass.—73-07068
Relation between the $\Omega_6$ intensity parameter of $Er^{3+}$ ions and the $^{151}Eu$ isomer shift in oxide glasses.—73-06963
Spectroscopic properties and mechanisms of excited state absorption and energy transfer upconversion for $Er^{3+}$-doped glasses.—73-06972
Suppression of superconductivity in $Er_{1-x}Ca_xBa_2Cu_3O_y$ by hole doping and pair breaking.—73-15640
Suppression of superconductivity in the $Er_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$ system.—73-15641
Upconversion and local structure of $Er^{3+}$-doped aluminate glasses.—73-03817
Upconversion dynamics of $Er^{3+}$:$YAlO_3$.—73-08787
Uv blue and green upconversion luminescence of $PbF_2$+$GeO_2$:$Er_2O_3$ pumped with 650 nm.—73-05684
**erosion,**
Cavitation-erosion [CE] of plasma-sprayed nickel aluminides.—73-06743
Destruction of refractories by a high-temperature gas stream.—73-00796
Effect of purity on the erosion of sintered alumina.—73-09579
Effects of erodent recycling in solid particle erosion testing.—73-05042
Erosion of an aligned alumina-stainless steel composite.—73-06782
Erosion of glass as modeled by indentation theory.—73-10439
Erosion of some HVOF [high-velocity oxy-fuel] sprayed coatings in fluidized bed circumstances.—73-09526
Erosion resistance of diamond coatings.—73-06783
Fundamental mechanisms of erosion [studied] using Hertzian fracture test.—73-07030
Gage measures hot erosion of insulation.—73-12142
Hydroabrasive erosion characteristics of 30 vol% $SiC_p$/6061-T6-Al composite at shallow impact angles.—73-06802
Influence of nozzle roughness on conditions in a gas-blast erosion rig.—73-06461
Influence of the mass flux and impact angle of the abrasive on the erosion resistance of materials used in pulverized fuel blends and other components in thermal power stations.—73-09622
Sand erosion of ceramics.—73-06515
Solid-particle erosion of in situ reinforced $Si_3N_4$.—73-06525
Specimen diameter, impact velocity, erosion rate, and particle density in a slurry pot erosion tester.—73-08445
Thermal damage by erosion and cracking under pulsed irradiation.—73-05655
**etchants/etching,**
Anisotropic metal oxide etch.—73-01839
Anisotropic titanate etch.—73-01840
Anisotropy of silicon etching in fluorine plasma: phenomenological model.—73-16655
Application of a high-density inductively coupled plasma reactor to polysilicon etching.—73-07381
Bias voltage diagnostics during oxide etch in Drytek 384T.—73-07283
Characteristics of GaAs molecular layer etching [MLE].—73-04905
Characteristics of gas-assisted focused ion beam etching.—73-11097
Characterization of reactive ion etching of glass and its applications in integrated optics.—73-00593
Characterization of selective reactive ion etching effects on δ-doped GaAs/AlGaAs MODFET [modulation-doped field-effect transistor] layers.—73-04266
Chemical etching for fine-grained $YBa_2Cu_3O_{7-x}$.—73-07999
Chemical etching of silicon (100) by hydrogen.—73-16671
Comparative characteristics of plasma-etched GaAs and InP.—73-07418
Comparison between etching in $Cl_2$ and $BCl_3$ for compound semiconductors using a multipolar electron cyclotron resonance source.—73-04272
Creation of deep gap states in Si during $Cl_2$ or HBr plasma etch exposure.—73-07426
Deep trench plasma etching of single-crystal silicon using $SF_6/O_2$ gas mixtures.—73-07435
Determination of the concentration of etching solution components containing nitric and hydrofluoric acids.—73-00947
Dry and wet etching characteristics of InN, AlN, and GaN deposited by electron cyclotron resonance metallorganic molecular beam epitaxy.—73-09074
Dry eching of III-IV semiconductors in $CH_3I$, $C_2H_5I$, and $C_3H_7I$ discharges.—73-07455
Dry etching of CdTe/GaAs epilayers using $CH_4/H_2$ gas mixtures.—73-11146
Dry etching of GaAs and AlGaAs by $Cl_2$ in molecular beam epitaxy system.—73-11147
Dry-process, through-wafer via holes for GaAs power devices.—73-11149
ECR plasma etching of silicon nitride ceramics.—73-05748
ECR plasma etching of silicon nitride ceramics.—73-16720
Electrode material and geometry effects on the formation and electrical properties of particle traps in a plasma etch system.—73-07317
Electron cyclotron resonance etching of semiconductor structures studied by in situ spectroscopic ellipsometry.—73-14879
Electron cyclotron resonance reactive ion etching of fine features in $Hg_xCd_{1-x}Te$ using $CH_4/H_2$ plasmas.—73-07492
Elemental and structural state of the surface layer of silicon and formation of dielectric coatings on it after reactive ion etching.—73-14705
Enhanced etching of Si(100) by neutral chlorine beams with kinetic energies up to 6 eV.—73-04318
Etch mechanism in the reactive ion etching of silicon nitride.—73-02816
Etching investigation of $SiC_w/Al_2O_3$ and Incusil-ABA joints.—73-03586
Etching of nanoscale structures on high-temperature superconductors.—73-11954
Etching of Si with $Cl_2$ using an electron cyclotron resonance source.—73-07511
Etching rate characterization of $SiO_2$ and Si using ion energy flux and atomic fluorine density in a $CF_4/O_2/Ar$ electron cyclotron resonance plasma.—73-09121
Fabrication of deep submicron patterns with high aspect ratio using magnetron reactive ion etching and sidewall process.—73-08337
Fabrication of sub-20-nm trenches in silicon nitride using $CHF_3/O_2$ reactive ion etching and oblique metallization.—73-09133
Identification of the volatile reaction products of the $Cl_2$+GaAs etching reaction.—73-11256
In situ ellipsometry and reflectometry during etching of patterned surfaces: experiments and simulations.—73-07580
Influence of different etching mechanisms on the angular dependence of silicon nitride etching.—73-09173
Influence of mass transfer on homogeneity of etching in a planar reactor.—73-04366
Ion beam etching of GaAs and GaAs/AlGaAs heterostructure probed in real time by spectroscopic ellipsometry.—73-01222
Ion beam etching of metal oxide ceramic.—73-01860
Large radium new etching system using electron beam excited plasma [EBEP].—73-08348
Macrokinetics of the etching of porous glass by alkali.—73-14419
Magnetron reactive ion etching of GaAs in $SiCl_4$.—73-07659
Magnetron-enhanced etching of GaAs.—73-01237
Magnetron-enhanced reactive ion etching of GaAs and AlGaAs using $CH_4/H_2/Ar$.—73-07660
Method of minutely roughening substrate surface by etching.—73-00747
Microwave plasma etching of $Si_3N_4$.—73-16870
New technique for dry etch damage assessment of semiconductors.—73-11350
Plasma etching of structural ceramics for microstructural analysis.—73-12177
Plasma etching of ZnS, ZnSe, CdS, and CdTe in electron cyclotron resonance $CH_4/H_2/Ar$ and $H_2/Ar$ discharges.—73-11395
Plasma etching: an enabling technology for GHz silicon integrated circuits.—73-07736
Postetching of diamond thin films in a hydrogen-oxygen atmosphere.—73-05952
Process optimization of 200-nm-wide trenches in $SiO_2$ using a chemically amplified acid-catalyzed e-beam resist.—73-07353
Radio frequency plasma etching of $Si/SiO_2$ by $Cl_2/O_2$: improvements resulting from the time modulation of the processing gases.—73-02987
Reactive ion etched nanometer size trenches [studied] using a combined scanning electron microscope and scanning tunneling microscope.—73-17190
Reactive ion etching [RIE] of a-SiC:H films using $CCl_4$ and $O_2$ gas mixture.—73-06015
Reactive ion etching of crystalline silicon using $NF_3$ diluted with $H_2$.—73-07762
Reactive-ion-etching-induced damage to $SiO_2$ and $SiO_2$-Si interfaces in polycrystalline Si overetch.—73-07763
Reduction of sidewall roughness during dry etching of $SiO_2$.—73-09300
Remote plasma-etching reactors: modeling and experiment.—73-12186
Review of the chemical reaction mechanism and kinetics for hydrofluoric acid etching of silicon dioxide for surface micromachining applications.—73-14079
Selective and uniform high rate etching of polysilicon in a magnetically confined microwave discharge.—73-13247
Selective etching of YBCO target by ion-plasma sputtering.—73-04803
Selective reactive ion etching [RIE] of phosphorus-doped oxide over undoped $SiO_2$.—73-06031
Surface characterization of GaAs after the reactive ion etching of GeMoW ohmic contact in radio-frequency $SF_6$-$O_2$ plasma.—73-15193
Surface etching and roughening in integrated processing of thermal oxides.—73-01334
Surface processes in digital etching of GaAs.—73-04495
Transformer coupled plasma etch technology for the fabrication of subhalf micron structures.—73-08368
Via hole process for GaAs monolithic microwave-integrated circuit using two-step dry etching.—73-11506
Water vapor controlling selective reactive ion etching of $SiO_2$/Si in $NF_3$ plasma.—73-07859
**ettringite,**
Carbonation of ettringite.—73-00030
Decomposition of synthetic ettringite by carbonation.—73-03448
Formation of ettringite at elevated temperature.—73-06657
Influence of superplasticizer on aqueous phase composition in the $CaO$-$Al_2O_3$-$SO_3$-$H_2O$ system.—73-10013
Mechanism of ettringite and monosulfate formation.—73-10039
Preferred nucleation of secondary ettringite in preexisting cracks of steam-cured cement paste.—73-13763
Relative importance of deleterious reactions in concrete: formation of AAR [alkali aggregate reaction] products and secondary ettringite.—73-10138
Secondary ettringite formation in heat-treated portland cement concrete: influence of different w/c ratios and heat-treatment temperature.—73-03535
Simultaneous presence of alkali-silica gel and ettringite in concrete.—73-06715
Solid solutions of ettringites: II, Incorporation of $B(OH)^{4-}$ and $CrO_4^{2-}$ in $3CaO$-$Al_2O_3$-$3CaSO_4$-$32H_2O$.—73-10155
Stability of ettringite.—73-06719
Time-resolved synchrotron energy dispersive diffraction [EDD] of the dynamic aspects of the synthesis of ettringite during mine packing.—73-00199
**eucryptite,**
Formation mechanism and kinetics of β-eucryptite in $Li_2O$-$Al_2O_3$-$SiO_2$ system.—73-12583
Humidity sensor using porous ceramics $xLi_2O$-$Al_2O_3$-$2SiO_2$.—73-01191
Thermal expansion data: XVI, Complex oxides with stuffed derivatives of silica structures and topaz.—73-12891
**europium oxide,**
Correlation between magnetic and dielectric properties of $EuMn_2O_5$ single crystals.—73-16432

Photomagnetic properties of $Eu_{1-x}Sm_xO$ magnetic semiconductor films.—73-12859
Role of vacancies in the magnetic and magnetooptic properties of Tb-doped EuO and EuS films.—73-04646

**europium,**
$^{151}Eu$ Mossbauer study and role of Eu ions in $Eu_xY_{1-x}Ba_2Cu_3O_{7-y}$ high-$T_c$ superconductors.—73-08064
Anisotropy of thermopower and electric conductivity in single-crystal $EuBa_2Cu_3O$ at hydrostatic pressures up to 12 kbar.—73-07985
Calculation of $4f^65d$ energy levels of $Eu^{2+}$ ion in KX (X=Cl, Br, I) crystals.—73-08560
Comparison of the spectroscopic properties of $Eu^{3+}$-doped silica dried gel, silica gel glass, and conventional silicate glass.—73-10422
Effect of high pressure on electrical properties of europium and ytterbium hexaborides.—73-02580
Effect of Li doping on the superconducting properties of $EuBa_2Cu_3O_7$ by ac susceptibility measurement and Li NMR.—73-04703
Eu and Yb excitation mechanisms in ZnS, CaS, SrS, and InP.—73-04331
Eu site symmetry in $AEu(MoO_4)_2$ (A=Cs or Rb) generating saturated red luminescence.—73-02272
$Eu^{2+}$ in $Y_2O_3S:Eu^{3+}$ and $Y_2O_2S:Eu^{3+}$, $Tb^{3+}$.—73-08618
$Eu^{3+}$-doped luminescence glasses prepared by a sol-gel process.—73-10528
Fluorescence line narrowing study of $Eu^{3+}$ in YSZ: a new direction of research in superionic materials.—73-00971
Fluorescence properties of $Eu^{3+}$ ions doped in several oxide glasses.—73-10441
High-pressure study of photoluminescence [PL] spectra in magnetic semiconductor EuSe.—73-07564
Initial stages of InAs deposition on $SrF_2$-coated $EuBa_2Cu_3O_{7-y}$ thin-film superconductors.—73-11808
Kondo-like anomalies in point-contact characteristics of ferromagnetic $EuFe_2P_2$.—73-07946
Magnetic properties of $Eu_2CuO_4$ single crystals.—73-15338
Measurements on temperature and frequency variation of ac conductivity in a metastable state of europium nitrate crystal.—73-08914
Molecular beam epitaxy of PbTe/EuTe superlattices and their structural investigation by X-ray diffraction using reciprocal space mapping.—73-11336
Polarization-dependent photomagnetic effect in $\alpha$-$Fe_2O_3$:Eu, Ga crystals.—73-04635
Polarized luminescence of $Eu^{3+}$ ions in crystals with the garnet structure.—73-02671
Position and charge state of the Eu impurity in the PbSe lattice.—73-01288
Pressure-induced phase transition by $YVO_4$:$Eu^{3+}$: an emission lifetime study at high pressure.—73-05621
Pressure-induced phase transition in $YVO_4$:$Eu^{3+}$: a luminescence study at high pressure.—73-12660
Relation between the $\Omega_6$ intensity parameter of $Er^{3+}$ ions and the $^{151}Eu$ isomer shift in oxide glasses.—73-06963
Resistive transition in $EuBa_2Cu_3O_{7-y}$ epitaxial thin films.—73-15611
Two valence states of Eu in an $SrS_xO_{1-x}$:$Eu_y$ phosphor.—73-08784
Variation of the electron-spin polarization in EuSe tunnel junctions from zero to near 100% in a magnetic field.—73-16646

**eutectics,**
Wetting properties of W by molten $SiO_2$-MgO-$Al_2O_3$ ternary eutectic composition.—73-00277

**evaporation,**
Component evaporation from lead-bearing glasses.—73-00310
Current status review: filtered arc evaporation.—73-15711
Isothermal evaporation of some components of industrial glasses.—73-00649
Noble gas ion-assisted evaporation of carbon.—73-16882

**excitons,**
Absorption by bound and free excitons in $ZnP_2$-$D_4^8$.—73-07374
Features of temperature dependence of 1A-exciton decay constant in CdS crystal.—73-01164
Improved two-band model for quantum well excitons: asymmetric wells.—73-04362
Long intrinsic radiative lifetimes of excitons in quantum wires.—73-08901
Low dimensionality semiconductors: modeling of excitons via a fractional-dimensional space.—73-07641
Luminescence of a self-trapped exciton in $GeO_2$ crystal.—73-08905
Shift of exciton resonances in the intense pulsed excitation of a CdS crystal.—73-15160

**exhaust gases,**
Catalyst for purifying exhaust gas.—73-02026
Catalysts for the purification of exhaust gas.—73-02027
Exhaust gas cleaner [with ceramic powder layer] and method of cleaning exhaust gas.—73-15943
Exhaust gas filter [with ceramic fiber] and method for making the same.—73-15944
Exhaust gas purifier for methanol-fueled engines.—73-05212
Exhaust gas purifying catalyst and an exhaust gas purifying method using the catalyst.—73-02036
Method for purification of lean-burn engine exhaust gas.—73-12383

**expansion,**
Alkali-silica reaction [ASR]: VIII, Correlation between mortar-bar expansion and $\Delta$ values.—73-00021
Effects of sulfate and expansive clinker contents on expansion time of expansive cement paste.—73-00081
Expansive mechanisms in concrete[—review].—73-09956
High strength, flexible ceramic materials with volumetric and shape stability on heating and cooling.—73-02014
Influence of additives on the expansive stress of quicklime.—73-00110
Influence of hydration degree and pore structure on the expansive stress of nonexplosive demolition agent.—73-10008
Mechanism of sulfate expansion: I, Thermodynamic principle of crystallization pressure.—73-10040
Natural zeolite for preventing expansion due to alkali-aggregate reaction.—73-06692

**explosive processing,**
Explosive pretreatment of $ZrSiO_4$ powder.—73-05797
Internal explosion in laser ablation of superconducting targets.—73-11810
Nonequilibrium crystallization of noncrystalline solids: explosive crystallization modeling.—73-06945

**extraction,**
Application of a mass heat extractor to increase the pull of a forehearth.—73-07107
Hydraulic excavators and wheeled front-end loaders in rock quarries.—73-15729
Method of extracting binders by rubber pressing method.—73-02894
Method of extracting binders by rubber pressing method.—73-13134

**extruders/extrusion,**
Aspects of forming ceramic bodies by the molding process.—73-01762
Designing an extruder with allowance for the properties of ceramic extrusion compounds: III.—73-12021
Designing an extruder with allowance for the properties of ceramic extrusion compounds: IVb.—73-12125
Designing an extruder with allowance for the properties of ceramic extrusion compounds: Va.—73-12126
Directional growth of extruded $YBa_2Cu_3O_{7-x}$ superconductors.—73-15421
Dome-shaped extrusion dies.—73-12076
Extrusion machines for plastic forming of ceramic bodies.—73-01781
Extrusion properties of clay.—73-07191
Extrusion through a great cross-section area.—73-03978
Fabrication and properties of superconducting wire formed by extruding method.—73-04722
Fabrication of alumina sheets by extrusion.—73-02823
Laboratory measurement extruder—experimental equipment for the design of ceramic extruders.—73-12156
Microstructure and properties of extruded SHS materials.—73-17163
Relations between worm rotating speeds and relative parameters of extruders.—73-08361
Technological fundamentals of SHS extrusion.—73-17051

**fabrication,**
Active silica in porcelain production.—73-00892
Carborane-based inhibitors for carbon-carbon composites.—73-12418
Characteristic dispersion frequencies of resonance-type soft mode system of lead titanium oxide in far infrared.—73-02555
Characteristics of masonry cement produced at 975°C in fluidized bed boiler.—73-06636
Commissioning and operation of Universal Cement's Ta-Fu gypsum board plant.—73-03445
Dry-process, through-wafer via holes for GaAs power devices.—73-11149
Fabrication and characterization of ß-SiAlON components from polymeric precursors.—73-05798
Fabrication and mechanical properties of $C_f$/NiAl and $SiC_w$/NiAl composites.—73-03587
Fabrication of ceramic heat exchanger cores by doctor blade process.—73-05801
Fabrication of dense ß, ß´´-alumina ceramics by reaction sintering.—73-16773
Fabrication of giant redware pot with loop handle.—73-10838
Fabrication of internally burned tiles.—73-10681
Fabrication of movable artificial eye seat of hydroxyapatite bioceramics.—73-08515
Fabrication of porcelain ware for microwave ovens.—73-10843
Fabrication of yttrium iron garnet using a front-loading hot-press furnace.—73-16779
Fiber-based ceramic materials.—73-04002
Knowledge-based decision support systems for rapid and efficient production planning in CMC fabrication.—73-15733
Low-temperature fabrication of anorthite ceramics.—73-05899
Manufacture of cement–unused fly ash bricks without firing or steam curing.—73-06683
Method for fabrication of a carrier body of aluminum nitride.—73-12482
Method of producing $YBa_2Cu_4O_x$-type superconducting metal oxides.—73-11978
Nanoscale engineering of metal/semiconductor interfaces.—73-07686
Net-shape fabrication of Y-TZP ceramic through a statistically designed experiment.—73-09220
New routes for fabricating ceramic materials.—73-13150
Powder mixture for monolithic refractories containing graphite and a method of making thereof.—73-00889
Principles and applications of sol-gel method: network formation and phase separation processes.—73-07164
Process for preparing an impermeable carbon fiber-reinforcing type of composite material.—73-02124
Process for producing a denitration catalyst.—73-12397
Process for producing a high-temperature superconductor containing bismuth, strontium, calcium, and copper.—73-01733
Process for producing an elongated superconductor.—73-01735
Producing large sapphire for optical applications.—73-08521
Production and properties of zirconia ceramics.—73-02018
Production of lime-slag cement based on wastes of a metallurgical plant.—73-13767
Production of $ZrO_2$ by use of plasma technique and its application.—73-16959
Quantum leap in cup technology.—73-04047
Quartz optical waveguide and method for producing the same.—73-00760
Rainbow ceramics—a new type of ultra-high-displacement actuator.—73-04569
SiAlON type sintered bodies and method of producing the same.—73-02133
Six-axis-controlled nanometer-order positioning stage for microfabrication.—73-15848
Stable zeolite of low unit cell constant and method of making [the] same.—73-02069
Technical ceramics for refractory applications.—73-04021
Using rocks in ceramic production.—73-02000

**failure,**
Behavior of ceramic matrix fiber composites under longitudinal loading.—73-03240
Determination of defect distributions for use in failure theories of load-bearing ceramics.—73-17276
Effect of proof testing on the failure probability of multiaxailly loaded ceramic components.—73-17292
Failure mechanisms in mission-cycled carbon-carbon composites under flexural load at room and elevated temperatures.—73-17315
Failure modes of ceramic elements with ring-crack defects.—73-17316
Failure of glass during intensive pulsed action.—73-00479
Failure of glass insulators in electric connectors.—73-00480
Inherent fallacy in composite interaction failure curves.—73-09624
Ion-space-charge initiation of gated field emitter failure.—73-12824
Life-assessment technology for power-plant components.—73-13559
Microstructural observations on the failure modes of a unidirectional carbon-carbon composite.—73-13422
Numerical evaluation of failure theories for brittle materials.—73-17407
Predicting the life of high-temperature structural components in power plants.—73-13579
Probabilistic failure predictions in ceramics and ceramic matrix fiber-reinforced composites.—73-17416
Statistics of brittle failure in multiaxial stress states.—73-03355
Thermal shock behavior of ceramics: probabilistic predictions of failure and damage.—73-05665

**Faraday effect,**
Photoinduced thermal Faraday rotation in semimagnetic semiconductors.—73-07722
Transverse Faraday effect in crystal with birefringence inversion (CdS).—73-02718

**fatigue,**
Behavior of mirrorlike region of sintered $Si_3N_4$ under rotary bending and static fatigue.—73-06328
Bending fatigue behavior of unidirectionally reinforced SCS6/Ti-15-3.—73-03241
Beneficial effects of cyclic tensile loading on fatigue resistance of an $Si_3N_4$.—73-17241
Comparison of tensions and flexure to determine fatigue life prediction parameters at elevated temperatures.—73-17252
Crack size effect on crack propagation behavior and experimental verification of cyclic fatigue mechanism of sintered silicon nitride.—73-13498
Cyclic thermal shock in SiC whisker-reinforced alumina and in other ceramic systems.—73-05539
Determination of fatigue parameters of sodium calcium silicate glass on measurement of strength by different methods.—73-00446
Determination of the fatigue parameters of soda-lime-silicate glass in measurement of strength by different methods.—73-00447
Effect of humidity and cyclic loading condition on fatigue behavior of silicon nitride.—73-17288
Effects of crack size on fatigue behavior in silicon nitride.—73-06393
Electric fatigue in lead zirconate titanate ceramics.—73-04548
Evaluation of fatigue behavior of ceramics toughened by grain bridging mechanisms.—73-17308
Evaluation of tensile static, dynamic, and cyclic fatigue behavior for a HIPed silicon nitride at elevated temperatures.—73-06408
Fatigue behavior of a Saffil-reinforced aluminum alloy (AA6061).—73-03287
Fatigue behavior of nonoxide ceramics at elevated temperature.—73-06414
Fatigue behavior of sintered $Al_2O_3$ under rotary bending and static fatigue.—73-17318
Fatigue behavior of sintered $Si_3N_4$ under rotary bending and static fatigue.—73-06415
Fatigue behavior of structural ceramics.—73-06416
Fatigue behavior of tetragonal polycrystals containing 4 mol% $Y_2O_3$.—73-03288
Fatigue crack propagation in SiC-continuous-fiber-reinforced Ti-6Al-4V alloy metal-matrix composites.—73-03290
Fatigue damage development in $Al_2O_3$/Al composites.—73-03291
Fatigue damage in SiC/CAS composites.—73-03293
Fatigue mechanisms in graphite/SiC composites at room and high temperature.—73-06419
Fatigue of thick thermal barrier coatings [TTBC's].—73-10230
Fraction and fatigue of a Nicalon/CAS continuous-fiber-reinforced glass-ceramic matrix composite.—73-03295
Fully reversed fatigue of a Ti MMC.—73-10234
High-temperature fatigue properties of silicon nitride in nitrogen atmospheres.—73-06452

Indentation fatigue: a simple cyclic Hertzian test for measuring damage accumulation in polycrystalline ceramics.—73-15805
Lifetime prediction for ceramics under elevated temperature with static fatigue.—73-06469
Mechanical and environmental factors in the cyclic and static fatigue of silicon nitride.—73-09631
Size effect on fatigue behavior in structural ceramics.—73-09670
Size effect on fatigue behavior in structural ceramics.—73-17431
Static fatigue in ceramic materials: influences of an intergranular glassy phase and fracture toughness.—73-17433
Statistical analysis of lifetime predictions for ceramics exhibiting a transition in fatigue crack growth behavior.—73-06526
Statistical analysis of the fatigue life distribution of monolithic silicon nitride.—73-06527
Statistical theory of fatigue in ferroelectric devices.—73-11619
Tensile and fatigue fracture behavior and water–environment effects in an SiC-whisker/7075-aluminum composite.—73-03361
Thermal fatigue and subcritical crack growth in ceramics.—73-05658
Thermal fatigue behavior of actively cooled divertor mockups with fiber composites as plasma interactive material.—73-05659
Thermal fatigue behavior of alumina ceramics by water quenching method.—73-13603
Thermal fatigue characteristics of functionally gradient materials [FGM's] for aerospace applications.—73-03653
Thermal fatigue life prediction of alumina by finite difference model.—73-08989
Thermal fatigue of engineering ceramics.—73-05660
Thermal fatigue of glass.—73-03815
Time-dependent reliability analysis of monolithic ceramic components using the CARES/LIFE integrated design program.—73-17446
Value of ASTM to the commercial fatigue testing laboratory and its customers.—73-06597

**faujasite,**
$^{129}$Xe NMR study of faujasite zeolites of varying Al content.—73-12733
Cation site energies in dehydrated hexagonal faujasite (EMT).—73-12545
Semiempirical approach to determination of framework aluminum content in faujasite-type zeolites by X-ray powder diffraction.—73-08729
Solid-state and catalytic characterization of intergrown zeolite structures based on six-membered rings.—73-08733
Structural characterization of a dehydrated magnesium/sodium beryllophosphate faujasite phase.—73-12697

**feeding apparatus,**
Metered feeding of fly ash and [cement] additives with the URW [Universal Rotor Weighfeeder].—73-10042
Method of feeding glass batch to a glass-melting furnace.—73-00745
UK installation of continuous feed system for dosing wet glass fiber.—73-15758
Use of platinum in glass feeder systems.—73-14526

**feldspar,**
AKW kaolins and feldspars for the [European] ceramic industry.—73-01977
Apatite in feldspars may be critical for glass quality.—73-14322
Densification process of pottery body for building construction: IV, Effect of particle size of feldspar on densification.—73-05734
Diagenetic K-feldspar textures: a TEM study and model for diagenetic feldspar growth.—73-15900
End-member feldspar concentrations determined by FTIR spectral analysis.—73-12579
Feldspar.—73-12271
Feldspathic sand as raw material for porcelain.—73-01981
Internal textures and chemical compositions of anti-rapakivi mantled feldspars from the Oki-Dogo Island, Japan.—73-15906
Tetrahedral-site occupancies in sodium aluminum-gallium feldspar solid solutions [Na(Al$_{1-x}$Ga$_x$)Si$_3$O$_8$].—73-02520

**Fermi surface,**
de Haas-van Alpen effect and Fermi surface of $YBa_2Cu_3O_{6.97}$.—73-11721
Electronic structure and the Fermi surfaces of antiferromagnetic $NdB_6$.—73-02259
Fermi surface and transport properties of $YBa_2Cu_4O_8$.—73-11763
Thermodynamic evidence for a density-of-states peak near the Fermi level in $YBa_2Cu_3O_{7-y}$.—73-08255

**ferric compounds,**
Coating of ferric oxide particles with silica by hydrolysis of TEOS.—73-02748
Coating of ferric oxide particles with silica by hydrolysis of TEOS.—73-10508
Spin-glass behavior in amorphous $BiFeO_3$.—73-11674

**ferrites,**
Adsorption of sulfonic acid doped poly(vinyl chloride) on barium ferrite particles.—73-01448
Anionic vacancy distribution in reduced barium-lanthanum ferrites: $Ba_xLa_{1-x}FeO_{3-x/2}$ ($1/2 \le x \le 2/3$).—73-03121
Appearance of competing magnetic anisotropy in nonmagnetic substitutions of 3*d* ions in [rare-earth] orthoferrites.—73-01449
Application of Mn-Zn ferrite with fine grain size to magnetic heads.—73-04590
Behavior of residual magnetization of gadolinium ferrite garnet sublattices near compensation point.—73-15307
Bulk magnetic properties of tetravalent silicon substituted in copper ferrite.—73-07926
Cation distribution in the Mn-Zn ferrites using Mossbauer effect.—73-05366
Cation distribution investigation of the system $Li_{0.5}Fe_xGa_{2.5-x}O_4$ by X-rays, electrical conductivity, and Mossbauer studies.—73-16045
Cation distribution of $ZnFe_2O_4$ fine particles studied by neutron powder diffraction.—73-08561
Characterization of perovskite-type $GdFeO_3$ powders prepared by amorphous citrate process.—73-08571
Color change of ferrite phase.—73-09857
Comparative study of the ferrite phase in high-iron cements with pure $C_2A_xF_{1-x}$ by Mossbauer spectrometry.—73-00045
Composition dependence of discontinuous magnetization in Li-Ti ferrites.—73-15309
Core losses of Mn-Zn ferrites with fine grain size.—73-04596
Coupled oscillations of iron, rare-earth, and elastic subsystems in orthoferrites with Kramers rare-earth ions.—73-04597
Crystal and magnetic structures of $Ca_2Cr_{0.5}Fe_{1.5}O_5$ at 2.1 K.—73-02174
Crystal structure and spin-glass behavior in R-type $BaFe_{6-2x}Sn_{2+x}Co_xO_{11}$ ($x$=1.1) hexagonal ferrites.—73-02183
Crystal structure of a new quaternary ferrite: $Ba_{12}Fe_{28}Ti_{15}O_{84}$.—73-02187
Crystal structure of aluminum-calcium ferrite phase with variable composition of $CaFe_3AlO_7$ type.—73-02188
Defect study by HREM of the hydrated sodium β″-alumina-like ferrite and derived (Li, Zn) spinel ferrite.—73-01451
Delta-H plot evaluation of remanence behavior in barium ferrite tapes and disks.—73-04603
Determination of the minimum concentration of ferrofluid of $CoFe_2O_4$ required to orient liquid crystals.—73-07931
Dielectric behavior of mixed lithium-zinc ferrites.—73-02567
Discontinuous grain growth and the grain boundary in a solid-solid reaction growth method for ferrite single crystals.—73-01452
Effect of indirect and direct exchange interactions on magnetic structure of $CuFe_2O_4$ and $CuFeCrO_4$ ferrites.—73-15317
Effect of porosity on magnetic and electrical properties of lithium ferrite.—73-15319
Effects of CaO and $SiO_2$ addition on microstructure and intrinsic coercivity [iHc] of sintered Sr ferrite.—73-01456
Effects of cation distribution on magnetic properties in cobalt ferrite.—73-07933
Effects of the substrate temperature on the properties of Ni-Zn-Cu ferrite thin films deposited by rf magnetron sputtering.—73-01457
Elastic and magnetoelastic properties of $PbFe_{12}O_{19}$ single crystals.—73-16470
Electrical and magnetic properties of $Zn_xCa_{1-x}Fe_2O_4$ ($x$=0–1).—73-05554
Electrical properties of Y-type hexagonal ferrite.—73-15320
Electromagnetic properties of Mn-Zn ferrite single crystal with small variation of $Fe_2O_3$ concentration.—73-15321
Erasure and noise study in barium ferrite tape media.—73-04610
Exchange-relativistic interactions and anisotropy of circular magnetooptics in Er and Ho orthoferrites.—73-15323
Exchange-relativistic interactions and magnetooptical properties of orthoferrites.—73-01459
Experimental evidence for Harper-Dorn creep in Mn-Zn ferrite.—73-17314
Fabrication of ferrite films using laser deposition.—73-15377
Faraday effect and magnetic moment dynamics in holmium ferrite garnet in superstrong magnetic field.—73-15325
Features in the acoustic properties of $ErFeO_3$ in second-order phase transitions.—73-07935
Features of cation distribution in aluminum-substituted barium hexaferrites.—73-16147
Ferrite microstrip antenna.—73-15378
Ferrite powders obtained by retreatment of metallurgic wastes.—73-01461
Ferrite surface treatments [investigated] by spectroscopic ellipsometry.—73-13397
Field-induced commensurate intermediate phases in helimagnet $(Ba_{1-x}Sr_x)_2Zn_2Fe_{12}O_{22}$ ($x$=0.748).—73-07937
Flying type composite magnetic head having Mn-Zn ferrite core.—73-01486
Formation of cobalt ferrites in glasses based on potassium aluminoborate systems.—73-00344
Formation of cobalt ferrites in glasses based on potassium aluminoborate systems.—73-00345
Formation reaction of Mn-Zn ferrite by wet process.—73-09144
Frequency dependence of the ferromagnetic resonance linewidth and effective linewidth in manganese-substituted single-crystal barium ferrite.—73-01463
Glass-ferrite coatings on ceramics.—73-00495
Grain-boundary microstructure and magnetic properties of low-temperature-fired Ni-Zn-Cu ferrite.—73-11655
Granulation of barium ferrite in the fluidized bed.—73-11656
High uniaxial magnetic anisotropy in epitaxial $(Dy,Bi)_3(Fe,Ga)_5O_{12}$ films.—73-01464
High-field effective linewidth and eddy current losses in moderate conductivity single-crystal M-type barium hexagonal ferrite disks at 10–60 GHz.—73-07938
High-temperature microwave response of industrial ferrites.—73-05577
Humidity-sensitive electrical response of sintered $MgFe_2O_4$.—73-16509
Hydrothermal synthesis of barium ferrite fine particles from goethite.—73-13092
Hyperfine interactions and magnetic studies of $Li_{0.5-0.5x}Mg_xFe_{2.5-0.5x}O_4$.—73-01466
Hyperfine interactions in ordered lithium ferrite: NMR investigations with diamagnetic substitution and hydrostatic compression.—73-08639
Identification of hydration reactions through stress induced by volume change: II, $C_4AF$ systems.—73-03481
In situ use of gelation or an aminodextran in the preparation of uniform ferrite particles.—73-01487
Influence of $Cu^{2+}$ ion on magnetic moment and Curie temperature of $Zn_2$-X hexaferrites.—73-07941
Influence of Fe substitution by R ions in an Ni-Zn ferrite.—73-15329
Influence of heat-treatment temperature on microwave absorbing properties of Ni-Zn ferrite.—73-04616
Influence of oxygen partial pressure on the shape of the *B-H* curve for Mn-Zn ferrites.—73-15330
Influence of process parameters on power loss minimum versus temperature of Mn-Zn ferrites.—73-11657
Initial permeability of polycrystalline MnZn ferrites: the influence of domain and microstructure.—73-07943
Inner stress induced by Cu metal precipitation at grain boundaries in low-temperature-fired Ni-Zn-Cu ferrite.—73-14711
Interpretation of stresses in the glass-bonded ferrites by Vickers indentation method.—73-13557
Laminated magnetic record/playback head with thin films of high permeability material spaced apart by very thin films of insulating magnetic material for high bit densities and data transfer rates.—73-01488
Local structure analysis of $ZnFe_2O_4$ by extended X-ray absorption fine structure.—73-16198
Low-temperature-sintered ferrite for multilayer chip components.—73-11658
Magnesium location in the barium-magnesium-iron Y-type hexagonal ferrite.—73-07947
Magnetic and biomagnetic films obtained by ferrite plating in aqueous solution.—73-13126
Magnetic anisotropy of microcrystals of cobalt ferrite in a glass matrix.—73-01468
Magnetic anisotropy of microcrystals of cobalt ferrite in the matrix of a glass.—73-00370
Magnetic behavior of magnetite and cobalt ferrite particles in magnetic fluid and their local structure analysis using EXAFS.—73-15333
Magnetic carrier particles.—73-04664
Magnetic encoder having a magnetic recording medium containing barium ferrite.—73-11675
Magnetic head with suppressed generation of pseudogap.—73-11676
Magnetic head.—73-04665
Magnetic properties and domain structure of strontium ferrite particles.—73-04620
Magnetic properties and residual stress developed in Mn-Zn ferrite bonded with glass.—73-11660
Magnetic properties of $BaFe_{12-2x}Co_xSn_xO_{19}$ prepared by coprecipitation annealing.—73-04621
Magnetic properties of $Co_xFe_{3-x}O_4$ during conversion from normal to inverse spinel particles.—73-04622
Magnetic properties of ferrite microparticles in borate glasses.—73-15339
Magnetic properties of the two-dimensional antiferromagnets $RFe_2O_4$ (R=Y, Er) at high pressure.—73-07955
Magnetic properties of $TmFeO_3$ and $TmGa_{0.13}Fe_{0.87}O_3$ orthoferrites.—73-15342
Magnetic property and chemical reaction in the interface of ferrite and glass.—73-11664
Magnetic relaxation enhancement effects of Mossbauer line shapes in Ni-Zn-Co ferrite system.—73-04624
Magnetic resonance in the vicinity of spin reorientation in $NdFeO_3$.—73-01471
Magnetoelastic waves in orthoferrites with non-Kramers rare-earth ions.—73-07964
Manganese zinc ferrite single crystal growth by continuous crystal growing method.—73-01472
Manufacturing of ferrite-base abrasives for magnetic-electrolytic polishing and its finishing characteristics.—73-06608
Method for investigating the reversal properties of isolated barium ferrite fine particles utilizing magnetic force microscopy (MFM).—73-05066
Method of making a [ferrite] vertical recording head for contact and near contact magnetic recording.—73-15381
Method of manufacturing ferrite crystals.—73-04667
Microstructure of Co ferrite films and Co ferrite/Zn ferrite double layered films prepared by plasma-enhanced MOCVD.—73-06258
Microwave sintering of Ni-Zn ferrites.—73-04627
MnZn ferrite preparation by coprecipitation method.—73-11666
Modification of ferrite products using additives derived from aqueous salt solutions.—73-01474
Mossbauer and magnetization studies of nickel ferrites.—73-04628
Mossbauer and magnetization study of cobalt ferrite aluminates.—73-04629
Mossbauer spectroscopic studies of glass-ceramics with hexagonal barium and strontium ferrites.—73-00669
Mossbauer study of Co-Zn ferrites prepared by coprecipitation techniques.—73-07966
Mossbauer study on the distribution change and charge conversion of cations in $CoFe_2O_4$.—73-07967
Nature of centers of domain wall fixing in nonstoichiometric ferrite-garnet films.—73-01475
NMR study of magnetic structure of $Tb_xY_{3-x}Fe_5O_{12}$ garnets [$x$=0.1, 0.26].—73-15351
Orthogonal magnetic "impurity" ($Fe^{3+}$ in *c* positions) in orthoferrite $YFeO_3$.—73-07968
Oscillation spectrum of asymmetric domain walls in ferrite-garnet films.—73-07969

Permanent magnets attract more power.—73-07970
Permanent magnets—Nd-Fe-B and ceramic hard ferrites continue to grow.—73-15356
Phase cooperation between the $ZnFe_2O_4$ and $\alpha$-$Fe_2O_3$ phases of ferrite catalysts in the oxidate dehydrogenation of *n*-butenes.—73-02373
Physicochemical properties of ferrite powder modified by iron hydroxide.—73-05948
Preparation and characterization of thin films of M-type barium ferrite on microcrystalline carbon substrates with diffusion barrier sublayers.—73-04636
Preparation and magnetic properties of monodispersed Zn ferrites of submicrometric size.—73-07971
Preparation and microwave absorbing characteristics of Ni-Zn ferrite composite.—73-01479
Preparation and properties of polycrystalline monovalent-cation ß''-ferrites.—73-04637
Preparation of fine-grained high-$\mu$ ferrites by spray-roasting nitrate solutions.—73-11669
Preparation of metal-substituted hexagonal barium ferrite with organic precipitant method.—73-05975
Preparation of nanocrystalline $LaFeO_3$ using a stearic acid-sol method.—73-13197
Preparation of Ni-Zn ferrite thin films by ICP flash evaporation method.—73-15360
Preparation of NiZn ferrite films by spin-spray ferrite plating on oxygen-plasma-treated substrates.—73-04638
Preparation of oxygen excess $SrLaFeO_{4+\delta}$ and its electrical and magnetic properties.—73-11670
Preparation of Sr ferrite magnets by the new annealing–remilling process.—73-07972
Preparation of Sr ferrite magnets by the new annealing–remilling process.—73-15361
Propagation characteristics of a ferrite image guide.—73-04640
Properties of epitaxial Ba hexaferrite thin films on *A*-, *R*-, and *C*-plane-oriented sapphire substrates.—73-04642
Properties of hexaferrite $Co_2Y(Ba_2Co_2Fe_{12}O_{22})$ prepared by coprecipitation method.—73-04643
Pyroelectric properties of $Ni_{0.65}Zn_{0.35}Cu_xFe_{2-x}O_4$ ferrites for thermoelectric energy conversion.—73-11609
Quadrupole effects and magnetic anisotropy in the NMR spectra of Jahn-Teller $Mn^{3+}$ ions in lithium ferrite.—73-04644
Quantitative X-ray phase analysis of polycrystalline ferrite-garnet films.—73-16285
Recording characteristics of acicular barium ferrite particulate medium with perpendicular magnetic anisotropy.—73-04645
Remagnetization dynamics of ferrite-garnet films with weak uniaxial anisotropy.—73-01480
Research on $C_2A_xF_{1-x}$ in iron-rich fluoroaluminate cement.—73-06711
Resonance absorptions in $KFe_{11}O_{17}$.—73-16295
Science and technology of composite materials—ferrite materials.—73-07976
Shape of the pulsed remagnetization curve of ferrite-garnet films.—73-01481
Signature of linear (Bulaevskii-Ginzburg) domain walls near $T_c$ of Ba hexaferrite.—73-04650
Sintered ferrite materials and chip parts.—73-11678
Sintering of MnZn ferrites of large cross section.—73-11672
Site preference for $Zn^{2+}$ and $Ge^{4+}$ in mixed ferrite $Zn_xGe_{1-x}Fe_2O_4$.—73-04651
Solid-phase reaction for preparing strong magnetic ferrites by pulsed loading.—73-04652
Spin-glass behavior of the system $CoFe_{2-x}Ga_xO_4$.—73-05486
Structural characterization of polycrystalline Ga-substituted magnesium ferrites ($MgFe_xGa_{2-x}O_4$) and zinc ferrites ($Zn(Fe_xGa_{2-x}O_4)$.—73-07977
Structure-property relationships in M-type hexaferrites: hyperfine interactions and bulk magnetic properties.—73-04657
Sulfoferrite cements.—73-13784
Synthesis and structure of $Sr_2FeO_4$.—73-02493
Synthesis of barium hexaferrite superfine powder by means of the glass crystallization technique.—73-03042
Synthesis of crystalline zinc ferrite near room temperature.—73-17037
Synthesis of nanosized barium ferrite particles using an inorganic dispersing phase.—73-04659
Thin films of barium ferrite with perpendicular magnetic anisotropy produced by laser ablation deposition.—73-01483
Thin-film {ferrite} magnetic head.—73-15382
Vickers hardness anisotropy in $RFeO_3$ (R=Yb, Dy) single crystals.—73-07981
Weak ferrimagnetism in neodymium ferrite chromites.—73-01484
X-ray, transport, magnetic, Mossbauer, and catalytic studies of the system $Zn_{1-x}Cu_xMnFeO_4$.—73-08796
XRD study of cation distribution in the Mn-Zn ferrites.—73-12736
XRD study on the structures of ferrites: hematite, Ba ferrite, and $Zn_2Y(Ba_2Zn_2Fe_{12}O_{22})$.—73-12737
ZnO precipitation during sintering of Ni-Zn ferrite used for the substrate of thin-film heads.—73-01485

**ferroelastic materials,**
Calculation of nonlinear optical constants of single crystals of ferroelectrics and ferroelastics.—73-01392
Elastic energy release due to domain formation in the strained epitaxy of ferroelectric and ferroelastic films.—73-11567
X-ray and optical study of $KSc(MoO_4)_2$ ferroelastic.—73-02542

**ferroelectric materials/ferroelectrics,**
90° wall in the tetragonal phase of $BaTiO_3$-type ferroelectrics.—73-07901
Acoustic emission in ferroelectric lead titanate ceramics: origin and recombination of microcracks.—73-15248
Active device and active matrix display having ferroelectric layer as active layer.—73-11630
Advances in dielectric ceramics.—73-14678
Calculation of nonlinear optical constants of single crystals of ferroelectrics and ferroelastics.—73-01392
Ceramic Transactions, Volume 43: Ferroic Materials: Design, Preparation, and Characteristics.—73-17523
Charge trapping centers in ferroelectric ceramics.—73-04540
Compositional effect on the liquid-phase formation in lead iron tungstate ferroelectric ceramics.—73-15252
Compositional instability and the resultant charge variations in mixed B-site cation relaxor ferroelectrics.—73-07928
Compositional ordering and phase transitions in $Pb(Yb_{0.5}Nb_{0.5})O_3$.—73-07871
Critical behavior of specific heat in ferroelectric $K_2ZnCl_4$ and $(NH_4)_2BeF_4$ at normal-incommensurate phase transition.—73-07875
Dc leakage currents in ferroelectric memories.—73-11558
Destruction of ferroelectric ceramics in electric and stress fields.—73-15255
Dielectric properties of ferroelectric ceramic material in the system $SrTiO_3$ ($K_{0.5}Bi_{0.5}$)$TiO_3Bi_2O_3$·$3TiO_2$ at low frequencies: I, Dielectric constant, dissipation factor, temperature, and frequency characteristics of capacitor.—73-11562
Diode with a ferroelectric cathode.—73-07881
Domain wall clamping in ferroelectrics by orientation of defects.—73-01404
Elastic energy release due to domain formation in the strained epitaxy of ferroelectric and ferroelastic films.—73-11567
Electrical and optical properties of chemically derived ferroelectric films.—73-11571
Electrical state and surface composition of the $PbMg_{1/3}Nb_{2/3}O_3$ single crystal.—73-07886
Equilibrium size of domains in ferroelectric ceramics.—73-01409
Ferroelectric memory programs in Canada.—73-11574
Ferroelectric optical image comparator.—73-04578
Ferroelectric $Pb(Mg,Nb)O_3$ ceramics with various Mg/Nb ratios.—73-01412
Ferroelectric thin coatings.—73-11577
Ferroelectric thin films for electronic applications.—73-01414
Ferroelectric thin-film research in France.—73-11578
Forced translational vibration of 90° domain walls and the dielectric dispersion in ferroelectric ceramics.—73-07891
Growth and characterization of ferroelectric thin films by the photo-CVD process.—73-15267
Influence of phase transition on the optical recharging processes in the ferroelectric film on a silicon substrate.—73-04556
Intelligent processing of ferroelectric films.—73-15269
Ion beam etching of metal oxide ceramic.—73-01860
Light diffraction on domain structure in $Ba_2NaNb_5O_{15}$ and $Gd_2(MoO_4)_3$ crystals.—73-15270
Method of manufacturing device having ferroelectric film.—73-04585
Models for breakdown-resistant dielectric and ferroelectric ceramics.—73-07900
Noninvasive optical probe of ferroelectric films.—73-08425
Percolation processes and anomalous light scattering in ferroelectrics with diffuse phase transition.—73-15275
Phase transitions in new ferroelectric of $KTiOPO_4$ family.—73-01424
Phenomena observed under gradual diffusion of ferroelectric phase transition.—73-16271
Photopolarization effects in $Sn_2P_2Se_6$ single crystals.—73-16566
Process for fabricating a ferroelectric capacitor in a semiconductor device.—73-04587
Propagation of ultrashort electromagnetic videopulses [$\approx 10^{-14}$ s] in ceramic ferroelectrics.—73-15283
PTCR device.—73-11641
Pulsed excimer laser deposition of ferroelectric thin films.—73-11607
Pyroelectric properties of ferroelectric-polymer composites.—73-07913
Relaxor ferroelectrics.—73-01430
Semiconductor device with ferroelectric and method of manufacturing the same.—73-11545
Sol-gel preparation of ferroelectric films through metal alkoxides.—73-15287
Spontaneous relaxor–ferroelectric transition of $Pb(Sc_{0.5}Ta_{0.5})O_3$.—73-11618
Statistical theory of fatigue in ferroelectric devices.—73-11619
Structures of the ferroelectric phases of barium titanate.—73-01435
Theory and practice in the prediction of new materials.—73-09750
Thermally activated rejuvenation of ferroelectric properties in electrically fatigued lead zirconate titanate ceramics.—73-07923
Thin ferroelectric films for thermal detector applications.—73-11626

**ferroelectricity,**
Crystal chemistry underlying ferroelectricity in $Bi_4Ti_3O_{12}$, $Bi_3TiNbO_9$, and $Bi_2WO_6$.—73-01397
Ferroelectric thin films and device applications.—73-04553
Miniature actuator.—73-11635

**ferromagnetic materials/ferromagnets,**
Optomagnetocaloric effect.—73-15353
Photoemission and absorption spectroscopy of $Mn_2Sb$, MnAlGe, $Mn_2As$, $Cr_2As$, and $Fe_2As$.—73-08699
Spin-dependent electron tunneling between ferromagnetic films.—73-15365

**ferromagnetism,**
Ferromagnetism in the Tl-Sr-V-O system.—73-01462

**fiber reinforcement,**
Ceramic fiber-reinforced silicon carboxide composite with adjustable dielectric properties.—73-14681
Ceramic fiber-reinforced silicon carboxide composite.—73-03909
Ceramic-fiber-reinforced glasses.—73-14335
Crack bridging models for fiber composites with slip-dependent interfaces.—73-09552
Crack growth resistance model for fiber-reinforced ceramic materials.—73-06349
Crack-fiber interaction in SiC fiber-reinforced glass matrix composite.—73-10425
Deformed steel fiber-cementitious matrix bond under impact.—73-00055
Effect of fiber fractures on the frictional heating in a uniaxially fiber-reinforced ceramic matrix composite.—73-09575
Effect of fiber orientation on the fracture toughness of brittle matrix composites.—73-17286
Effects of fiber roughness on interface sliding in composites.—73-17127
Effects of reinforced content and shape on cavitation and failure in metal-matrix composites.—73-03277
Effects of residual stress and frictional sliding on *R*-curve behavior in fiber-reinforced ceramics.—73-06398
Effects of testing rates and age on ASTM C-1018 toughness parameters and their precision for steel-fiber-reinforced concrete.—73-09938
Engineering properties of carbon-fiber-reinforced cement composites.—73-00083
Evaluation of interfacial properties of fiber-reinforced ceramic composites using fiber push-in tests.—73-09593
Fabrication of carbon-fiber-reinforced hBN composites.—73-16771
Fabrication of continuous-fiber-reinforced polycrystalline oxide composites via molten salt infiltration.—73-09129
Fatigue behavior of a Saffil-reinforced aluminum alloy (AA6061).—73-03287
Fiber and Whisker Reinforced Ceramics for Structural Applications.—73-13654
Fiber for secondary reinforcement.—73-00090
Fiber matrix interaction in SiC fiber reinforced ceramic and intermetallic composites.—73-09452
Fiber-reinforced silicon carbide ceramics and method of producing the same.—73-05300
Fluormica-coated Nicalon-fiber-reinforced glass-ceramic composites.—73-14383
Fracture behavior of microfiber-reinforced mortars.—73-03472
Fracture mechanics and mechanisms of fiber-reinforced brittle matrix composites.—73-03297
Fracture of microfiber-reinforced DSP [densified small particle] materials.—73-09972
FRCMC's: a sample preparation challenge.—73-08401
Friction behavior of ceramic fiber-reinforced aluminum metal-matrix composites against a 440C steel counterface.—73-03591
Frost susceptibility of fiber-reinforced cement building materials based on the three-dimensional pore structure.—73-13727
FRP composite industry is cautiously optimistic about the future.—73-13623
Glass-doped ceramic matrix composites.—73-10631
High-flexural-strength ceramic fiber-reinforced silicon carboxide composite.—73-03930
High-temperature ceramic composite.—73-12370
Impact behavior of corrugated sheets of fiber-reinforced cement.—73-09995
Infiltration/pyrolysis processing of fiber-reinforced silicon nitride.—73-05861
Influence of sintering behavior on mechanical properties and thermal shock resistance at temperature difference of 600 K of fiber-dispersed $ZrO_2$ ceramics.—73-17361
Interface compatibility in Nicalon-fiber-reinforced metal and ceramic composites.—73-03155
Interfacial debonding and fiber pullout stresses of fiber-reinforced composites: IX, A simple treatment of Poisson's effect for frictional interfaces.—73-09625
Interfacial debonding and fiber pullout stresses of fiber-reinforced composites: IX, A simple treatment of Poisson's effect for frictional interfaces.—73-09626
Interfacial mechanical properties of fiber-reinforced ceramic composites.—73-06464
Interfacial mechanical properties of fiber-reinforced ceramic composites.—73-13555
Interfacial properties and high-temperature mechanical behavior of fiber-reinforced ceramics.—73-09627
Izod impact test for measuring the fracture energy of fiber-reinforced ceramics.—73-05059
Knitted fiber-reinforcing material.—73-03687
Latex-modified cement mortar reinforced by short carbon fibers.—73-10027
Manufacture of short-fiber-reinforced glasses by extrusion and examinations regarding their structure and mechanical properties.—73-10562
Matrix cracking and fiber bridging of carbon-fiber-reinforced carbon matrix composites.—73-06472
Matrix cracking in fiber-reinforced ceramics.—73-09628
Measurement of silicon carbide fiber strength in composites from studies of their fracture surfaces.—73-09630
Mechanical properties of concrete materials reinforced with polypropylene or polyethylene fibers.—73-00134
Mechanical properties of fiber-reinforced glass and glass-ceramics.—73-07047
Mechanics of tool wear during machining of advanced fibrous composites.—73-06487
Mechanistically based fatigue-damage evolution model for brittle matrix fiber-reinforced composites.—73-13570
Method for fabricating a ceramic fiber-reinforced composite material.—73-12377
Method for improving ceramic fiber-reinforced molybdenum disilicide composites.—73-12484

Method of making fiber-reinforced metal component.—73-10329
Method of producing a ceramic fiber-reinforced glass-ceramic matrix composite.—73-10646
Microstructural image analysis applied to fiber composite materials—a review.—73-08417
Microstructure and frost durability of cementitious building materials reinforced with nonasbestos fibers.—73-00142
Microstructure and frost durability of cementitious building materials reinforced with nonasbestos fibers.—73-10049
Modeling of the elastic properties of fiber-reinforced composites: I, Orientation measurement.—73-08919
Molybdenum disilicide matrix composites reinforced with continuous ceramic fibers.—73-12499
Monitoring loads in fiber-reinforced composite materials.—73-12168
Preparation techniques for analysis of fiber-reinforced ceramic matrix composites.—73-08435
Science and technology of composites—fundamental theory on the strength of reinforced materials by long fibers.—73-17424
Self-diagnosing performance for fracture in [carbon fiber–glass fiber-reinforced plastic] CFGFRP-reinforced concrete.—73-13775
Sintering behavior of arranged ceramic short-fiber-reinforced glass matrix composites.—73-14492
Sol-gel processing of fiber-reinforced ceramic shapes.—73-03021
Subcritical crack growth in continuous-fiber-reinforced ceramic composites.—73-09679
Subcritical crack growth in CVI silicon carbide reinforced with Nicalon fibers: experiment and model.—73-17438
Synthetic fiber-reinforced cement composites—optimization of the composition and structural and mechanical properties.—73-10177
Tensile strength of a fiber-reinforced ceramic.—73-03363
Thermal shock behavior of SiC fiber-reinforced glasses.—73-10489
Toughening of high-strength cementitious matrix reinforced by discontinuous short fibers.—73-10182
Toughness behavior of fiber-reinforced rapid-set materials: a preliminary study.—73-06727
Toughness indices of steel fiber-reinforced concrete [SFC] at subzero temperatures.—73-06728
Turning of carbon and glass fiber hybrid cloth composite material.—73-04951
Ultimate strengths of fiber-reinforced ceramics and metals.—73-03374
Utilization of waste FRP as resources.—73-10189
Vapor-grown carbon-fiber-reinforced carbon/carbon composites.—73-12445

**fiberglass,**
Apparatus for manufacturing a glass and organic composite strand, including a blowing device.—73-15762
Glass fiber insulation bonded with a uv-cured system.—73-10629
Insulation assembly.—73-10637
Method for producing fiber product.—73-14548
Method of forming a preform by precoating glass fibers prior to chopping and preforming.—73-14552
Method of winding glass fibers.—73-10648
Reoriented insulation assembly and method.—73-00762

**fibers,**
Acoustic microscopy of ceramic-fiber composites.—73-03118
Analysis of fiber frictional sliding in fiber bundle pushout test.—73-17237
Application of ceramic fiber to reheating furnace for hot strip mill.—73-00775
Asymptotic analysis of crack bridging by ductile fibers.—73-03238
Behavior of ceramic matrix fiber composites under longitudinal loading.—73-03240
Biomimetic process for preparing magnetite fibers.—73-04591
Calculation of the thermal conductivity and gas permeability in a uniaxial bundle of fibers.—73-16661
Carbon fibers having high strength and high modulus of elasticity and polymer composition for their production.—73-12448
Catalytic composite for deodorizing odorous gases and a method for preparing the same.—73-05195
Ceramic composites for extremely high-temperature applications.—73-12318
Ceramic fiber insulation boards with improved thermal shock resistance.—73-00783
Ceramic fiber insulation structure with readily repairable perimeter insulation.—73-14637
Ceramic fiber—aspects of use under COSHH.—73-06561
Ceramic filter construction and method.—73-05198
Ceramic simulated log.—73-12348
Ceramic-coated fibers.—73-12349
Chemical, morphological, and structural changes of silicate fibers in NaOH and $Ca(OH)_2$ solution.—73-13942
Chemically corroded pristine silica fibers: blunt or sharp flaws—correction.—73-06200
Chemically corroded pristine silica fibers: blunt or sharp flaws.—73-03126
Chemically treated glass fibers with improved reinforcement properties.—73-03910
Coated ceramic fiber system.—73-05205
Comparative investigation of high-temperature ceramic fiber insulating tile.—73-05163
Composition and microstructure of CVD-C, SiC coating on SiC fiber.—73-03128
Controlled resistivity ceramic fibers and process for making them.—73-12456
Corrosion of fibrous silicates in electrolyte solutions.—73-14148
Creep resistance of developmental polycrystalline yttrium aluminum garnet fibers.—73-17268
Crystallization behavior of high-purity amorphous silicon nitride fibers.—73-16100
CVD process for the manufacture of ceramic fibers.—73-04969
Deintercalation $H_2SO_4$-intercalated graphite fiber.—73-16105
Development of mullite fibers using the sol-gel process.—73-09067
Drying of boehmite gel fibers.—73-03833
Economical SiC fiber tow via CVD.—73-16719
Effect of chlorides and fluorides on leaching of basalt fibers. Features of formation of porous structure in hydrothermal conditions.—73-16455
Effect of cleaning and abrasion-induced damage on the Weibull strength distribution of sapphire fiber.—73-17282
Effect of curing in air on synthesis of Si-Ti-C-O fiber.—73-05758
Effect of curing in air on synthesis of Si-Ti-C-O fiber.—73-13002
Effect of heat treatment on the stress relaxation and microstructure of CVD SiC fibers.—73-09576
Effect of high-temperature exposure on the tensile strength of alumina fiber Nextel 610.—73-17287
Effect of isothermal exposure on SiC fibers.—73-12425
Effect of oxygen content on pyrolysis-suppression of Si-Ti-C-O fibers coated with surface oxide layers.—73-16734
Effect of oxygen on pyrolysis of SiC fiber synthesized from polycarbosilane.—73-05764
Effect of stainless steel fibers on thermal properties of castable refractories.—73-00805
Embedded-end debonding during fiber pullout.—73-09589
Evaluation of fiber strength characteristics on the basis of the fiber fragmentation test.—73-17309
Extended high-temperature superconducting fiber channels based on the sol-gel method and effects of thermophysics of glass fiber forming.—73-15466
Fabrication of continuous fiber ceramic matrix composites via slurry routes.—73-02824
Features of leaching and sorption-structural properties of basalt fibers.—73-16497
Fiber coating of unbonded multilayers for toughening ceramic fiber-matrix composites.—73-12364
Fiber partitions meet new packaging demands.—73-14379
Fiber pushout and interfacial shear in metal matrix composites.—73-06789
Fiber-based ceramic materials.—73-04002
Fibers for energy power delivery and chemical sensors.—73-14187
Fibers from gels.—73-13059
Formation of "Na-sepiolite" fibers by hydrothermal treatment of Na-fluor-taeniolite and Na-fluor-tetra-silicic mica.—73-16787
Fracture and sliding in the fiber/matrix interface and failure processes in ceramic composites.—73-13534
Glass size compositions and glass fibers coated therewith.—73-03925
Glass-ceramic sol-gel coating of ceramic fibers.—73-16803
Grain-size composition of mullite silica fibers.—73-03149
High rate electrophoresis process for ceramic-coated fibers.—73-12081
High-strength ceramic fiber board.—73-05218
High-temperature elasticity of single-crystal $Al_2O_3$ fibers by Brillouin spectroscopy.—73-08881
High-temperature gasket.—73-02044
High-temperature strength and creep behavior of Carborundum alpha silicon carbide fibers.—73-09613
High-thermal-conductivity diamond-coated fiber articles.—73-12473
Hot-grip tensile method for alumina-fiber testing.—73-01903
Implications of fiber stress rupture on lifetimes of ceramic matrix composites.—73-17351
In situ fiber strengths in ceramic matrix composites from fracture mirrors.—73-09617
In situ fracture and Auger analysis of Nicalon fibers.—73-15804
Influence of fiber surface treatment on the mechanical properties of fabric-reinforced carbon-carbon composites.—73-13550
Inorganic fiber composition.—73-15996
Inorganic fiber sinter and process for producing [the] same.—73-15997
Insulating ceramic fiber batting module, anchoring system, ladle cover assembly and method of assembly.—73-00887
Insulating shaped articles comprising inorganic fibrous matrices and xanthan gum/cationic starch binders.—73-10781
Insulation material.—73-10782
Interground fiber cement.—73-10195
Kinetics of curing of polycarbosilane fiber by oxidation treatment.—73-05889
Laser speckle microstrain measurements on small-diameter fibers.—73-15810
Mechanism of ceramization of electron-irradiation-cured polycarbosilane fiber.—73-09201
Mechanism of ceramization of electron-irradiation-cured polycarbosilane fiber.—73-16860
Mesophase pitches, carbon fiber precursors, and carbonized fibers.—73-02105
Method for continuously coating fibers.—73-01863
Method for fabrication of continuous-fiber-reinforced ceramic matrix composites.—73-16866
Method for preparing molded articles of high-purity alumina fibers.—73-15948
Method for surface treating the inner wall of a furnace, which is lined with ceramic fibers.—73-04034
Method of and an apparatus for forming fibers.—73-12085
Micromechanical analysis of fiber crack propagation in composite materials due to transverse tensile loads.—73-09648
Micromechanical aspects of fiber debonding and frictional sliding in brittle matrix composites.—73-09649
Microstructure and microchemistry of polymer-derived crystalline SiC fibers.—73-03169
Microstructure of silicon carbide fiber-reinforced silicon carbide ceramic matrix composites heat-treated in vacuo and in pure oxygen.—73-03174
Morphology, relationship, and origin of fiber and dendrite calcite crystals.—73-15908
New model for evaluation of the interfacial friction coefficient and residual clamping stress in a fiber-pushout test.—73-08924
Optical functioning glass and fiber amplifier.—73-03956
Performance of ceramics and fiber composites under severe thermal shocks applied by energetic electron beams or accelerated plasmas.—73-05609
Polymer-derived ceramic fibers having improved thermal stability.—73-02056
Preparation of calcium phosphate fibers for applications to biomedical fields.—73-02947
Preparation of continuous $ZrO_2$-$Y_2O_3$ fibers by precursor method using polyzirconoxane.—73-05971
Preparation of mixed fiber composite structures.—73-10338
Preparation of $Na_{1-x}Ti_{2+x}Al_{5-x}O_{12}$ ($x$=0.2) fiber by precursor method.—73-13195
Preparation of silicon carbide fiber from activated carbon fiber [ACF] and gaseous silicon monoxide.—73-13202
Preparation of substantially polycrystalline silicon carbide fibers from methylpolydisilylazanes.—73-05326
Preparation of superconducting $YBa_2Cu_3O_{7-x}$ fibers through metal citrate gel as a precursor.—73-08178
Preparation of superfine fiber by vacuum arc plasma jet method.—73-05982
Preparation of titanium oxide fibers by use of sodium alginate.—73-02973
Preparation of titanium oxide fibers by use of sodium alginate.—73-13208
Process for controlling the temperature of a fiber centrifuger.—73-05005
Process for producing composite materials with a metal matrix with a controlled content of reinforcer agent.—73-03701
Properties of stoichiometric silicon carbide fiber derived from polycarbosilane.—73-17185
Protective coating for nonoxide sintered fibers generated by in situ chemical reaction.—73-05333
Pumpable ceramic fiber composition.—73-04039
Pure silicon carbide fibers from polymethylsilane.—73-16963
Pyrolysis of low-oxygen SiC fiber prepared by electron-irradiation curing method.—73-16964
Pyrolytic behavior of CVD-coated SiC fibers.—73-12665
Recent developments, performance improvements, and new ceramic fibers produced by the viscous suspension spinning process.—73-16972
Scanning acoustic microscopy of SCS-6 SiC fibers in titanium matrices.—73-12191
Second-order diffraction efficiency in Bragg gratings written within germanosilicate fibers.—73-16592
SEM studies on alumina fiber formation through plant fiber substrates.—73-13445
SiC fibers having low oxygen content and methods of preparation.—73-02134
SiC fibers having low oxygen content and methods of preparation.—73-12517
Silicon carbide/SRBSN composites.—73-03194
Silicon carboxide fibers.—73-03966
Sol-gel processing of continuous mullite fibers.—73-17005
Sprayed ceramic fiber substrates. Reinforcing and anchoring linings with refractive textiles.—73-00867
Static fatigue of metal-coated fibers.—73-14279
Steady-state matrix cracking of ceramics reinforced by aligned fibers and transforming particles.—73-03356
Strength properties of basalt fibers.—73-00548
Stress-rupture behavior of small-diameter polycrystalline alumina fibers.—73-09678
Structure development in polycrystalline zirconium dioxide fibers.—73-02461
Super-heat-resistant silicon carbide fibers from polycarbosilane.—73-12528
Superconducting conductor.—73-11999
Superfluorescence in RE-doped silica fiber.—73-14286
Suppression of pyrolysis of Si-C-O fiber [Nicalon] with oxide film.—73-17203
Surface roughness characterization of three alumina-type fibers by atomic force microscopy [AFM].—73-09515
Synthesis and characteristics of fibrous $3CaO{\cdot}Al_2O_3{\cdot}32CaCO_3{\cdot}3H_2O$.—73-03036
Synthesis of ceramic fibers in the Si-O-C system.—73-03044
Synthesis of polymetalloxanes and their properties as a precursor for amorphous oxide: VI, Preparation of $SiO_2$-$TiO_2$ fibers containing various $TiO_2$ contents from polytitanosiloxane [PTS].—73-03051
Synthesis of Si-O-C fibers from rice husk carbide—explanation of formation condition.—73-03055
Synthesis of Si-O-C fibers from rice husk carbide—explanation of formation condition.—73-13310
Technology for the development of polycrystalline oxidic functional fibers at ISC Wurzburg[, Germany].—73-17052
Temperature dependence of dynamic shear modulus of a chemically vapor deposited SiC fiber: an application of inverted torsion pendulum.—73-17439
Tensile properties of alumina fibers using hot-grips.—73-17443
Tensile strength of chemical vapor deposited silicon carbide fibers.—73-06537
Theoretical analysis for fiber orientation observed in one visual field.—73-06538

Thermal behavior of blended fiber products of $Al_2O_3$-$SiO_2$ system.—73-16618
Thermal degradation of polycrystalline fibers of $Al_2O_3$-$SiO_2$ system.—73-16625
Thermal oxidation of fluorozirconate glass and fibers.—73-14518
Thermal stability of amorphous SiC fiber coated with oxide film.—73-05674
Thermomechanical and microstructural stability of Nextel 610 polycrystalline alumina fiber.—73-12334
Thermosetting copolymers, silicon-carbide-based fiber and processes for producing [the] same.—73-12531
Time-dependent strength of sapphire fibers at high temperatures.—73-09687
Transpiration-cooled ceramic fiber seal.—73-10789
Transverse strength of SCS-6 silicon carbide fibers—correction.—73-06544
Transverse strength of SCS-6 silicon carbide fibers.—73-03373
Transverse thermal conductivity of a unidirectional fiber composite with fiber-matrix debonding: a calculation based on effective-medium theory.—73-12902
Vacuum-molded ceramic fiber electric radiant heating unit with resistance heating coils internally free of fibers.—73-12252
Zirconium and silicon oxide fibers and microspheres produced by the sol-gel transition and plasma-chemical methods.—73-14531

**fibrous materials,**
Effect of crystal-axis orientation on dielectric properties of ceramics prepared from fibrous barium titanate.—73-16457
Elevated-temperature fracture characterization of advanced fibrous ceramic thermal insulators.—73-17305
Experimental investigation of optical-thermophysical characteristics of condensed combustion products and heat-resistant materials.—73-12136
Fibrocement materials based on glass fiber.—73-13724
Measurement of thickness and heat conductivity of fibrous thermal insulators.—73-01910
Nonporous diffusion furnace components.—73-12503
Optimization of silicon nitride ceramics.—73-06497
Review of recent research [1982-1992] in the former Soviet Union on fibrous composites.—73-09748
Simple approximations for bridged cracks in fibrous composites.—73-17429

**field effect transistor,**
Backgating in GaAs field effect transistors.—73-01081
Batch fabrication and operation of GaAs-$Al_xGa_{1-x}As$ FET self-electrooptic effect device (FET-SEED) smart Pixel arrays.—73-14783
Characterization of interface states in submicrometer MOS transistors by different charge pumping techniques.—73-14803
Compound sidewall spacer technology for submicron MOSFET.—73-04067
Diamond field effect transistor with a particular boron distribution profile.—73-04512
Diamond Schottky-gate-type field effect transistor.—73-11520
Direct-current and radio-frequency characterization of submicron-striped channel field effect transistor structures using focused ion beam and electron-beam lithography.—73-14838
Experimental FET based on 4H:SiC polymorph.—73-14901
Fabrication of *n*-channel metal-oxide-semiconductor field effect transistors with 0.2-μm gate lengths in 500-Å thin-film silicon on sapphire.—73-14905
Fabrication of novel self-aligned MISFET's on InP by S interface engineering technique.—73-07523
Field effect transistor.—73-01371
Gate technology for 89-GHz vertical doping engineered Si metal-oxide-semiconductor field effect transistor.—73-14939
High-frequency analysis of fast devices using small-signal Monte Carlo simulations: application to a 0.1-μm gate MODFET.—73-07562
High-frequency analysis of fast devices using small-signal Monte Carlo simulations: application to a 0.1-μm gate MODFET.—73-14959
Influence of the interface-state density on the electron mobility in silicon inversion layers.—73-11274
Junction field effect transistor formed in silicon carbide.—73-04212
Low-frequency noise and phase noise in MESFET's with LT [low-temperature] GaAs passivation.—73-15018
Method for making a superconducting field effect transistor with inverted MISFET structure.—73-11964
Method of fabricating a nitride capped MOSFET for integrated circuits.—73-01375
Method of fabricating silicon carbide field effect transistor.—73-15238
Method of making metal oxide semiconductor field effect transistors with a lightly doped drain structure having a recess-type gate.—73-04524
Monte Carlo study of 50-nm-long single and dual-gate MODFET's: suppression of short-channel effects.—73-15049
Monte Carlo study of 50-nm-long single- and dual-gate MODFETs: suppression of short-channel effects.—73-07683
Numerical calculation of transient characteristics of GaAs vertical FET's.—73-15064
Pseudomorphic InGaAs high-electron-mobility transistors [HEMT's].—73-15126
Semiconductor device having field effect transistor using ferroelectric film as gate insulation film.—73-11544
Sidegating in GaAs MESFET's: role of stationary Gunn domains.—73-07799
Silicon carbide field effect device.—73-15245
Silicon carbide power MOSFET with floating field ring and floating field plate.—73-01387
Simulated optimum gate and encapsulant properties for a refractory gate GaAs metal-semiconductor field effect transistor during annealing.—73-11446
Superconducting receivers in radio astronomy.—73-15636
Temperature investigation of the gate-drain diode of power GaAs MESFET with low-temperature-grown (Al)GaAs passivation.—73-15202
Transport of quasi-two-dimensional electrons in heterojunction field effect transistors.—73-15216
Vertical diamond field effect transistor.—73-11550

**filaments,**
Apparatus for producing glass filaments.—73-01844
Deformation of CVD silicon carbide monofilaments under variable mechanical loading.—73-17272
Effect of oxygen on filament activity in diamond chemical vapor deposition.—73-02789
Formation of a conducting filament and breakdown in polycrystalline indium oxide.—73-07534
Glass fibers with fine conducting cores.—73-00636
High-temperature structural stability of chemically vapor deposited silicon carbide filaments.—73-16507
Making crystal filaments from extruded rods.—73-13127
Microstructural influences on the creep behavior of CVD silicon carbide monofilaments.—73-09479
Preparation and characterization of high-$T_c$ superconducting $YBa_2Cu_3O_{7-y}$ filaments.—73-[illegible]1636

**fillers,**
Coated ceramic filler materials.—73-[illegible]05206
Fibrous electrically conductive filler [illegible]d process for producing the same.—73-04207
Influence of microfillers on enhancement of concrete strength.—73-06675
Micro-glass-balloon "CEL-STAR."—73-00515
Predicting the optimum sizes of fillers in enamel slips.—73-00256
Production of activated mineral filler from ash and slag wastes of thermal power plants for the preparation of asphalt concretes.—73-05146
Prognosis of optimal size of filler in enamel slips.—73-00260
Strength development and heat of hydration of low heat cement.—73-06721

**films,**
Acoustoelectronic interaction in superconducting $YBa_2Cu_3O_{7-y}$ films.—73-01491
Active plasma species in TiN film formation process by plasma CVD method.—73-12908
Aggregate structure of coralloid $ZnO_x$ films.—73-05353
Ambient-temperature sputtering of composite oxide films.—73-12915
Aminoalkoxide sol-gel coating of transition metal oxide films.—73-12916
Amorphous and polycrystalline silicon films deposited by electron cyclotron resonance reactive plasma deposition.—73-09015
Amorphous intergranular films in silicon nitride ceramics quenched from high temperatures.—73-03119
Analysis of dc-sputtered $Si_3N_4$ films using X-ray diffraction and computer simulation.—73-08548
Anisotropy in residual strains and the lattice parameter of reactive sputter-deposited ZrN films.—73-16031
Apparatus for applying antilacerative film to glass.—73-04955
Automotive glass thick film conductor paste.—73-11001
Bolometric response of superconducting $YBa_2Cu_3O_{7-x}$ microbridges.—73-11697
Boron nitride thin films on Si(100) by MOCVD.—73-14786
Carbonaceous protective films and method of depositing the same.—73-02090
Characteristics and structure of LPD-$SiO_2$ film incorporating organic dye.—73-13934
Characterization of a-SiC:H films produced in a standard plasma-enhanced chemical vapor deposition system for X-ray mask application.—73-12939
Characterization of epitaxial iron oxide films by conversion electron Mossbauer spectroscopy [CEMS].—73-15308
Characterization of epitaxially grown CVD Pb(Zr, Ti)$O_3$ films with high deposition rate.—73-17115
Characterization of Tb at the interface of SiN/TbFeCo film by Auger electron spectroscopy.—73-03567
Chemical composition of electron-beam evaporated $TiO_2$ films.—73-05368
Coating (of silicate films) on steel sheet by the sol-gel method.—73-06751
Combined buckling and cracking of films.—73-03245
Conversion of chemically deposited ZnS films to photoconducting ZnO films.—73-16687
Conversion of fullerenes to diamond.—73-15985
Corona discharge-stimulated transverse diffusion of silver in glassy As-Se films.—73-00603
Cracking behavior of sol-gel films.—73-02756
Cracking of brittle films on elastic substrates.—73-17263
Crystalline phase and superconductor characteristics of the plasma-sprayed $YBa_2Cu_3O_{7-y}$ high-$T_c$ superconductor thick film.—73-04692
Crystallization of $LiNbO_3$ films from metal alkoxides.—73-07876
Crystallographic relationship between $Y_2Cu_2O_5$ and 123 phase in chemical vapor deposited Y-Ba-Cu-O superconducting films.—73-11719
Defect-induced control of the structure of boron nitride.—73-12461
Defects in chemical-vapor-deposited diamond films [studied] by cross-sectional cathodoluminescence.—73-13386
Defects in silicon dioxide films on Si(100) [studied] by a variable energy positron beam.—73-13344
Dependence of the growth of $Al_2O_3$ films on the growth conditions in the [atomic layer epitaxy] ALE-like process.—73-05735
Deposition and characterization of multicomponent oxide films and multilayers from aqueous solution.—73-12973
Deposition of high-quality TiN films by excimer laser ablation in reactive gas.—73-12976
Deposition of TiN films onto glaze of porcelain by reactive sputtering.—73-00768
Design of hybrid films composed of inorganic and organic materials with desired properties.—73-14831
Determining the refractive index and absorption coefficient of Ag-photodoped amorphous As-S films.—73-14153
Diagnostics of GaAs films grown by atomic layer epitaxy.—73-11136
Diamond film semiconductors.—73-11137
Diamond film synthesis by MWCVD and its application to cutting tools.—73-16708
Diamond materials with enhanced heat conductivity.—73-12462
Diamondlike amorphous carbon films prepared by rf sputtering in argon.—73-09071
Dipole and exchange spin excitations in inhomogeneous ferrite films.—73-15314
Direct observation of crystallization process from amorphous Y-Ba-Cu-O film by means of optical microscopy.—73-15420
Drying of granular ceramic films: II, Drying stress and saturation uniformity.—73-02776
Dual-ion-beam sputter deposition of ZnO films.—73-08836
Durable, low-surface-energy treatments.—73-12424
Early stages of growth of crystalline, diamondlike films on Si(100) by pulsed laser evaporation of graphite.—73-02778
Edge-geometry SNS devices made of Y/Ba/Cu/O.—73-15423
Effect of annealing on the properties of conductivity and diffusional mass transport in $As_2S_3$ films photodoped with silver.—73-00451
Effect of substrate on crystallization of PZT films prepared by laser sputtering.—73-16742
Effect of substrate temperature on the properties of dc reactive magnetron sputtered titanium oxide films.—73-02798
Effect of surface aluminum oxide films on thermally induced hillock formation.—73-05772
Effect of temperature annealing on properties of $\alpha$-$Si_{1-x}C_x$:H films ($0<x\leq1$).—73-16744
Effect of the matrix on the oxidation of nanostructured Ge granular films.—73-05386
Effect of uniaxial compression on current-voltage characteristics of high-$T_c$ $YBa_2Cu_3O_{7-x}$ films.—73-15438
Effects of annealing conditions on the properties of tantalum oxide films on silicon substrates.—73-16465
Effects of cluster ionization and acceleration on photoluminescence spectra of CdTe films grown by ionized cluster beam deposition.—73-07469
Effects of oxygen pressure and substrate temperature on the in situ grown BiSrCaCuO films by laser ablation.—73-11740
Effects of self-bias voltage on formation of cBN film.—73-16126
Effects of thermal annealing on the properties of zirconia films prepared by ion-assisted deposition.—73-13036
Elastic moduli of rf-sputtered $Al_2O_3$-$TiO_2$ amorphous films.—73-03279
Electric field effects on vortex dynamics in ultrathin $YBa_2Cu_3O_{7-\delta}$ films.—73-08049
Electrical and optical properties of ion-beam-sputtered ZnO:Al films as a function of film thickness.—73-08849
Electrical characteristics and hydrogen concentration of chemical-vapor-deposited silicon dioxide films: effect of water treatment.—73-12785
Electrical characteristics of barium titanate films prepared by laser ablation.—73-07885
Electrical characteristics of excimer laser-ablated bismuth titanate films on silicon.—73-12786
Electrical conductivity and photoluminescence of diamond films grown by downstream microwave plasma CVD.—73-16475
Electrical properties of boron-implanted homoepitaxial diamond films.—73-16478
Electrical properties of tantalum-based composite oxide films.—73-04088
Electrical resistivity of diamond films grown by thermal plasma CVD.—73-02604
Electrochemical liquid deposition [ELD] of ceria.—73-16758
Electron-beam penetration and free-carrier generation in diamond films.—73-08861
Electronic structure of epitaxial erbium silicide films on Si(111).—73-02261
Emission spectra and morphology of carbon films by ECR plasma CVD.—73-03141
Environmental reactivity characteristics of $K_3C_{60}$ and $YBa_2Cu_3O_{7-x}$ high-temperature superconductor thin film.—73-15461
Epitaxial growth of $YBa_2Cu_3O_{7-\delta}$ films on oxidized silicon with yttria- and zirconia-based buffer layers.—73-08063
Epitaxial yttrium iron garnet films grown by pulsed laser deposition.—73-07934
Epitaxy of high-$T_c$ superconducting films on (001)silicon surface.—73-11953
Fabrication and properties of textured $YBa_2Cu_3O_7$ thick films on polycrystalline $Ag_{0.9}Pd_{0.1}$ and silver substrates.—73-08073
Fabrication of ferrite films using laser deposition.—73-15377
Fabrication of $Y_1Ba_2Cu_3O_8$ films and $Y_1Ba_2Cu_3O_{7-x}$ films with higher $J_c$ by metallorganic deposition.—73-15262
Factors determining the carbon monoxide sensing properties of tin oxide thick films calcined at different temperatures.—73-14914
Failure mechanism of chromium-silicon-oxide resistive films stressed by electric pulse loading.—73-07323

Ferroelectric phase transition in $BaTiO_3$ films.—73-07888
Film formation and sintering of colloidal monoclinic zirconia.—73-13060
Film formation from molten salts by electrochemical process.—73-14706
Film-type electrical resistor combination.—73-04208
Floating magnetic head slider [with ceramic film].—73-15379
FMR [ferromagnetic resonance] doublet in two-layer ferrite-garnet films.—73-11654
Formation of porous calcium phosphate films on titanium oxide substrate by spray pyrolysis technique.—73-13065
Formation of ZnO films by $CO_2$ laser ablation at atmospheric pressure.—73-05816
Fourier transform Raman spectroscopy of superconducting $YBa_2Cu_3O_{7-\delta}$ films on strontium titanate and magnesium oxide substrates.—73-15484
Free flux flow at high dissipation levels in $YBa_2Cu_3O_{7-\delta}$ epitaxial films.—73-15485
Free-standing oxide superconducting articles.—73-04835
Frequency dependence of surface resistivity of [superconducting] films: low-frequency electromagnetic losses.—73-15486
Friction and wear of plasma-deposited diamond films.—73-13542
Fundamental research on the deposition of cubic boron nitride films on curved substrates by ion-beam-assisted vapor deposition.—73-05820
Geometrical factors affecting the $CO_2$ laser chemical vapor deposition of silicon oxide films in parallel configuration.—73-13074
Giant flux flow in superconducting $YBa_2Cu_3O_{7-\delta}$ films.—73-15491
Giant negative magnetoresistance in perovskite $La_{1/3}Ba_{1/3}MnO_3$ ferromagnetic films.—73-15327
Glass pane with reflectance reducing coating.—73-14541
Growth and patterning of high-$T_c$ superconducting films.—73-11776
Growth of epitaxial 3C-SiC films on (111) silicon substrates at 850°C by reactive magnetron sputtering.—73-09154
Growth of epitaxial TiN films on MgO(100) by high current discharge plasma.—73-13081
Hardness and elastic modulus of diamond and diamondlike carbon [DLC] films.—73-05575
Heteroepitaxial growth of MgO films by dual ion beam sputtering.—73-16813
High uniaxial magnetic anisotropy in epitaxial $(Dy,Bi)_3(Fe,Ga)_5O_{12}$ films.—73-01464
High-$T_c$ superconducting film.—73-11956
Humidity-sensitive properties of titania films prepared using the sol-gel process.—73-16510
Hydrothermal $BaTiO_3$ films on silicon: morphological and chemical characterization.—73-10958
Identification of N dangling bonds in SiN films using X-ray absorption studies.—73-03095
Improvement in the thermal oxidation resistance of chemical-vapor-deposited diamond films.—73-09528
Inference of substrate temperature on the formation of carbon films by hybrid plasma CVD.—73-09171
Influence of oxygen pressure on the electrical and optical properties of reactively evaporated indium oxide films.—73-08888
Influence of phase transition on the optical recharging processes in the ferroelectric film on a silicon substrate.—73-04556
Influence of pressure on nitrogen incorporation in ultraviolet chemical-vapor-deposited $SiO_2$ films.—73-13100
Influence of substrate composition on the sintering behavior of zirconia thick films.—73-05875
Influence of substrate temperature on the formation of carbon films by hybrid plasma CVD.—73-16842
Influence of surface preparation prior to thermal nitridation on the electrical characteristics of silicon nitride films deposited on polycrystalline silicon films.—73-05876
Instability of polycrystalline bridges that span cracks in powder films densified on a substrate.—73-06235
Interface effects in Bi-2212/Ag and Bi-2223/Ag superconductors.—73-11809
Interface properties of anodic sulfide and sulfide oxide films on *n*-InSb.—73-04371
Interference effects at initial stages of recrystallization under laser irradiation of cadmium sulfide films on substrates with artificial microrelief.—73-14997
Ion channeling in textured polycrystalline diamond films.—73-09472
Laser ablation method of preparing oxide superconducting films on elongated substrates.—73-01709
Laser deposition of crystalline boron nitride films.—73-05306
Laser deposition of HTSC films: expansion of the laser plasma, deposition of particles, formation of the crystal structure, and superconducting properties of films.—73-04753
Laser reflective interferometry for in situ monitoring of diamond film growth by chemical vapor deposition.—73-01909
Laser-enhanced synthesis and processing of diamond films from liquid hydrocarbons.—73-02885
Lead zirconate titanate films from a diol-based sol-gel method.—73-09191
Low-melting glasses for the potting of thick film microcircuits.—73-00654
Low-pressure and low-temperature gallium arsenide homoepitaxy employing in situ generated arsine.—73-15021
Low-pressure CVD of $Ta_2O_5$ films for ULSI devices using tantalum pentaethoxide as precursor.—73-09193
Low-temperature conductivity of ZnO films prepared by chemical vapor deposition.—73-12826
Low-temperature deposition of SiC films by microwave plasma chemical vapor deposition.—73-16851
Magnetic and magnetooptical properties of Cu-doped Bi, Al:DyIG films prepared by the pyrolysis method.—73-05591
Magnetic circular dichroism in $YBa_2Cu_3O_{7-\delta}$ films.—73-08125
Magnetic exchange coupling for bilayered $Ni_{81}Fe_{19}$/NiO and trilayered $Ni_{81}Fe_{19}$/NiFeNb/NiO films.—73-11659
Magnetic ordering in amorphous $Bi_2O_3$-ZnO-$Fe_2O_3$ films sputtered at high temperatures.—73-04618
Measurement of the electronic transfer process in nitride film on a silicon substrate via photoconductance decay.—73-12832
Mechanical properties of hydrogenated hard carbon films.—73-09639
Mechanical properties of SiC films for X-ray lithography application.—73-09642
Mechanical stability of passivation films deposited on aluminum substrates.—73-03614
Mechanism of resistance variation of thick-film resistors on commercial 96% alumina substrates.—73-00994
Method for fabricating diamond films on nondiamond substrates and related structures.—73-12481
Method for forming a field oxide film of a semiconductor device.—73-15237
Method for forming a silicon carbide film.—73-05310
Method for forming a titanium nitride barrier layer.—73-02108
Method for heteroepitaxial diamond film development.—73-02111
Method for producing diamond films.—73-12488
Method for producing silicon dioxide film which prevents escape of Si component to the environment.—73-14550
Method of depositing high-density titanium nitride films on semiconductor wafers.—73-05315
Method of forming an inorganic protective layer on an oxide superconducting film.—73-04850
Method of manufacturing device having ferroelectric film.—73-04585
Method of manufacturing silicon nitride film.—73-02116
Method of preparing high-temperature superconductor films on opposite sides of a substrate.—73-11975
Method of preparing oxide superconducting films by laser ablation.—73-11976
Method of X-ray diffraction examination of thin superconducting films.—73-15820
Micrograin structure influence on electrical characteristics of sputtered indium tin oxide films.—73-13415
Microstructure of Co ferrite films and Co ferrite/Zn ferrite double layered films prepared by plasma-enhanced MOCVD.—73-06258
Morphology of TiN films deposited by arclike plasma-enhanced ion plating.—73-09493
Mossbauer studies of reactively deposited tin oxide films.—73-09217
Mossbauer studies of reactively deposited tin oxide films.—73-16223
Multiple cracking and interface debonding in a brittle film on a ductile rod.—73-08423
Multiwave scattering processes of fast electrons in textured PbSe films.—73-15051
Novel elastic anomalies in Zr-N films.—73-08929
Nucleation and growth of CVD polycrystalline $Si_3N_4$ films at low temperatures.—73-05937
Nucleation and growth of diamond films on Ni-cemented tungsten carbide: effects of substrate pretreatments.—73-16885
Nucleation control of diamond films by microlithographic patterning.—73-02119
Observation of hydrogenated amorphous carbon films by atomic force microscopy.—73-08679
Optical characterizations of photoinduced chemical vapor deposition produced $SiO_2$ films in vacuum ultraviolet, ultraviolet, and visible region.—73-12846
Optical waveguide of silica glass film on ceramic substrate.—73-03957
Photoelectric properties of CdTe films subjected to laser radiation.—73-15093
Photoelectrochemical characterization of tin-doped indium oxide.—73-07716
Photoluminescence of fine semiconductor (CdS, CdSe, Ge) particle-doped films prepared by a mutual counterdiffusion method and a sol-gel process.—73-04440
Physics of film growth from the vapor phase.—73-05949
Plasma nitriding of sputtered Ti films.—73-09243
Preparation and characterization of crystalline ZrC films.—73-05957
Preparation and characterization of polycrystalline diamond films and epitaxial diamond films.—73-05958
Preparation of Al-C-O-N films by microwave plasma chemical vapor deposition.—73-05967
Preparation of Al-C-O-N films by microwave plasma chemical vapor deposition.—73-16911
Preparation of $BaTiO_3$ films by icp flash evaporation.—73-05970
Preparation of $BaTiO_3$ films by ICP flash evaporation.—73-16917
Preparation of $Bi_2Sr_2CaCu_2O_y$ films on alumina substrates with a $CuAl_2O_4$ buffer layer.—73-08176
Preparation of biaxially aligned cubic zirconia films on Pyrex glass substrates using ion-beam-assisted deposition.—73-09257
Preparation of NiZn ferrite films by spin-spray ferrite plating on oxygen-plasma-treated substrates.—73-04638
Preparation of oxide film by the oxidation plating method.—73-02961
Preparation of PZT film on (100)Pt/(100)MgO subtrate by CVD and its properties.—73-16930
Preparation of textured diamond films on Si substrates by hot-filament chemical vapor deposition.—73-09270
Preparation of thick silica films by combined sol-gel and electrophoretic deposition methods.—73-14478
Preparation of thin silicon-on-insulator films by low-energy oxygen ion implantation.—73-10984
Process for making superconductor Tl-Pb-Sr-Ca-Cu-O films.—73-04866
Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers.—73-02128
Process-property correlations of excimer laser-ablated bismuth titanate films on silicon.—73-11605
Production of oxide superconducting films by laser sputtering using $N_{22}$.—73-01737
Properties of $(Ho,Bi)_3(Fe,Ga)_5O_{12}$ films near angular momentum compensation point.—73-15363
Properties of buried $SiO_2$ films in SIMOX structures.—73-04151
Properties of diamond film by chemical vapor deposition.—73-09284
Properties of oxide-nitride-oxide [ONO] stacked films for gate insulation in active matrix displays.—73-04152
Protective film on sliding members and method of forming [the] same.—73-10344
Pulsed vacuum uv irradiation of AsSe and $As_2S_3$ glassy chalcogenide semiconductor films.—73-04458
Rapid thermal annealing [RTA] of spin-on-glass [SOG] films.—73-03881
RBS study of in situ grown BiSrCaCuO films.—73-08184
Reactor vessel for manufacture of superconducting films.—73-11998
Relations between structure and photoelectric properties of CdTe films with anomalous impurity photovoltage.—73-16585
Relationship between the stress and bonding properties of amorphous $SiN_x$:H films.—73-12876
Remagnetization dynamics of ferrite-garnet films with weak uniaxial anisotropy.—73-01480
Remote plasma chemical vapor deposition of silicon nitride films.—73-09303
Residual hydrogen-gas-induced defects in heteroepitaxial $Y_1Ba_2Cu_3O_{7-\delta}$ films.—73-11891
Second-order optical nonlinearity in corona-poled glass films.—73-07073
Semiconductor device having protective insulating film.—73-04231
$SnO_2$ grazing-incidence antireflection films for monochromatization of synchrotron radiation: design, preparation, and characterization.—73-12879
Sol-gel-derived lead titanate films.—73-13282
Specific features of nucleation and growth of solid solution $(Zn_{1-x}Cd_xTe)_{1-y}(In_2Te_3)_y$ films.—73-05483
Spectroellipsometric [SE] characterization of lanthanide-doped $TiO_2$ films obtained via the sol-gel technique.—73-12688
Spin-dependent electron tunneling between ferromagnetic films.—73-15365
Structural and electrical properties of InSb epitaxial films grown on GaAs by low-pressure MOCVD.—73-15182
Structural and optical properties of a-$SiN_x$:H prepared by plasma-enhanced chemical vapor deposition.—73-12882
Structural and optical studies of oxygenated amorphous CdTe films.—73-15183
Structural change and sintering behavior of $BaTi_5O_{11}$ coating film derived from metal alkoxide.—73-09342
Structural change and sintering behavior of $BaTi_5O_{11}$ coating film derived from metal alkoxide.—73-17010
Structural changes in thin As-Se films: DSC and EXAFS studies.—73-14090
Structural properties and low-temperature photoluminescence of cadmium telluride films produced by liquid phase epitaxy.—73-05646
Structure and adhesion of ZrN films formed by reactive magnetron sputtering ion plating [RMSP] and dynamic ion mixing [DIM].—73-08973
Substantially transparent free-standing diamond films.—73-05345
Substructural transformations in irradiated and aged PbTe films.—73-16343
Superconducting films on microwave dielectric substrates.—73-11915
Synchronizer ring.—73-03703
Synthesis of diamondlike carbon (a-C:H) films by hybrid plasma CVD—effects of ion beam injection energy on film deposition.—73-03046
Synthetic film of zeolite crystal body and method for manufacturing the zeolite film.—73-05246
Techniques for the growth of crystalline films by molecular beam deposition.—73-06108
Theoretical study on silicon nitride film growth: ab initio molecular orbital calculations.—73-13321
Thermal expansion of chemical vapor deposition grown diamond films.—73-16628
Thermal stability of a-$SiN_x$:H [$x \leq 0.4$] films.—73-05673
Thermodynamical and experimental analyses of chemical vapor deposition of ATO from $SnCl_4$-$SbCl_5$-$H_2O$ gas mixture.—73-12722
Thermomagnetic effect in inhomogeneous superconducting films.—73-15657
Thick $YBa_2Cu_3O_7$ film formation on $Y_2BaCuO_5$ ceramic substrates.—73-15658
Thinning a diamond body by means of molten rare-earth-containing alloys.—73-16021
$TiO_2$-based vitreous coatings obtained by sol-gel method.—73-09379
Tribological properties of polished diamond films.—73-09688
Ultrafine particle films [UFP] by gas deposition method.—73-06129
Use of an ultrasonic resonance technique to measure the in-plane Young's modulus of thin diamond films deposited by a dc plasma jet.—73-01935
Use of transmission electron microscopy for the characterization of rapid thermally annealed, solution-gel, lead zirconate titanate films.—73-09520

Utilization of formates for superconductivity of HTS films.—73-01702
Virtual interface method for in situ ellipsometry of films grown on unknown substrates.—73-09385
Water-repellent metal oxide film coated on glass substrate and method of forming [the] same.—73-03972
Water-repellent metal oxide film coated on glass substrate and method of forming [the] same.—73-03973
XRD study on heavy ion disorder in $YBa_2Cu_3O_{7-y}$ film.—73-15670
$YBa_2Cu_3O_{7-\delta}$ films: calculation of the thermal conductivity and phonon mean-free path.—73-11945
YBaCuO films by pulsed laser deposition [PLD] and sputtering.—73-04827

**filters/filtration,**
$Al_2O_3$-MgO-$ZrO_2$ ceramic foam filter.—73-03989
Broken porcelain as filter material.—73-07236
Ceramic duplex filter.—73-01045
Ceramic filter construction and method.—73-05198
Ceramic filter element and method of manufacture.—73-02029
Ceramic filter process.—73-12346
Ceramic filter.—73-05199
Ceramic filter: synthesis and applications for bioseparation.—73-12319
Ceramic filters for hot gas cleanup.—73-08505
Ceramic filters for the cast metals industry.—73-07197
Classifying filters for refining metals.—73-00788
Comparison of $BaTiO_3$ optical novelty filter and photothermal lensing configurations in photothermal experiments.—73-12756
Compositions for forming high-temperature ceramic particulate filters.—73-04029
Computer simulation of a sintered filter.—73-16684
Effects of additives on electromagnetic properties in EMI noise filters for high-frequency region.—73-04606
Emission control technology from Sweden.—73-15724
Estimation of poor size distribution in different structural cylindrical porous ceramic filters from gas permeability.—73-15797
Evaluation of the efficiency of refining molten metals by filtration.—73-04000
Exhaust gas cleaner [with ceramic powder layer] and method of cleaning exhaust gas.—73-15943
Exhaust gas filter [with ceramic fiber] and method for making the same.—73-15944
Filter membrane and method of manufacture.—73-02037
Iron modification in the mold using foam-ceramic filters.—73-00828
Method of cleaning porous ceramic filters.—73-01868
Method of manufacturing dielectric block filters.—73-04221
New developments in high-efficiency particulate air filtration.—73-04932
Polycapillary model of a porous medium for analyzing filtration processes in ceramics.—73-03182
Polycapillary model of porous media for analysis of filtration processes in ceramic materials.—73-02927
Porous ceramic filter and preparation thereof.—73-15950
Porous ceramic filters produced by hot isostatic pressing.—73-16901
Reactive sputtering of molybdenum oxide gradient index filters.—73-02994
Refractory products for refining molten metals by filtration.—73-00857
Shaping technology for ceramic sheets using vacuum filtration.—73-08363
Superconductive coplanar-waveguide filters.—73-11917
Technology of forming ceramic tile by vacuum filtration.—73-04049
Thin-cake filtration offers improved washing capability for ceramic powders.—73-08366

**fine ceramics,**
Advancement of processing applications and fine ceramic products.—73-08502
Creep rupture map of engineering fine ceramics.—73-06360
Determination of moisture content in fine ceramic powders using the Karl Fischer (aquametry) method.—73-08389
Fine ceramics and nondestructive testing.—73-01900
Friction and wear properties of fine ceramics in high-temperature and high-pressure water.—73-03303
How small size defects in fine ceramic materials can we see by radiography.—73-01904
Rheology of fine ceramics.—73-16976
Sintering behavior of ultrafine ceramic particles.—73-06054
Trend of Japanese patents on fine ceramics: III.—73-03409

**fineness,**
Microfine cements.—73-03498
Properties of very fine blast-furnace slags manufactured by jet mill.—73-06707

**finite element analysis,**
Basic theory of finite element method.—73-14572
Three-dimensional finite element analysis of thin-film stresses using ALGOR personal-computer-based software.—73-01934
Two-dimensional finite element method simulation of Vickers indentation of hardness measurements on TiN-coated steel.—73-06869

**fire-retardant,**
Glazing against fire.—73-07135
Gypsum boards and their fire resistance.—73-09978

**fireclay,**
Determination of phosphoric anhydride in the gaseous products of firing of phosphate-bonded fireclay shapes.—73-14582
Fabrication of thin deck based on cordierite-bonded fireclay.—73-07213
Fireclay refractories for service in reducing conditions.—73-00816
Kyanite and fireclay from Vietnam.—73-01985

**firing copper,**
Purple copper glaze.—73-10888

**firing,**
Bone china, a high-quality soft porcelain.—73-10802
Boric-zirconium porcelain—a new type of low-firing porcelain.—73-10803
Bricks fired from mixture of coal spoil and fly ash.—73-10673
Clean firing of glass furnaces through the use of oxygen.—73-08465
Color development of glossy glazes for rapid and single fire processes.—73-00901
Composition and technology of glossy/satinized glaze systems for fast firing of earthenware.—73-00902
Computer application to the refractory firing process development.—73-14581
Considerations and results in applying oxygen firing to industrial melters.—73-08467
Controlling and optimizing an oxy-fuel-fired furnace.—73-15869
Design considerations and modeling of the glass melter combustion space for oxy-fuel firing.—73-15870
Development of fast dry-fast technology.—73-12214
Economics drive the conversion of glass tanks to oxy-fuel.—73-08470
Effect of firing regimes on the microstructure and the properties of zircon-containing ceramics.—73-02783
Energy usage in firing ceramics and melting glass.—73-08471
Fabrication of a planar solid oxide fuel cell by tape-casting and cofiring method.—73-00969
Fast drying and firing process of heavy clay with bars dryer and bars kiln.—73-10682
Fast firing technology in the brick and tile industry—a technical evaluation.—73-05115
Fast firing technology in the brick and tile industry—economic considerations.—73-05116
Fast single-fire decoration firing allows automation and energy savings.—73-00906
Firing techniques to improve the quality of bone china.—73-10847
Furnaces with efficient utilization of energy for firing sanitary ware and porcelain.—73-12220
Heat transfer mathematical model within a ceramic body during firing process.—73-13085
How 100% oxygen firing impacts regenerative melters.—73-12224
Industrial experience with 100% oxy-fuel-fired furnaces.—73-15879
Inertizing—beyond double and single firing.—73-15731
Influence of kiln atmospheres on electrical porcelain firing.—73-08475
Influence of the production cycle on the formulation and properties of bodies and glazes.—73-10859
Is the refractories industry able to cope with the steadily increasing demand for ceramic fast-firing technology.—73-10737
Jet firing with pulse/proportional control (AM/FM).—73-08476
Jet firing with pulse/proportional control.—73-08477
Juanying rock-based fine porcelain fired in low-temperature reducing flame.—73-10862
Kiln operation and firing practices.—73-08478
Know-how of firing of red floor tile.—73-10683
Manville plant gets a boost from oxygen-gas firing.—73-12229
Method for reducing shrinkage during firing of ceramic bodies.—73-04992
Method of firing ceramic honeycomb structure.—73-04993
Method of firing glass-melting furnace.—73-01975
Methods of reducing overburnt specks in internal-fired bricks.—73-10684
Modern design basics for whiteware firing technology in the 1990's.—73-10870
Modern fast firing of whiteware products—effects on product quality.—73-10871
$NO_x$ reduction using new firing technology.—73-12233
Once or twice firing for porcelain tableware.—73-04045
Optimization of design of equipment for firing.—73-01962
Optimization of firing technology in a tunnel kiln for firing super-duty refractories by direct automatic control of the oxygen content.—73-10749
Oxy-fuel firing for emissions control on a container melter.—73-08481
Physicochemical reaction heat during ceramic firing.—73-08432
Plugging into drying and firing productivity.—73-12237
Process for firing ceramic honeycomb structural bodies.—73-05242
Rationalization of energy for glost and bisque firing of porcelain in shuttle kilns.—73-01967
Recognizing new technology—the fast firing of decorated ware using natural gas open flame kilns.—73-10889
Refractories for use in firing ceramics.—73-00890
Research on low-temperature and fast-firing sanitary ware of $K_2O$-$Na_2O$-$Al_2O_3$-$SiO_2$.—73-14666
Scaling up the microwave firing of ceramics.—73-06028
Small high-temperature tunnel kiln with an injector system of firing.—73-01970
Status report on the development of an oxygen-fuel-fired forehearth.—73-08487
Sub-bright glaze for fast firing in push bat kilns.—73-14667
Textural changes of materials containing diaspore through firing.—73-00878
Ultimate firing machine for sanitary ware.—73-05134
Utilization of isostatic pressing in the industry of vessels.—73-12069
Waste-oil fired kiln.—73-12245
White and light porcelain fired at low temperature.—73-10909

**flame spraying,**
Prediction model to assist plasma and HVOF spraying.—73-16904
Synchronizer ring.—73-03703

**flat glass,**
Ancient flat glass unearthed from China.—73-13660
Choosing a flat glass washing and drying system.—73-15709
Computer control system of molten glass temperature in the forming zone of flat glass furnace of up-draw process.—73-14339
Float-bath ribbon-width control method and system.—73-14538
Measurement of angular emissivity of coated flat glass: extension of the angular range up to 85°.—73-14223
Repeat performance of 1991 is predicted.—73-13643
Using borax in the production of flat and container glass.—73-10615

**flaws,**
Change of surface grinding flaw of ß-SiAlON with oxidation and its influence on bending strength.—73-02739
Chemically corroded pristine silica fibers: blunt or sharp flaws—correction.—73-06200
Chemically corroded pristine silica fibers: blunt or sharp flaws.—73-03126
Correlations between flaw tolerance and reliability in zirconia.—73-17257
Flaw detection in concrete by the impact-resonance test.—73-09963
Interrelation between flaw resistance, $K^R$-curve behavior, and thermal shock strength degradation in ceramics.—73-06465
Interrelation between flaw resistance, *R*-curve behavior, thermal shock strength degradation, and stress-strain behavior of ceramics.—73-06466
Theoretical study of the effect of initial flaw size on the proportional limit.—73-09374

**flexural strength,**
Biaxial flexure testing: analysis and experimental results.—73-06334
Characterization of the flexural strength degradation of a commercial hot-pressed silicon nitride in a high-temperature sulfidizing environment.—73-06340
Effect of surface grinding on flexural strength of alumina.—73-09581
Flexural properties of brittle multilayer materials: II. Experiments.—73-17321
Four-point and biaxial flexure strength of PZT ceramics: a probabilistic approach.—73-17323
High-temperature strength of the hot-pressed partially stabilized α-SiAlON ceramics having the composition of $Y_{0.1}(Si, Al)_{12}(N, O)_{16}$.—73-03309

**flexure,**
Flexural behavior of repaired reinforced concrete beams using FRP [fiber-reinforced plastic] and some kind of mortar.—73-09964

**float glass,**
Annealing of ion-implanted silver colloids in glass.—73-10495
Behavior of rf sputter-deposited $SiO_2$ and $Al_2O_3$ diffusion barriers on float glass at 300°C in air.—73-10499
Computer simulating the stretching process on float glass.—73-14340
Distribution of flatness deviations in float glass ribbon.—73-14353
Eagle eye on float line defects.—73-10520
Electrolytic surface modification of float glass [at 600–950°C] using molten metal electrodes.—73-00621
EPMA, RBS, and SIMS analyses of tin profiles in commercial float glass.—73-14375
Float glass ribbon thickness measurement.—73-14380
Interferometric determination of the homogeneity of float glass.—73-14413
Nanohardness measurements of float glass surfaces.—73-14230
Spectral remote sensing of the dynamic temperature distribution in glass plates.—73-07076
Sulfate utilization in float glass production.—73-07177
Surface crystallization kinetics of float glass.—73-14507
Surface stress measurement of thermally tempered float glasses.—73-14508
Technological changes in sheet glass manufacture.—73-03408
Thermal conductivity of float glass at room temperature.—73-07085

**flocculation,**
Depletion stabilization/flocculation strategy for fiber-particle microcomposites.—73-09061
Selective flocculation of kaolinite from mixtures with tribasic calcium phosphate [TCP] using hydrolyzed polyacrylamides.—73-01995
Selective flocculation of tribasic calcium phosphate [TCP] from mixtures with quartz using polyacrylic acid [PAA] flocculant.—73-01996
Shear flocculation of quartz.—73-01997

**floor tile,**
Antistatic flooring.—73-14642
Construction of antistatic floors coated with ceramics.—73-08387
Development of ceramic wall and floor tiles using fly ash.—73-10817
Imitation granite floor tile.—73-10790
Know-how of firing of red floor tile.—73-10683
Monolithic coverings for floors with increased service strength on the basis of VNV modified by a polymer.—73-00146
Non-steam-cured fly ash products.—73-10069
Optimal firing temperature curve for ceramic wall and floor tile.—73-07265
Presentation of two-dimensional property function for ceramic floor tiles.—73-10885
Wall and floor tile body and glaze formulas for once fast firing at low temperature.—73-10907

**flow,**
- Cost of ownership drives flow meter evolution.—73-05033
- Designing hoppers and silos for reliable flow.—73-15712
- Exhaust/preheat/hot zone air-flow considerations.—73-01949
- Flow behavior of modified cement pastes.—73-06656
- Flow properties of fine-grained bulk materials in troughed chain conveyors: II, Vertical conveying.—73-01782
- Frit making (frit melting) during inclined flow of the charge.—73-00632
- Fuel flow metering.—73-01951
- Glass flow in a tubing bowl.—73-14393
- Importance of the flow technology for the drying of ceramic products.—73-12035
- Interpreting the results of 3-D glass flow calculations.—73-00648
- Measurement of flow velocity and correlation to particle velocity under plasma-spraying conditions.—73-09199
- Paste Flow and Extrusion (Oxford Series on Advanced Manufacturing, Vol. 10).—73-17534
- Properties of the flow line as a score.—73-00691
- Two-dimensional simulation of glass flow and heat transfer in a glass-melting furnace after air bubbling.—73-03898
- Use of numerical flow models in the glass-melting process.—73-14525
- Use of oscillatory shear to study flow behavior of fresh cement paste.—73-00202
- Water model simulation on tundish sliding nozzle—fluid flow in submerged entry nozzle.—73-00883

**flue gas,**
- Adsorptive and catalytic flue gas purification of exhaust gases from cement plants: laboratory and small-scale experiments.—73-00017
- Flue gas cleaning with limestone.—73-01783
- Sorption kinetics of $SO_2$ from combustion flue gases at low temperatures.—73-00191

**fluidization,**
- Exciton transport in $Cu_2O$: evidence for excitonic superfluidity.—73-17079
- Fluidized mixing—the efficient way to combine bulk powders.—73-04922

**fluidized bed,**
- Fluidized-bed heat exchangers operating with small-particle solids.—73-16499
- Practical experience with a plant for fluidized bed granulate drying for pressed ceramic bodies.—73-01816
- Refractories in fluidized-bed combustors.—73-14613

**fluids,**
- Elaboration of ceramic materials and supercritical fluids.—73-13040

**fluorapatite,**
- Anisotropic luminescence centers of $T^{3+}$ ion luminescence in fluoroapatite crystals.—73-08808
- Glass-ceramic biomaterials based on the fluorapatite-anorthite and fluorapatite-diopside systems.—73-02013
- Pyrolytic route for the formation of hydroxyapatite/fluoroapatite solid solutions.—73-16967

**fluorescence,**
- Compositional improvement of fluorescent tube glasses.—73-03716
- Fluorescence line narrowing study of $Eu^{3+}$ in YSZ: a new direction of research in superionic materials.—73-00971
- Measurement of indium desorption activation energy from InP layers by laser-induced fluorescence [LIF].—73-11308
- Optical fluorescence from chromium ions in sapphire: a probe of the image stress.—73-05442
- Process for producing fluorescent or phosphorescent pigments coated with glass.—73-03960
- Self-absorption effect in the fluorescence yield of NiO at the oxygen *K*-edge.—73-05636

**fluorides,**
- $^{19}F$ nuclear magnetic resonance study of the structural role of fluorine ions in glasses of the system $Al(PO_3)_3$-$BaF_2$ and $Ba(PO_3)_2$-$CdF_2$.—73-00341
- Alternative doping of *p*-type amorphous silicon films using boron trifluoride.—73-01071
- Amplified spontaneous emission in $Ho^{3+}$-doped ZBLA fibers.—73-06995
- Analysis of absorption in zinc selenide and fluoride mirrors and films.—73-02550
- Anion transport in $Ba_{0.5}Ce_{0.5}F_{2.5}$ single crystal with spatially oriented fluctuations of composition.—73-17072
- Anionic conductivity in $Na_{0.5-x}R_{0.5+x}F_{2+2x}$ (R=Dy–La, Y; $x$=0.1) single crystals with fluorite-type structure.—73-16030
- Anomalous light scattering in the glass transition region.—73-06997
- Atomic structure of nonstoichiometric $Pb_{0.3}La_{0.7}F_{2.7}$ crystal (fluoritelike phase at high pressure).—73-16035
- BIG fluoride glass optical fibers with improved NA.—73-06998
- Cadmium-containing fluoride glasses.—73-06886
- Characterization of fluoride glasses for single-mode optical fibers with large refractive index difference.—73-07000
- Chemical effects in ion-implanted glass waveguides.—73-03712
- Comparison of physical properties of $ZrF_4$- and $HfF_4$-based melts and glasses.—73-07004
- Compounds containing layers of composition $[(Sb^{III}F)PO_4]$, $[(Sb^{III}F)As_4]$—crystal structures of $Na(SbF)PO_4{\cdot}1.5H_2O$, $Na(SbF)AsO_4$, $NH_4(SbF)PO_4{\cdot}H_2O$, and $NH_4(SbF)AsO_4{\cdot}3H_2O$.—73-02171
- Computer simulation of the vibrational spectra and properties of fluoride glasses based on $ZrF_4$.—73-07005
- Concentration dependence of unit cell parameters of $M_{1-x}R_xF_{2+x}$ phases [M=Ca, Sr, Ba, Cd, Pb; R=rare-earth elements] with fluorite structure.—73-16066
- Cross relaxation for $Tm^{3+}$ ions in indium-based glasses.—73-06896
- Cross relaxation of $Tb^{3+}$ ions in $ZnF_2$-$CdF_2$-based glasses.—73-13950
- Crystal structure of $Ca_{1-x}Nd_xF_{2+x}$ ($x$=0.1, 0.2) from precision X-ray diffraction data.—73-02191
- Crystal structure of $LiYF_4$.—73-12562
- Crystallization in lead-bearing glasses and melts based on $BaSrCaMgAl_2F_{14}$.—73-07007
- Crystallization of fluoride glasses.—73-00315
- Crystals with the fluorite structure: synthesis, additive coloring, and photochemistry of color centers [CC's]: I, Growth of activated crystals and efficiency of radiative formation of color centers.—73-02757
- Defect centers in heavy-metal fluoride glasses: a review.—73-06902
- Development of heavy-metal fluorides with electrofunctionality by reactions under fluorine or hydrogen-fluoride gas atmosphere.—73-14688
- Devitrification studies of heavy metal fluoride glasses containing alkali fluoride.—73-07118
- Diffusion and clustering in the $Cd_{1-x}Bi_xF_{2+x}$ solid solution: a fluorine NMR study.—73-03090
- Discrete variational $X_\alpha$ (DV-$X_\alpha$) method studies on energy levels and vibrational structure of $MgF_2$:$V^{2+}$ crystals.—73-12572
- Dynamics of an anion subsystem in new olivofluorozirconate glasses by the method of $^{19}F$ nuclear magnetic resonance.—73-00328
- Effect of calcium fluorosulfosilicate on formation of calcium silicate.—73-09899
- Effect of fluorine-bearing limestone on clinker quality.—73-09904
- Effect of phase transition on intrinsic luminescence parameters of $RbCaF_3$.—73-16122
- Effect of rare-earth ions on the thermal stability of $AlF_3$-based glasses.—73-07016
- Effect of rubidium and cesium fluorides on the structure and properties of phosphate glasses.—73-00462
- Effect of $Yb^{3+}$ codoping on the upconversion emission intensity in $Er^{3+}$-doped ZBLAN fluoride glasses under 800-nm excitation.—73-14164
- Electric and dielectric properties of $ZrF_4$-$BaF_2$-$LaF_3$ glass.—73-10434
- Electrical conductivity measurements of binary solutions of molten alkaline-earth fluorides.—73-00957
- Electrical transport phenomena in $ZrF_4$-$BaF_2$-$LaF_3$-$AlF_3$ glasses.—73-07024
- Epitaxial growth of oxides on semiconductors using fluorides as a buffer layer.—73-07507
- Epitaxial rare-earth fluoride insulating layers on semiconductors: structure, phase transitions, and interface reactions.—73-11197
- EPR of $Ce^{3+}$ ions in $KMgF_3$ crystal.—73-16140
- EPR structural investigations of transition metal fluoride glasses (TMFG).—73-06912
- ESR studies of $Mn^{2+}$ centers in $Sr_{1-x}Ba_xF_2$:Mn crystals.—73-05397
- Evaluation of thin $MgF_2$ films by spectroscopic ellipsometry.—73-17133
- Evidence of superconductivity at 30 K in $Pr_2CuO_{4-x}F_x$.—73-04717
- EXAFS study of ternary $ZrF_4$-$BaF_2$-$NdF_3$ glasses.—73-00339
- Experimental thermodynamics and phase equilibria estimation in Zr fluoride glasses.—73-06916
- Fluorescence line narrowing of $Sm^{3+}$ in ZBLAN fluoride glasses.—73-07026
- Fluoride glasses and methods for making optical fibers from the glasses.—73-10627
- Fluoride glasses with dysprosium and europium dopants: their low-temperature and magnetic field dependence of Rayleigh and Brillouin scattering.—73-03789
- Fluorides in zirconia glazes.—73-00907
- Fluoroindate glasses for active and passive fibers.—73-14382
- *Fm3m*→*I4/m*→*P2₁/n* successive phase transitions in $Rb_2KInF_6$ and $Rb_2KLuF_6$ elpasolites.—73-16145
- Formation of scattering centers in fluoride glass preforms and fibers.—73-06919
- Gain saturation characteristics of Raman amplification in silica and fluoride glass optical fibers.—73-06920
- Gas film levitation: a unique containerless technique for the preparation of fluoride glass rods.—73-07132
- Glass crystallization of $Zn_{0.5}Cd_{0.5}B_2O_4$-$La(BO_2)_3$-$VF_3$ system.—73-13993
- Glass formation in the system $ZrF_4$-$SnF_2$.—73-13996
- Growth and characterization of ferroelectric $BaMgF_4$ films.—73-01416
- Growth and some properties of $Na_{0.5-x}R_{0.5+x}F_{2+2x}$ single crystals (R=Y, Dy–Ln; $x$=0.1 and 0.15) with fluorite structure.—73-16501
- High-efficiency ytterbium-doped fluoride fiber laser.—73-07034
- Highly refractive glass for cinephotooptics.—73-00640
- Holmium in ZBLAN: interplay of lasing, colasing, and excited state absorption.—73-07035
- Hot isostatic pressing of fluoride glasses.—73-07138
- Hydrochloric acid corrosion of ZBLAN fluoride glasses.—73-06924
- Improved fluoride glasses for 1.3-μm optical amplifiers.—73-07037
- Incorporation of fluorides into cement kiln materials under different modes of operation.—73-09999
- $InF_3$-based fluoride glasses.—73-03737
- Influence of F⁻ [fluoride] on crystalline structure of $C_3S$ [tricalcium silicate].—73-10001
- Influence of chlorine-fluorine substitution on the electrical properties of some fluoride glasses.—73-07039
- Information about the microcrystalline structure from the ir reflection spectra of thin uv optical films: $NdF_3$ and $MgF_2$.—73-08641
- Interaction of yttria with uranium fluoride gases ($UF_n$, $n$=4, 6) at high temperatures.—73-12010
- Interactions in the system $KF$-$CuF_2$-$BiF_3$.—73-16182
- Interactions of $YBa_2Cu_3O_{7-x}$ thin films with alkaline earth fluoride substrates.—73-08112
- Ionic conductivity and $^{19}F$ NMR investigation of some series of $ZrF_4$-based fluoride glasses containing $LaF_3$ or $YF_3$.—73-07042
- Ionic conductivity of $Ba_{1-x}Gd_xF_{2+x}$ crystals [$x$=0.25 and 0.4–0.41] at high temperatures.—73-16524
- Low refractive index fluoride glasses containing barium, indium, and gallium.—73-14217
- Low-temperature crack healing in heavy metal fluoride glass.—73-14218
- Luminescence and nonlinear optical properties of barium fluoromolybdate ($Ba_2MoO_3F_4$).—73-05589
- Luminescence of divalent and trivalent rare-earth ions in SYAM-fluoride glass.—73-10450
- Luminescence of $Gd^{3+}$-activated $LiNaY_2F_8$.—73-02324
- Luminescence of the cadmium oxyfluoromolybdate, $CdMoO_3F_2$.—73-08906
- Luminescence of $Tl^+$ ions in an NaF:Tl crystal under pulsed excitation.—73-08907
- Luminescence thermal quenching of $Nd^{3+}$-doped fluoride BIGaZYTZr glass.—73-07046
- Magnetic susceptibility of nonstoichiometric fluorides with fluorite structure.—73-16532
- MBE growth of rare-earth-doped fluoride insulators on semiconductors for laser applications.—73-04399
- Mechanical properties of ZBLAN glasses.—73-07048
- Method of forming fluoride glass fiber preform.—73-03946
- Method of manufacturing a heavy metal fluoride glass composition.—73-03950
- Mild surface fluorination of glass fibers.—73-03858
- Model of atomic structure of $Na_3Lu_{13}F_{46}$.—73-16218
- Mossbauer spectroscopy of glasses based on tin fluorides.—73-14045
- Neutron diffraction study of nonstoichiometric phase $La_{0.85}Sr_{0.15}F_{2.85}$.—73-02346
- New fluorogallate glasses.—73-06940
- New fluoroindate glass compositions.—73-06941
- New glass compositions containing alkali metal derived from BIGaZYbT.—73-06942
- New modifications of tetrafluorolutetiate of sodium, $NaLuF_4$.—73-12640
- NMR study of fluoride ion and proton motion in $N_2H_5Sn_2F_5$.—73-01002
- OH absorption in the low-loss window of ZBLAN(P) glass fiber.—73-06948
- Optical properties of $Cr^{3+}$ in thin-film lead-based fluoride glass.—73-07059
- Optical properties of fluoride phosphate glasses.—73-14244
- Optical properties of pure, $Nd^{3+}$-doped, and $Pr^{3+}$-doped fluoroindate glasses.—73-07060
- Oxidation states of transition metals in ZBLAN.—73-06950
- Peculiarities of the electrical properties of polycrystalline α-$PbSnF_4$ in frequency range $10^2$..*6·10¹⁰ Hz*.—*73-02661*
- Phase *p-T* diagrams of $Cs_2RbDyF_6$ and $Cs_2NaTmBr_6$ elpasolites.—73-16245
- Phase transitions in elpasolite, $Rb_2KScF_6$.—73-16266
- Physical properties of $ZrF_4$- and $HfF_4$-based melts and glasses.—73-14252
- Plasma-enhanced chemical vapor deposition of $ZrF_4$-based fluoride glasses.—73-07161
- Preferred orientation of ß-lead fluoride grains formed within micropores of porous alumina.—73-16905
- Preparation and thermal decomposition of yttrium hydroxide fluorides.—73-02404
- Process for chemical vapor purification of group IIIA metal fluorides.—73-02122
- Pyrolytic route to fluoride glasses: I, Preparation and thermal decomposition of metal trifluoroacetates.—73-00693
- Pyrolytic route to fluoride glasses: II, Preparation of glasses in the system $ZrF_4$-$BaF_2$-$LaF_3$-$AlF_3$-NaF.—73-00694
- Radiation defects and thermoluminescence of barium fluoride.—73-16582
- Raman scattering study of the $Ba_{1-x}R_xF_{2+x}$ superionic conductors.—73-05466
- Rare-earth-doped high NA fluoride fiber amplifiers.—73-07067
- Rates of crystal nucleation and growth in $(100-x)Na_2O$·$2CaO$·$3SiO_2$·$xNaF$ glasses.—73-14484
- Reaction equation of $C_4AF$ hydration in the presence of gypsum.—73-10131
- Reaction of tungsten hexafluoride with Si and TiN surfaces.—73-13228
- Relation between anionic conductivity and parameters of $^{19}F$ NMR spectra for nonstoichiometric fluorite fluorides.—73-02682
- Scattering-loss mechanism in $CaF_2$-film-assisted diffusion bonding of $MgF_2$ ceramics.—73-08966
- Schemes of isomorphous heterovalent cation substitutions in fluoride solid solutions with fluorite structure.—73-02426
- Science and technology of composite materials: optical fibers made by fluoride glasses.—73-00699
- Sn-*K*, Pb-$L_3$, and Ba-$L_3$ EXAFS, X-ray diffraction, and $^{119}Sn$ Mossbauer spectroscopic studies of ordered $PbSnF_4$ and $BaSnF_4$ fluoride ionic conductors with α-$PbSnF_4$ structure.—73-02434
- Sol-gel synthesis of high-quality heavy-metal fluoride glasses.—73-00703
- Spectroscopy of the simplest intrinsic defects in γ-irradiated NaF crystals.—73-03112
- $Sr_{1-x}Er_xF_{2+x}$ luminescent thin films epitaxially grown on InP(100).—73-04489
- States of admixed iron atoms in glasses of the system $CdGeO_3$-$CdF_2$-$AlF_3$ according to data from Mossbauer spectroscopy.—73-00403
- Striae in fluoride glass.—73-07079
- Structural model of $NaYb_2F_7$ fluoritelike phase.—73-02449
- Structural relations between monoclinic and orthorhombic fluorite-related superstructures $Mo_{0.5-x}Ln_{0.5+x}F_{2+2x}$ single and twinned phases.—73-02453

Structural role of fluorine ions investigated by the method of nuclear magnetic resonance of $^{19}F$ in glasses of the system $Al(PO_3)_3$-$BaF_2$ and $Ba(PO_3)_2$-$CdF_2$.—73-00410
Structure of color centers in $SrF_2$:Na crystals studied by optically induced dichroism.—73-02464
Structure of glass based on $BaZr_2F_{10}$.—73-14109
Surface modification of heavy metal fluoride glass by ion implantation.—73-03768
Synthesis, atomic structure, and electrical conductivity of mixed crystals of (K, Ba)(Zn, Li)$F_3$.—73-16355
Systematic study of refractive index variations with composition in heavy metal fluoride glasses.—73-07082
Systematic substitutions in ZBLA and ZBLAN glasses.—73-07083
Systematic survey of experimental and simulated glass formation for the $ZrF_4$-$BaF_2$-NaF system.—73-06977
Tentative phase diagram of the system $PbF_2$-$BiF_3$.—73-02516
Ternary system $CaF_2$-$SrF_2$-$MnF_2$.—73-02517
Thermal conductivity of aluminofluorophosphate glasses.—73-00555
Thermodynamics of the ZBN glass-forming system.—73-06981
$U^{3+}$-doped bulk and fiber fluoride glasses.—73-06985
Upconversion and relaxation of high-lying states in rare-earth-doped ZBLAN bulk and fibers.—73-07095
Upconversion in neodymium-doped fluoride glasses.—73-07096
Variable-temperature X-ray diffraction analysis of the behavior of the mobile fluorine ions in a superionic conductor $\beta$-$PbF_2$.—73-02537
Vibrational spectra and structure of fluorindate glasses.—73-06987
Viscosity and density of molten barium zirconate and related melts.—73-09007
Visible and uv upconversion from diode-pumped neodymium-doped fluoride glasses.—73-03818
Vitrification and properties of the glass system $Zn_{0.5}Cd_{0.5}B_2O_4$-$La(BO_2)_3$-$YF_3$.—73-14124
Vitrification and the properties of glass systems containing tin tetrafluoride.—73-14125
X-ray photoelectron spectroscopic study of the interactions of $CF^+$ ions with gallium arsenide.—73-07864
X-ray photoelectron spectroscopy study of low-energy $CF^+$ ion interactions with silicon.—73-08793
X-ray structural study of consecutive phase transitions in potassium pentafluoroantimonate(III) in the 323–98 K range: I, Dynamics, symmetry, and lattice parameters.—73-16397
X-ray structural study of consecutive phase transitions in potassium pentafluoroantimonate(III) in the 323–98 K range: II, Crystal structure.—73-16398
X-ray structural study of consecutive phase transitions in potassium pentafluoroantimonate(III) in the 323–98 K range: III, Structural modulation.—73-16399
XPS and NEXAFS study of fluoride glass structure using synchrotron radiation.—73-14127
Zr-EXAFS study of fluoride ion-conducting $ZrF_4$-$BaF_2$-CsF glasses.—73-01042

**fluorine,**
$^{19}F/^{29}Si$ CP MAS NMR study of microporous solids synthesized in fluoride medium.—73-08400
Characterization of fluorine-doped silica glasses.—73-06887
Chemical resistance of facing plates based on alkali-silicate fluorine-containing slag.—73-06889
Depth profiles of ion-implanted fluorine in tin oxide films prepared by atmospheric pressure chemical vapor deposition.—73-02231
Effect of fluorine doping on the electrical properties of $Bi_2Sr_2CaCu_2O_x$.—73-08031
Effects of F doping in $YBa_2Cu_3O_{7-\delta}$ polycrystalline samples.—73-08044
Elastic anomaly and structure of F-doped silica glass.—73-01894
Features of the formation of the near-surface layer of fluorine-containing glasses.—73-00481
Features of thermal dissociation of oxyfluoroniobates.—73-16150
Fluorine-containing germanate glasses.—73-00343
Fluorine-doped high-$T_c$ cuprate $TlSr_2CaCu_2O_7$.—73-15474
Glass-ceramics containing fluorine.—73-10546
High-temperature strength of fluorine-doped silicon nitride.—73-06454
Highly conductive and transparent films of tin- and fluorine-doped indium oxide produced by APCVD.—73-10955
Influence of an RbF interlayer on the Ge/GaAs interface properties.—73-01199
Influence of fluorine on the superconducting properties of $YBa_2Cu_3O_{7-\delta}$.—73-08106
Interaction of components in fluorochalcogenide vitreous systems.—73-14013
Method for treating fluoroaluminosilicate glass.—73-14551
Properties of fluorine-doped tin oxide films produced by atmospheric pressure chemical vapor deposition from tetramethyltin, bromotrifluoromethane, and oxygen.—73-16577
Reagent-less processing of stagnant water containing fluorine.—73-09742
Removing fluorine from the surface of silicon nitride powder with chemical reagents.—73-02995
Role of fluorine atoms in the oxidation-hydrolysis process of plasma-assisted chemical vapor deposition fluorinated silicon nitride film.—73-13239
Structural behavior of fluorine in silica gels and glasses.—73-14089
Structural study on fluorine-doped Bi(Pb)-Sr-Ca-Cu-O superconductor.—73-01669
Structure and photochromism of Al-Cd-O-F glasses.—73-10486
Structures and properties of F-doped Bi-system superconductors.—73-11910
Synthesis, structure, and application of fluorine-graphite intercalation compound.—73-13317
Treatment of sintered SiC by fluorine.—73-06301
Treatment of sintered SiC by fluorine.—73-17214

**fluorite,**
$BaNdCe_{0.9}Fe_{1+x}Cu_{1-x}O_{7-\delta}$: an intergrowth of the $BaYFeCuO_5$-type and $CeO_2$-fluorite-type structures.—73-02149
Ceramic bodies obtained using the waste products of the fluorite concentration plants.—73-00894
Ceramics from wastes of fluorite beneficiation mills.—73-00898
Electron microscopy study of the fluorite↔rhombohedral ($R_{III}$) transformation in the U-La-O system.—73-01746
Oxygen-deficient fluorite with a tunnel structure: $Bi_8La_{10}O_{27}$.—73-02368
Relation between anionic conductivity and parameters of $^{19}F$ NMR spectra for nonstoichiometric fluorite fluorides.—73-02682
Transition of fluorite-type crystals to superionic conductor state.—73-02531

**fluoroaluminates,**
Frequency upconversion and its new mechanism in $Tm^{3+}$-doped fluoroaluminate glasses.—73-07029
New energy-saving cement—iron-rich fluoroaluminate cement.—73-13756
Process of producing potassium fluoroaluminates.—73-15931

**fluorophosphates,**
Characterization of fluorophosphate optical glasses.—73-00437
Conditions of fabrication and some properties of zirconium-containing fluorophosphate glasses.—73-00440
Conditions of synthesis and some properties of zirconium-containing fluorophosphate glasses.—73-00441
Effect of cerium oxide on radiation resistance of alkali fluorophosphate glasses.—73-14161
Fluorophosphate glass.—73-00732
Incommensurate modulation in $Na_8[Fe_2[PO_4]_4(O,F)_2]$ structure at 623 K.—73-16172
Lightweight optical glass of fluorophosphate.—73-00737
Production of fluorophosphate glasses for high-efficiency optics by use of a "glove-box" melting furnace.—73-03878
Refinement of atomic structure of the ionic conductor $Na_{4+x}FeP_2O_{8+x}F_{1-x}$.—73-16289
Spectroscopic investigations of the $Er^{3+}$ fluorescence transitions at 540 nm and 1.5 μm in fluoride phosphate and phosphate glasses.—73-10482
Spectroscopic studies of pure and chromium-doped lead fluorophosphate glasses.—73-00401
Time-resolved spectroscopy of chromium-neodymium system in a fluorophosphate glass.—73-14299
X-ray study of acentral modification of $Na_{4+x}FeP_2O_{8+x}F_{1-x}$.—73-02546
Zirconium-containing fluorophosphate glasses colored with oxides of *d* and *f* elements.—73-07189

**fluorosilicates,**
Crystal structure of new native Na, Ba, Mn fluorosilicate.—73-16086
Pressure-induced magnetic ordering in $CoSiF_6{\cdot}6H_2O$.—*73-02406*
Structural phase transition in $MnSiF_6{\cdot}6H_2O$ [crystal].—73-16326

**fluorozirconate,**
Compositional dependence of upconversion fluorescence of $Er^{3+}$ ions in alkali and alkaline-earth fluorozirconate glasses.—73-14147
Compositional dependence of upconversion luminescence of trivalent erbium ions in fluorozirconate glasses: II, Alkaline-earth fluoride dependence.—73-10423
Crystallization behavior of fluorozirconate glasses.—73-06897
Effect of Se and Ag on the crystallization of fluorozirconate glasses.—73-14360
Effect of some refractive index modifiers on both numerical aperture and mechanical strength of fluorozirconate fibers.—73-07017
Efficiency $Er^{3+}$-doped fluorozirconate fiber amplifier.—73-07020
Efficient amplification in the first telecommunications window.—73-07021
Energy transfer in Tm:Eu-codoped fluorozirconate fiber.—73-02610
Influence of Ag on nucleation and crystallization of fluorozirconate glasses.—73-06928
Influence of alkali content and alkali mixing on the chemical durability of fluorozirconate glasses.—73-06929
Ir to visible upconversion spectroscopy in $Tm^{3+}$-doped fluorozirconate fibers.—73-08896
Microgravity processing of fluorozirconate glasses to reduce devitrification during fiber drawing.—73-07150
Oxygen in fluorozirconate glasses.—73-14064
Red, green, and blue upconversions in erbium-doped fluorozirconate glass.—73-07068
Structural study of fluorozirconates recrystallizing from fluoride glasses ($LnZr_2F_{11}$, $BaNaZr_2F_{11}$, $8BaZr_2F_{10}$): a key for glass structure models.—73-06974
Synthesis and microstructural studies of $Er^{3+}$-doped fluorozirconate devitrified glasses.—73-06976
Thermal oxidation of fluorozirconate glass and fibers.—73-14518
Time-resolved spectroscopy of Ni-doped fluorozirconate glasses.—73-07093
Upconversion laser glasses and their molecular design simulations for fluorozirconate glass.—73-14304

**fluorphlogopite,**
Conversion of fluorphlogopite to hydroxyphlogopite in NaOH and LiOH hydrothermal solutions.—73-02173

**fluorspar,**
Burning cement clinker from the raw meal using barite and fluorspar as a combined additive.—73-09834
Evaluation of an optimum percentage addition of fluorspar in white cement raw mix containing 4% $SO_3$.—73-09949
Fluorspar.—73-12272

**flux pinning,**
Certain mechanical behavior of Y-123 specimens with pinning centers from different origins.—73-15396
Depinning of flux lines in $Bi_2Sr_2CaCu_2O_{8+y}$.—73-04694
Enhanced flux-line pinning in $Bi_2Sr_2CaCu_2O_x$ by neutron irradiation and $Li(n, {}^3T)\alpha$ reaction-induced charged-particle defects.—73-01543
Flux pinning by collision cascades and large defect clusters in single-crystal $YBa_2Cu_3O_{7-\delta}$.—73-08083
Flux pinning characteristics in Bi-2212 single crystal.—73-15477
Flux pinning mechanism of high-$T_c$ Y-Ba-Cu-O superconductor containing artificial pinning centers $Y_2BaCuO_5$.—73-08084
Flux-line pinning of $Bi_2Sr_2Ca_1Cu_2O_x$ crystals: interplay of intrinsic 2-D behavior and irradiation-induced columnar defects.—73-08085
Measurement of trapped flux distribution in a high-$T_c$ superconductor using a flux-gate magnetometer.—73-04767
Preparation and properties of $Ba_2YCu_3O_{7-\delta}$-$BaZrO_3$ superconductive composite by spray-drying method.—73-15587
Scaling of the flux pinning force in epitaxial $Bi_2Sr_2Ca_2Cu_3O_x$ thin films.—73-15615

**fluxes,**
Assessment of spodumene in ceramic bodies.—73-04042
Determination of the flux creep time from the microwave absorption in the high-temperature superconductor $YBa_2Cu_3O_{7-\delta}$.—73-08018
Effects of flux on properties and microstructure of fine porcelain.—73-14653
Flux composition of Jun red glaze and its structure of colored layers.—73-07254
Flux creep and pinning in Ag-doped high-$T_c$ superconductor $YBa_2Cu_3O_{6+x}$.—73-04725
Flux movement in quench- and-melt-grown YBCO generated by a pulsed magnetic field.—73-15475
Flux penetration in Bi(Pb)-Sr-Ca-Cu-O superconductor.—73-15476
Flux penetration of melt-processed $YBa_2Cu_3O_{7-\delta}$: direct observation of anisotropy.—73-08082
Melting properties of PbO-$B_2O_3$-$SiO_2$ system flux.—73-10564
New sodium fluxing agents for ceramics.—73-01989
Nucleation and growth of a flux instability in superconducting $YBa_2Cu_3O_{7-x}$ films.—73-15569

**fly ash,**
Anhydrite binders activated with portland cement and potassium sulfate with addition of fly ash filler.—73-09816
Application of leak-proof concretes using fly ash.—73-09819
Cement equivalence factors for fly ash [FA].—73-13687
Cements incorporating brown coal fly ash from the Latrobe valley region of Victoria, Australia.—73-06635
Coal combustion fly ash utilization in concrete formulation.—73-03444
Complement and synergism of fly ash, granulated basic slag, and silica powder.—73-09861
Comprehensive utilization of fly ash.—73-08496
Development of ceramic wall and floor tiles using fly ash.—73-10817
Development of chimney lining bricks using fly ash.—73-06647
Development of glazed fly ash tile.—73-10818
Developments and applications of fly ash wall panels in China.—73-09892
Durability of building mortar mixed with fly ash.—73-09895
Effect of fly ash on the strength development of high-performance concrete.—73-03455
Effects of complex additives on hydration of fly ash.—73-09103
Effects of fly ash in original state on properties of cement.—73-09935
Effects of the ground granulated blast-furnace slag and fly ash on the low-heat-generating concrete.—73-09939
Formula for carbonation speed of fly ash concrete.—73-06659
Future of fly ash in the ceramic industry.—73-12273
Granulometric determination of treated power plant fly ash.—73-12276
Hydration products and mineral phase of fly ash–slag–alkali cementing material (FKJ).—73-09992
Indian fly ash with high percentage of cenospheres.—73-05143
Influence of different sized fractions of a fly ash [FA] on workability of mortars.—73-06674
Manufacture of fired hollow blocks of fly ash.—73-08350
Manufacture of sintered fly ash aggregate using sludge.—73-08497
Melting of fly ashes and product properties.—73-10456
Metered feeding of fly ash and [cement] additives with the URW [Universal Rotor Weighfeeder].—73-10042
Method for making lightweight ceramic particles.—73-05149
Microstructural study of gypsum-activated fly ash hydration in cement paste.—73-00141
Modified fly ash.—73-06691
Morphology and microstructure of activated Indian fly ash.—73-15907
Natural remanent magnetization [NRM] of portland cement concrete.—73-00149
New type of pressed fly ash products.—73-10068
New, simple, rapid, and reliable method for determining sulfur trioxide and phosphorus pentoxide in portland cement and classes C and F fly ash.—73-06693
Non-steam-cured fly ash products.—73-10069

Nonfired and nonautoclaved fly ash bricks.—73-10070
Nucleation and crystal growth in a fly-ash-derived glass.—73-14057
Nucleation and pozzolanic factors in strength development of class F fly ash concrete.—73-00152
PFA [pulverized fly ash] concrete: permeation properties of cover to steel reinforcement.—73-06694
PFA [pulverized fuel ash] concrete: exposure temperature effects on chloride diffusion.—73-13759
Potential of fly ash for cement manufacture.—73-00166
Preparation of building mortar using calcium-added fly ash.—73-06699
Present state, tendency, and future of utilization of fly ash in China.—73-08498
Problems in production of autoclaved lime–fly ash bricks and their preventive measures.—73-10096
Properties of calcium-added fly ashes.—73-08499
Properties of flowable, high-volume fly ash–cement composite.—73-03521
Properties of gas concretes containing high proportions of pfa (pulverized fly ash).—73-00174
Reducing environmental pollution by using fly ash as a raw meal component.—73-03527
Relationship between strength and water/cement content of mortar with classified fly ash.—73-10136
Semitheoretical method for the assessment of reactivity of fly ashes.—73-03537
Solidification/stabilization of a synthetic electroplating waste in lime–fly ash binder.—73-10156
Substitution of wet fly ash for sand in mortars or concretes.—73-10170
Use of fly ash in heat-cured concrete and the effect of postcuring storage regimes on strength, modulus of elasticity, and freezing-thawing durability.—73-10186

**foam,**
Analysis and modeling of sol foaming for the preparation of low-density ceramics.—73-12917
Experimental determination of the volumetric heat transfer coefficient between stream of air and ceramic foam.—73-05564

**foamed ceramics,**
$Al_2O_3$-MgO-$ZrO_2$ ceramic foam filter.—73-03989
Iron modification in the mold using foam-ceramic filters.—73-00828
Multifunctional foam glasses from volcanic glassy rocks.—73-00670
Process for making silicon carbide foam.—73-02123
Thermal barrier structure.—73-00891

**foils,**
Thin foil preparation of small-diameter ceramic or glass fibers for observation by TEM.—73-08451

**forecasts,**
5.5 percent increase is forecast for composite shipments.—73-13620
Color predictions and the economy.—73-06613
Exploring the SC [superconductor] industry from within.—73-15464
Forecasting color trends in 1993-94.—73-06616
Industry outlook for 1993.—73-06573
Repeat performance of 1991 is predicted.—73-13643
U.S. advanced ceramics industry: the growth continues.—73-13647

**forehearth,**
Characteristics of good forehearth control.—73-14336
Design of electrically heated forehearth and its application.—73-05107
Energy saving in forehearths.—73-15873
Forehearth.—73-15893
Optimization of direct electrical heating of the forehearth.—73-05126
Rapid cool forehearth.—73-01826
Status report on the development of an oxygen-fuel-fired forehearth.—73-08487
Temperature control of forehearth.—73-14516
Universal arch blocks for adaptable forehearths.—73-10778

**forging,**
Superplastic forging procedure for manufacture of ceramic yttria-stabilized tetragonal zirconia products.—73-06073

**formation,**
Acceleration of the clinker formation process.—73-09801
Advantages that synthetic fabrication lubricants provide the metal finisher.—73-13795
Analysis of the formation of glass waste in the electric lamp industry.—73-00589
Causes and prevention of defects during ceramic forming.—73-02734
Ceramic Transactions, Volume 40: Cement Technology.—73-17520
Conditions of formation of $YBa_2Cu_3O_{7-\delta}$ from CuO, $Y_2O_3$, and $BaCO_3$.—73-04684
Development in nonportland cements.—73-09888
Dynamics of strong and fragile glass formers: differences and correlation with low-temperature properties.—73-13964
Effect of residual glassy phase in a bioactive glass-ceramic on the formation of its surface apatite layer in vitro.—73-00332
First observation of the increase in atomic mean square displacements upon glass formation: inelastic neutron scattering study of $K_{1-x}(NH_4)_xH_2PO_4$ mixed crystals.—73-00342
Formation and densification of R-α′-SiAlON's (R=Nd, Sm, Gd, Dy, Er, and Yb).—73-05810
Formation and solid-state properties of ß-dicalcium silicate.—73-09967
Formation mechanism and kinetics of ß-eucryptite in $Li_2O$-$Al_2O_3$-$SiO_2$ system.—73-12583
Formation mechanism of oxygen-deficient region in electrochemically reduced Y-PSZ crystal.—73-17134
Formation mechanism of ultrafine tungsten oxide particle during thermal decomposition of ammonium paratungstate [APT].—73-09453
Formation of 2223 high-$T_c$ superconducting phase in the Bi-Sr-Ca-Cu-O system.—73-04728
Formation of aluminum nitride by intensified plasma ion nitriding.—73-00235
Formation of perovskite-type $Pb(Mg_{1/3}Nb_{2/3})O_3$ under hydrothermal conditions.—73-17136
Formation of strontium metatitanate in the system $SrCO_3$+$TiO_2$, SrO+$TiO_2$+$H_2O$.—73-16793
Formation processes of ß-$C_2S$ by the decomposition of hydrothermally prepared CSH with $Ca(OH)_2$.—73-08629
Forming of ceramic powders by cyclic-CIP—quantitative evaluation of densification behavior.—73-16799
Forming tableware.—73-03845
Freshness of cement: conditions for syngenite $CaK_2(SO_4)_2$·$H_2O$ formation.—73-06661
Fundamentals of controlled formation of glass-ceramics.—73-00634
Glass formation as the recurrent process.—73-13995
Glass formation in systems based on AgX (X=Cl, Br, or I).—73-00346
Glass-forming ability and crystallization tendency evaluated by DTA method in the multicomponent system.—73-13999
Historical development of greenish porcelain (qingci).—73-00008
Hydroxyapatite formation.—73-08516
In situ formation of metal-ceramic oxide microstructures.—73-00283
Kinetics of silicon nitride formation by gas-phase routes in the Si-C-O-N system.—73-13111
Metallorganic resin derived barium titanate: II, Kinetics of $BaTiO_3$ formation.—73-16214
Method for forming carbide coating on various metals and their alloys.—73-00286
Method for forming internally helixed high-temperature superconductor assembly.—73-01711
Method of controlling metal oxidation during waveguide formation.—73-00742
Nucleation and growth in the initial stage of metastable titanium disilicide formation.—73-09495
Orifice method of forming the optical fibers of complex topology.—73-14450
Phases and kinetics of ß′-SiAlON formation from clays.—73-16269
Press forming in the ceramic industry.—73-12180
Reduced individual section (IS) machine wear through air pressure control.—73-12060
Thickness of parison layer formed in blo*w* method.—73-00714
Titanium disilicide formation by interdiffusion of titanium/amorphous silicon multilayers: influence of the bilayer silicon to titanium thickness ratio on the film properties.—73-13327
Tobermorite formation in the system CaO, $C_3S$-$SiO_2$-$Al_2O_3$-NaOH-$H_2O$ under hydrothermal conditions.—73-00200
Topologically disordered networks of rigid polytopes: III, Edge and face sharing.—73-14122
Trial manufacture of giant Jun porcelain products.—73-10903

**forsterite,**
Application of forsterite ceramics and their production processes.—73-10918
Cooperative effect of microimpurities during crystallization of forsterite from melt.—73-17075
Crystallization of precursors to forsterite and chromium-doped forsterite.—73-05379
Cw lasing characteristics of high-$Cr^{4+}$ concentration forsterite.—73-16436
Forsterite insulation board for alloy steel concasting tundish.—73-04003
Gas-permeable forsterite refractories.—73-00817
Laser characteristics of forsterite $Mg_2SiO_4$:Cr crystals.—73-02627
Normal and polarized absorption spectra of the Cr:$Mg_2SiO_4$ crystal.—73-05441

**Fourier transform infrared spectroscopy (FTIR),**
Broadband spectroscopic ellipsometry based on a Fourier transform spectrometer.—73-12112
Characterization of the metal oxide–polyacrylic acid [PAA] compounds by Fourier transform infrared spectroscopy.—73-08572
End-member feldspar concentrations determined by FTIR spectral analysis.—73-12579
Extension of spectroscopic ellipsometry to the far infrared.—73-12138
Far-ir spectroscopic ellipsometer.—73-12139
Fourier transform infrared and inelastic neutron scattering study of HY zeolites.—73-05406
Fourier transform infrared spectroscopy of hydrous oxide/aqueous solution interfaces.—73-09145
Ir phase-modulated ellipsometer using a Fourier transform spectrometer for in situ applications.—73-12150
Ir spectroscopic ellipsometry: instrumentation and applications in semiconductors.—73-12151
Ir spectroscopy ellipsometry: instrumentation and results.—73-12152
Structural changes in mordenites revealed by two-dimensional Fourier synthesis of X-ray powder diffraction patterns.—73-12696

**fractal,**
Effects of $Al_2O_3$-$TiO_2$ contents on the structure and permeability of porous magnesia ceramic—fractal characteristics of pores.—73-05776
Fractal reaction in solids—reaction functions reconsidered.—73-05818
Fractal reaction in solids—reaction functions reconsidered.—73-17080
Homogeneous fractals in supercritical glass.—73-03734

**fractography,**
Application of mixed-mode fracture criteria for weakest-link failure prediction for ceramic materials.—73-17239
Results of round robin exercise on the fractography of advanced structural ceramics.—73-17194

**fracture mechanics,**
Analytical method to determine the bridging stress transferred within the fracture process zone: II, Application to mortar.—73-09815
Brittle-to-ductile transition in silicon nitride.—73-06336
Creep damage mechanisms in structural ceramics.—73-06357
Development of experimental energy methods of fracture mechanics for certification of ceramics[—review].—73-08393
Dissipative process accompanying fracture.—73-06374
Dynamic fracture responses of $Al_2O_3$, $Si_3N_4$, and $SiC_w/Al_2O_3$.—73-06375
Elevated-temperature fracture resistances of monolithic and composite ceramics using chevron-notched bend tests.—73-06403
Fractoemission from ceramics at cryogenic temperatures.—73-06426
Fracture behavior of nonoxide ceramics under biaxial stresses.—73-06433
Fracture mechanics and mechanism of ceramic composites.—73-05819
Fracture mechanics and mechanisms of fiber-reinforced brittle matrix composites.—73-03297
Fracture mechanics treatment of thermal shock and the effect of bridging stresses.—73-06435
High-temperature fracture mechanism of gas-pressure-sintered silicon nitride.—73-03307
High-temperature fracture mechanism of gas-pressure-sintered silicon nitride.—73-06453
Indentation fracture resistance of self-reinforced mullites.—73-06457
New theory of nondestructive inspection based on fracture mechanics and fracture statistics.—73-06495
Precision crack-off of ceramics.—73-06500
Precracking parameters for ceramic single-edge-precracked-beam [SEPB] specimens.—73-06501
Size effect in fracture of ceramic-ceramic composite materials.—73-06522

**fracture toughness,**
Analysis of dependence of volume fraction and micropore shape on fracture toughness by the equivalent inclusion method.—73-03236
Analysis of effects of elastic inhomogeneity and residual thermal stress on fracture toughness by the equivalent inclusion method.—73-06323
Cleavage of ceramic and mineral single crystals.—73-06342
Correlation between crack tortuosity and fracture toughness in cementitious material.—73-05032
Crack-shape–wake-area effects on ceramic fracture toughness and strength.—73-17262
Effect of coarse aggregate quantity on fracture toughness of concrete.—73-13706
Effect of microstructure on the fracture toughness of a metal-matrix composite.—73-03269
Effect of notch-root radius on the fracture toughness of a fine-grained alumina.—73-06387
Effects of elastic inhomogeneity and residual thermal stress on fracture toughness [analyzed] by the equivalent inclusion method.—73-13515
Effects of process zone and specimen geometry on fracture toughness of silicon nitride ceramic.—73-06397
Effects of reinforcement size and distribution on fracture toughness of composite nickel aluminide intermetallics.—73-00225
Enhancement of fracture toughness by residual stress in $Si_3N_4$ composites.—73-06404
Enhancement of fracture toughness by residual stress in $Si_3N_4$ composites.—73-13523
Estimation of fracture toughness and residual stresses in yttrium-aluminum garnet [single] crystals.—73-17307
Evaluation of fracture strength and fracture toughness of glass by flat punch.—73-14182
Evaluation of fracture toughness by a single-edge V-notched beam method.—73-03282
Evaluation of fracture toughness by chevron V-notch method.—73-13525
Evaluation of fracture toughness for structural ceramics using SEPB specimens: IV, Fracture behavior of α-alumina polycrystals with different grain sizes.—73-03283
Evaluation of fracture toughness for structural ceramics using SEPB specimens: IV, Fracture behavior of α-alumina polycrystals with different grain sizes.—73-13526
Fatigue and fracture toughness of aluminum alloys reinforced with SiC and alumina particles.—73-03286
Features of notch preparation for fracture toughness measurements in partially stabilized zirconia.—73-05047
Fracture toughening mechanisms in the $SiC_w/Al_2O_3$ composite system.—73-06437
Fracture toughness and transition of fracture behavior of silicon nitride at elevated temperatures.—73-13537
Fracture toughness assesssment of silicon-carbide-based ceramics and particulate-reinforced composites.—73-03299
Fracture toughness by the surface crack in flexure (SCF) method.—73-17332
Fracture toughness by the surface crack in flexure (SCF) method: results of the VAMAS round robin.—73-17333
Fracture toughness evaluation of 2040-Al/$Al_2O_3$ particulate composites by instrumented impact.—73-03300
Fracture toughness evaluation of mullite ($3Al_2O_3$·$2SiO_2$) having three different microstructures.—73-13538
Fracture toughness measurement by indentation fracture method at elevated temperature [≤1200°C].—73-06439
Fracture toughness measurements on SiC/$Al_2O_3$ composite.—73-03301
Fracture toughness of advanced ceramics at room temperature.—73-17334

Fracture toughness of autoclaved aerated concrete [AAC] products.—73-03473
Fracture toughness of carbon-fiber-reinforced ceramic composites.—73-06440
Fracture toughness of dense silicon nitride.—73-13539
Fracture toughness of multicomponent phosphate glasses.—73-00487
Fracture toughness of SiC-whisker/$ZrO_2$/$Al_2O_3$ triple-phase composites.—73-06441
Fracture toughness testing in alumina.—73-06442
Geometry effects for stress intensity factor of sandwich specimen for measuring interfacial fracture toughness.—73-05050
Grain size dependence of fracture toughness in polycrystalline alumina.—73-03305
Grain size dependence of the fracture toughness of silicon nitride ceramics.—73-06446
High fracture toughness of $ZrO_2$ solid-solution ceramics with nanometer grain size in the system $ZrO_2$-$Al_2O_3$.—73-09610
High-temperature fracture toughness of sapphire.—73-17346
Influence of crack propagation path on the fracture toughness of polycrystalline $Al_2O_3$.—73-17356
Influence of grain size and secondary phase on the fracture toughness of sintered MgO bodies: II, Addition of $Fe_2O_3$.—73-06460
Influence of microcracking on fracture toughness of $TiO_2$ sintered body.—73-13552
Interpretation of data from the four-point bending delamination test to measure interfacial fracture toughness.—73-03320
Micro- and macrostructural factors in DRA [discontinuously reinforced alumina] fracture resistance.—73-06827
New method for evaluating fracture toughness of brittle materials.—73-13575
New method to compute size-independent fracture toughness values for brittle materials.—73-13576
Reliability of ceramic fracture toughness measurements by indentation.—73-06511
Simple preparation method to determine fracture toughness using the single edge notched beam [SENB] technique for porcelain ceramics.—73-09669
Static fatigue in ceramic materials: influences of an intergranular glassy phase and fracture toughness.—73-17433
Toughening in zirconia-toughened alumina composites with nontransforming zirconia.—73-03371
V-notched technique for single-edge notched-beam and chevron notch methods.—73-03375
VAMAS fracture toughness round robin test on ceramics.—73-13608

**fracture,**
Ambient and high-temperature stable fracture tests in ceramics: applications to yttria-partially-stabilized zirconia.—73-03235
Changes in fracture surface area and actual fracture energy of a carbon-fiber-reinforced silicon nitride composite during failure.—73-09546
Computer simulation of fracture sequences in heterogeneous materials.—73-03247
Computing reliabilities of ceramic components subject to fracture.—73-12120
Computing reliabilities of ceramic components.—73-09550
Dependence of ceramic fracture properties on porosity.—73-09569
Determination method of fracture crack propagation rate in ceramics.—73-06372
Discriminating between fracture criteria in the prediction of failure probability of brittle materials.—73-13503
Dynamic fracture process of thermally tempered glass studied by the method of caustics.—73-07014
Effect of atmospheric humidity on the dynamic fracture strength of SiC abrasives.—73-06606
Effect of crack orientation on the fracture properties of composite materials.—73-09573
Effect of shock waves on fracture in tempered glass.—73-00463
Engineering ductile fracture in brittle matrix composites.—73-09590
Estimating lower-bound fracture parameters for brittle materials.—73-13524
Fractal characterization of fracture surfaces in mortar.—73-03471
Fracture at Cu/sapphire interfaces.—73-03590
Fracture behavior and degradation of piezoelectric properties in PZT.—73-11580
Fracture behavior of a silicon nitride ceramic containing a high-temperature ductile phase.—73-06428
Fracture behavior of a silicon nitride ceramic under mixed-mode fracture condition.—73-17326
Fracture behavior of a silicon nitride ceramic under mixed-mode fracture conditions.—73-06429
Fracture behavior of cement-based materials.—73-06660
Fracture behavior of ceramic laminates in bending: I, Modeling of crack propagation.—73-06430
Fracture behavior of ceramic laminates in bending: II, Comparison of model predictions with experimental data.—73-06431
Fracture behavior of cyclically loaded PZT.—73-14930
Fracture behavior of sintered silicon nitride under multiaxial stress states: II.—73-06434
Fracture mechanism maps: their applicability to silicon nitride.—73-17327
Fracture model of machinable ceramics.—73-17328
Fracture modes in initially cracked concentric cylinders.—73-17329
Fracture resistance of metal-ceramic interfaces.—73-13838
Griffith criteria for brittle fracture in compression.—73-13544
Influence of aggregate size on fracture process zone of concrete detected with three-dimensional acoustic emission technique.—73-00111
Influence of heating rate on the thermal strain induced fracture of Mg-PSZ samples.—73-05583
Intrinsic fracture energy of polycrystalline silicon nitride.—73-06467
Kinetics of brittle fracture and possibilities of its prediction.—73-17369
Method of predicting glass fracture during tempering.—73-00661
Multiaxial equivalent of stressed volume.—73-17404
New development of the *J*-based fracture testing technique for ceramic matrix composites [CMC's].—73-12172
Nonlinear fracture behavior of porous zirconia ceramics.—73-09655
Prediction of fracture and detection of fatigue in ceramic composites from electrical resistivity measurements.—73-09657
SEM investigations of fracture surfaces using stereo pairs: I, Fracture surfaces of rock and of cement paste.—73-03536
Sigmoidal indentation–strength characteristics of polycrystalline alumina.—73-06517
Statistical theory of ceramic damage and fracture.—73-09674
Thermal shock fracture by laser irradiation.—73-05669
Thermal shock resistance and fracture of ceramic materials.—73-05671
Transient thermal fracture of ceramic-to-metal interfaces.—73-03660
Weibull estimators for pooled fracture data.—73-17458
Work-of-fracture determination for brittle materials.—73-06552

**freeze drying,**
Colloidal suspensions for the preparation of ceramics by a freeze-casting route.—73-12948
Normal atmospheric preparation of $YBa_2Cu_4O_8$ superconductor from nitrate solution by freeze-drying method.—73-15568

**freezing and thawing,**
Comparative study of latex-modified concretes and normal concretes subjected to freezing and thawing in the presence of a deicer salt solution.—73-00043
Damage evaluation of concrete in freezing and thawing process via spectral response of transverse elastic wave.—73-09879
Dimensional variations, capillary absorption, and freeze-thaw resistance of repair mortars admixed with polymers.—73-00065
Effect of sealers on the freeze-thaw resistance of mortar.—73-09915
Effects of oxygen on the melting and freezing of $Bi_2Sr_2Ca_1Cu_2O_{8+\delta}$.—73-11739

**frequency,**
All-fiber frequency shifter using $LiNbO_3$ sound area wave (SAW) device.—73-01391
Characterization of the performance of 1-3 type piezocomposites for low-frequency applications.—73-01394
Frequency response of $YBa_2Cu_3O_{7-\delta}$ granular and epitaxial films under radiation.—73-04729

**friction,**
Analysis of fiber frictional sliding in fiber bundle pushout test.—73-17237
Ceramics, friction, and chemistry.—73-08506
Effect of grain size on friction and sliding wear of oxide ceramics.—73-06379
Effect of water vapor in air on friction and wear of $Al_2O_3$, $Si_3N_4$, and partially stabilized zirconia sliding on various metals.—73-09583
Environmental effects on friction and wear of ceramics.—73-12798
Friction and Wear of Ceramics.—73-17526
Friction and wear performances of [D] detonation-gun- and plasma-gun-sprayed ceramic and cermet hard coatings under dry friction.—73-06796
Friction and wear test of titanium boride ceramics at elevated temperatures.—73-06444
Friction and wear thresholds of alumina-chromium steel pairs sliding at high speeds under dry and wet conditions.—73-17337
Friction behavior of ceramic fiber-reinforced aluminum metal-matrix composites against a 440C steel counterface.—73-03591
Friction characteristics of ceramic slurry and plasma-sprayed coatings.—73-09606
Friction force measurements on potential controlled graphite in an electrolyte environment.—73-15800
Friction microprobe investigation of particle layer effects on sliding friction.—73-05049
Frictional behavior of extremely smooth and hard solids.—73-09607
Frictional properties of SiC for several kinds of metals.—73-17338
High-speed sliding of $Al_2O_3$ pins against an En-24 steel disk.—73-06449
High-temperature elastic moduli and internal frictions of α-SiC ceramic.—73-05576
Internal friction and oxygen diffusion in $x$$Na_2O$-$(1-x)$$B_2O_3$·$2SiO_2$ [$x$=0.3–1] glasses: I, Internal friction.—73-00356
Internal friction and oxygen diffusion in $x$$Na_2O$-$(1-x)$$B_2O_3$·$2SiO_2$ glasses: II, Oxygen diffusion.—73-00357
Internal friction measurement of carbon-carbon composites by lateral vibration method.—73-12149
Internal friction of 16.3$Na_2O$·33.7$MgO$·50$SiO_2$ glass.—73-14019
Internal friction of 9.4 mol% $Y_2O_3$-$ZrO_2$ cubic single crystal.—73-17365
Kinetic frictional behavior of aluminosilicate ceramics.—73-17368
Lubrication of ceramics.—73-17153
Resonance-type internal friction of 1:1:1:2 Bi-Sr-Ca-Cu-O superconductor at very low frequencies.—73-01650
Rolling friction in a linear microactuator.—73-05632
Sliding friction and wear of ceramics in neutral, acid, and basic aqueous solutions.—73-06523
Sliding friction and wear up to 600°C of high-speed steels and silicon nitrides for gas turbine bearings.—73-06854

**frits/fritting,**
Calculation of optimal mixtures for frit production.—73-15708
Effect of frit composition on the crystallization and relative opacity of low-temperature melting $TiO_2$-opacified porcelain enamels in the $SiO_2$-$B_2O_3$-$Na_2O$-$K_2O$- $Li_2O$-$CaO$-$TiO_2$-$ZrO_2$-F-$P_2O_5$ system.—73-00221
Effect of frit compositions on the glass transition temperature, water durability, and coloring of the CdS-CdSe pigment containing low-temperature porcelain red enamel in the system $SiO_2$-$B_2O_3$-$Na_2O$-$K_2O$-$Li_2O$-$ZnO$-$Al_2O_3$-$ZrO_2$-F.—73-03722
Epoxy resins—materials for simulating the process of fritting.—73-00622
Frit making (frit melting) during inclined flow of the charge.—73-00632
Frit melting in a moving charge along a ramp.—73-00633
High-gloss ceramic frits.—73-03932
Interaction of chemical elements in enamel frits.—73-03738
Lead-, cadmium-, and barium-free frits for ceramic glazes.—73-03936
Properties of lead-free frits for glazes.—73-10887
Purple pigments, a process for their production and use thereof.—73-03963
Rare-earth-containing frits having a high glass transition temperature and their use for the production of enamels having improved heat resistance.—73-03965

**frost resistance,**
Microstructure and frost durability of cementitious building materials reinforced with nonasbestos fibers.—73-00142
Quantitative analysis of pore structure on frost durability of inorganic building materials.—73-03188

**fuel cells,**
Cathode performance of ACF/acetylene black hybrid electrodes for phosphoric acid fuel cell.—73-10919
Characterization of SiC-SiC whisker matrix retaining electrolyte in phosphoric acid fuel cell.—73-04064
Construction and operation of fuel cells based on the solid electrolyte $BaCeO_3$:Gd.—73-00944
Electrochemical devices based on single-component solid oxide bodies.—73-11013
Fuel cells of molten carbonate type.—73-14707
Materials for electrochemical energy conversion and storage systems.—73-07337
Systematic selection of perovskite solid electrolytes for intermediate temperature fuel cells.—73-01034
Thinner, more efficient oxygen separation cells.—73-07369

**fuels,**
Competitive pricing—gas supplies to the ceramic industry.—73-05104
Conversion of a fiberglass furnace from 100% electric firing to oxy-fuel combustion.—73-08468
Diffusion kinetics theory of parallel solid-phase processes at fuel containing ceramics burning.—73-15715
Ecological and economical aspects of cement production when using waste-derived fuels.—73-00068
Economics drive the conversion of glass tanks to oxy-fuel.—73-08470
Fuel flow metering.—73-01951
Fuel gas obtained from tree bark for operating a rotary lime kiln in a sulfate pulp plant.—73-01952
Inland Cement alternative fuel program.—73-05119
Partial conversion of a gas-air-fired television furnace to oxy-fuel combustion.—73-08482
Rational fuel use in glass furnaces.—73-01966
Reduction of dioxin in connection with the use of waste-derived fuels in the cement industry.—73-10133

**functionally gradient materials,**
Development of a thermal shock evaluation device for functionally gradient materials for aerospace applications.—73-05037
Development of functional ceramic composites by SHS routes.—73-16704
Economic process for rapid densification of ceramics, metals, and functionally gradient materials.—73-15718
Fabrication and properties of functionally gradient materials.—73-00232
Fabrication of a functionally gradient material of TiC-SiC system by chemical vapor deposition.—73-02822
Fabrication of a functionally gradient material of TiC-SiC system by chemical vapor deposition.—73-13052
Fabrication of zirconia-alumina functionally gradient material by superplastic diffusion bonding.—73-15924
Functional materials prepared by electron shower method.—73-16800
Functionally gradient circuit board.—73-10311
Improvement of ductility of ceramic-rich region in functionally gradient materials [FGM's] by metal fiber premixing.—73-03598
Laser and plasma-arc thermal shock/fatigue fracture evaluation procedure for functionally gradient materials.—73-05061
Method for producing self-supporting ceramic bodies with graded properties.—73-03691
New materials set endurance records.—73-00253
Powder processing technique for development of zirconia-nickel functionally gradient materials.—73-05953
Powder processing technique for development of zirconia-nickel functionally gradient materials.—73-10263
Properties of functionally gradient composite consisting of hydroxyapatite containing glass-coated titanium and characters for bioactive implant.—73-03636

Properties of functionally gradient composite consisting of hydroxyapatite containing glass-coated titanium and characters for bioactive implant.—73-10267
Residual stress characteristics of functionally gradient materials.—73-03639
Residual stress characteristics of functionally gradient materials.—73-10272
Slip casting of continuous functionally gradient material.—73-09332
Slip casting of continuous functionally gradient material.—73-16999
Synthesis of functionally gradient NiCr-Al/MgO-$ZrO_2$ coatings by plasma spray technique.—73-06861
Theoretical approach of optimum design for a plate of functionally gradient materials [FGM's] under thermal loading.—73-03652
Thermal fatigue characteristics of functionally gradient materials [FGM's] for aerospace applications.—73-03653
Thermal shock fracture mechanism of metal/ceramic functionally gradient materials.—73-03654

**furnaces,**
Application of ceramic fiber to reheating furnace for hot strip mill.—73-00775
Application of mathematical and statistical methods for analyzing the wear of the tuyere assembly of open-hearth furnaces.—73-00777
Blast furnace life prolongation through taphole relining at No. 1 BF in Kure Works [Japan].—73-14575
Centorr/Vacuum Industries: high-temperature solutions.—73-03383
Computer control system of molten glass temperature in the forming zone of flat glass furnace of up-draw process.—73-14339
Control of silicon carbide heating elements using SCR's.—73-04069
Cupola furnace complex for mineral wool production.—73-01946
Decreasing power costs in operation of electric furnaces and kilns.—73-05106
Design of refractories and bindings for modern high-productivity pyrometallurgical furnaces.—73-10712
Development of $Al_2O_3$-C-SiC brick for blast-furnace taphole.—73-14584
Effects of melting parameters on the roof stability in a high-load electric steel-melting furnace.—73-00811
Emission control on a USA glass fiber furnace.—73-12218
Energy efficiency of furnaces for firing ceramics.—73-05112
Energy-saving technology for scrubbing waste gases from frit furnaces.—73-08333
Evaluation of high-emittance coatings in a large industrial furnace.—73-07211
Extending the campaign life of the Kashima No. 3 blast furnace [Ibaraki, Japan]—73-14591
Features of operation of blast-furnace hot-blast stoves with poured checkerwork.—73-00815
Furnace technology for the manufacture of rare-earth permanent magnets.—73-01954
Furnaces with efficient utilization of energy for firing sanitary ware and porcelain.—73-12220
Glass melt homogenization in glass furnace—mathematical and physical model.—73-10542
Hardening furnace for sheets of glass and the like.—73-12250
Improvement activities of life prolongation at Nakayama No. 2 blast furnace [Osaka, Japan].—73-14594
Materials processing using a variable-frequency microwave furnace.—73-05120
Measures to extend the campaign lives of blast furnaces at Kakogawa Works [Japan].—73-14602
Measuring furnace/sample heat transfer coefficients.—73-15814
Melting and forming system for high-quality glass products.—73-01957
Method and apparatus for the semicontinuous melting and discharging of ceramic material in an induction melting furnace with sintering crust crucible.—73-04984
Method for surface treating the inner wall of a furnace, which is lined with ceramic fibers.—73-04034
Moving temperature gradient heat pipe furnace element.—73-15735
Moving-gradient furnace with constant-temperature cold zone.—73-12231
New developments in electric furnaces.—73-05125
Nonporous diffusion furnace components.—73-12503
Optimization of design of equipment for firing.—73-01962
Pelletizing and recycling of dust from and to a lead glass furnace.—73-07160
Pressure exerted by the packing in a blast-furnace air heater on the wall and supporting surface.—73-00839
Process for producing furnace atmospheres using noncryogenically generated nitrogen.—73-15894
Segmented ceramic liner for induction furnaces.—73-14640
Service of refractories in steelmaking plants.—73-00860
Service of refractory materials in shaft furnaces with melting of ferroalloys by the thermal reduction method.—73-00861
Siliceous articles with improved thermal stability for coke furnace.—73-00864
Single-heater, three-zone furnace.—73-15891
Techniques to extend campaign life of blast furnace at Mizushima Works [Kurashiki, Japan].—73-14627
Technology of high-temperature furnaces.—73-05132
Temperature measurement in a 2.45-GHz microwave furnace.—73-05089
Trends and developments in vacuum furnace technology.—73-12205
Use of a variable-frequency microwave furnace [VFMF] for large-area, uniform processing.—73-05135
Why a preventive/corrective furnace maintenance program is important.—73-15761

**fused silica,**
Brillouin scattering by localized acoustic modes in silicon oxynitride–fused silica optical waveguides.—73-08816
Chemical interactions in titanium- and tungsten-implanted fused silica.—73-06888
Conversion of fused silica powder to quartz.—73-17120
Factors affecting the rate of devitrification of fused silica powder.—73-02829
Hot-pressing of fused silica.—73-10550
Hydrogen and chlorine impurities' influence on high-temperature defects in fused silica.—73-14001
Low-sodium zircon refractory and fused silica process.—73-14639
Method for preparing a fused silica glass body codoped with a rare-earth element and aluminum.—73-00741
Microhardness of fused silicas.—73-14225
Optical spectra of Pb-implanted fused silica.—73-00525
Physical origin of the temperature dependence of chromatic dispersion in fused silica.—73-00530
Strength and toughness of slip-cast fused-silica composites.—73-10484
Transient ionic conductivity in fused silica.—73-00568
Uv-induced 210-nm absorption band in fused silica with different thermal history and stoichiometry.—73-07098

**fusion,**
Applications of advanced materials for the manufacturing of components of experimental devices for controlled nuclear fusion research.—73-08283
Fusion of silicon carbide products with aluminum during the siliconizing (firing) process.—73-03593
Mechanofusion—a new technology for creating composite material.—73-02891
Properties and application of electrofused technical zirconia powders.—73-05179

**gadolinium oxide,**
Formation of oxide phases in the system $Fe_2O_3$-$Gd_2O_3$: II.—73-12586
Glass formation and structure of glasses containing $Fe_2O_3$ and $Gd_2O_3$.—73-13994
Phase relations in the ternary system $ZrO_2$-MgO-$Gd_2O_3$ and its dependence on synthesis method.—73-16260

**gadolinium,**
Behavior of residual magnetization of gadolinium ferrite garnet sublattices near compensation point.—73-15307
Characterization of perovskite-type $GdFeO_3$ powders prepared by amorphous citrate process.—73-08571
Cross relaxation averaging EPRS spectra in $Pb_3Ge_3O_{11}$:$Gd^{3+}$.—73-15253
Effects of slow neutron irradiation on superconductive films.—73-15446
Electrical resistivity of the as-grown $Gd_{1.92}Ce_{0.08}CuO_4$ single crystal under pressure.—73-16482
Energy distribution of gaps in $GdBa_2Cu_3O_7$.—73-08057
Enhanced magnetocaloric effect in $Gd_3Ga_{5-x}Fe_xO_{12}$.—73-04609
Growth of $GdBa_2Cu_3O_7$ superconducting thin films on (100)$SrTiO_3$ single-crystal substrates at various substrate temperatures.—73-11777
Growth of $GdBa_2Cu_3O_7$ superconducting thin films on nonlattice-matched MgO substrate.—73-11778
Growth of single-crystal $Y_{1-x}Gd_xBa_2Cu_3O_{6+y}$.—73-08092
Hydrated rare-earth metal-ion-exchanged zeolite A: characterization by luminescence spectroscopy: I. The $Gd^{3+}$ ion.—73-12596
Influence of Gd doping of a Bi molten solution on residual impurities in epitaxial GaAs.—73-11271
Internal field and EPR in $Sm_{1.995}Gd_{0.005}CuO_4$ crystals.—73-08644
Laser performance of $Cr^{3+}$:$(Gd,Ca)_3(Ga,Mg,Zr)_2Ga_3O_{12}$.—73-08897
Luminescence of $Gd^{3+}$-activated $LiNaY_2F_8$.—73-02324
Magnetic and optical properties of $Cd_{1-x}Gd_xTe$ diluted magnetic semiconductor.—73-04395
Magnetic orientation phase transition in $Gd_2CuO_4$: resonance, magnetic, and acoustic investigations.—73-07336
Magnetic polaritons of a semiinfinite uniaxial antiferromagnet.—73-15337
Magnetic properties of $Y_{1-x}Gd_xCo_4B$ compounds.—73-07956
Magnetoelectric effect of $GdMn_2O_5$ single crystal.—73-08910
Metal-insulator transition in a disordered antiferromagnet $Yb_{1-x}Gd_xTe$.—73-16540
Mossbauer study of $Gd_3Fe_{17}C_{20}$ compound prepared by melt quenching.—73-08672
Phase development in the system Gd-Cr-S.—73-02374
Preparation and properties of high-$T_c$ $GdBa_2Cu_3O_{7-\delta}$ superconducting ceramics obtained from gadolinium nitrate.—73-11868
Preparation of garnet-type $Gd_3Al_5O_{12}$ powders by an amorphous citrate process.—73-05972
Preparation of garnet-type $Gd_3Al_5O_{12}$ powders by an amorphous citrate process.—73-13188
Preparation of spherical gadolinium compound particles.—73-13204
Raman scattering in $(Y_{1-x}Gd_x)Ba_2Cu_3O_y$ system and relationship between structure of vibrational spectra and critical temperature in (123) superconductors.—73-01644
Spectroscopy and laser performance of Nd-doped gadolinium lithium fluoride.—73-08969
Structure of high-$T_c$ superlattices.—73-08214
Superconducting state of $GdBa_2Cu_3O_{6+\delta}$ single crystals ($\delta$=0.56; 0.75).—73-08224
Synthetic $GdGaTi_2O_7$—new polymorphic modification of polymignyte.—73-02509
Thermal anomalies in $Bi_2WO_6$ and EPR of doped $Gd^{3+}$ ions.—73-08984
Thermal conductivity, specific heat, elastic constants, and thermal expansion of doped gadolinium-gallium garnets.—73-16622
Thermographic investigation of gadolinium iodide.—73-16380
Thermopower of superconducting $GdBa_2Cu_3O_7$ thin films.—73-07924

**gages/gaging,**
Safety and health considerations related to vacuum gaging.—73-08439
Simplified gage method for test reliability.—73-15846

**gallates,**
Effect of axial compression on optical activity of silver thiogallate.—73-16453
Elastic constants of bismuth-containing gallate glasses.—73-07022
FTIR investigations of the crystallization of ir-transmitting glasses: application to calcium gallate glass.—73-10377
Improving stabilized zirconia with strontium gallate.—73-13094
$NdGaO_3$ substrates with defined grain boundaries prepared by welding or soldering.—73-13148
New fluorogallate glasses.—73-06940
Optical constants of bismuth gallate glasses.—73-07058
Optical spectroscopy of $MgGa_2O_4$:$Co^{2+}$.—73-12643
Photoelastic constants of bismuth-containing gallate glasses.—73-07063
Refraction and molar volume of bismuth-containing gallate glasses.—73-07069
Spin-glass behavior of the system $CoFe_{2-x}Ga_xO_4$.—73-05486
Structural refinements on a sodium ß-aluminogallate crystal and a parent $Nd^{3+}$-exchanged crystal.—73-02452
Thermal conductivity and thermal properties of the substituted strontium hexagallate, $SrGa_{11}Mg_{0.5}Zr_{0.5}O_{19}$, in the temperature range 5–300 K.—73-02705
$YBa_2Cu_3O_7$/$NdGaO_3$/$YBa_2Cu_3O_7$ trilayers by modified off-axis sputtering.—73-08280

**gallium arsenide,**
Γ-$X_c$ mixing in GaAs/AlAs superlattices of type II.—73-01172
Γ-X mixing effects on photoluminescence intensity in GaAs/AlAs type-II superlattices.—73-14936
Γ-X-Γ electron transfer in mixed type I–type II GaAs/AlAs quantum well structures.—73-01173
0–1 GHz waveguide 10.6 μm GaAs electrooptic modulator.—73-01368
0.98–1.02-μm strained InGaAs/AlGaAs double quantum well high-power lasers with GaInP buried waveguides.—73-15232
0.98-μm InGaAs-InGaAsP-InGaP GRIN-SCH SL-SQW lasers for coupling high optical power into single-mode fiber.—73-15233
1-D "dislocation"-related electronic states in GaAs(110)×Bi(1×1) interface.—73-07701
1.48-μm high-power GaInAsP-InP graded-index separate-confinement heterostructure multiple quantum well laser diodes.—73-15067
2-D nonisothermal finite element simulation of laser diodes.—73-15220
600-mW cw single-mode GaAlAs triple quantum well laser with a new index-guided structure.—73-11447
Ab initio calculation of the surface phonons in GaAs(110).—73-11059
Absorption edge singularities in highly excited semiconductors.—73-07375
Absorption modulation induced by electron beam excitation of strained $In_{0.2}Ga_{0.8}As$/GaAs multiple quantum wells.—73-11060
Absorption of ir radiation by an electron plasma in the case of scattering by impurities and plasmon-phonon excitations in semiconductors.—73-14765
Absorption of ir radiation by holes in [GaAs] quantum well structures.—73-14766
Adsorption and thermal desorption of chlorine from GaAs(100) surfaces.—73-07377
Ammonia plasma passivation of GaAs in downstream microwave and radio-frequency parallel-plate plasma reactors.—73-11064
Amphoteric doping of Si in InAlAs/InGaAs/InP(311)A heterostructures grown by molecular beam epitaxy.—73-11065
Analysis of differential gain in InGaAs-InGaAsP compressive and tensile strained quantum-well lasers and its application for estimation of high-speed modulation limit.—73-14770
Analysis of GaAs(100) surfaces prepared with various wet and in situ sample treatments.—73-07378
Analysis of the high-temperature characteristics of InGaAs-AlGaAs strained quantum-well lasers.—73-07379
Analytical solution of subbands and absorption coefficients of AlGaAs-GaAs hyperbolic quantum wells.—73-14771
Angle-resolved photoemission and band structure of the alloy $Al_{0.5}Ga_{0.5}As$ compared to that of the superlattice $[(AlAs)_2/(GaAs)_2]_{10}$.—73-04239
Anisotropy in SHG from reconstructed surfaces of GaAs.—73-14772
Anisotropy of the optical reflection of GaAs in the region of its fundamental absorption edge.—73-01076
Annealing behavior of Au(Te)/*n*-GaAs contacts.—73-11067
Annealing of $As_{Ga}$-related defects in LT [low-temperature] GaAs: the role of gallium vacancies.—73-14773
Annealing of native defects in Te-doped GaAs.—73-14774
Annealing studies of Er-implanted GaAs and the excitation mechanism of Er in GaAs.—73-04240
Anomalies in annealed LT [low-temperature] GaAs samples.—73-14775
Anomalous doublet peaks in the current spectra of a *p-n* structure, which are linked with one type of deep states.—73-11070
Antiphase boundaries in GaAs layers.—73-01079
Apparatus for growing a GaAs single crystal by pulling from GaAs melt.—73-01370
Application of low-temperature [LT] GaAs to $GaAs_{Si}$.—73-14777

Arsenic reflection from GaAs and AlGaAs surface during molecular beam epitaxy.—73-11073
Artificial pyroelectricity in gallium arsenide.—73-04539
Aspects of interface modes and LO eigenmodes in GaAs/AlAs quantum wells.—73-07384
Atom-resolved imaging and spectroscopy on the GaAs(001) surface using tunneling microscopy.—73-07385
Atomic layer epitaxy of AlAs and $Al_xGa_{1-x}As$ for device application.—73-04247
Atomic layer epitaxy on (001)GaAs: real-time spectroscopy.—73-07387
Atomic model for hydrogen passivation of DX centers in GaAs and $Al_xGa_{1-x}As$ alloys.—73-11076
Atomic scale survey of III-V epitaxial interfaces.—73-07388
Atomic structure of Al-GaAs(110) interfaces.—73-08554
Auger recombination, gain, and temperature sensitivity of 1.5-μm compressively strained semiconductor laser.—73-14780
Backgating in GaAs field effect transistors.—73-01081
Ballistic and elastic mean free paths determined by magnetic electron focusing effect in GaAs/AlGaAs.—73-04250
Band offset determination in parabolic and triangular quantum wells of GaAs/AlGaAs and GaInAs/AlInAs.—73-11081
Band offset measurement at the $In_{0.5}Ga_{0.5}P$/GaAs heterojunction by using properties of transition metal.—73-04253
Band-filling effect in quantum well with excitation of 532-nm picosecond laser.—73-11083
Barrierless dimer breaking at semiconductor surfaces by chlorine atoms.—73-14782
Batch fabrication and operation of GaAs-$Al_xGa_{1-x}As$ FET self-electrooptic effect device (FET-SEED) smart Pixel arrays.—73-14783
Bi thin-film growth structures prepared at 30 K on GaAs(110) and InP(110).—73-07390
Biexciton formation by two-photon absorption in quantum wells.—73-07392
Binary AlAs/GaAs versus ternary GaAlAs/GaAs interfaces: a dramatic difference of perfection.—73-07393
Binding energies of Wannier excitons in GaAs-$Ga_{1-x}Al_xAs$ quantum well structures.—73-14785
Blue/green light-emitting diodes and laser diodes [LD's] based on II-VI heterostructures grown on predeposited GaAs buffer layers.—73-11085
Bound bipolaron at the surface: the negative *U* behavior of GaAs(110) with adsorbed alkali metals.—73-14787
Bound phonons and DX centers in GaAs under hydrostatic pressure.—73-11086
Bridging THz frequency gaps in the near ir by coherent four-wave mixing in GaAlAs laser diodes.—73-01085
Bulk and surface second harmonic generation in noncentrosymmetric semiconductors.—73-01497
Bulk defects [observed] by STM and spectroscopy: arsenic antisite defects in GaAs.—73-14788
Bulk GaAlAs mirror as a saturable absorber for subpicosecond pulse generation around 835 nm.—73-01086
Buried stripe AlGaAs heterolasers fabricated by one-stage LPE.—73-01087
Calculation of alloy scattering relaxation time for ternary III-V and II-VI semiconductors.—73-14790
Calculation of heterojunction conduction band for a field-assisted InP/InGaAsP/InP semiconductor photocathode.—73-11089
Calculation of the Schottky barrier height at the Al/GaAs(001) heterojunction: effect of interfacial atomic relaxations.—73-04256
Calculation of the temperature profiles in GaAs single crystals grown in a thin molten layer by the Kyropoulos method with liquid encapsulation.—73-14791
Calculation of the X-valley intersubband optical transition linewidth in [111] grown AlAs/(GaAl)As quantum wells.—73-04257
Calculation of thermal expansion of gallium arsenide.—73-04258
Can nuclear magnetic resonance resolve epitaxial layers.—73-08377
Capacitance-voltage characteristics of selectively doped heterostructures containing deep centers.—73-01090
Capacitance-voltage characteristics of thin-film structures made of *n*-type GaAs.—73-01091
Carrier lifetimes in strained InGaAsP multiple quantum-well laser structures.—73-07398
Carrier-carrier scattering effects in InGaAs-GaAs strained layer lasers.—73-14792
Carrier-concentration dependence of velocity-field characteristics in $In_{0.53}Ga_{0.47}As$.—73-11090
CBE-grown 1.5-μm GaInAsP-InP surface-emitting lasers.—73-14793
CdTe epitaxial growth on (211)B GaAs by molecular beam epitaxy.—73-07400
Changes in the light-scattering diagram of undoped GaAs single crystals due to electron bombardment.—73-14795
Characteristics and special features of the conductivity of surface δ-doped layers in GaAs with a variable density of 2-D electrons.—73-01095
Characteristics of GaAs molecular layer etching [MLE].—73-04905
Characteristics of heavily Be-doped GaAs layers grown by molecular beam epitaxy.—73-11098
Characteristics of LPE and of electrophysical properties of epitaxial $In_{0.53}Ga_{0.47}As$:Sb films.—73-01097
Characteristics of modulation-doped quantum well lasers grown by molecular beam epitaxy.—73-11099
Characterization of crystalline low-temperature GaAs layers annealed from an amorphous phase.—73-14798
Characterization of deep traps in semiinsulating gallium arsenide.—73-14799
Characterization of GaAs on Si using polarized laser light.—73-07406
Characterization of GaAs(100) surfaces by AES and LEED.—73-01100
Characterization of $GaAs/Ga_{1-x}Al_xAs$ multilayer systems by ir spectroscopy at normal incidence.—73-14801
Characterization of GaAs/GaAsP strained multiple quantum wells grown by gas source molecular beam epitaxy.—73-11101
Characterization of S incorporation in $GaAs_{1-x}S_x$ by ir spectroscopy.—73-06197
Characterization of selective reactive ion etching effects on δ-doped GaAs/AlGaAs MODFET [modulation-doped field-effect transistor] layers.—73-04266
Characterization of $SiO_2$-GaAs interface structures using spectroscopic ellipsometry.—73-14805
Characterization of the surface-acoustic-wave-induced potential in a GaAs/AlGaAs heterostructure.—73-04267
Characterization of ZnS grown by MOCVD on GaAs(100) using *t*-butyl mercaptan and dimethylzinc.—73-07412
Chemical and electrochemical treatments of GaAs with $Na_2S$ and $(NH_4)_2S$ solutions: a surface chemical study.—73-07413
Chemical reactions at metal/compound semiconductor interfaces: Au and GaAs.—73-11109
Chemistry of S/GaAs and metal/S/GaAs systems.—73-04270
Coherent control of LO-phonon dynamics in opaque semiconductors by femtosecond laser pulses.—73-07416
Coherent optical polarization of bulk GaAs studied by fs photon-echo spectroscopy.—73-14810
Collective intersubband excitation in a *p*-doped GaAs/AlGaAs multiple quantum well.—73-01105
Comparative characteristics of plasma-etched GaAs and InP.—73-07418
Comparative study of the oxide growth mode on GaAs(111) and $(\bar{1}\bar{1}\bar{1})$ surfaces: implications for direct oxide electron beam writing.—73-01106
Comparison of *pnp* and *npn* InGaAlAs/InGaAs heterojunction bipolar transistors [HBT's].—73-11112
Comparison of steady-state and transient characteristics of lattice-matched and strained InGaAs-AlGaAs (on GaAs) and InGaAs-AlInAs (on InP) quantum-well lasers.—73-01107
Compensation of the conductivity of *n*-type GaAs:Yb radiation defects.—73-14813
Composite GaAs-on-quartz substrate for integration of millimeter-wave passive and active device circuitry.—73-11514
Compositional nonuniformities and strain relaxation at misoriented $In_xGa_{1-x}As$/GaAs interfaces.—73-14814
Compressively strained 1.3-μm InAsP/InP and GaInAsP/InP multiple quantum-well lasers for high-speed parallel data transmission systems.—73-14815
Conditions for light-induced short-time growth of GaAs and InP by chloride epitaxy.—73-04274
Conductance quantization in a GaAs electron waveguide device fabricated by X-ray lithography.—73-14816
Confined-to-propagating transition of LO phonons in GaAs/$Al_xGa_{1-x}As$ superlattices observed by ps Raman scattering.—73-07422
Control of As diffusion using ultrathin metal passivating layers at GaAs(100) surfaces.—73-07423
Control of differential gain, nonlinear gain, and damping factor of high-speed application of GaAs-based MQW lasers.—73-14817
Control of Ge homojunction band offsets via ultrathin GaAs dipole layers.—73-01110
Correlation between optical backgating and photogeneration mechanism in GaAs MESFET's.—73-11122
Correlation of interface chemistry, barrier height, and step density for Al on vicinal GaAs(100) surfaces.—73-01112
Coverage-dependent surface photovoltage induced by synchrotron radiation at metal/GaAs interfaces.—73-01114
Creation of radiative hydrogen-related states within strained $In_xGa_{1-x}As$/GaAs quantum wells by hydrogenation.—73-01115
Critical layer thickness of strained-layer InGaAs/GaAs multiple quantum wells determined by double-crystal X-ray diffraction.—73-14818
Critical passivation ledge thickness in AlGaAs/GaAs heterojunction bipolar transistors [HBT's].—73-11124
Cross-sectional imaging of doped layers in epitaxial gallium arsenide films by scanning tunneling microscopy.—73-11125
Cross-sectional scanning tunneling microscopy of epitaxial GaAs structures.—73-11126
Cross-talk coupling between two filamentary currents in *n*-GaAs under longitudinal magnetic field.—73-07428
Cryogenic and high-temperature operation of $Al_{0.52}In_{0.48}P$/-$In_{0.2}Ga_{0.8}As$ high electron mobility transistors [HEMT's].—73-11127
Current-induced corrections to the effective dielectric constant of inhomogeneous semiconductor alloys.—73-14821
Cyclotron resonance in $(GaAs)_n(InAs)_m$ superlattices.—73-07431
Cyclotron-resonance-induced negative photoconductivity in $GaAs/Al_xGa_{1-x}As$ quantum wells.—73-14822
Damage introduction in GaAs/AlGaAs and InGaAs/InP heterojunction bipolar transistor structures during electron cyclotron resonance plasma processing.—73-07432
Deep levels and reduction in the conductance of a direct selectively doped heterostructure on application of a triggering voltage pulse to the gate.—73-14825
Deep trapping centers in *n*-type GaAs bombarded with fast neutrons.—73-14826
Deep-level defects in GaAs grown from a molten Ga-Bi solution.—73-01119
Defects in GaAs bulk crystals and multilayers caused by In diffusion.—73-04280
Defects in III-V materials and the accommodation of strain in layered semiconductors.—73-09398
Defects in strained $In_{0.2}Ga_{0.8}As$/GaAs multiple quantum wells on patterned and unpatterned substrates: a near-infrared cathodoluminescence study.—73-07438
Definite identification of $D^-$ centers in GaAs quantum wells by tilt-induced splitting in a magnetic field.—73-07439
Deformation-stimulated changes in the concentration of light-emitting centers in GaAs.—73-01121
Degradation mechanism of GaAs/AlGaAs quantum well lasers.—73-07440
Dependence of high-speed properties on the number of quantum wells in 1.5-μm InGaAs-InGaAsP MQW L14-shifted lasers.—73-14828
Dependence of the frequency shift of the optical-microwave double resonance signal in the Cs $D_2$ line on the pumping frequency and power of a GaAs semiconductor laser.—73-01122
Dependence of the radiation stability of the intensity of luminescence emitted by solid solutions of III-V compounds on their composition.—73-14829
Depletion-electric-field-induced changes in second harmonic generation from GaAs.—73-14830
Design of InGaAs-InAlAs multiple-quantum-well optical modulators.—73-01124
Design of widely tunable semiconductor lasers using grating-assisted codirectional-coupler filters.—73-14832
Detection and reduction of indium segregation during molecular beam epitaxial growth of InGaAs/GaAs using in situ reflection mass spectrometry [REMS].—73-11133
Detection of overtone vibration spectrum of water vapor by AlGaAs diode laser.—73-11134
Determination of the geometrical configuration of Bi on GaAs(110) by X-ray standing wave triangulation.—73-07441
Determination of the homogeneity of quantum wells in the InGaAs/GaAs system from photomodulation spectra.—73-07442
Determining lattice mismatch or the composition of a single ultrathin GaInAs layer grown on InP.—73-04282
Development of high-quantum-efficiency, lattice-mismatched, 1-eV GaInAs solar cells.—73-07444
Diagnostics of GaAs films grown by atomic layer epitaxy.—73-11136
Dielectric function of GaAs/AlAs superlattices grown on GaAs substrates with different orientation.—73-14833
Difference frequency Raman scattering and confined optical phonons in ultrashort-period $(GaAs)_n/(AlAs)_n$ superlattices.—73-01126
Differences in Si doping efficiency in tertiarybutylarsine, monoethylarsine, and arsine for GaAs and AlGaAs grown by MOVPE.—73-14834
Diffraction and two-beam coupling in GaAs along the [111] direction.—73-11139
Digital etching of III-V multilayered structures combined with laser ionization mass spectroscopy [LIMS]: photon-assisted depth profiling.—73-11141
Dimensional reduction of GaAs quantum well cut by dislocation slip observed by photoluminescence.—73-07445
Dimer formation on (001)GaAs under organometallic chemical vapor deposition growth conditions.—73-07446
Diode structures from amorphous low-temperature [LT] GaAs.—73-14835
Direct determination of impact ionization rates near threshold in $Al_{0.9}Ga_{0.1}As$ and GaAs using molecular beam epitaxially grown $GaAs/Al_{0.9}Ga_{0.1}As$ structures and soft X-ray photoemission.—73-07447
Direct mapping [by STM] of electronic structure across $Al_{0.3}Ga_{0.7}As$/GaAs heterojunctions: band offsets, asymmetrical transition widths, and multiple-valley band structures.—73-14836
Direct measurement of heavy-hole exciton transport in type-II GaAs/AlAs superlattices.—73-11142
Direct observation of hot electron distribution function in GaAs/AlGaAs heterostructures.—73-14837
Direct optical observation of hydrogenation-induced damage in GaAs.—73-01129
Direct proof of two-electron occupation of Ge-DX centers in GaAs codoped with Ge and Te.—73-11143
Dislocation slipping, a new technique to produce steplike surfaces compatible with quantum confinement sizes.—73-07450
Dislocation slipping, a new technique to produce steplike surfaces compatible with quantum confinement sizes.—73-14839
Dislocations in an AlGaAs/GaAs superlattice.—73-04283
DLTS detection of hole traps in MBE-grown *p*-GaAs using Schottky barrier diodes.—73-11145
Do we need a new methodology for GaAs passivation.—73-07452
Dopant incorporation in GaAs and AlGaAs grown by MOMBE for high-speed devices.—73-14841
Doping of epitaxial GaAs films by Zn acceptor impurity during LPE from Ga-Bi molten solutions.—73-14842
Double barrier resonant tunneling device with selectively applied field in the well.—73-06154
Dramatic work function variations of molecular beam epitaxially grown GaAs(100) surfaces.—73-07454
Dry etching bilayer and trilevel resist systems for submicron gate length GaAs-based high-electron-mobility transistors for power and digital applications.—73-14844
Dry etching of CdTe/GaAs epilayers using $CH_4/H_2$ gas mixtures.—73-11146
Dry etching of GaAs and AlGaAs by $Cl_2$ in molecular beam epitaxy system.—73-11147
Dry-process, through-wafer via holes for GaAs power devices.—73-11149
DX centers in $Al_{0.34}Ga_{0.66}As$ amorphous thin films.—73-14845
Dynamical properties of $Ga_{1-x}In_xAs$ solid solutions: influence of local distortion effects.—73-04286

Dynamics characteristics of high-power pulses generated in GaAs/AlGaAs superluminescent diodes.—73-01132
Dynamics of $NH_3$ photodesorption from GaAs(100): role of electronic quenching.—73-07457
Dynamics of switching in Si and GaAs *p-i-n* diodes.—73-07458
Effect of $\Gamma$-$\chi$ mixing on electron tunneling times in GaAs/AlAs double barrier heterostructures.—73-07460
Effect of boron, oxygen, and fluorine in ion-implanted GaAs.—73-04287
Effect of bulk doping on scanning tunneling microscopy images of GaAs(001) 2×4 *surfaces.—73-07461*
Effect of crystalline defects on electrical properties of heavily Si-doped strain-relaxed $In_{0.5}Ga_{0.5}As$ layers grown by molecular beam epitaxy on GaAs.—73-11151
Effect of dead space in gain and noise in Si and GaAs avalanche photodiodes.—73-01133
Effect of electron cyclotron resonance generated hydrogen plasmas on carbon incorporation and interfacial quality of GaAs and AlGaAs grown by metallorganic molecular beam epitaxy.—73-07463
Effect of electron-beam deposition rate on the electrical properties of Ti/ and Pt/*n*-GaAs contacts.—73-12771
Effect of Ga implantation on the intermixing of InGaAs/GaAs strained quantum wells.—73-04289
Effect of hot electrons on the magnetic field enhancement of exciton luminescence in GaAs.—73-14849
Effect of interface roughness and scattering on the performance of AlAs/InGaAs resonant tunneling diodes.—73-11157
Effect of interface roughness on nonlinear vertical transport in GaAs/AlAs superlattices.—73-07466
Effect of neutron bombardment on the displacement of the *p-n* junction interface in GaAsP:Zn light-emitting diodes.—73-11160
Effect of orientation of substrate surface on properties of homoepitaxial GaAs layers grown by liquid phase epitaxy technique.—73-14854
Effect of Sb doping on point defect ensemble in MOVPE GaAs.—73-14855
Effect of Si delta doping and growth temperature on the *I*(*V*) characteristics of molecular beam epitaxially grown GaAs/(AlGa)As resonant tunneling devices.—73-11162
Effect of strain on the high-speed modulation of GaAs- and InP-based quantum well lasers.—73-14857
Effect of structural and chemical parameters on the optical properties of highly strained AlGaAs/InGaAs/AlGaAs quantum wells.—73-11164
Effect of substrate temperature on ultrahigh vacuum interfaces of indium oxide/GaAs(110).—73-11165
Effect of substrate tilt on MOCVD growth of (100)CdTe on (100)GaAs.—73-11166
Effect of surface passivation with SiN on the electrical properties of InP/InGaAs heterojunction bipolar transistors.—73-11167
Effect of the recombination in the space charge region of the illuminance characteristics of the surface photo-emf of GaAs and InP.—73-11168
Effects of As flux on Si delta-doped GaAs.—73-11170
Effects of electrode geometry and polarity on the occurrence of negative peaks in optical transient current spectroscopy applied to semiinsulating gallium arsenide.—73-11171
Effects of heat treatment on the 0.8-eV photoluminescence emission in GaAs grown by molecular beam epitaxy at low temperatures.—73-14863
Effects of reactive ion etching on optical and electrooptical properties of GaInAs/InP-based strip-loaded waveguides.—73-11174
Effects of the substrate misorientation on the excitonic transition properties in GaAs/AlGaAs superlattices.—73-07476
Effects of ytterbium addition on liquid phase epitaxial growth of InGaAs/InP heterostructures.—73-04296
Elastic and plastic contributions to X-ray line broadening of InGaAsP/InP heterostructures.—73-11175
Elastic constant $C_{11}$ of $Al_xGa_{1-x}As$ determined by near-ir Brillouin scattering.—73-14865
Elastic strain effect dependence on the energy band gaps and the lattice parameters in CdTe epitaxial layers on GaAs(100) substrates grown by hot-wall epitaxy.—73-04300
Electric and magnetic field induced dimensionality reduction in InGaAs-GaAs superlattices.—73-07479
Electric subband studies in an $In_{0.53}Ga_{0.47}As$/InP one-side-modulation-doped quantum well.—73-01140
Electric subbands in Si-delta-doped GaAs grown by MOCVD.—73-01141
Electric-field-induced ultrafast intersubband transitions in large GaAs-AlAs quantum wells via electron-interface-phonon interaction.—73-01142
Electrical and optical properties of Yb-, Er-doped GaAs.—73-04302
Electrical characteristics of Ar ion sputter-induced defects in epitaxially grown *n*-GaAs.—73-07484
Electrical characteristics of low-temperature $Al_{0.3}Ga_{0.7}As$.—73-14867
Electrical characterization of low-temperature GaAs layers, and observation of the extremely large carrier concentrations in undoped material.—73-07485
Electrical charaterization of Cu-diffused *n*-GaAs epitaxial layers using optical deep transient spectroscopy.—73-11178
Electrical properties of DX centers in heavily Se-doped $Al_xGa_{1-x}As$.—73-01147
Electrical properties of low-temperature [LT] GaAs grown by molecular beam epitaxy and migration-enhanced epitaxy.—73-14869
Electrical properties of molecular beam epitaxial GaAs grown at 300–450°C.—73-14870
Electrodeposited GaAs films.—73-14876
Electroluminescence of vanadium in GaAs.—73-01152
Electromodulation study of GaAs with excess arsenic.—73-07490
Electron intersubband normal incidence absorption in InGaAs/GaAs quantum wells.—73-11185
Electron microscope studies of liquid-phase epitaxy of InGaAsP/GaAs structures with thin (<10 nm) layers.—73-04310
Electron minibands in $(GaAs)_n(AlAs)_m$ superlattices with even and odd *M*.—73-14880
Electron-induced nitridation of GaAs(100) with ammonia.—73-11188
Electronic apparatus [made of GaAs] with improved thermal expansion match.—73-14749
Electronic structure of samarium atoms adsorbed on the GaAs(110) surface.—73-07501
Elimination of planar faults in lattice-matched heteroepitaxial films using ion-assisted [IA] molecular beam epitaxy.—73-11191
Emission infrared spectroscopy for in situ analysis of the OMVPE growth surface.—73-15796
Energetics of As dimers on GaAs(001) As-rich surfaces.—73-14886
Energetics of GaAs(100)-(2×4) and -(4×2) reconstructions.—73-14887
Energy density distribution of interface states in Au Schottky contacts to epitaxial $In_{0.21}Ga_{0.79}As$:Zn layers grown on GaAs by metallorganic vapor phase epitaxy.—73-11193
Energy spectrum of 2-D electrons and doublet structure of cyclotron line in GaAs-GaAlAs heterojunctions in tilted magnetic field.—73-01158
Enhanced radiative adsorption of thin, heavily beryllium-doped GaAs films.—73-04319
Epitaxial compositions.—73-04513
Epitaxial $Ga_2Se_3$ layers grown on GaAs(100) using a heterovalent exchange reaction.—73-07505
Epitaxial GaAs and InGaAs picosecond photoresistors grown by low-temperature metallorganic chemical vapor deposition technique.—73-04321
Epitaxial growth of GaAs prepared by low-pressure MOCVD at low temperatures.—73-07506
Epitaxial tilt of partially relaxed InGaAs layers grown on (100)GaAs substrates.—73-07508
Equipartition method for the analyses of two nonidentical closely separated rib waveguides.—73-14893
Er-doped GaAs for high-speed photoconductor applications.—73-04327
Erbium-doped gallium arsenide: a self-organizing low-dimensional system.—73-04328
Etching of InP(100) 4×2 and molecular beam epitaxially grown GaAs(100)-*c*(4×4) with atomic hydrogen.—73-11198
Evaluation of ohmic contacts to GaAs(100) and (111)B using InAs/GaAs short-period superlattice [SPS] and InGaAs intermediate layers.—73-11199
Evidence for substitutional-interstitial defect motion leading to DX behavior by donors in $Al_xGa_{1-x}As$.—73-07512
Evidence for trigonal symmetry of the metastable state of the EL2 defect in GaAs.—73-09403
Evidence of interaction between two DX centers in *n*-type AlGaAs from RDLTS and temperature-dependent pulse-width DLTS measurements.—73-04333
Evidence of noncommutativity and nontransitivity of band discontinuities in InP-Al(In)As-Ga(In)As heterostructures.—73-04334
Evolution process of antiphase boundaries in GaAs on Si.—73-04335
Excess currents as a result of trap-assisted tunneling in double barrier resonant tunneling diodes.—73-07515
Excess dark current due to saw damage in semiinsulating GaAs.—73-14898
Exchange cleavage of excitonic levels in type-I and type-II superlattices.—73-11201
Exciton photoluminescence [PL] of surface quantum wells in a GaAs/AlGaAs.—73-11202
Exciton spin dynamics in GaAs heterostructures.—73-07518
Exciton states in GaAs/AlGaAs Bragg confining structures studied by resonant Raman scattering.—73-14899
Exciton transport and localization in type-II GaAs/AlAs superlattices.—73-11204
Excitons and electron-phonon interaction in $In_{0.53}Ga_{0.18}Al_{0.3}As$.—73-01162
Experimental observation of persistent currents in a GaAs-AlGaAs single loop.—73-14903
Fabrication of nanostructures with multilevel architecture.—73-11209
Fabrication of overpass microstructure in GaAs using isotropic reactive ion etching.—73-07524
Fabrication of quantum dot structures using aerosol deposition and plasma techniques.—73-05804
Fabrication of ultrahigh quality vertical facets in GaAs using pattern corrected electron beam lithography.—73-04342
Factors influencing Si segregation and its effect on the two-dimensional electron gas mobility in inverted GaAs/*n*-AlGaAs heterostructures.—73-14915
Factors responsible for the difference in the dose dependence of the intensities of different luminescence bands of III-V semiconductor compounds bombarded with fast particles.—73-14916
Features of defect formation in active region of GaAlAs/GaAs epitaxial heterostructures for solar cells under alternating heat effects.—73-03094
Femtosecond optical response of low-temperature-grown $In_{0.53}Ga_{0.47}As$.—73-14922
Fermi-level inhomogeneities on the GaAs(110) surface imaged with a photoelectron microscope.—73-07528
Fermi-level variation on GaAs(110) surface with Sb overlayer studies with a photoelectron microscope.—73-11213
Field effect on the deep levels and DX centers in $Al_xGa_{1-x}As$/GaAs and $In_xGa_{1-x}As$/GaAs.—73-04343
Field effect transistor.—73-01371
Field ionization mechanism for a high refractive nonlinearity in heavily doped *n*-GaAs.—73-14925
Fine structure of the A line of bound excitons in $GaAs_xP_{1-x}$:N solid solutions.—73-01165
Finite superlattice with the embedded quantum well.—73-07529
First observation of EL2-like defect levels in annealed [low-temperature] LT GaAs.—73-14927
First-principles calculations of many-bond band-gap narrowing at an Al/GaAs(110) interface.—73-14928
Fluctuating potential and localization in semiinsulating GaAs.—73-01166
Focused ion-beam implantation in strained InGaAs-GaAs quantum wells.—73-07531
Formation of deep centers in GaAs by laser irradiation.—73-07536
Formation of periodic-modulated composition structure by coherent separation of phases in quaternary solid solutions of III-V semiconductors.—73-14929
Formation of $SiO_2$/GaAs(100) interface by electron stimulated oxidation of ultrathin Si overlayers: subcutaneous oxidation processes.—73-07537
Four-channel ridge waveguide quantum well wavelength division demultiplexing detector and its optimization.—73-07538
Free-carrier effects in GaAs single modulation-doped quantum well as applied to active *Q* switching of injection lasers.—73-07539
Free-electron laser internal photoemission [IPE] measurements of heterojunction band discontinuities.—73-11215
GaAs 2×2 Mach–Zehnder optic waveguide switch/modulator.—73-11216
GaAs deposition on the (100) and (110) planes of gold by electrochemical atomic layer epitaxy: a low-energy electron diffraction, Auger electron spectroscopy, and scanning tunneling microscopy study.—73-07542
GaAs electronics in the marketplace.—73-07541
GaAs island morphology and defect structure [observed] on the Berkeley atomic resolution microscope [ARM].—73-06219
GaAs surface control during metallorganic vapor phase epitaxy by reflectance anisotropy spectroscopy [RAS].—73-11217
GaAs surface oxidation and deoxidation using electron cyclotron resonance oxygen and hydrogen plasmas.—73-01171
GaAs surface stabilization by vacuum anneal with SiO.—73-04108
GaAs/AlGaAs atomic layer epitaxy in a commercial MOCVD reactor.—73-04344
GaAs/AlGaAs first-order gratings fabricated with electron beam lithography and very narrow linewidth long cavity DBR laser diodes.—73-14933
GaAs/Ge heterojunction grown by metallorganic chemical vapor deposition and its application to high-efficiency photovoltaic devices.—73-14934
Gain-switched GaAs vertical-cavity surface-emitting lasers.—73-14935
GaInAs/InP and GaInP/GaAs(100) interfaces: an ultraviolet photoelectron spectroscopy study.—73-07543
Gas source molecular beam epitaxial growth and device applications in $In_{0.5}Ga_{0.5}P$ and $In_{0.5}Al_{0.5}P$ heterostructures.—73-14938
Gas source molecular beam epitaxy of InGaP and GaAs on strained-relaxed $Ge_xSi_{1-x}$/Si.—73-11219
Gaussian lineshape analysis of the RT photoreflectance of GaAs/AlGaAs and InAs/GaAs multiple quantum wells.—73-14940
Generation and measurement of picosecond electrical pulse and dispersion on stripline.—73-14941
Generation of fast-switching $As_2$ and $P_2$ beams from $AsH_3$ and $PH_3$ for gas-source molecular beam epitaxial growth of InGaAs/InP multiple quantum well and superlattice structures.—73-11220
Geometric and electronic structures of Na/GaAs.—73-06220
Giant electropleochroism in GaAs-(Al,Ga)As heterostructures: the quantum-well Pockels' effect.—73-07547
Grazing-incidence X-ray photoemission spectroscopy investigation of oxidized GaAs(100): a novel approach to nondestructive depth profiling.—73-11223
Ground state of transition elements of the Fe group in GaAs and GaP.—73-07548
Ground-state energy of the shallow bound polaron in ternary mixed crystal.—73-01178
Growth and characterization of $Al_xGa_{1-x}As$ Bragg reflectors by LP-MOCVD.—73-14944
Growth and characterization of device-quality GaAs produced by laser-assisted atomic layer epitaxy using triethylgallium.—73-04348
Growth and characterization of novel multilayer heterostructures for the monolithic integration of resonant cavity photodiodes and heterojunction bipolar transistors.—73-11225
Growth and properties of AlInAs-GaInAs alloys and quantum wells on (110)InP.—73-11227
Growth mechanism of $(InAs)_m(GaAs)_n$ strained short-period superlattices grown by molecular beam epitaxy.—73-11229
Growth mechanisms of AlGaAs on terraced substrates by low-pressure MOVPE.—73-14949
Growth modes and relaxation mechanisms of strained InGaAs layers grown on InP(001).—73-07550
Growth of *p*- and *n*-type GaAs/(AlGa)As double barrier resonant tunneling devices on (311)A and (111)B substrate orientations.—73-07551
Growth of $Al_xGa_{1-x}As$ by metallorganic chemical vapor deposition using trimethylgallium and trimethylamine alane.—73-11231
Growth of AlGaAs and AlGaAs/GaAs heterostructures on misoriented (110)GaAs and a normal-incidence type-II AlAs/AlGaAs quantum well infrared photodetector.—73-11232

Growth of AlN on GaAs(110) by reactive molecular beam deposition.—73-07553

Growth of $Ga_xIn_{1-x}As_yP_{1-y}$ using ethyldimethylindium and tert-butylphosphine.—73-14950

Growth of GaAs-AlAs quantum clusters on non-(100)-oriented faceted GaAs surfaces by MBE.—73-07554

Growth of high-quality *p*-type GaAs epitaxial layers using carbon tetrabromide by gas-source molecular beam epitaxy [GSMBE] and molecular beam epitaxy.—73-11236

Growth of high-quality AlGaAs/GaAs heterostructures by molecular beam epitaxy for photonic and electronic device applications.—73-14951

Growth of III-V materials by metallorganic molecular beam epitaxy.—73-04352

Guided-wave measurements of real-excitation optical nonlinearities in a tensile-strained InGaAs on InP quantum well at 1.5 μm.—73-14953

Gunn diodes made of *n*-InGaAs/*n*⁺-InP heterostructures.—73-07556

Hall and drift mobilities in molecular beam epitaxial grown GaAs.—73-14954

Hall mobility and temperature-dependent photoluminescence of carbon-doped GaAs.—73-14956

Heterostructure with 2-D electrons as a Hall sensor.—73-01183

High excitation effects in type II GaAs/AlAs superlattices.—73-01184

High gain AlInAs/GaAsSb/AlInAs NpN HBT's on InP.—73-11243

High-efficiency 50-GHz InGaAs multimode waveguide photodetector.—73-07559

High-field filling of deep levels in heterostructure AlGaAs/GaAs FET's with modulated doping.—73-07560

High-field transient of photoexcited GaAs electrons and holes with acoustic and TO-phonon momentum scattering.—73-07561

High-frequency analysis of fast devices using small-signal Monte Carlo simulations: application to a 0.1-μm gate MODFET.—73-07562

High-frequency analysis of fast devices using small-signal Monte Carlo simulations: application to a 0.1-μm gate MODFET.—73-14959

High-performance double pulse doped pseudomorphic AlGaAs/InGaAs transistors grown by molecular beam epitaxy.—73-07563

High-performance heterojunction bipolar transistor [HBT] grown by molecular beam epitaxy using novel growth method.—73-11245

High-power individually addressable monolithic four-beam array of GaAlAs window diffusion stripe lasers.—73-01185

High-power pseudomorphic gallium arsenide high electron mobility transistors.—73-04516

High-speed λ=1.3 μm metal-semiconductor-metal [MSM] photodetectors on GaAs.—73-11247

High-speed (≥6 GHz) InGaAs/InP avalanche photodiodes grown by gas source molecular beam epitaxy with a thin quaternary grading layer for high bit rate (≥5 Gbit/s) systems.—73-14961

High-speed (≥6 GHz) InGaAs/InP avalanche photodiodes grown by gas source molecular beam epitaxy [GSMBE] with a thin quaternary grading layer for high bit rate (≥5 Gbit/s) systems.—73-07566

High-speed 1.3-μm InGaAsP Fabry-Perot laser for digital and analog applications.—73-14962

High-speed operation on strained InGaAs/InGaAsP MQW laser under zero-bias condition.—73-14963

High-speed photodetector applications of GaAs and $In_xGa_{1-x}As$/GaAs grown by low-temperature molecular beam epitaxy.—73-14964

High-temperature plastic deformation and luminescence properties of GaAs.—73-16506

Highly doped GaInAs using diethylberyllium by MOCVD for InP-based heterostructure bipolar transistor applications.—73-04355

Hologram recording in GaAs through EL2 intracenter absorption.—73-01189

Hopping conduction and its photoquenching in molecular beam epitaxial GaAs grown at low temperatures [LT].—73-14966

Hot carrier relaxation in bulk $In_{0.53}Ga_{0.47}As$.—73-14967

Hubbard correlations and charge transfer at the GaAs(110) surface with alkali adsorbates.—73-14968

Hydrogen sensitivity of ZnSe/GaAs structures.—73-14970

Hydrogenation of GaAs covered by GaAlAs and subgrain boundary passivation.—73-11255

Identification of the volatile reaction products of the $Cl_2$+GaAs etching reaction.—73-11256

Impact excitation of Er-doped GaAs and the rare-earth sites in III-V compound semiconductors.—73-04360

Impact of surface processing on Al/GaAs(100) interface states.—73-04361

Implant-damage isolation of InP and InGaAsP.—73-07573

Improved optical properties of low-temperature molecular beam epitaxially grown AlGaAs by In incorporation.—73-11258

Improved thickness uniformity in molecular beam epitaxial growth of GaAs using a tilted conical insert crucible.—73-07575

In overlayers on Sb-passivated GaAs.—73-07577

In situ core-level photoelectron spectroscopy study of indium segregation at GaInAs/GaAs heterojunctions grown by molecular beam epitaxy.—73-11262

In situ detection of InGaAs strained layer relaxation by laser light scattering [LLS].—73-07579

In situ ellipsometric study of As capping and low-temperature [LT] molecular beam epitaxy GaAs growth and implications for the low-temperature critical thickness.—73-11264

In situ generated arsine radicals for gallium arsenide homoepitaxy.—73-04363

In situ observation of the growth process of the InAs-GaAs heteroepitaxial system using scanning microprobe reflection high-energy electron diffraction–total reflection angle X-ray spectroscopy.—73-05419

In situ optical characterization of GaAs and InP surfaces during chloride atomic layer epitaxy [ALE].—73-04364

In situ passivation of GaAs after $BCl_3$/$Cl_2$ reactive ion etching.—73-07581

In situ Raman studies during the epitaxial growth of ZnSe layers on GaAs(110).—73-07582

In situ STM observation of MBE surfaces of III-V semiconductors.—73-14974

In situ, real-time diffuse optical reflectivity measurements during GaAs cleaning and subsequent ZnSe/GaAs heteroepitaxy.—73-07587

$In_{0.53}Ga_{0.47}As$ *p-i-n* photodiode for detection in the 1.3 to 1.6 μm spectral range.—73-15510

$In_{0.53}Ga_{0.47}As$ PIN photodiode for detection in the 1.3 to 1.6 μm spectral range.—73-11800

$In_xGa_{1-x}As$ (x=0.25–0.35) grown at low temperature [LT].—73-14975

In-plane transport of excitons in quantum well structures.—73-14976

Index gratings stabilized by deep centers for fast optical addressing.—73-07589

Inelastic hot electron scattering at GaAs(110) surface.—73-01198

Influence of arsenic vapor pressure during copper diffusion on deep level formation in silicon-doped gallium arsenide.—73-03600

Influence of doping and heat treatment on lattice parameter in homoepitaxial GaAs layers obtained by LPE.—73-01202

Influence of double implantation of Si and F atoms on the electrical parameters of semiinsulating GaAs.—73-01203

Influence of Gd doping of a Bi molten solution on residual impurities in epitaxial GaAs.—73-11271

Influence of growth temperature on the photoresponse of low-temperature-grown GaAs:As *p-i-n* diodes.—73-14980

Influence of implantation of compensating impurity ions on the optical properties of *n*⁺-type GaAs.—73-07594

Influence of irradiation conditions on the defect formation processes in *n*-type GaAs.—73-01205

Influence of laser annealing on the electrical properties of MIS structures based on GaAs.—73-04365

Influence of optical phonon emission by holes on the hot cw luminescence linewidth.—73-07597

Influence of reduction in the substrate thickness on the optical properties of epitaxial GaAs films (long-range effect).—73-07599

Influence of silicon nitride cap on the thermal stability of strained $Al_{0.32}Ga_{0.68}As$/ $In_{0.1}Ga_{0.9}As$ high-mobility structures grown by metallorganic chemical vapor deposition.—73-07601

Influence of substrate temperature on the growth of InGaAs layers on (111)B-GaAs.—73-11273

Influence of sulfiding on the state of the surface and photoelectric properties of InP and GaAs.—73-01208

Influence of surface treatment of GaAs in chalcogen vapors on the properties of Schottky barriers in Me-GaAs structures.—73-14985

Influence of the process of vapor phase epitaxy on clusters of electrically active defects in GaAs:Cr substrates.—73-14988

Influence of the substrate on the photoconductivity of InGaAs/GaAs quantum wells.—73-04369

Infrared studies of Be-doped GaAs grown by molecular beam epitaxy at low temperatures [LT].—73-14991

InGaAs-InAlAs multiple quantum well optical bistable devices using the resonant tunneling effect.—73-01213

InGaAs/GaAs single quantum-well lasers with monolithically integrated multilayer waveguides for surface-emitted sum-frequency generation.—73-07606

InGaAs/InGaAsP MQW electroabsorption modulator integrated with a DFB laser fabricated by band-gap energy control selective area MOCVD.—73-14992

InGaAs/InP quantum wells on vicinal Si(001): structural and optical properties.—73-07607

Inhomogeneous and wide range of barrier heights at metal/molecular beam epitaxy GaAs(100) interfaces observed with electrical measurements.—73-07608

Initial stages of heterojunction formation: Si on GaAs(100).—73-01215

Instability of $Ti_xGa_y$ alloys with respect to GaAs at elevated temperatures.—73-07610

Interacting edge states in quantum wires.—73-14995

Interface and relaxation properties of chemical beam epitaxy grown GaP/GaAs structures.—73-11278

Interface profile optimization in novel surface passivation scheme for InGaAs nanostructures using Si interface control layer.—73-07612

Interface quantum well states observed by three-wave mixing in ZnSe/GaAs heterostructures.—73-07613

Interface roughness from Γ and χ luminescence in type II GaAs/AlAs superlattices with composition gradient.—73-01220

Interface sharpness during the initial stages of growth of thin, short-period III-V superlattices.—73-04372

Interface states and the transport of two-dimensional interface excitons in AlGaAs/GaAs structures.—73-07614

Interface stoichiometry dependence of the Schottky barrier height of CoGa and GaAs.—73-07615

Interface strain in organometallic vapor phase epitaxy grown InGaAs/InP superlattices.—73-04373

Interface structure of the 1 monolayer (2×1)-Si/GaAs(001) system by X-ray photoelectron diffraction [XPD].—73-11281

Interfaces in GaAs/AlAs: perfection and applications.—73-07616

Interfacial atomic composition and Schottky barrier heights at the Al/GaAs(001) interface.—73-11282

Interfacial defects and morphology of InGaAs epitaxial layers grown on tilted GaAs substrates.—73-11283

Internal barriers in GaAs epitaxial layers produced by delta-doped dipoles.—73-07618

Internal photoemission of CoGa/GaAs Schottky barriers, possible injection of electrons into the L valley.—73-01221

Interphase interactions in thin-film Pt-GaAs surface-barrier structures.—73-04374

Interpretation of deep levels in Si-GaAs crystals observed by photoinduced current transient spectroscopy.—73-04375

Intersubband absorption line broadening in $In_{0.53}Ga_{0.47}As$/-$In_{0.52}Al_{0.48}As$ quantum wells: a pseudopotential calculation.—73-07620

Intersubband absorption of ir radiation in stressed quantum-well $In_xGa_{1-x}As$-GaAs structures.—73-04376

Intervalley scattering in indirect gap $Al_{0.48}Ga_{0.52}As$ alloy.—73-04377

Investigation and optimization of InGaAs/InP heterointerfaces grown by chemical beam epitaxy using spectroscopic ellipsometry and photoluminescence.—73-15001

Ion beam etching of GaAs and GaAs/AlGaAs heterostructure probed in real time by spectroscopic ellipsometry.—73-01222

Ion beam oxidation of GaAs: the role of ion energy.—73-01223

Ion-assisted molecular beam epitaxy of GaAs on Si(100).—73-11286

Ir photoconductivity and luminescence of quantum wells in multilayer GaAs/AlGaAs heterostructures.—73-11287

Isothermal and thermally stimulated relaxation of the current and capacitance in a weakly asymmetric *p-n* junction with an inhomogeneous doping profile in the *n*- and *p*-type regions.—73-11288

$L_6$-$X_6$ intervalley scattering time and deformation potential for $Al_{0.6}Ga_{0.4}As$ as determined by fs time-resolved ir absorption spectroscopy.—73-11289

Laser-assisted nitridation of GaAs: mechanisms.—73-05892

Laser-induced deposition of tungsten on GaAs from $WF_6$.—73-11291

Lateral *npn* junction and semiinsulating GaAs current confinement structure for index-guided InGaAs/AlGaAs lasers by MBE.—73-15010

Lateral *p-n* junctions between quasi-two-dimensional electron and hole systems at corrugated GaAs/AlGaAs interfaces.—73-07634

Lateral and vertical isolation by arsenic implantation into MOCVD-grown GaAs layers.—73-15011

Lateral straggle of Si and Be focused ion beam implanted in GaAs.—73-11292

Lateral transport in GaAs-(Al,Ga)As superlattices investigated by transient grating measurements.—73-01229

Lattice location and photoluminescence of Er in GaAs and $Al_{0.5}Ga_{0.5}As$.—73-04380

Lattice tilt and dislocations in compositionally step-graded buffer layers for mismatched InGaAs/GaAs heterointerfaces.—73-07635

Localized deposition of GaAs/GaInP heterostructures using LP-MOVPE.—73-15013

Long intrinsic radiative lifetimes of excitons in quantum wires.—73-08901

Long-range effect in GaAs single crystals with different dislocation densities.—73-07639

Long-range effects in semiinsulating semiconductors GaAs and InP irradiated with argon ions.—73-04383

Long-wavelength GaAs/$Al_xGa_{1-x}As$ quantum well infrared photodetectors grown using metallorganic chemical vapor deposition.—73-15014

Low threading dislocation density GaAs on Si(100) with InGaAs/GaAs strained-layer superlattice grown by migration-enhanced epitaxy.—73-15017

Low-frequency noise and phase noise in MESFET's with LT [low-temperature] GaAs passivation.—73-15018

Low-frequency noise of a 980-nm InGaAs/GaAs strained quantum well [QW] laser.—73-07643

Low-frequency noise of a 980-nm InGaAs/GaAs strained quantum well laser.—73-15019

Low-growth-temperature AlGaAs current blocking layers for use in surface normal optoelectronic devices.—73-11295

Low-pressure and low-temperature gallium arsenide homoepitaxy employing in situ generated arsine.—73-15021

Low-temperature GaAs growth regimes [observed] by real-time ellipsometry.—73-15022

Low-temperature growth and characterization of ZnSe films grown on GaAs.—73-04387

Low-temperature mobility of a 2-D electron gas and the quality of a heterojunction in InGaAs/InP heterostructures grown by LPE.—73-01233

Low-threshold GaInAsSb/GaAlAsSb double heterostructure lasers grown by LPE.—73-15025

Low-threshold tensile-strained InGaAs-InGaAs quantum well lasers with single-step separate-confinement heterostructures.—73-15026

Low-threshold-strained GaInP quantum well ridge lasers with AlGaAs cladding layers.—73-11301

Luminescence centers induced in *p*-type GaAs:Zn by radiation and heat treatment.—73-15027

Luminescence from gold-passivated GaAs surfaces excited with a scanning tunneling microscope.—73-04389

Luminescence of $Tm^{3+}$ in gallium arsenide grown by metallorganic vapor phase epitaxy.—73-04390

Luminescence study of long-term kinetics of carriers in epitaxial GaAs.—73-15028

Luminescence study of the intra-4*f* emissions from GaAs:(Er+O) and $Al_xGa_{1-x}As$:(Er+O).—73-04394
Magnetic field enhancement of Raman scattering on folded acoustic phonons in GaAs-AlGaAs superlattice.—73-07648
Magnetic structure of $Fe_3GaAs$.—73-15029
Magnetic-field-induced photovoltaic effect in *p*-type GaAs.—73-07652
Magnetic-field-induced saddle points in GaAs/AlAs short period superlattices.—73-07653
Magnetoexcitons in quantum wells in parallel-field configuration.—73-04397
Magnetophotoconductivity studies of $D^0$ and $D^-$ centers in GaAs quantum wells in metallic and insulating states.—73-07655
Magnetoplasmons, protons, and spin-flip excitations in GaAs quantum wires.—73-15034
Magnetotransport properties of two-dimensional channels in pseudomorphic and strain-relaxed $In_{0.17}Ga_{0.83}As$ heterojunctions.—73-07657
Magnetotunneling in the *n*-type GaAs/AlGaAs wide-well double barrier structure under transverse high magntic fields.—73-07658
Magnetron reactive ion etching of GaAs in $SiCl_4$.—73-07659
Magnetron-enhanced etching of GaAs.—73-01237
Magnetron-enhanced reactive ion etching of GaAs and AlGaAs using $CH_4/H_2/Ar$.—73-07660
Mandelstamm-Brillouin light scattered by the surface of (111), (110)GaAs and (111)InSb crystals.—73-01238
Many-electron effects on the structural properties of *sp* impurities in semiconductors.—73-07661
Masking technique for depositing gallium arsenide on silicon.—73-04519
Measurement of polarization characteristics in 1.3-μm InGaAsP/InP ridge-waveguide laser diode.—73-11309
Measurement of radiative and nonradiative recombination rate in InGaAsP-InP LED's.—73-01241
Measurement of reflection high-energy electron diffraction oscillations during molecular beam epitaxial growth of GaAs on a rotating substrate.—73-07663
Measuring properties of point defects by electron microscopy: the Ga vacancy in GaAs.—73-07664
Mechanical characteristics of aluminum thin films on silicon and gallium arsenide.—73-10249
Mechanism for radiation-stimulated changes of the position of the maximum of an "impurity" luminescence band of GaAs and InP.—73-11311
Mechanism of carbon incorporation during GaAs epitaxy.—73-04400
Mechanism of high-speed switching in GaAs structures with deep centers.—73-07665
Mechanisms of optical nonlinearity in waveguide *p-i-n* structures under conditions of electroabsorption of light.—73-15038
Meltback etching and regrowth of GaAs/AlGaAs in liquid phase epitaxy for fabrication of microlens.—73-04401
Mesa surface recombination current in AlGaAs/GaAs heterojunction bipolar transistors with an emitter-base-emitter structure.—73-07668
Metastability and chemical bonding of S-induced defects in GaAs and InP.—73-11314
Metastable phase transition of the alloy $(GaAs)_{1-x}Si_x$ and its electronic properties.—73-04402
Method of improving the mechanical properties of semiconductor materials.—73-01378
MeV energy sulfur implantation in GaAs and InP.—73-04404
Microscopic capacitors and neutral interfaces in III-V/IV/III-V semiconductor heterostructures.—73-07340
Migration-enhanced epitaxial growth of GaAs on Si using $(GaAs)_{1-x}(Si_2)_x$/GaAs strained-layer superlattice buffer layers.—73-11316
Miniband formation at finite electric fields in a graded-gap superlattice.—73-07672
Minority carrier lifetimes in molecular beam epitaxy grown $Al_xGa_{1-x}As$/GaAs double heterostructures [DH's] doped with aluminum.—73-07673
Misfit accommodation and dislocations in heteroepitaxial semiconductor layers: II–VI compounds on GaAs.—73-07674
MOCVD growth and properties of erbium-doped GaAs.—73-04408
Model and principles of formation of the structure of the (Ga,In)As solid solution structure.—73-15042
Model calculations of optical properties for disordered GaAs/AlAs superlattices.—73-04409
Model for the atomic layer epitaxy of GaAs.—73-01246
Modeling and performance characteristics of GaAs quantum well infrared detector structures.—73-01248
Modification of heterojunction band offsets at III-V/IV/III-V interfaces.—73-11320
Modification of the spectrum of shallow states in GaAs by the action of laser radiation pulses.—73-01250
Modulated ellipsometry for characterization of multiple quantum wells [MQW's] and superlattices.—73-15821
Modulation spectra of doped GaAs-$Al_{0.3}Ga_{0.7}As$ quantum-well structures.—73-11321
Molecular beam epitaxial GaAs grown at low temperatures.—73-15044
Molecular beam epitaxial growth and characterization of inverted, pulse-doped AlGaAs/InGaAs/GaAs transistor structures.—73-11322
Molecular beam epitaxial growth and characterization of modulation-doped field effect transistor heterostructures using InAs/GaAs superlattice channels.—73-11323
Molecular beam epitaxial growth condition dependence of reflection high energy electron diffraction dampening and quantum well photoluminescence.—73-11325
Molecular beam epitaxial growth mechanisms of (Al,Ga)As on vicinal GaAs surfaces: self-organization and step bunching.—73-11326
Molecular beam epitaxial growth of boron-doped GaAs films.—73-11328
Molecular beam epitaxial growth of InAs on GaAs(100) [analyzed] by reflection anisotropy spectroscopy.—73-07678
Molecular beam epitaxially grown InP/InGaAsP heterostructure for inversion-channel devices.—73-11331
Molecular beam epitaxy and migration-enhanced epitaxy growth modes of GaAs on pseudomorphic Si films grown on GaAs(100) substrates.—73-07679
Molecular beam epitaxy growth of InAs-AlSb-GaSb interband tunneling diodes.—73-07680
Molecular beam epitaxy growth of semiconductor heterostructure optical converter lasers using the InGaAs/AlGaAs materials system.—73-11333
Molecular beam epitaxy in situ grown Ag/GaAs Schottky diodes.—73-11334
Molecular beam epitaxy on exact and vicinal GaAs(III).—73-11337
Molecular layer epitaxy of GaAs.—73-01251
Momentum-space images of surface dimers on GaAs(100)-(2×4) by high-energy Auger and X-ray photoelectron diffraction.—73-07681
Monolithic AlGaAs-GaAs single quantum-well ridge lasers fabricated with dry-etched facets and ridges.—73-01253
Monolithic gallium arsenide phased array using integrated gold post interconnects.—73-04527
Monolithic InGaAsP-InP laser amplifier gate switch matrix.—73-15046
Monolithic integration of a waveguide InGaAs/InP *pin* photodiode with a locally ion-implanted JFE7 for receiver OEIC applications.—73-15047
Monolithically integrated DWDM receiver.—73-15048
Monte Carlo study of 50-nm-long single and dual-gate MODFET's: suppression of short-channel effects.—73-15049
Monte Carlo study of 50-nm-long single- and dual-gate MODFETs: suppression of short-channel effects.—73-07683
Multiple quantum wells consisting of InAs/GaAs short-period strained-layer superlattice {SPSLS] wells for 1.3–1.55-μm photonic applications.—73-11340
Multiwafer growth of highly uniform InGaP/GaAs by low-pressure MOVPE.—73-15050
Nanosecond four-wave mixing in semiinsulating GaAs.—73-00998
Narrow-band photoionization resonance transition at 0.65 eV in AlGaAs/GaAs heterostructures.—73-15052
Native vacancies in semiinsulating GaAs observed by positron lifetime spectroscopy under photoexcitation.—73-15053
Nature and origin of residual impurities in high-purity GaAs and InP grown by chemical beam epitaxy.—73-11344
Nature of point defects generated in GaAs by pulsed laser radiation.—73-01255
Nature of the long-wavelength shift of the spectrum of coherent radiation emitted from GaInAsSb.—73-07689
Nearly degenerate multiwave mixing in quasi-equilibrium semiconductors.—73-11345
Negative longitudinal magnetoresistance of δ-doped layers in GaAs.—73-01256
New approaches for a solar-pumped GaAs laser.—73-04416
New $As_{Ga}$-related center in GaAs.—73-15054
New selective molecular beam epitaxial growth method for direct formation of GaAs quantum dots.—73-11349
New technique for dry etch damage assessment of semiconductors.—73-11350
Nitridation of GaAs(110) using energetic $N^*$ and $N_2^+$ ion beams.—73-04417
Noise of semiconductor laser arrays.—73-07695
Noise of the 1/*f* type and electrical and photoelectric properties of GaAs bombarded with high-energy ions.—73-04418
Noncompensated GaAs sawtooth doping superlattices: a self-consistent band structure.—73-01258
Nondestructive characterization of III-V alloy multilayer structures using spectroscopic ellipsometry.—73-15058
Nonlinear behavior of the Shubnikov-de Haas oscillations on short-channel $Al_xGa_{1-x}As$/GaAs heterostructures subjected to strong electric fields.—73-11352
Nonlinear dynamics of directly modulated 1.55-μm InGaAsP DFB semiconductor laser.—73-15060
Nonlinear surface acoustic waves in GaAs-AlAs superlattices.—73-11353
Nonmonotonic dependence of 1/*f* noise on the intensity of additional illumination of GaAs.—73-01260
Nonmonotonic isothermal relaxation of the current in an *n-π-p* structure associated with a reversal of the electric field.—73-01261
Nonthermalized distribution of electrons in ps time scale in GaAs.—73-07697
Novel carrier confinement (*p-n-p* junctions) on (111)A GaAs substrates patterned with equilateral triangles.—73-04420
Numerical calculation of transient characteristics of GaAs vertical FET's.—73-15064
Ohmic contact study for quantum effect transistors and heterojunction bipolar transistors with InGaAs contact layers.—73-07699
OMVPE regrowth of $CH_3I$ vapor-etched GaAs.—73-15065
One-eV 1.2-defect photoluminescence [PL] peak in heavily planar-doped *n*-type GaAs grown by molecular beam epitaxy.—73-11356
Operational wavelength range of GaInAs(P)-InP intersectional optical switches using field-induced electrooptic effect in low-dimensional quantum-well structures.—73-01262
Optical amplification in quantum superlattices $GaAs/Al_xGa_{1-x}As$ [x=0.35].—73-15068
Optical analysis of metallorganic vapor phase epitaxy grown ZnS/ZnSe/GaAs(100) heterostructures: carrier diffusion and interface sharpness.—73-07703
Optical and structural properties of MOVPE grown $Ga_xIn_{1-x}As$/InP strained multiple quantum well structures.—73-15069
Optical anisotropy due to exciton polaritons in $Al_{1-x}Ga_xAs$-GaAs quantum wells.—73-04427
Optical characteristics of GaAs/AlGaAs ridge quantum well wires grown by MBE on nonplanar substrates.—73-15071
Optical gain in CdSe epitaxial layers on GaAs.—73-04429
Optical nonlinearities on GaAs-GaAlAs multiple-quantum-well hetero-*nipi* waveguides.—73-01264
Optical properties and fluctuations of composition in $Ga_{0.77}In_{0.23}As_{0.19}Sb_{0.81}$ alloys.—73-04430
Optical second harmonic generation from unbiased single $Ga_{1-x}Al_xAs$ quantum wells with symmetric structures.—73-01266
Optical waveguide formed of compound semiconductor materials and process of fabricating the optical waveguide.—73-01380
Optically detected magnetic resonance excitons and carriers in pseudodirect GaAs/AlGaAs superlattices.—73-15075
Optically pumped submillimeter wave semiconductor lasers.—73-01267
Optimization and characteristics of Al-free strained-layer InGaAs/GaInAsP/GaInP SCH-QW lasers (λ≈980 nm) grown by gas-source MBE.—73-15077
Optimization of molecular beam epitaxy grown *p-i-n* multiple quantum well electroabsorption modulators for the 1.5-μm wavelength region.—73-11364
Optimization of undoped GaAs by low-pressure OMVPE using trimethylgallium.—73-11365
Ordering in InGaAs/InAlAs layers.—73-15079
Orientation dependence of normal incidence [ir] absorption in ellipsoidal-valley quantum wells.—73-11367
Orientation-dependent growth of InGaAs/InP for applications in laser-diode arrays.—73-11368
Origin of photoluminescence from $Er^{3+}$ centers in erbium-doped GaAs and $Al_{0.4}Ga_{0.6}As$ grown by MBE.—73-11369
Origins and elimination of oval defects in GaAs layers grown by molecular beam epitaxy.—73-01268
Oscillations of the tunnel conductance of an *n*-GaAs:Te/Au junction with a Schottky barrier.—73-07707
Oscillatory magnetoabsorption of multilayer quantum well structures.—73-15081
Overlayer-induced valence states, and evidence for charge transfer in Na/GaP(110) and Na/GaAs(110): a comparative photoemission [PE] study.—73-11370
Parameters of the energy band structure of epitaxial films in $In_{1-x}Ga_xAs$/InP heterojunctions.—73-01270
Partial strain release and surface states formed on the sidewall of InGaAs quantum well wires.—73-07709
Passivating oxide and surface contaminants on GaAs(100) [analyzed] temperature-dependent and angle-resolved X-ray photoelectron spectroscopy and time-of-flight secondary ion mass spectrometry.—73-07710
Passivation of carbon acceptors during growth of carbon-doped GaAs, InGaAs, and HBT's by MOCVD.—73-11371
Patterning of GaAs by in situ electron-beam lithography toward nanometer-scale structures.—73-15084
Pb/GaAs(100): band bending, adatom-induced gap states, and surface dipole.—73-11372
Performance of an ultrahigh-vacuum sample transfer system for investigation of molecular beam epitaxy grown semiconductor surfaces.—73-15086
Phonon Raman scattering in GaAs-based quantum dots.—73-15088
Phonon-assisted resonant magnetotunneling in Al/GaAs-GaAs-AlGaAs heterostructures.—73-15089
Phonon-plasmon modes in the Raman light-scattering spectra of epitaxial *n*-type $Al_xGa_{1-x}As$ films[—review].—73-07712
Photocatalytic growth-rate enhancement in MOMBE of GaAs on ZnSe by surface photoabsorption.—73-04435
Photoconductivity transient measurements on III-V semiconducting layers using a microwave technique.—73-04436
Photodetector AlGaAs/GaAs structures formed on Si substrates by combining LPE and MBE methods.—73-15091
Photoelectric method for determination of the optical absorption coefficient and its application to semiinsulating GaAs.—73-01273
Photoelectron phenomena in GaAs layers with a built-in surface quantum heterowell.—73-07718
Photoellipsometry determination of surface Fermi level in GaAs(100).—73-07719
Photoellipsometry: a modulation spectroscopy method applied to *n*-type GaAs.—73-12174
Photoemission study of the annealed Pd/GaAs(110) interface.—73-01275
Photoemission study of the ZnSe/GaAs(100) interface: composition and band offset.—73-01276
Photoinduced formation of surface recombination centers in GaAs.—73-04438
Photoion detection with a wide dynamic range using a quadrupole mass spectrometer for nonresonant multiphoton ionization of sputtered neutrals.—73-15830
Photoluminescence [PL] spectroscopy of near-surface quantum wells: electronic coupling between quantized energy levels and the sample surface.—73-11382
Photoluminescence and FTIR investigation of laser gettering of GaAs.—73-07723
Photoluminescence and Hall characterization of pseudomorphic GaAs/InGaAs/AlGaAs heterostructures grown by molecular beam epitaxy.—73-11383

Photoluminescence and photoluminescence excitation spectroscopy of H-related defects in strained $In_xGa_{1-x}As/GaAs(100)$ quantum wells.—73-07724
Photoluminescence and surface photovoltaic spectra of strained InP on GaAs.—73-01278
Photoluminescence associated with $Au_{Ga}$ centers in GaAs:Au.—73-01279
Photoluminescence from a single GaAs/AlGaAs quantum dot.—73-07725
Photoluminescence from heteroepitaxial (211)B CdTe grown on (211)B GaAs by molecular beam epitaxy.—73-11384
Photoluminescence intensity control by impurity and exciton avalanche breakdown transients in *n*-GaAs.—73-15097
Photoluminescence of a degenerate electron gas in GaAs:Si films grown by the method of MBE.—73-11385
Photoluminescence of heavily doped GaAs with an ordered distribution of impurity complexes.—73-01281
Photoluminescence of superlattices in GaAs δ-doped with C.—73-07728
Photoluminescence spectra and anisotropic energy shift of GaAs quantum wires in high magnetic fields.—73-07730
Photoluminescence study of energy transfer processes in erbium-doped $Al_xGa_{1-x}As$ grown by MBE.—73-04441
Photoluminescence study of symmetric, coupled, double $In_xGa_{1-x}As$-GaAs quantum well structures.—73-04442
Photoreflectance and photoluminescence characterizations of $GaAs/Al_xGa_{1-x}As$ single quantum wells with interface structures.—73-15098
Photoreflectance characterization of GaAs as a function of temperature, carrier concentration [CC], and near-surface electric field.—73-11390
Photoreflection of GaAs.—73-11391
Photosensitivity of Au-GaAs Schottky barriers with a surface microrelief (fundamental optical absorption reaction).—73-01283
Picosecond capture of photoexcited holes by shallow acceptors in *p*-type GaAs.—73-07734
Picosecond dynamics of resonantly excited excitons in GaAs quantum wells.—73-15102
Picosecond investigation of photorefractive and free carrier gratings in GaAs:EL2 and CdTe:V.—73-07735
Picosecond nonlinear optical characterization of GaAs at 1.064 μm.—73-04443
Piezospectroscopy of a $GaAs/Ga_{0.73}Al_{0.27}As$ single quantum well structure: piezoelectric effects.—73-04566
Plasma passivation of gallium arsenide.—73-07737
Plasmon-phonon coupling in GaAs-AlAs superlattices.—73-01285
Polarimetric effect in $GaP_xAs_{1-x}$ surface barrier structures.—73-11396
Polariton luminescence near the surface of GaAs.—73-11397
Polarizability of a donor in a quantum box.—73-04444
Polarization dependence of the interband optical absorption by an InGaAs quantum well in GaAs.—73-11398
Polarizibility of a carrier in GaAs quantum dot.—73-04445
Polaronic effects and donor polarizability in a quantum well.—73-01287
Power evolution of an actively mode-locked AlGaAs semiconductor laser.—73-15108
Praseodymium dioxide doping of $In_{1-x}Ga_xAs_yP_{1-y}$ epilayer grown with liquid phase epitaxy.—73-04447
Precipitation of arsenic in doped GaAs.—73-15109
Pregrowth treatment dependence of surface morphology for GaAs grown on exactly oriented (111)A substrates by molecular beam epitaxy.—73-04448
Pressure-induced resonant Raman scattering in an $In_xGa_{1-x}As/GaAs$ strained-layer superlattice.—73-11403
Problem of the nature of the luminescence band at 1.23–1.25 eV in the spectrum of GaAs:Te crystals.—73-01290
Process characterization and evaluation of hydride VPE-grown $Ga_xIn_{1-x}As$ using a Ga/In alloy source.—73-15117
Process control system for improved run-to-run control of molecular beam epitaxial growth of $GaAs/Al_xGa_{1-x}As$ heterostructures.—73-11404
Processes of recombination of nonequilibrium carriers in epitaxial GaAs films.—73-01291
Processing and reconstruction effects on Al-GaAs(100) barrier heights.—73-04453
Profiles of isotopes in III-V semiconductor compounds formed as a result of bombardment with high-energy α particles.—73-15119
Profiles of the isotopes formed in GaAs by bombarding it with α particles of energies of 12, 16, and 20 MeV.—73-15120
Properties and use of cycled grown OMVPE GaAs:Zn, GaAs:Se, and GaAs:Si layers for high-conductance GaAs tunnel junctions.—73-11405
Pseudomorphic InGaAs high-electron-mobility transistors [HEMT's].—73-15126
Pulse asymmetry in actively mode-locked InGaAsP lasers.—73-01293
Pulse asymmetry in actively mode-locked InGaAsP lasers.—73-07748
Pulsed laser-induced photochemical decomposition of GaAs(110) studied with time-resolved photoelectron spectroscopy using synchrotron radiation.—73-07750
Pure effects of strain in strained-layer multiple quantum well lasers.—73-15128
Quantitative analysis of $In_xGa_{1-x}As$ by Auger electron spectroscopy.—73-07751
Quantitative oxygen measurements in OMVPE $Al_xGa_{1-x}As$ grown by methyl precursors.—73-15129
Quantum and classical relaxation times and properties of a heterojunction in selectively doped $InP/In_{0.53}Ga_{0.47}As$ heterostructures.—73-15130
Quantum dot levels produced by strain modulation of GaAs-AlGaAs quantum wells.—73-07753
Quantum interference effects as a tool to probe the sidewalls of submicrometer-size $n^+$-GaAs channels.—73-07755
Quantum size effects in photoemission from Ag islands on GaAs(110).—73-15131
Quantum well GaAs/AlGaAs shallow-donor far-infrared photoconductors grown by molecular beam epitaxy.—73-11410
Radiative performance of strained-layer lasers.—73-15135
Radiative recombination in modulation-doped GaAs/AlGaAs heterostructures in the presence of an electric field.—73-15136
Raman scattering spectroscopy of ion-implantation-doped GaAs layers.—73-01297
Raman studies of the growth mechanism of ZnSe/GaAs(001) heterostructures.—73-07761
Rapid thermal annealing of magnesium-implanted GaAs-GaAlAs heterostructures experimental and simulated distributions.—73-04462
Reaching consensus and closure on key questions, a history of success, and failure of GaAs surfaces and interfaces at the Proceedings of the Physics and Chemistry of Semiconductor Interfaces.—73-11412
Reactive-ion-etching-induced damage studies and application to self-aligned InP/InGaAs heterojunction bipolar transistor [HBT] technology.—73-11414
Reduction of deep levels in MOCVD-regrown $Al_xGa_{1-x}As$ interfaces by $(NH_4)_2S$ passivation and in situ HCl etching.—73-11416
Reduction of linewidth enhancement factor in InGaAs-InP modulation-doped strained multiple quantum well lasers.—73-15142
Reflectance anisotropy spectroscopy [RAS]: a new method for semiconductor surface chemistry investigation.—73-15842
Reflection high-energy electron diffraction measurements of molecular beam epitaxially grown GaAs and InGaAs on GaAs(111).—73-15143
Regrowth of GaAs at the Au-Ge-Ga/GaAs interface under an As flux.—73-01301
Relationship between near-band-edge absorption and photoluminescence efficiency in semiinsulating GaAs.—73-15144
Relative sensitivity factors for positive atomic and molecular ions sputtered from Si and GaAs.—73-01303
Relaxation of GaAs surface band bending by atomic layer passivation.—73-11417
Relaxation oscillation in an AlGaAs laser.—73-01304
Reliability of GaAs-based semiconductor diode lasers: 0.6–1.1 μm.—73-15146
Remarkable improvement in the temperature characteristics of GaAs lasers using an InGaAlP cladding layer.—73-15147
Reproducible growth and application of AlAs/GaAs double barrier resonant tunneling diodes.—73-11419
Resonant Brillouin scattering from polaritons in ZnSe/GaAs epitaxial layers.—73-15148
Resonant generation of biexcitons in a GaAs quantum well.—73-07771
Resonant magnetoluminescence of high-quality GaAs.—73-07772
Resonant nonlinear optical properties of GaAs-GaAlAs single quantum-well waveguide and an integrated asymmetric Mach-Zehnder interferometer.—73-01305
Resonant nonlinear susceptibility near the GaAs band gap.—73-07773
Resonant one-acoustic-phonon Raman scattering in multiple quantum wells.—73-11421
Review of III-V semiconductor-based metal-insulator-semiconductor structures and devices.—73-15149
Role of microstructure in the electrical properties of GaAs grown at low temperature [LT].—73-15151
Role of the exchange interaction in piezospectroscopic properties of an exciton bound to an Sn acceptor in GaAs.—73-01307
Role of ZnSe films on GaAs using acoustoelectric voltage spectroscopy.—73-07780
RT operation of GaInAs/GaInAsP/InP SCH lasers with quantum-wire size active region.—73-15153
Sb-induced optical transitions of the Sb/GaAs(110) interface.—73-01308
Scaling behavior of delta-doped AlGaAs/InGaAs high electron mobility transistors [HEMT's] with gate lengths down to 60 nm and source-drain gaps down to 230 nm.—73-11429
Scanning tunneling microscope study of GaAs(001) surfaces grown by migration-enhanced epitaxy [MEE].—73-11430
Scanning tunneling microscopy of flat and vicinal molecular beam epitaxy grown GaAs(001)-(2×4) surfaces: the effect of growth rate.—73-11432
Scanning tunneling microscopy of GaInAs/InP multiquantum well (110) surfaces observed under an ultrahigh vacuum.—73-11433
Scanning tunneling microscopy of passivated gallium arsenide under ambient conditions.—73-07783
Scanning tunneling microscopy studies of Ge/GaAs(100) interface formation.—73-11434
Scanning tunneling microscopy study of [LT] low-temperature grown GaAs.—73-17195
Scanning tunneling microscopy study of molecular beam epitaxial growth of GaAs on GaAs(001).—73-11435
Scanning tunneling microscopy study of the ambient oxidation of passivated GaAs(100) surfaces.—73-07784
Scattering of electrons in multibarrier $GaAs/Al_xGa_{1-x}As$ structures.—73-07786
Schottky barrier formation at nonreactive interfaces: Ga/GaAs(100) and Pb/GaAs(100).—73-04472
Schottky barrier formation between GaAs(110) and alkali metals.—73-01309
Schottky barrier height [SBH] control at epitaxial NiAl/GaAs(001) interfaces by means of variable band gap interlayers.—73-04473
Screening of the field in *p-i-n* structures made of GaAs and subjected to a voltage-causing carrier depletion.—73-01310
Second-order Raman scattering of LO phonon-plasmon modes in $GaAs_{1-x}P_x$.—73-15155
Selective exciton formation in thin $GaAs/Al_xGa_{1-x}As$ quantum wells.—73-11439
Selective growth of GaAs and GaAlAs by Cl-assisted OMVPE at atmospheric pressure.—73-15156
Selective photosensitivity formation in graded-gap injection photodiode prepared from electron irradiation compensated $Al_xGa_{1-x}As$.—73-01311
Selective reaction ion etching [SRIE] in $SiCl_4/SiF_4$ plasmas for gate recess in GaAs/AlGaAs modulation-doped field effect transistors.—73-11440
Selective regrowth of III-V epitaxial layers by low-pressure organometallic vapor phase epitaxy [OMVPE] using $CCl_4$.—73-07791
Self-aligned gallium arsenide/aluminum gallium arsenide collector-up heterojunction bipolar transistors capable of microwave applications and method.—73-04532
Self-consistent calculations of carrier distribution and energy bands in InGaAs/InP *p-i-n* diodes.—73-04475
Self-consistent tight-binding calculations of band offsets in $GaAs/Al_xGa_{1-x}As$-(110) and $GaSb/Al_xGa_{1-x}Sb$-(110) heterojunctions. Theoretical evidence for a new common-anion rule.—73-07792
Semiconductor device.—73-01384
Serpentine superlattice quantum-wire arrays of (Al,Ga)As grown on vicinal GaAs substrates.—73-07795
Si incorporation during molecular beam epitaxy growth of GaAs and preferential attachment of Si atoms at misorientation steps.—73-07796
Sidegating in GaAs MESFET's: role of stationary Gunn domains.—73-07799
Simple reliable processing technique for low-threshold high-power strained InGaAs-AlGaAs GRINSCH SQW laser diodes.—73-15162
Simulated optimum gate and encapsulant properties for a refractory gate GaAs metal-semiconductor field effect transistor during annealing.—73-11446
Simultaneous operation of ten-channel tunable DFB laser arrays using strained InGaAsP multiple quantum wells.—73-15163
Solid-phase decomposition of GaAs as a result of laser bombardment at threshold density.—73-15165
Solution to the wave equation in the numerical simulation of buried heterostructure lasers.—73-15166
Space group symmetry of the conduction band minimum in very short period GaAs/AlAs superlattices.—73-07802
Spectral and electrical characteristics of *n*-GaAs-(*n-p*)-$Al_xGa_{1-x}As$ *p*-$Al_{(0.01)}Ga_{1-x}As$-$p^+$-GaAs heterostructures with ultrathin surface layers.—73-15167
Spectral characteristics of variable-gap structures with a nonlinear composition profile.—73-01316
Spectral dependence of differential gain, mode shift, and linewidth enhancement factor in an InGaAs-GaAs strained-layer single-quantum-well laser operated under high-injection conditions.—73-15168
Spectroscopic transmission ellipsometry studies of intersubband transitions in *n*-$GaAs/Al_{0.3}Ga_{0.7}As$ quantum wells.—73-15173
Spectrum of shallow donor states in $(GaAs)_n(InAs)_m$ superlattices.—73-08201
Spin orientation by optical pumping in strained $In_xGa_{1-x}As/GaAs$ quantum wells.—73-15174
Spin precession in GaAs inversion layers using antilocalization.—73-07805
Spin split cyclotron resonance in a 2-D electron system at very high magnetic fields.—73-07806
Spin-flip-induced hole burning in GaAs quantum wells: determination of exciton Zeeman splitting.—73-07807
Spin-polarized electron tunneling from a ferromagnet into GaAs.—73-07808
Spontaneous emission of highly excited GaAs/(Ga,Al)As quantum wells.—73-01319
Sputtering of GaAs(001) by $Ar^+$ ions with energies of 1–9 keV.—73-04488
Static *I-V* characteristics of resonant tunnel diodes based on GaAs/AlAs heterostructures.—73-11453
Steady-state carrier escape from single quantum wells.—73-15177
Step and kink energetics on GaAs(001).—73-15178
STM investigation of the surface of GaAs passivated in aqueous solution of $Na_2S$.—73-01320
STM study of the Si(001)-(2×1) and GaAs(001)-(2×4) surfaces.—73-15180
Stoichiometry- and bond-structure-dependent decomposition of trimethylgallium on As-rich GaAs(100) surfaces.—73-07812
Strain and the two-dimensional electronic structure of monolayers of Bi/InAs(110) and Bi/GaAs(110).—73-07813
Strain-relaxed InGaAs buffer layers grown by molecular beam epitaxy for 1.3-μm Fabry-Perot optical modulators.—73-11455
Strained epitaxial layers [studied] by Raman techniques.—73-07815
Strained layer [SL] single quantum well [SQW] double heterostructure optoelectronic switching laser.—73-11456
Stress-induced optical activity in the zinc blende type semiconductors.—73-11458
Structural and electrical properties of low-temperature GaInAs.—73-11459
Structural characterization of encapsulated Au/Zn/Au ohmic contacts to *p*-type GaAs.—73-11460
Structure and carrier lifetime in LT [low-temperature] GaAs.—73-15184
Structure of GaAs heteroepitaxial layer grown on GaP(001) by molecular beam epitaxy.—73-01327

Study of harmonic distortion and period doubling in DFB ridge waveguide laser with strong current modulation.—73-01328

Sublattice orientation dilemma: a reflection high-energy electron diffraction and X-ray photoelectron diffraction study of GaAs growth on vicinal Si(001) surfaces.—73-07818

Submilliampere-threshold multi-quantum-well AlGaAs laser without facet coating using single-step MOCVD.—73-01329

Submillimeter EPR evidence for the As antisite defect in GaAs.—73-15188

Subpicosecond carrier response of unannealed low-temperature-grown GaAs vs temperature.—73-15189

Sulfurized passivation of GaAs(100) surfaces.—73-04175

Surface acoustic wave element.—73-11642

Surface and interface ordering on non-(100)-oriented GaAs substrates.—73-07821

Surface atomic structure and bonding of GaAs(110)-$p(1\times1)$-Bi (1 ML).—73-07822

Surface characterization of GaAs after the reactive ion etching of GeMoW ohmic contact in radio-frequency $SF_6$-$O_2$ plasma.—73-15193

Surface chemistry and kinetics of GaAs atomic layer epitaxy [ALE].—73-01333

Surface evolution during molecular beam epitaxy deposition of GaAs.—73-07824

Surface photoabsorption study of the laser-assisted atomic layer epitaxial [ALE] growth process of GaAs.—73-04494

Surface polaritons due to the folded optical phonons in GaAs/AlAs superlattices.—73-01336

Surface processes in digital etching of GaAs.—73-04495

Surface reactions in atomic layer epitaxy of GaAs [studied] using trimethylgallium by reflectance difference spectroscopy and mass spectroscopy.—73-01337

Surface reconstruction, steps, and ordering in semiconductor alloys grown from vapor phase.—73-07825

Surface roughness of strained $In_{0.1}Ga_{0.9}As$ films grown on GaAs substrates by molecular beam epitaxy.—73-03202

Surface science at atmospheric pressure: reconstruction on (001)GaAs in organometallic chemical vapor deposition.—73-11468

Surface stoichiometry and interface formation during molecular beam epitaxy of strained $InAs/Al_xGa_{0.48-x}In_{0.52}As$ heterostructures.—73-11469

Symmetry of the $V_{Ga}Te_{As}$ complex in GaAs and its reorientation at low temperatures.—73-01339

TEM characterization of $In_{1-x}Ga_xSb$ on (001)GaAs heteroepitaxial system.—73-07828

Temperature dependence of Raman scattering by acoustic phonons in a superlattice GaAs/AlGaAs in strong magnetic fields.—73-01343

Temperature dependence of the impedance of a diode with an inhomogeneous base made of an overcompensated semiconductor.—73-01344

Temperature dependence of the low-frequency noise in structurally perfect GaAs and after destructive compression.—73-01345

Temperature dependence of the threshold current density of double-heterostructure GaInAsSb lasers.—73-01346

Temperature drift of modulation characteristics in semiconductor lasers.—73-15200

Temperature effects in GaAs OEMS [optoelectronic modulation spectroscopy] spectra.—73-15201

Temperature formation of structural defects in the interface of GaAs Schottky barrier.—73-11478

Temperature investigation of the gate-drain diode of power GaAs MESFET with low-temperature-grown (Al)GaAs passivation.—73-15202

Temperature- and size-dependent excitonic relaxation process in GaAs/AlGaAs quantum wells.—73-04496

Temperature-dependent chemical and electronic structure of reconstructed GaAs(100) surfaces.—73-07831

Temperature-dependent hydrogenation on near-surface strained quantum wells.—73-11479

Temperature-induced spin reversal in *n*-GaAs.—73-01347

TEOV doping of gallium arsenide.—73-04536

Terahertz emission in single quantum wells after coherent optical excitation of light hole and heavy hole excitons.—73-07832

Testing for nonuniformity of the resistivity in semiinsulating GaAs substrates by the "dark spot" method.—73-07833

Theoretical analysis of self-sustained pulsation phenomena in narrow-stripe semiconductor lasers.—73-15203

Theoretical and experimental studies of the effects of compressive and tensile strain on the performance of InP-InGaAs multi-quantum-well lasers.—73-01348

Theoretical study on three-photon excitation and photoemission on a negative electron affinity (NEA) GaAs photocathode.—73-11480

Theory of scanning tunneling microscopy of the (110) surface of GaAs based on the method of quasi-stationary states in the tight binding method.—73-07834

Theory of the capture of holes by a quantum well in GaAs-type semiconductors.—73-07835

Theory of Zn-enhanced disordering in GaAs/AlAs superlattices.—73-07836

Thermal analysis of GaAs-AlGaAs etched-well surface-emitting double heterostructure lasers with dielectric mirrors.—73-15205

Thermal effects on the growth of $SiO_2$ on GaAs(100) by reduction of native oxides.—73-07838

Thermal oxidation of AlGaAs.—73-01351

Thermal stability of Mo-Al Schottky metallizations on *n*-GaAs.—73-10286

Thermionic reverse current in GaAs surface-barrier structures.—73-01353

Threshold current analysis of compressive strain (0–1.8%) in low-threshold, long-wavelength quantum well lasers.—73-15209

Threshold current density in strained layer $In_xGa_{1-x}As$-GaAs quantum-well heterostructure lasers.—73-01356

Time-of-flight secondary ion mass spectrometry study of $P_2S_5/(NH_4)_2S$-treated and ultraviolet/ozone-treated GaAs.—73-15212

Transformations of the Ge-GaAs system under rapid thermal treatment by electron beam.—73-04500

Transient nonlinear optical response from excitation-induced dephasing in GaAs.—73-15213

Transient photoconductivity in Si-doped $Al_{0.26}Ga_{0.74}As$.—73-07841

Transmission model InGaAs photocathode for night vision system.—73-04537

Transport in strained relaxed $In_{0.15}Al_{0.85}As$/ $In_{0.17}Ga_{0.83}As$ heterojunctions.—73-06180

Transport of quasi-two-dimensional electrons in heterojunction field effect transistors.—73-15216

Transport phenomena in spaced doped GaAs/$Al_xGa_{1-x}As$ superlattices.—73-11487

Transport properties of a two-dimensional electron gas closely separated from an underlying $n^+$ GaAs layer: the fabrication of independent ohmic contacts using molecular beam epitaxial regrowth and in situ focused ion beams.—73-11488

Trapping and recombination processes via deep level $T_3$ in semiinsulating gallium arsenide.—73-04502

Tunable generation of microscopic and mesoscopic step arrays on non-(100)-oriented GaAs: a new route to quantum wire structures by epitaxial growth.—73-11489

Tunneling microscopy of point defects on GaAs(110).—73-11490

Tunneling spectroscopy on compensating surface defects induced by Si doping of molecular beam epitaxially grown GaAs(001).—73-07845

Two 2-D hole gas in a GaInP/GaAs heterojunction.—73-15219

Two-phase liquid phase epitaxy of $In_{0.53}Ga_{0.47}As$ on InP.—73-11492

Two-phonon absorption in GaAs quantum wires.—73-07847

Ultrafast carrier dynamics in III-V semiconductors grown by MBE at very low substrate temperatures.—73-01359

Ultrafast electron tunneling in reverse-biased, high-efficiency quantum-well laser structure.—73-07849

Universal fluctuations and impurity charge exchange in GaAs-based microstructures.—73-04505

Unusually slow temporal evolution of femtosecond four-wave-mixing signals in intrinsic GaAs quantum wells: direct evidence for the dominance of interaction effects.—73-07854

Use of a silicon strip doping source in chemical beam epitaxy.—73-15222

$V_{Ga}Sn_{Ga}$ complex in GaAs [investigated] by the polarization photoluminescence [PL] and piezospectroscopic methods: I, Structure of the complex and its reorientation under low uniaxial pressure.—73-11498

Vacancy at the DX center [observed] in Si- and Sn-doped AlGaAs.—73-11500

Vacancy migration, adatom motion, and atomic bistability on the GaAs(110) surface studied by scanning tunneling microscopy.—73-09427

Vacuum ultraviolet photoelectron spectroscopy study of the interaction of molecular sulfur with the GaAs(100) surface.—73-07856

Valence band offset at the asymmetric GaAs/$In_{0.53}Ga_{0.47}As$ interface [determined] by ultraviolet photoemission spectroscopy.—73-11502

Variable energy positron beam characterization of defects in as-grown and annealed low-temperature-grown GaAs.—73-15224

Very low chirping of InGaAs-InGaAlAs MQW, DFB, BRS lasers under 10 Gbit/s modulation.—73-15225

Via hole process for GaAs monolithic microwave-integrated circuit using two-step dry etching.—73-11506

Visualization of electrical inhomogeneities in semiinsulating GaAs.—73-11507

Wafer bonding for hybrid circuit technology using solid-state reactions.—73-01363

Wavelength and threshold current variation in inhomogeneously pumped InGaAs/AlGaAs single and double quantum-well ridge waveguide lasers.—73-07860

Wavelength-tunable InGaAsP-InP multiple-λ/4-shifted distributed feedback laser.—73-15226

Weak-beam stereomicrography of defects in GaAs/$In_xGa_{1-x}As$ interfaces.—73-15227

Well width dependence of the exciton lifetime in narrow GaAs/GaAlAs quantum wells.—73-15228

Wide-bandwidth low-noise InGaAsP-InAlAs superlattice avalanche photodiode with a flip-chip structure for wavelengths of 1.3 and 1.55 μm.—73-15229

Wigner solid vs incompressible Laughlin liquid: phase diagram derived from time-resolved photoluminescence.—73-08791

Work function, electron affinity, and band bending at decapped GaAs(100) surfaces.—73-07862

"Wrong" bond interactions at inversion domain boundaries in GaAs.—73-07863

X-ray photoelectron and Auger electron spectroscopy study of ultraviolet/ozone oxidized, $P_2S_5/(NH_4)_2S$-treated GaAs(100) surfaces.—73-06184

X-ray photoelectron spectroscopic study of the interactions of $CF^+$ ions with gallium arsenide.—73-07864

X-ray photoemission spectroscopy studies of cesium and oxygen on GaAs(100).—73-07865

X-ray standing wave study of the Sb/GaAs(110) interface structure.—73-07866

XRD and Raman studies of low-temperature-grown GaAs epilayers.—73-15231

Zero-magnetic-field spin splitting in the GaAs conduction band from Raman scattering on modulation-doped quantum wells.—73-07867

**gallium oxide,**

Characterization and crystallite growth of semiconducting high-temperature-stable $Ga_2O_3$ thin films.—73-04265

Electron mobility in single- and polycrystalline $Ga_2O_3$.—73-07493

Phase equilibria in the system $Na_2O$-$B_2O_3$-$Ga_2O_3$ at 600°C.—73-02382

Phase relations in the $In_2O_3$-$Ga_2ZnO_4$-ZnO system at 1350°C.—73-02386

Properties and structure of binary PbO-$GaO_{1.5}$ glasses as the base of nonlinear optical multicomponent glasses.—73-03808

Structural model for PbO-$Ga_2O_3$-$SiO_2$ glasses.—73-00409

**gallium,**

Acoustic emission and memory effects in $TlGaSe_2$ [crystals].—73-16025

Anomalies in the structural and electrophysical properties of the amorphous semiconductor a-GaSb:Ge.—73-11069

Anomalous anisotropy in the absorption coefficient of vacancy-ordered $Ga_2Se_3$.—73-04241

Auger lifetimes in ideal InGaSb/InAs superlattices.—73-11078

Ballistic electron emission spectroscopy of noble metal-GaP(110) interfaces.—73-01082

Ballistic-electron emission microscopy [BEEM] at metal/GaP(110) interfaces: electron transport and Schottky barrier heights.—73-11079

Cesium on GaP(110) surfaces: a confirmation of the metal-induced gap states-plus-defects model.—73-11095

Characterization of Cu(Ga, In)$Se_2$ thin films and heterojunctions grown by close-spaced vapor transport.—73-16668

Characterization of $Ga_{1-x}In_xSb$ thin layers grown on GaAs substrate by infrared reflectivity.—73-07405

Characterization of $Ga_{1-x}In_xSb$ thin layers grown on GaAs substrate by infrared reflectivity.—73-14800

Chemical beam epitaxial growth of InP, InGaP, and InAs heterojunctions using triethylindium and bisphosphinoethane.—73-11107

Comparative study of the crystal structure of synthesized $CuGa_{1-x}In_xTe_2$ compounds.—73-16058

Crystal growth method for gallium-nitride-based compound semiconductor.—73-11516

Defects in electron-irradiated GaInP.—73-09397

Depolarization of vibrational modes in $CdGa_2Se_4$ crystals.—73-01123

Drift leakage current in AlGaInP quantum well lasers.—73-14843

DX-like center in bulk GaSb:S.—73-04285

Effect of $Ga_2O_3$ substitution on Bi-2212 superconductor.—73-01528

Effect of interfacial bond type on the electronic and structural properties of GaSb/InAs superlattices.—73-11158

Effects influencing the distribution profiles of implanted ions in crystalline semiconductor III-V targets after ion implantation.—73-01138

Electrical properties and photoluminescence of epitaxial GaSb:Bi and GaSb:Bi:Sn films formed from Bi solutions.—73-01145

Electrical properties of epitaxial *p-n* GaP structures deposited on Si substrates.—73-11180

Electroluminescence of epitaxial GaP *p-n* structures grown on Si substrates.—73-14877

Electromechanical properties of gallium phosphate at temperatures from –196 to 723°C.—73-02606

Electronic passivation of GaP surfaces using $(NH_4)_2S$ treatment.—73-07496

Epitaxial growth of GaP by remote plasma-enhanced chemical vapor deposition.—73-05790

Evidence for pyroelectricity in single variant spontaneously ordered $GaInP_2$.—73-14895

Features of gallium orthophosphate growth under hydrothermal conditions.—73-16148

Gallium nitride base semiconductor device.—73-01373

Gallium zeolites.—73-02039

Gas source molecular beam epitaxial growth and characterization of 600–660-nm GaInP/AlInP double-heterostructure lasers.—73-14937

Green photoemission of α-$Ga_2S_3$ crystals.—73-01177

Growth and characterization of GaN on *c*-plane (0001)sapphire substrates by plasma-enhanced molecular beam epitaxy.—73-13078

Growth and characterization of GaN on sapphire and silicon.—73-14945

Growth efficiency and distribution coefficient of GaInP-InP epilayers and heterostructures.—73-07549

Growth of $Ga_xIn_{1-x}P/Ga_{0.5}In_{0.5}P$ multiple quantum wires by strain-induced lateral layer ordering process.—73-11233

Heteroepitaxy, polymorphism, and faulting in GaN thin films on silicon and sapphire substrates.—73-13086

High-pressure structural phase transformation in GaN.—73-02282

High-resistivity [low-temperature] LT $In_{0.47}Ga_{0.53}P$ grown by gas source molecular beam epitaxy.—73-14960

High-responsivity ultraviolet gallium nitride detector.—73-11524

Influence of buffer layers on the deposition of high-quality single-crystal GaN over sapphire substrates.—73-02866

Influence of doping with Ga on the properties of $Pb_{1-x}Ge_xTe$ solid solutions.—73-14979

Injection-enhanced transformation of luminescence spectra of green GaP:N light-emitting diodes.—73-14993

Interaction of an electron-hole plasma with optical phonons in GaP.—73-07611

Interactions in the system $SnO_2$-$GaSbO_4$.—73-12608

Interface stoichiometry dependence of the Schottky barrier height of CoGa and GaAs.—73-07615

Intrinsic point defects and microdefects in GaSb single crystals doped by electrically active impurities (Si, Ge, Te).—73-17082

Ir investigation of phonon modes in $(Ga_xIn_{1-x})_2Se_3$ solid solution in the $0.1\leq x\leq 0.4$ concentration range.—73-09414

*I-V* characteristics and switching to a low-resistivity state in PbTe:Ga at low temperatures.—73-01192
K-nonconserving transition in heavily doped LPE-grown *n*-type $In_{0.5}Ga_{0.5}P$.—73-07626
Laser performance of $Cr^{3+}$:$(Gd,Ca)_3$ $(Ga,Mg,Zr)_2Ga_3O_{12}$.—73-08897
Laser-assisted atomic layer epitaxy of GaP in chemical beam epitaxy.—73-04379
Layer-by-layer epitaxial growth of GaN at low temperatures.—73-05893
Light-emitting semiconductor device using gallium nitride group compond with double layer structures for the *n*-layer and/or the *i*-layer.—73-11525
Light-emitting semiconductor device using gallium nitride group compound.—73-11526
Low noise ohmic contacts on *n*- and *p*-type GaSb.—73-07642
Low-noise ohmic contacts on *n*- and *p*-type GaSb.—73-15020
Low-temperature growth of AlGaP and GaP on Si substrates by atomic layer epitaxy.—73-11297
Low-temperature photochromic response of gallium-doped bismuth germanium oxide.—73-02629
Magnetooptical investigation of shallow donors in GaP.—73-15033
Materials for superconducting electronics: in situ growth of $PrGaO_3$ thin films by metallorganic chemical vapor deposition.—73-07338
Measurement of AlP/GaP(100) heterojunction band offsets by X-ray photoemission spectroscopy.—73-11307
Measuring properties of point defects by electron microscopy: the Ga vacancy in GaAs.—73-07664
Metal-insulator transition in a-GaSb:Cu.—73-04135
Method of manufacturing gallium nitride semiconductor light-emitting device.—73-04525
Molecular beam epitaxial growth of high-mobility *n*-GaSb.—73-11329
Nature of changes in the properties of PbTe:Ga due to changes in the degree of doping.—73-07687
Nature of the instability of the luminescence emitted by GaP:N structures.—73-07688
Nonstoichiometry and intrinsic point defects [and microdefects] in GaSb.—73-17089
Optical characterization of AlGaN-GaN-AlGaN quantum wells.—73-16553
Optical constants of laser-deposited $CuGaSe_2$ films near the fundamental absorption edge.—73-11358
Optical properties of $CdGa_2S_{4-x}Se_{4(1-x)}$ solid solutions.—73-11360
Optimum growth temperature determination for GaInSb/InAs strained-layer superlattices.—73-11366
Percolation theory and concentrated phase transition of ε-γ type in $GaS_xSe_{1-x}$ solid solutions.—73-16244
Photoassisted growth of gallium nitride by gas source molecular beam epitaxy.—73-05945
Photochemical growth of GaN and AlN on sapphire(0001) and GaAs(100).—73-13162
Photoemission of Ag-, Cu-, and Ge-doped α-$Ga_2S_3$ crystals.—73-04437
Photoluminescence characterization of AlGaN-GaN pseudomorphic quantum wells and calculation of strain-induced band gap shifts.—73-15095
Photosensitivity of In-*p*-$CuIn_xGa_{1-x}Se_2$ thin-film structures.—73-15100
Plasma and wet chemical etching of $In_{0.5}Ga_{0.5}P$.—73-15104
Polarization-dependent photomagnetic effect in α-$Fe_2O_3$:Eu, Ga crystals.—73-04635
Polarized micro-Raman spectra in $CuGaSe_2$.—73-01286
Polarized piezomodulated reflectance study of spontaneous ordering in $GaInP_2$.—73-07741
Preparation and properties of gallium phosphide doped by rare-earth elements.—73-04450
Preparation of Sb/GaSb(111)-oriented multilayer structures using molecular beam epitaxy and migration-enhanced epitaxy.—73-07745
Properties of InAs/(Ga,In)Sb strained-layer superlattices grown on the (111) orientations.—73-11407
Raman and ir vibrational spectra of $TlGaS_2$.—73-07760
Raman light scattering in a-GaSb.—73-15137
Reflection high-energy electron diffraction studies of the growth of $InAs/Ga_{1-x}In_xSb$ strained-layer superlattices.—73-07767
Remote plasma-enhanced chemical vapor deposition of GaP with in situ generation of phosphine precursors.—73-07769
Role of defects in the passivation of III-V semiconductor surfaces modified by alkali metals: $O_2$/Rb/*p*- and *n*-type GaSb(110).—73-07776
Scanning tunneling microscope tip-induced migration of vacancies on GaP(110).—73-15154
Schottky barrier formation at nonreactive interfaces: Ga/GaAs(100) and Pb/GaAs(100).—73-04472
Schottky contacts on *n*-$Ga_{0.51}In_{0.49}P$ [studied] by low-pressure metallorganic chemical vapor deposition.—73-11437
Single-phase deposition of α-gallium nitride by a laser-induced transport process.—73-06047
Spectral responses in near-infrared of the mixed compounds III-V, ternary and quaternary, based on GaSb.—73-07803
Spectral responses in near-infrared of the mixed compounds III-V, ternary and quaternary, based on GaSb.—73-15169
Spectroscopy of gallium and aluminum orthophosphate single crystals.—73-16310
Stimulated emission [of radiation] in layered InSe and GaSe crystals.—73-15179
Structural characterization of polycrystalline Ga-substituted magnesium ferrites ($MgFe_xGa_{2-x}O_4$) and zinc ferrites $Zn(Fe_xGa_{2-x}O_4)$.—73-07977
Structure and superconducting properties of Ga-substituted $YBa_2Cu_3O_{7-\delta}$ and $YBaSrCu_3O_{7-\delta}$ systems.—73-08213
Structure of an Mn impurity center in GaSb.—73-07817
Superposed multiquantum barriers for InGaAlP heterojunctions.—73-01332
Surface morphology and quality of strained InGaAs grown by molecular beam epitaxy on GaAs.—73-11466
Surface photovoltage effects in photoemission from metal/GaP(110) interfaces: temperature-dependent Fermi level movement.—73-01335
Surface tension of gallium garnet melts.—73-03033
Synthesis and characterization of gallosilicates and galloaluminosilicates isomorphous to zeolite beta.—73-06077
Synthesis of a new compound $NaGaTi_5O_{12}$.—73-06086
Synthesis of single crystals and crystal structure of gallosilicate zeolites: I, Gallosilicate with ANA [analcime]: $NaGaSi_2O_6{\cdot}H_2O$ framework—temperature structure studies.—73-02499
Synthesis of single crystals and crystal structure of gallosilicate zeolites: II, Gallosilicate with NAT [natrolite]: $Na_2Ga_2Si_3O_{10}{\cdot}2H_2O$—synthesis and X-ray diffraction study.—73-02500
Synthetic $GdGaTi_2O_7$—new polymorphic modification of polymignyte.—73-02509
Temperature dependence of near-ir photoluminescence in $Ga_{0.5}In_{0.5}P$ epilayer grown on GaAs substrate by metallorganic chemical vapor deposition (MOCVD) method.—73-11476
Tetrahedral site ordering in synthetic gallium albite: a $^{29}Si$ MAS NMR study.—73-02519
Theory of photovoltaic effects in *n*-type GaP.—73-15204
Thermal conductivity, specific heat, elastic constants, and thermal expansion of doped gadolinium-gallium garnets.—73-16622
Thermodynamics of surface-induced ordering in the $Ga_{1-x}In_xP$ alloy.—73-08782
Tracer diffusion and defect structure in Ga-doped CoO.—73-13370
Transparent and conductive GaN thin films prepared by an electron cyclotron resonance plasma metallorganic chemical vapor deposition method.—73-09380
X-ray photoelectron spectroscopy investigation of the mixed anion GaSb/InAs heterointerface.—73-11510

**gamma rays,**
Effect of γ-ray radiation on $Li_2O$ ceramics.—73-02575

**garnets,**
Analysis of the optical spectra of trivalent holmium in yttrium scandium gallium garnet.—73-12744
Composition microheterogeneity of uvarovite-grossularite garnets.—73-16060
Dynamic magnetic phase diagrams of a magnetic material with strong anisotropy.—73-07932
Effects of rapid recurrent annealing on structure and magnetooptical properties of garnet films.—73-04607
Enhanced magnetocaloric effect in $Gd_3Ga_{5-x}Fe_xO_{12}$.—73-04609
EPR of thermally populated $Er^{3+}$ excited states in garnets.—73-02270
Excitation and diffraction of elastic waves by oscillating domain lattices in magnetic garnet films.—73-04611
FMR [ferromagnetic resonance] doublet in two-layer ferrite-garnet films.—73-11654
Garnet with uvarovite content in chrome diopside decomposition structures.—73-05408
Garnet, industrial.—73-12274
High uniaxial magnetic anisotropy in epitaxial $(Dy,Bi)_3(Fe,Ga)_5O_{12}$ films.—73-01464
Improvement of FMR linewidth in Bi-substituted lutetium iron garnet thin films for the MSW-optical-mode interaction.—73-04615
Influence of annealing on magnetic properties of a Ge-doped garnet film.—73-07940
Infrared fluorescence spectra of $Nd^{3+}$ sites in gadolinium gallium garnet:Nd and gadolinium gallium garnet:Nd,Cr.—73-12603
Jahn-Teller effect in $V^{4+}$-doped $Gd_3Ga_5O_{12}$ garnet.—73-08654
Kinetics and deformation during the reaction of yttrium-aluminum perovskite and alumina to yttrium-aluminum garnet.—73-13413
Laser performance of $Cr^{3+}$:$(Gd,Ca)_3$ $(Ga,Mg,Zr)_2Ga_3O_{12}$.—73-08897
Magnetic and magnetooptical properties of Cu-doped Bi, Al:DyIG films prepared by the pyrolysis method.—73-05591
Magnetic bubble in light wave field.—73-15334
Magnetooptical waveguides of aluminum garnet.—73-01490
Method of manufacturing ferrite crystals.—73-04667
Multisite optical spectra and energy levels of trivalent thulium ions in yttrium scandium gallium garnet.—73-08674
Nano- and picosecond 3-μm Er:YSGG lasers using InAs as passive *Q* switchers and mode lockers.—73-07685
Nature of centers of domain wall fixing in nonstoichiometric ferrite-garnet films.—73-01475
NMR study of magnetic structure of $Tb_xY_{3-x}Fe_5O_{12}$ garnets [x=0.1, 0.26].—73-15351
Optical properties of Bi- and Ga-substituted Tm-Fe garnet films.—73-12850
Oscillation spectrum of asymmetric domain walls in ferrite-garnet films.—73-07969
Performance of a fiber optic magnetic field sensor utilizing a magnetooptical garnet.—73-15355
Polarized luminescence of $Eu^{3+}$ ions in crystals with the garnet structure.—73-02671
Preparation of garnet-type $Gd_3Al_5O_{12}$ powders by an amorphous citrate process.—73-05972
Properties of $(Ho,Bi)_3(Fe,Ga)_5O_{12}$ films near angular momentum compensation point.—73-15363
Quantitative X-ray phase analysis of polycrystalline ferrite-garnet films.—73-16285
Radiative and nonradiative transitions from the $^1T_2$ upper excited state of the $Ni^{2+}$ ion in rare-earth garnet crystals.—73-02679
Remagnetization dynamics of ferrite-garnet films with weak uniaxial anisotropy.—73-01480
Shape of the pulsed remagnetization curve of ferrite-garnet films.—73-01481
Spectral orgins of giant Faraday rotation and ellipticity in Bi-substituted magnetic garnets.—73-04653
Surface tension of gallium garnet melts.—73-03033
Synthesis and physical-chemical investigation of La-M-Ga garnets (M=Sc, In, Lu).—73-16352
Synthesis and stability of silica-substituted hydrogarnet $Ca_3Al_2Si_{3-x}O_{12-4x}(OH)_{4x}$.—73-10176
Temperature dependences of the lattice constants and thermal expansion coefficients of $Sm_3Fe_5O_{12}$ and $Er_3Fe_5O_{12}$ single crystals.—73-04661
Thermal conductivity and phonon mean free path length in calcium-gallium-germanium garnet single crystals [at 5–300 K].—73-16619
Thermal conductivity of gadolinium-scandium-aluminum garnets codoped by chromium.—73-16620
Thermal conductivity, specific heat, elastic constants, and thermal expansion of doped gadolinium-gallium garnets.—73-16622
$Zr^{4+}$ and $Ti^{4+}$ substitution in gallium garnets.—73-12741

**gases,**
1-D rare gases in the pores of mordenite.—73-08931
1-D rare gases in the pores of mordenite.—73-16237
Analysis of gases evolved by AZS refractories and by refractory/glass melt reactions. Techniques and results. Contribution to the bubble-forming mechanism of AZS material.—73-10697
Application of new gas purging systems in ladle metallurgy.—73-10698
Ceramic catalyst supports and catalysts for chemical processes and scrubbing of gas discharges.—73-08504
Ceramic filters for hot gas cleanup.—73-08505
Characteristics of gas-assisted focused ion beam etching.—73-11097
Chemical, phase, and enthalpy balance of changes in the preheated batch for Eutal glass: I, Determination of the mass balance of the escape of gas reaction products.—73-00595
Cleaning gases from polishing crystal glass components.—73-00597
Competitive pricing—gas supplies to the ceramic industry.—73-05104
Contribution of semiconductive materials to gas detection.—73-05031
Destruction of refractories by a high-temperature gas stream.—73-00796
Effects of added $TiO_2$ on the characteristics of $SnO_2$-based thick-film gas sensors.—73-11169
Effects of gas composition in the shaping zone on the thermomechanical properties of glass.—73-00619
Energy-saving technology for scrubbing waste gases from frit furnaces.—73-08333
Gas composition in the annealing zone and glass-working properties.—73-00635
Gas concrete products with lime-containing binder based on solid wastes of soda industry.—73-00096
Gas dynamics of HVOF [high-velocity oxy-fuel] thermal sprays.—73-09146
Gas porosity formation in epitaxial TiN films deposited by reactive magnetron sputtering in mixed $Ar/N_2$ discharges.—73-09455
Gases in glass [investigated] by kinetic mass spectrometry.—73-15801
Influence of various process gases on the magnetron sputtering of $ZrB_{12}$.—73-03603
Keeping workers safe from toxic gas exposure.—73-13627
Miniature gas sensor.—73-04526
Miniature gas sensor.—73-11535
Optical remote sensing for measurement of toxic gases.—73-15740
Photoemission spectromicroscopy: a new insight in the chemistry of $SnO_x$ films for gas sensors.—73-01274
Portable instrumentation for on-site monitoring of toxic gases.—73-05079
Precessing jet [P.J.] gas burner—a low $NO_x$ burner providing process efficiency and product quality improvements.—73-05129
Proposal of gas discrimination method by one sensor.—73-04456
Reactive sputtering using two reactive gases, experiments and computer modeling.—73-09296
Reactivity between Ti and $N_2$-$C_2H_2$ mixed gas on Ti(C,N) film deposition by arclike plasma-enhanced ion plating.—73-06016
Role of initial conductance and gas pressure on the conductance response of single-crystal $SnO_2$ thin films to $H_2$, $O_2$, and CO.—73-07778
Use of waste gas heat for glass batch preheating.—73-03901

**gehlenite,**
Symmetry lowering due to site occupation disorder in vibrational spectra of gehlenite $Ca_2(AlSi)AlO_7$.—73-12709

**gels,**
$^{129}Xe$ NMR studies of the porous structure of silica gels.—73-13465
$^{29}Si$ MAS [magic angle spinning] NMR spectroscopic investigation of alkali-silica [AS] reaction product gels.—73-06967
Application of selective $^{29}Si$ isotopic enrichment to studies of the structure of calcium silicate hydrate (CSH) gels.—73-05358
Characterization of electrodeposited gels on the tungsten heater coil.—73-03565
Characterization of titania gels by $^{17}O$ NMR and electron diffraction.—73-08573

Characterization of zirconia gels by $^{17}O$ nuclear magnetic resonance.—73-12550
Chemistry–crystallization relations in molecular mullite gels.—73-10358
Diffraction study of the sol-gel-derived $SiO_2$ gels.—73-13960
Drying of monolithic silica gels in a porous powder.—73-07121
Effect of lithium salts on the ionic conductivity of lithium silicate gels.—73-10431
Effect of silicic acid gelation operating conditions on the production of silica gels having molecular sieve properties.—73-16740
Effects of diols on surface area and pore radius of alkoxy-derived silica gels.—73-05779
Effects of diols on surface area and pore radius of alkoxy-derived silica gels.—73-14165
Effects of gel aging on the synthesis of NaY zeolite from colloidal silica.—73-13031
Electrical conductivity of dry silica gel under high pressure.—73-10435
EXAFS and XANES study of (Si, Ge) mullite gels and glasses prepared by slow hydrolysis of alkoxides.—73-10374
Extrusion, collection, and drying of ceramic precursor gel to form dried gel particles.—73-01854
Formation of MFI crystalline zeosilites from fluoride-containing silicate gels.—73-12585
Freezing gels.—73-00631
FTIR studies of gel to glass conversion in TEOS-fumed silica-derived gels.—73-03731
Hydroxyl-type specificity of diborane chemisorbed on the surface of silica gel.—73-06926
Hydroxyl-type specificity of diborane chemisorbed on the surface of silica gel.—73-16170
Influence of hydrolysis conditions on crystallization, phase transitions, and sintering of zirconia gels prepared by alkoxide hydrolysis.—73-10554
Interior hydroxyls of the silica gel system as studied by $^{29}Si$ CP-MAS NMR spectroscopy.—73-14016
Intermediate Si-Al spinel phase formation in phase transformation of diphasic mullite gel.—73-08643
Low-temperature sintering of α-alumina-seeded boehmite gels.—73-16854
Microstructure and phase transformation of α-alumina seeded boehmite gel.—73-13425
Microwave condensation and densification of porous silica gel.—73-14429
Models for the composition and structure of calcium silicate hydrate (CSH) gel in hardened tricalcium silicate pastes.—73-10056
Multicomponent glasses from particulate gels.—73-07154
Optical properties of $Ni^{2+}$-doped silica and silicate gel monoliths.—73-10467
Osmotic consolidation of suspensions and gels.—73-16891
Pore structure evolution in silica gel during aging/drying: III, Effects of surface tension.—73-10572
Preparation and densification of autoclave-dried $SiO_2$-$GeO_2$ gels.—73-14467
Preparation and some properties of porous alumina ceramics obtained by the gelatination [by HCl] of ammonium alginate.—73-02937
Preparation of polymer hybrids of the $SiO_2$-PVA or $SiO_2$-PEG system and porous materials made from hybrid gels.—73-03874
Process for rapidly drying a wet, porous gel monolith.—73-01876
Role of cations in the formation of aqueous silica gels.—73-00698
Silica gel and process for making it from polysilicic acid.—73-10664
Sintering of silica gels at a constant rate of heating.—73-16996
Slow dynamics of isotropic-nematic phase transition on silica gels.—73-06969
$SnO_2$ gels [studied] by $Eu^{3+}$ fluorescence spectroscopy.—73-10400
Sol-gel synthesis of amorphous five-component oxide systems using crown ether complexation: ZBLAN gels.—73-14495
Structural modeling of molecular correlation of water-gel interface.—73-14096
Structure reorganization in montmorillonite gels during drying.—73-13453
Surface chemistry of multicomponent silicate gels.—73-10410
Synthesis and structure control of inorganic porous gels by the polymer-incorporated sol-gel method.—73-17024
Synthesis of microporous silica-gel particles in W/O emulsion and an application to high-performance liquid chromatography.—73-00710
Synthesis of $Y_2O_3$-doped $ZrO_2$ gel monoliths by polycondensation of metal alkoxide and their change on heating: II, Crystallization behavior of gel monoliths and synthesis of translucent $Y_2O_3$-doped $ZrO_2$ ceramics.—73-03059
Titania gels: aggregation and gelation kinetics.—73-13326
Transparent silica gel tubes by the sol-gel process.—73-03897

**gems,**
Growth of emerald crystals by the flux evaporation method in $MoO_3$-$B_2O_3$ system.—73-16809

**generators,**
Power station with low environmental pollution.—73-02017

**geochemistry,**
Geological and inorganic materials.—73-08402
Zonation and geochemical patterns of buried calcite cements: Upper Smackover Formation, Clarke County, Mississippi.—73-15917

**geology,**
Geological and inorganic materials.—73-08402
Rheology of solid earth.—73-15913

**geometry,**
Model for predicting the effects of device geometry on the capacitance of field emitter array cathodes.—73-12835
Role of ionicity in the determination of surface atomic geometries: GaP, ZnS, and CuCl(110) surfaces.—73-11424

**germanates,**
Characteristics of the thermal evolution of the ferroelectric soft mode in $Li_2Ge_7O_{15}$ crystals.—73-01393
Critical broadening of EPR lines in $Li_2Ge_7O_{15}$:$Mn^{2+}$ crystals near ferroelectric phase transition.—73-16073
Cross relaxation averaging EPRS spectra in $Pb_5Ge_3O_{11}$:$Gd^{3+}$.—73-15253
Crystal structure of $LaFe_5Ge_3O_{15}$-$LaFe_5[GeO_4][Ge_2O_7]O_4$.—73-02199
Crystal structure of $Sr_3Y_2Ge_3O_{12}$.—73-02213
Crystal structures of spheres, $NaSbGeO_5$, $NaTaGeO_5$, and $LiTaSiO_5$.—73-16098
Crystallizing phases and kinetics of crystal growth in lithium germanate glasses.—73-13955
Determination of the basic composition of microsamples of $Bi_{12}GeO_{20}$ crystals.—73-02235
Devitrification of $Li_2O$-$5GeO_2$ glass.—73-00323
Dielectric properties of $Li_{2-x}Na_xGe_4O_9$ crystals.—73-16445
Domain structure of weak ferroelectric $Li_2Ge_7O_{15}$.—73-01403
Elastic properties and energetics of sodium germanate glasses containing oxides of group II-VI elements of the periodic table.—73-14168
EPR characterization of Co impurities doping $Bi_4Ge_3O_{12}$ single crystals.—73-05394
EPR of $Mn^{2+}$ ions in lithium heptagermanate crystals.—73-02267
Fabrication and optical properties of lead germanate glasses and a new class of optical fibers doped with $Tm^{3+}$.—73-07127
Ferroelectric phase transition in $Li_{2-x}Na_xGe_4O_9$ ($x$=0.5).—73-01413
Ferroelectric-phase-transition-induced pseudo-Stark splitting in spectra of $Li_2Ge_7O_{15}$:$Cr^{3+}$ crystals.—73-15264
Ferroelectricity and phase transitions in stilwellite, $LaBGeO_5$.—73-15265
Fluorine-containing germanate glasses.—73-00343
Hydration of tricalcium germanate.—73-09462
Identification of $Cr^{3+}$ impurities in heavily Cr-doped $Bi_4Ge_3O_{12}$ single crystals.—73-05417
Impedance relaxation of $Pb_3Ge_3O_{11}$ single crystals.—73-05580
Influence of device structure and growth conditions on the tunneling characteristics of $Si/Si_{1-x}Ge_x$ double barrier structures.—73-11270
Internal friction of mixed alkali aluminogermanate glasses—complexity of mixed alkali peak.—73-00358
Macrodefect formation in single crystals of lead germanate, $Pb_5Ge_3O_{11}$, during their layer-by-layer growth from melt.—73-17085
Optical, magnetooptical, and EPR study of chromium impurities in $Bi_4Ge_3O_{12}$ single crystals.—73-16241
Optically induced gratings in Fe- and Mn-doped $Bi_4Ge_3O_{12}$ single crystals.—73-02658
Phase transition in lead germanate in strong electromagnetic field.—73-16264
Preparation of $c$-plane-oriented $Pb_5Ge_3O_{11}$ film by the sol-gel method.—73-05965
Pressure-induced amorphization in crystalline $PbGe_3O_{11}$.—73-05460
Production and study of lead germanate-based glass-ceramics [GC] with oriented surface layers.—73-02981
Properties of barium gallium germanate glasses.—73-14259
Refractive index modification after ion exchange [of] $Na^+$(glass)-$Li^+$(molten salt) in germanate glasses with tantalum and calcium oxides.—73-14078
Sol-gel processing and crystallization of lithium tetragermanate.—73-03020
$Sr^{2+}$ doping effect on the phase transition in $Pb_5Ge_3O_{11}$ single crystals.—73-16599
Stabilized single-domain state and dielectric hysteresis loop [DHL] in $Pb_5Ge_3O_{11}$ crystals.—73-01433
Structural relaxation of bismuth germanate glasses.—73-03762
Structural studies in lead germanate glasses: EXAFS and vibrational spectroscopy.—73-06973
Structure and thermal expansion of $LiGe_2(PO_4)_3$.—73-02694
Structure of the sol-gel-derived sodium germanate glass—comparison with the melt-derived glass.—73-14113
Surface segregation in sodium germanate glass containing cobalt.—73-0[illegible]418
Thermal and elastic properties of $(Li_{1-x}Na_x)_2Ge_7O_{15}$ crystals [$x$=0, 0.08, 0.25].—73-16617

**germania,**
Effect of hydrolysis water on the crystallization of sol-gel-derived $GeO_2$.—73-02787
Effects of synthesis by melting in solar and radiation furnaces on changes in phase composition in the systems $ZrO_2$-$Ge_2O_3$-CaO(MgO).—73-02249
Effects of the substitution of Zn for Cu in the spin-Peierls cuprate $CuGeO_3$: the suppression of the spin-Peierls transition and the occurrence of a new spin-glass state.—73-12578
EXAFS investigation of the coordination state of germanium in $xBi_2O_3$-$(100-x)GeO_2$ glasses.—73-06915
EXAFS study on the coordination state of germanium in PbO-$GeO_2$ glasses—relation between structure and optical nonlinearity.—73-16143
Film thickness effects on the optical and electrical properties of Cu-$GeO_2$ thin cermet films.—73-06790
Formation mechanism of hydrogen-associated defect with an 11.9-mT doublet in electron spin resonance and red luminescence in $9SiO_2$:$GeO_2$ fibers.—73-07027
Heavy metal oxide glass optical fibers for use in laser medical surgery.—73-03929
Incommensurate-commensurate phase transition of $BaZnGeO_4$ studied by electron microscopy and diffraction.—73-12601
Luminescence of a self-trapped exciton in $GeO_2$ crystal.—73-08905
Mass spectrometric study of the thermodynamic properties of melts of the $B_2O_3$-$GeO_2$-$SiO_2$ system at 1373–1453 K.—73-00371
Mass spectrometric study of the thermodynamic properties of melts of the system $B_2O_3$-$GeO_2$-$SiO_2$ at temperatures 1373–1453 K.—73-00372
Nonresonant-type third-order optical nonlinearity of rare-earth-oxide-containing $GeO_2$ glasses.—73-03805
Nonresonant-type third-order optical nonlinearity of rare-earth-oxide-containing $GeO_2$ glasses.—73-10461
Phases in the $Na_2O$-$GeO_2$ system.—73-08698
Preparation and densification of autoclave-dried $SiO_2$-$GeO_2$ gels.—73-14467
Relation between third-order optical nonlinearity and structure of $Na_2O$-$GeO_2$ glasses.—73-06964
Sol-gel process for forming a germania-doped silica glass rod.—73-03969
Structural investigations of binary glasses and solid solutions in the $SiO_2$-$GeO_2$ system by EXAFS spectroscopy.—73-14094
Structural role of $GeO_2$ in sodium germanium phosphate glasses.—73-00411
Thin-film properties of germanium oxide synthesized by pulsed laser sputtering in vacuum and oxygen environments.—73-17058
Ultrasonic investigations of $V_2O_5$-$GeO_2$ glass.—73-07094
Uv blue and green upconversion luminescence of $PbF_2$+$GeO_2$:$Er_2O_3$ pumped with 650 nm.—73-05684

**germanium,**
Anisotropy of the photoconductivity of GeS single crystals.—73-11066
Anomalies in the structural and electrophysical properties of the amorphous semiconductor a-GaSb:Ge.—73-11069
Band-edge exciton luminescence from Si/strained $Si_{1-x}Ge_x$/Si structures.—73-08811
Characteristics of graded-gap bipolar transistors on the basis of semiconductor structure of $Ge_xSi_{1-x}$.—73-01096
Characterization of $Si_{1-x}Ge_x$/Si(100) heterostructures by photoluminescence and admittance spectroscopy.—73-07409
Characterization of undoped multiple quantum well structures.—73-11105
Combined flotation and photometric method of determining germanium in glasses.—73-01891
Control of Ge homojunction band offsets via ultrathin GaAs dipole layers.—73-01110
Crystal structure and morphology of epitaxial layers of germanium sillenite deposited by cathode reactive sputtering.—73-02181
Crystal structure of α-$TlSbOGeO_4$—high-temperature modification of $KTiOPO_4$.—73-12560
Deep-level transient spectroscopy and admittance spectroscopy of $Si_{1-x}Ge_xSi$ grown by gas-source molecular beam epitaxy.—73-11131
Dielectric losses in glasses of the Ag-Ge-Se system.—73-00448
Dielectric properties of Ge-Pb-O thin films obtained by rf sputtering.—73-00948
Dynamic effects of coherent epitaxial strain and surface stability: Ge on Si(100).—73-07456
Effect of rare-earth elements on the entropy of radiation defect ionization in $n$-type Ge.—73-04291
Effect of solid-solution composition on defect formation in $Ge_xSi_{1-x}$/Si heterostructures obtained by MBE.—73-17077
Effect of the matrix on the oxidation of nanostructured Ge granular films.—73-05386
Elastic properties of a-Ge:H/Si and a-Ge:H/$SiO_2$ heterostructures.—73-12783
Electrical characteristics of diodes fabricated in selective $Si/Si_{1-x}Ge_x$ epitaxial layers.—73-14866
Electrical resistivity studies of Ge-Se glasses at high pressures and low temperatures.—73-10437
Fabrication and X-ray photoelectron spectroscopy of granular Ge in Al and $Al_2O_3$ matrices.—73-09127
Fabrication of a lateral $p$-$i$-$n$ photodiode in an $Si/(Si_{0.8}Ge_{0.2}/Si)$ superlattice/Si/sapphire structure.—73-11207
Free-electron laser internal photoemission [IPE] measurements of heterojunction band discontinuities.—73-11215
GaAs/Ge heterojunction grown by metallorganic chemical vapor deposition and its application to high-efficiency photovoltaic devices.—73-14934
Germanium-loaded zeolite Y: preparation and characterization.—73-05410
Glass orthodontic bracket.—73-03922
High-resolution reactive ion etching of SiGe alloys.—73-11246
Impurity states of InGeTe.—73-01196
In situ investigation of temperature- and bias-dependent effects on the oxide growth of Si and Ge in electron cyclotron resonance.—73-05856
In situ transmission electron microscopy measurements of the electrical and structural properties of strained layer GeSi/Si $p$-$n$ junctions.—73-07586
Incorporation of boron into uhv/CVD-grown germanium-silicon epitaxial layers.—73-14977
Influence of annealing on magnetic properties of a Ge-doped garnet film.—73-07940
Influence of doping with Ga on the properties of $Pb_{1-x}Ge_xTe$ solid solutions.—73-14979

Interfacial point defects in heavily implanted silicon germanium alloys.—73-09413
Kinetics of nanosecond electrical "conditioning" of switching devices made of noncrystalline $Ge_xTe_{1-x}$ films.—73-01227
Luminescence from $Si_{1-x}Ge_x$/Si quantum wells grown by Si molecular beam epitaxy.—73-11304
Luminescence studies of confined excitons in pseudomorphic Si/SiGe quantum wells grown by solid-source molecular beam epitaxy [SSMBE].—73-11305
Measurements of critical point energies in the conduction band structure of $Si_{1-x}Ge_x$.—73-08664
Microscopic capacitors and neutral interfaces in III-V/IV/III-V semiconductor heterostructures.—73-07340
Monocrystal dislocationless Si:Ge, grown from the melt with Gd impurity.—73-04411
Ordering in silicon and germanium mullites.—73-03181
Photoluminescence [PL] properties of strained molecular beam epitaxy $Si_{1-x}Ge_x$/Si multiquantum wells [MQW's].—73-11381
Photoluminescence from pseudomorphic $Si_{1-x}Ge_x$ quantum wells grown by molecular beam epitaxy: variation of the band gap with high pressure.—73-07726
Photoluminescence in $Ge_{25}Se_{75-x}Bi_x$ sputtered films.—73-08951
Photoluminescence study of $Si_{1-x}Ge_x$/Si heterostructures grown by molecular beam epitaxy and ultrahigh vacuum chemical vapor deposition.—73-11388
Relaxed $Ge_xSi_{1-x}$ structures for III-V integration with Si and high-mobility two-dimensional electron gases in Si.—73-07768
Scanning tunneling microscopy studies of Ge/GaAs(100) interface formation.—73-11434
Second-order diffraction efficiency in Bragg gratings written within germanosilicate fibers.—73-16592
Semiconductor-metal transition induced by the structural transition in liquid $Ge_{15}Te_{85}$.—73-07794
Si(100) and Ge(100) core-level shifts: a reevaluation.—73-07797
Si-Ge strained layer heterostructures: device possibilities and process limitations.—73-04479
Si/SiGe heterostructures and devices.—73-15161
Space-charge-limited conduction in a-$Ge_{22}Se_{68}M_{10}$ (M=Cd, In, Pb, Te).—73-04485
States of admixed iron atoms in glasses of the system $CdGeO_3$-$CdF_2$-$AlF_3$ according to data from Mossbauer spectroscopy.—73-00403
Status of two-dimensional Si/SiGe heterostructures.—73-07810
Structural analysis of $Ge_xSi_{1-x}$/Si layers by remote plasma-enhanced chemical vapor deposition on Si(100).—73-15181
Structure and magnetic properties of $Ge_xFe_{3-x}O_4$ oxides [x=0, 0.2, 0.4, 0.6, 0.8, 1].—73-15367
Surface morphology of molecular beam epitaxially grown $Si_{1-x}Ge_x$ layers on (100) and (110)Si.—73-09514
Synthesis, physicochemical investigation, and electrophysical properties of solid solutions based on GeTe in the cross section $(CeTe)_{1-x}[(Ag_2Te)_{0.1667}(Bi_2Te_3)_{0.5333-x}]$.—73-16357
Temperature- and composition-dependent structures of $Si_xGe_{1-x}$/Si and $Si_xGe_{1-x}$/Ge superlattices.—73-08772
Tensimetric determination of the limits of the homogeneity region of the compound $Cd_4GeS_6$.—73-03207
Thermal expansion and network constraints in Ge-In-Se glasses.—73-07086
Thermooptic properties of glasses of the system Ge-As-S.—73-00566
Threshold behavior in the nonisothermal properties of Ge-Sb-Se glasses.—73-03770
Transformations of the Ge-GaAs system under rapid thermal treatment by electron beam.—73-04500
Two-photon absorption of ps laser pulses in layered GeS.—73-11493
Very narrow SiGe/Si quantum wells deposited by low-temperature atmospheric pressure chemical vapor deposition.—73-11505
Vitrification and structure of glasses of the $GeSe_2$-$GeBr_4$ system.—73-00424
Vitrification in the system Ge-Se-Cu and investigation of the physicochemical properties of glasses.—73-00425
X-ray absorption fine structure studies of buried Ge-Si interfaces.—73-01364
X-ray spectral investigation of glasses and crystals of the Ge-Se system.—73-16396

**getters/gettering,**
Gettering in Czochralski-grown single-crystal silicon wafer.—73-04345

**glass fibers,**
Accelerated aging process of AR fibers in the cement matrix.—73-13922
Airborne laboratory apparatus draws glass fibers.—73-14315
Amplified spontaneous emission in $Ho^{3+}$-doped ZBLA fibers.—73-06995
BIG fluoride glass optical fibers with improved NA.—73-06998
Characterization of different glass mineral fibers obtained from igneous rocks of the Canary Islands.—73-15898
Characterization of fluoride glasses for single-mode optical fibers with large refractive index difference.—73-07000
Chemical attack on alkali-resistant glass fibers in a hydrating cement matrix: characterization of corrosion products.—73-10421
Chemical treating composition for glass fibers having emulsified epoxy with good stability and the treated glass fibers.—73-00729
Dissolution kinetics of E-glass fiber in different basic solutions.—73-10362
Dye laser-pumped $Pr^{3+}$-doped fiber laser's basic parameter investigation, cw operation, and *Q*-switched operation.—73-14159
Effect of $B_2O_3$ on viscosity and durability of glass wool.—73-14357
Effect of some refractive index modifiers on both numerical aperture and mechanical strength of fluorozirconate fibers.—73-07017
Effects of material properties and crush conditions on the crush energy absorption of fiber composite rods.—73-07018
Efficiency $Er^{3+}$-doped fluorozirconate fiber amplifier.—73-07020
Efficient amplification in the first telecommunications window.—73-07021
Enthalpy relaxation in thin glass fibers.—73-10438
Evaluation of the alkali resistance of glass fibers and durability of glass-reinforced cement.—73-13983
Foreseeing of fracture in CFGRFP composites by the measurement of residual change in electrical resistance.—73-06425
Formation of Si–C bonds at the surface of silica and glass fibers.—73-03844
Glass fibers with fine conducting cores.—73-00636
Glass fibers with improved biological compatibility.—73-14540
Glass-fiber-forming composition, glass fibers obtained from the composition, and substrate for circuit board including the glass fibers as reinforcing material.—73-10632
High-efficiency ytterbium-doped fluoride fiber laser.—73-07034
Highly heat-resistant glass fiber and process for its production.—73-00736
Influence of structural defects on the strength of glass optical fibers.—73-10448
Influence of the chemical composition of glass on heat transfer through glass fiber insulations in relation to their morphology and temperature of use.—73-00504
Method of forming fluoride glass fiber preform.—73-03946
Microanalytical investigation of cement specimens with encased, chlor-tri-fluoroethane coated, continuous E-glass fibers.—73-00140
Microfine glass fibers, manufacture and applications.—73-00663
Microstructural and analytical characterization of some commercial and experimental mineral glass fibers.—73-10457
Mild surface fluorination of glass fibers.—73-03858
Mixing proportion, casting, and deformation behavior of decorating gypsum board.—73-10054
Modest turnaround forecast for fiberglass-reinforced composites.—73-13630
Nonlinear propagation of incoherent light in single-mode semiconductor-doped glass fiber with saturable nonlinearity.—73-15061
OH absorption in the low-loss window of ZBLAN(P) glass fiber.—73-06948
Optical gain in glass fiber doped with rare-earth ions.—73-03806
Oxynitride glass fiber for composite products, and glass fiber-reinforced products.—73-03958
Problem-free batch plant for Finnish fibermaker.—73-14479
Process for the preparation of glass fiber optical waveguides with increased tensile strength.—73-00758
Process for thermal treatment of glass fiber preform.—73-10659
Quality cullet is required for fiberglass, too.—73-03880
Rare-earth-doped glass fiber lasers and amplifiers.—73-03810
Rare-earth-doped high NA fluoride fiber amplifiers.—73-07067
Resonantly enhanced optical second harmonic generator.—73-00583
Self-frequency-doubling glass-fiber laser.—73-07074
Tellurite glass and fiber amplifier.—73-03970
Thermal determinations of mullite crystallization of 65% $Al_2O_3$-35% $SiO_2$ glass fibers.—73-05512
UK installation of continuous feed system for dosing wet glass fiber.—73-15758
XPS investigations of corroded manmade mineral fibers.—73-14128

**glass industry,**
Application of microprocessor to batching, mixing, and conveying system in the glass industry.—73-03820
Are glassmakers consistent or just insistent.—73-10497
Atmosphere protection in the glass industry and its relation to new legislation.—73-06558
Automation goal for MaasGlas [Holland].—73-14326
Automation in glass recycling: a Dutch perspective.—73-14327
Brief overview on glass industry and glass research in Spain.—73-07110
California's environmental challenges to glassmakers.—73-10502
CAQ [computer-aided quality assurance]—a system concept for the glass industry and a part of computer-aided process control systems.—73-01764
Conditions in the glass, ceramics, and porcelain sector from the year 1993 to its privatization.—73-06563
Current and future trends for efficient operator interfaces (or "If only they could talk").—73-01772
Customized process control systems ensure quality at Vitro plants.—73-14346
Dartington's experience with saving energy.—73-14347
Department of Energy's research and development program for the glass manufacturing industry.—73-07115
Distance between operator and process increases—how to solve the problem.—73-01776
Dutch import/export trends.—73-17474
EC [European Community] competition policy and its impact on British industry.—73-09713
Ecology activities of SVUS.—73-15717
Emission limits of air pollution and their legal background for the glass industry in the 18 EC and EFTA countries with reference to the values in Japan and the U.S.—73-03390
Environmental and energy issues in the glass industry.—73-07125
Essential need for good housekeeping.—73-10527
European container glass industry.—73-09714
Four leading factors in the growth of the Asian construction market.—73-17479
Fusion cast refractories for the glass industry.—73-10731
Future of crystal.—73-10538
Future of lead.—73-10539
Gearing up for recycling 2000.—73-14390
Germany counts the cost of recession and reunification.—73-17481
Glass industry in Asia is full-speed ahead in all areas.—73-17482
Glass industry represents an important market for rare earths.—73-12275
Glass science and glass industry in Japan.—73-06570
Glassmaking trends in Czechoslovakia.—73-13625
Great son of a great father—on the occasion of the 100th birthday of Erich Schott.—73-03394
Heavy metals issues dominate SGCD [Society of Glass and Ceramic Decorators] legislative meeting.—73-09718
How glassmaking wastes can be used as raw materials.—73-14406
How much lead leaches from crystal glassware.—73-03735
How noncontact thermometers measure glass temperature.—73-12145
How the industry fared in 1992.—73-09719
How to replace a complex control system with minimum production interruption.—73-07140
Impact of energy codes on the glass industry.—73-07141
Improved container performance through strength enhancement coatings.—73-07142
Indian glass industry review.—73-13626
Industry outlook for 1993.—73-06573
Investing for tomorrow—assistance from the EEO.—73-03398
Legislative challenges facing the EC container sector.—73-17493
Lithia finds new applications in the glass industry.—73-12283
Market prospects for special glasses.—73-09727
Overview of EC glass industry performance.—73-17496
Owens-Corning adjusts to a global economy.—73-13633
Philosophy, principles, and implementation of continuous improvement.—73-09738
PLM on course to cut energy consumption.—73-14460
Polish glass industry heads for privatization.—73-13634
Possibilities of using computer-aided technologies in the glass industry.—73-14463
Present and future economic outlook for European Community (EC) glassmakers.—73-13635
Rational use of energy in the European Community (EC) glass industry.—73-13639
RECLAIM [Regional Clean Air Incentives Market]—California's guarantee for cleaner air.—73-17501
Recycling of filter dust from electrostatic precipitators in the glass industry.—73-10592
Refractory concerns within the glass container industry.—73-07220
Right display in the right place.—73-01829
Selection criteria for straight-line edgers.—73-12061
Simple base inspection.—73-14490
Situation of the EC glass industry.—73-13646
Temperature measurement in the glass industry using radiation thermometers.—73-01832
Total quality.—73-10610
Training and development.—73-10611
Training for the 21st century.—73-10612
UK glass sector update.—73-17511
Video gives the competitive advantage.—73-17513
Wear and wear protection [in the glass industry].—73-01838
William Vernon Harcourt: pioneer glass scientist and founder of the British Association.—73-06598

**glass melts,**
3-D modeling of homogenization in glass melts.—73-00716
Activity of substrates in the catalyzed nucleation of glass-forming melts: I, Theory.—73-07104
Activity of substrates in the catalyzed nucleation of glass-forming melts: II, Experimental evidence.—73-07105
Analysis and modeling of glass melting.—73-14318
Aspects of computer simulation of glass-forming melts.—73-13927
Contribution to basicity of technical glass melts in relation to redox equilibria and gas solubilities.—73-00602
Contribution to the axial annealing of molds.—73-14343
Creeping and temperatures in the forming gob.—73-03829
Degassing behavior of glass specimens from various industrial glass-melting tanks.—73-00607
Degassing behavior of optical glasses.—73-10515
Direct connection between anisotropic optical properties, polarizability, and rheological behavior of single-phase glass melts.—73-07011
Direct cyclic electric heating of glass melt.—73-00612
Dynamic modeling of the heating field development on spatial models.—73-14355
Ecological problems in glass-melting process.—73-14356
Effect of temperature on the corrosion of refractories in glass melts (review).—73-00806
Effect of temperature on the corrosion of refractories in glass melts—review.—73-00807
Electrochemical investigation of multivalent elements in molten silicates at 1273 K.—73-13973
Experimental determination of the effective thermal conductivity of glass by steady-state method.—73-07025
Formation and oxidation of silicon in container glass melts.—73-10535
Future of the glass industry—electric melting.—73-14389
Glass melt homogenization in glass furnace—mathematical and physical model.—73-10542

High-resistant fused cast refractories for glass-melting furnaces: development and optimal application.—73-00819
High-temperature centrifuge method to study ion exchange in glass melts avoiding convective processes.—73-12144
Homogenization of glass melts by bubbling.—73-14405
Importance of the Lorentz force in electrically heated glass melts.—73-12225
Importance of the oxygen fugacity for the reactivity of oxidic glass melts.—73-14407
Influence of water content and basicity on redox ratio—consequences on radiation heat absorption and emission of glass melts during fusion and processing.—73-10556
Innovation in glass melting.—73-14412
Intermediate- and short-range structures of oxide glasses and melts.—73-14017
Kinetic study of refining by antimony.—73-14414
Kinetics of the forming gob.—73-03853
Mathematical modeling of complex shapes of glass tanks.—73-15885
Mathematical simulation in glass melting.—73-00659
Melting different types of glass melts, frits, and glazes.—73-14425
Metallographical and microanalytical investigations to reduce platinum corrosion in glass melts.—73-14427
Model study on degassing of sulfate-refined glass melts.—73-14432
Nonisothermal differential scanning calorimetry technique for studying crystallization in glass-forming melts.—73-14054
Nonsteady-state time lag in binodal phase separation and in crystallization of glass-forming melts.—73-14055
Products of interaction of glass oxide melts with aluminized steels.—73-00259
Reactivity of high-purity $ZrSiO_4$ sintered bodies for alkaline glass melts.—73-00849
Rheology of non-Newtonian glass-forming melts: II, Kinetics of relaxation and retardation.—73-07170
Silicomanganese slag as a glass-melting accelerator.—73-07171
Structural aspects of the rheology of glass-forming melts.—73-14088
Structural relaxation of glass-forming systems.—73-14098
Structure, non-Newtonian flow, and relaxation in glass-forming melts.—73-14506
Successful glass temperature conditioning.—73-00708
Surface tension of glass melts measured by the capillary rise method.—73-14288
Thermal behavior of glass batch on batch heating.—73-03895
Thermodynamics of the $Fe^{2+}$-$Fe^{3+}$ equilibrium in glass melts.—73-14519
Use of experimental design for developing glasses with a comparatively low $ZrO_2$ content which are highly resistant to alkali and which can be formed by a melt-spinning process.—73-03900
Use of numerical flow models in the glass-melting process.—73-14525
Use of optical basicity to estimate the viscosities of glasses and melts.—73-14305
Use of waste products in glass melting.—73-00718

**glass tempering,**
Heat strengthening vs tempering.—73-07136
How and why of chemically strengthened glass.—73-07139
Measurement of stress distribution in locally tempered glass cups.—73-10451

**glass,**
$^{11}B$, $^{29}Si$, and $^{27}Al$ nuclear magnetic resonance studies of $Na_2O$-$Al_2O_3$-$B_2O_3$-$SiO_2$ glasses.—73-10356
$^{19}F$ nuclear magnetic resonance investigation of the glass $[(Ga_2S_3)_{0.25}\cdot(GeS_2)_{0.75}](NaF)_{0.25}$.—73-13986
$^{19}F$ nuclear magnetic resonance study of the structural role of fluorine ions in glasses of the system $Al(PO_3)_3$-$BaF_2$ and $Ba(PO_3)_2$-$CdF_2$.—73-00341
$^{155}Gd$ Mossbauer spectra of $Gd^{3+}$ in borate glasses.—73-13991
$^{29}Si$ MAS NMR of Na-Si-O-N oxynitride glasses.—73-03756
$^{29}Si$ MAS NMR of Na-Si-O-N oxynitride glasses.—73-10399
$^{31}P$ MAS-NMR spectroscopy of calcium phosphate glasses.—73-10391
$^{57}Fe$ Mossbauer effect in sol-gel silicate glasses.—73-10375
0.55 μm and 1.55 μm emissions of $Er^{3+}$-doped glasses.—73-14313
2-D exchange NMR in deuteron glasses.—73-06984
Abrasion wear-resistant coated substrate product.—73-03902
Abrasion-resistant coatings for glass articles.—73-00724
Abrasive grain size and glass surface finish.—73-00584
Absence of difference between $^{11}B$ nuclear spin relaxation and Li ion conductivity relaxation in $(LiCl)_{0.6}$-$(Li_2O)_{0.7}$-$(B_2O_3)_1$ superionic glasses.—73-06882
Absorption and emission spectra of Ag-containing soda-lime-silica glasses.—73-14129
Absorption characteristics of Pr(III) and Tm(III) in germanium-based oxide glass.—73-03773
Absorption of coloring impurities in FK-14 glass.—73-06991
Absorption spectra of coloring impurities in glass from a synthetic batch.—73-06992
Ac conductivity in $Bi_4Sr_3Ca_3Cu_xO_z$ (y=0–5) and $Bi_4Sr_3Ca_{3-x}Li_xCu_4O_z$ (z=0.1–1) semiconducting oxide glasses.—73-07984
Ac field-induced silver injection into soda lime silicate glasses.—73-00931
Action of γ-irradiation on light attenuation in waveguides made of multicomponent glass.—73-14130
Activation barriers for dc conductivity in ionic glasses: classical calculations using the small-cluster approximation.—73-04055
Activation energy of ionic transport in mixed alkali glasses.—73-14677
Adhesion influence on the formation of physicomechanical properties of the glass-composite materials.—73-14131
Adhesion of glass to metals as a production problem.—73-14314
Adhesive strength of glass composite materials in the contact region.—73-06993
Advanced layer systems and coating techniques for large-area glass coatings by means of high-rate sputtering.—73-07106
Advances in basic science of traditional glasses.—73-04898
Algorithm for calculating glass charge compositions.—73-00587
Algorithm for determining instantaneous and residual quenching stresses.—73-00433
Alignment apparatus for a gob delivery system.—73-04954
Alkali content dependence of the ionic conductivity of oxide glasses.—73-10417
Alkali metal, copper phosphate glasses.—73-10620
Alkali zinc pyrophosphate glasses for polymer blends.—73-14317
Alkali-lead-iron phosphate glass and associated method.—73-10621
Alternative model for alkali-borate glass structure.—73-13924
Aluminum alloy wetting by lead glasses with additives preventing lead reduction.—73-00434
Analysis of submicrocrystals of the photochromic phase in glass using a differential scanning calorimeter.—73-13925
Analysis of the formation of glass waste in the electric lamp industry.—73-00589
Ancient Venetian glass: an analytical confirmation of historical sources.—73-13661
Anharmonism of the vibrations of the quasi-lattice and a model of fluctuation holes in glassy solids and melts.—73-00305
Annealing, toughening, strengthening, obscuring, and creating layers on glass.—73-14320
Anomalous behavior of ultrasonic velocity in cesium borate glasses.—73-10418
Anomalous expansion of sodium triborate melt and its effect on glass properties.—73-06996
Anomalous light scattering in the glass transition region.—73-06997
Anticorrosion coating for quartz glass.—73-00590
Antireflection coating on soda-lime glass formed by dipping in water-soluble alkali silicates.—73-14321
Apparatus for applying antilacerative film to glass.—73-04955
Apparatus for producing glass filaments.—73-01844
Apparatus for recycling glass.—73-01845
Apparatus for spraying glass containers.—73-12072
Application of ion-implantation technology for optoelectronics.—73-05694
Application of NMR spectroscopy in the study of glass structures: II.—73-01884
Application of tellurite bonding glasses to magnetic heads.—73-03775
Application of X-ray absorption spectroscopy (XANES) for the investigation of $SiO_2$ glass local structure.—73-13926
Applications of high-speed GSMAC-FEM to glass manufacture.—73-14323
Applications of porous glass as Merrifield-type support.—73-14134
Aqueous oligomer solutions as cutting fluids for glass polishing.—73-07108
Archaeometric investigation of ancient glasses from the Balearic Islands.—73-13662
Architects turn to laminated glass.—73-06557
Architectural glasses produced by surface-treatment processes.—73-03821
Art of successful screen printing.—73-14324
Assessment of the average coordination number concept in multicomponent, isostructural chalcogenide glasses.—73-13928
Athermal laser glass compositions with high thermal loading capacity.—73-14532
Automated mass spectrometer for analysis of gas bubbles in glass.—73-08376
Automated rotating cylinder viscometer for glass.—73-01887
Automatic detection of small inclusions in samples of optical glass.—73-01763
Automobile glasses with heat-shielding surface coating.—73-03822
Automotive design glazing and new glasses.—73-14328
Automotive glass thick film conductor paste.—73-11002
Bacteriostatic and fungistatic glass powders.—73-00435
Barium aluminosilicate glasses.—73-14534
Behavior of α-quartz and pressure-induced $SiO_2$ glass under pressure: a molecular dynamical study.—73-08555
Bending glass sheets.—73-04959
Bioabsorbable chlorophosphate glasses and bioabsorbable glass-polymer blends made therefrom.—73-03903
Bioactive glass interfacial reactions [analyzed] using Fourier transform infrared reflection spectroscopy.—73-06885
Bioactive glasses.—73-03709
Bioactivity of $CaO$-$P_2O_5$-$SiO_2$ glasses.—73-10357
Bioglass-ceramics in medicine.—73-14331
Bismuth- and lead-containing silicate glasses as materials for microchannel multipliers.—73-14137
Bismuth-containing lead-free glass enamels and glazes of low silica content.—73-03672
Black glass pastes for glazing and their production.—73-03904
Black glass-ceramic from rapid pyrolysis in oxygen-containing atmospheres.—73-03905
Body of cerium-doped quartz glass.—73-00726
Bonding glass for assembling a magnetic head, and a magnetic head.—73-03906
Bonding in simple phosphate glass.—73-13930
Borate glasses with the $nd^{10}$ $(n+1)$ $S^2$-shell activators.—73-14138
Brillouin scattering investigation of elastic constants in strained quartz glass.—73-14139
Cadmium-containing fluoride glasses.—73-06886
Calculating the optical properties of coated glasses.—73-10419
Calculation of the activation energy for ionic conduction in glasses.—73-06999
Calculation of the dynamic bending strength of glass measured by impact.—73-00436
Calorimetric and morphological study of the crystallization process in some chalcogenide glasses.—73-13932
Can graphite materials overcome thermal checking.—73-10503
Canonical correlation of waste glass compositions and durability, including pH.—73-08286
Capacitance-voltage characteristics and hydrogen concentration in phosphosilicate glass films: relation to phosphorus concentration and annealing effects.—73-10420
Carbon-containing black glass monoliths.—73-00728
Carbon-containing black glass monoliths.—73-14535
Carbon-containing black glass.—73-03907
Carbon-layer formation at silicon carbide-glass interface.—73-16043
Cd(S, Se, Te)-doped glasses: structure and optical properties.—73-14794
Ceramic Transactions, Volume 29: Advances in Fusion and Processing of Glass.—73-06602
Ceramic Transactions, Volume 30: Nucleation and Crystallization in Liquids and Glasses.—73-17517
Ceramic-fiber-reinforced glasses.—73-14335
Ceramic-glass ic package assembly having multiple conductive layers.—73-11008
Chalcogenide glasses of the system Ag-Cu-As-Se investigated by differential thermal analysis.—73-14140
Change of refractive index upon ion exchange; elasticity and optical properties of alkali silicate glasses containing titanium oxide.—73-14141
Changes in surface structure of sputtered glasses [observed] by AFM [atomic force microscopy] upon water absorption.—73-03711
Changes in surface structure of sputtered glasses [observed] by AFM upon water absorption.—73-13933
Changing role of the glass bottle maker.—73-00592
Characteristics of excitation of X-ray luminescence of $Ce^{3+}$ and $Tb^{3+}$ ions in silicate glass.—73-14143
Characterization of ceramics and glass using proton-induced X-ray emission.—73-01888
Characterization of crystallization in cordierite glasses by means of optical and electron microscopy.—73-13936
Characterization of fluorine-doped silica glasses.—73-06887
Characterization of fluorophosphate optical glasses.—73-00437
Characterization of glass surfaces and coatings using the proton milliprobe.—73-15780
Characterization of intermediate-range order in superionic $AgPO_3$-AgX (X=I, Br, Cl) glasses by neutron diffraction.—73-00938
Characterization of $ZrO_2$-$SiO_2$ glasses prepared with silicium and zirconium alkoxides.—73-13937
Chemical analysis of some stained glass windows in Leon Cathedral.—73-13663
Chemical and physical modifications in ion-implanted glasses.—73-13938
Chemical aspects of the glass transition in mixed alkali and mixed network glasses.—73-13939
Chemical compositions of ancient Central Asian glasses and the results of the restoration of lost schicht recipes.—73-13664
Chemical effects in ion-implanted glass waveguides.—73-03712
Chemical interaction and structural defects in ion-implanted $SiO_2$ glass.—73-13940
Chemical interaction in melts of the glassy systems $(A_2S_3)_{1-x}(P_2S_5)_x$ (A=As, Sb).—73-00307
Chemical polishing of small glass products.—73-14337
Chemical strengthening of some silicate- and borate-based glasses.—73-13941
Chemical, phase, and enthalpy balance of changes in the preheated batch for Eutal glass: I, Determination of the mass balance of the escape of gas reaction products.—73-00595
Chemical, phase, and enthalpy balance of changes in the preheated batch for Eutal glass: II, Determination of phase and enthalpy changes.—73-00596
Chemically induced defects in oxynitride glasses.—73-03714
Chemically treated glass fibers with improved reinforcement properties.—73-03910
Chihuly, the virtuoso of glass.—73-13665
Cleaning gases from polishing crystal glass components.—73-00597
Clusters in the model of glass based on soft three-center bonds in a rigid covalent network.—73-13943
Coated glass and method of manufacturing [the] same.—73-03911
Coated optical fibers and method.—73-03912
Coefficient of thermal expansion of glasses and melts of the Te-I system.—73-14144
Cofire technology: quantifying glass infiltration in the ceramic-metal interfacial region.—73-13382
Colloid size distribution in ion-implanted glass.—73-06890
Color and selected properties of $PbO$-$BiO_{1.5}$-$GaO_{1.5}$ glasses.—73-07002
Color center absorption in binary alkali silicate glasses.—73-14145

Color center formation and destruction in silica glasses with 248- and 242-nm absorption bands under the 248-nm laser irradiation.—73-13944
Colored glasses and method.—73-10624
Coloring glass in processing flows.—73-00598
Combined flotation and photometric method of determining germanium in glasses.—73-01891
Combined thermodynamic and neutron scattering investigation of glasses in the system $PbO-B_2O_3$.—73-13945
Comparative analysis of the state of surfaces of lead silicate glasses and microchannel films.—73-00309
Comparison between the elastic and nonlinear acoustic properties of neodymium and samarium phosphate glasses.—73-03780
Comparison of physical properties of $ZrF_4$- and $HfF_4$-based melts and glasses.—73-07004
Comparison of stress measurement techniques.—73-15781
Comparison of the behavior of container glasses in concentrated aqueous solutions of LiCl, NaCl, KCl, and CsCl.—73-13946
Comparison of U.S. and international glass/metal interactions after five years' burial in salt.—73-08288
Complex heat capacity of borate glasses.—73-14146
Complex investigation of crystallization of glasses in the system $BaO-Al_2O_3-SiO_2$.—73-13947
Component evaporation from lead-bearing glasses.—73-00310
Composite article and method.—73-03915
Composite materials consisting of $Li_2O-SiO_2$ [LS] crystals and $Na_2O-CaO-SiO_2$ [NCS] glass.—73-00311
Composition dependence of sheet glass properties (review).—73-00438
Composition effects on microstructure in heat-treated Fernald waste glasses.—73-09706
Composition of a protective atmosphere on water-resistant surfaces of silicate glass.—73-00312
Composition optimization for thermally polished sheet glass.—73-00601
Compositional and temperature effects on five-coordinated silicon in ambient-pressure silicate glasses.—73-06892
Compositional dependence of crystallization of As-Te glasses.—73-03826
Compositional dependence of upconversion fluorescence of $Er^{3+}$ ions in alkali and alkaline-earth fluorozirconate glasses.—73-14147
Compositional dependence of upconversion luminescence of trivalent erbium ions in fluorozirconate glasses: II, Alkaline-earth fluoride dependence.—73-10423
Compositional effects on the iron redox state in model glasses for nuclear waste immobilization.—73-08289
Computation of the critical speed of heating glass.—73-14338
Computer simulation of glass transition.—73-03717
Computer simulation of the vibrational spectra and properties of fluoride glasses based on $ZrF_4$.—73-07005
Computer-aided tracing of bubbles—glass quality control.—73-14341
Concentration criteria for the focusing distribution of the refractive index in gradient glasses.—73-00439
Conditions for alkali-borosilicate solution synthesis with europium introduction to manufacture hollow glass microspheres.—73-14342
Conditions of fabrication and some properties of zirconium-containing fluorophosphate glasses.—73-00440
Conditions of synthesis and some properties of zirconium-containing fluorophosphate glasses.—73-00441
Confluence and movement of particles upon liquid phase decomposition.—73-13948
Considerations on the optimization of the manufacturing process of super-lightweight glass bottles.—73-03828
Contact fixture for hot glass.—73-15764
Contribution of sodium and potassium oxides to the optical constants and density of silicate glasses.—73-00443
Contribution of sodium and potassium oxides to the optical constants and density of silicate glasses.—73-00444
Contribution to the problem of tensile and bending test method for SiC-fiber-reinforced glass.—73-17256
Control of pore characteristics of porous glass in the $ZrO_2-SiO_2$ system prepared by the sol-gel method.—73-10512
Controlled crystallization of some rectified slag-based glasses.—73-14345
Cooling station in a tempering plant for glass sheets.—73-04968
Coordination state of titanium atoms in titanate glasses.—73-06894
Correcting for nonlinearity in thermal aspects of electrical glass melting.—73-00604
Correlation between radiative transition probabilities of $Nd^{3+}$ and composition in silicate, borate, and phosphate glasses—correction.—73-06895
Correlation between radiative transition probabilities of $Nd^{3+}$ and composition in silicate, borate, and phosphate glasses.—73-00313
Corrosion of refractory materials in molten lead silicate glasses.—73-07202
Corrosion phenomena of medieval stained glasses.—73-14149
Corrosion resistance of ceramic refractories and platinum to lead phosphate glasses.—73-07203
Crack-fiber interaction in SiC fiber-reinforced glass matrix composite.—73-06202
Crack-fiber interaction in SiC fiber-reinforced glass matrix composite.—73-10425
Creep viscosity of glass-matrix composites near the percolation threshold.—73-10426
Cross relaxation for $Tm^{3+}$ ions in indium-based glasses.—73-06896
Cross relaxation of $Tb^{3+}$ ions in $ZnF_2-CdF_2$-based glasses.—73-13950
Crystallization behavior of fluorozirconate glasses.—73-06897
Crystallization behavior of multicomponent nonalkali silicate glasses.—73-03718
Crystallization characteristics of certain lithum manganese aluminosilicate glasses and the effect of adding $TiO_2$ or $ZrO_2$.—73-03719
Crystallization in glasses of the system $Na_2O-K_2O-CaO-Al_2O_3-SiO_2$.—73-06898
Crystallization in simulated glasses from Hanford high-level nuclear waste composition range.—73-08291
Crystallization kinetics of $CaO-MgO-Al_2O_3-SiO_2$ glass system using thermal analysis.—73-00314
Crystallization of Bi-Ba-Cu-O nonconventional glasses.—73-13952
Crystallization of doped chalcogenide glasses.—73-13953
Crystallization of fluoride glasses.—73-00315
Crystallization of glasses of the mixed structural network.—73-13954
Crystallization of grain-boundary phases in SiC ceramics through catalytic deoxygenation.—73-12457
Crystallization of lead titanate $PbTiO_3$ in gel-derived solder glasses.—73-10513
Crystallization of $LiNbO_3$ in tellurite glasses.—73-07114
Crystallization of passivation glass for electronic devices.—73-07291
Crystallization studies of $30Li_2O-70TeO_2$ glass.—73-06901
Crystallizing phases and kinetics of crystal growth in lithium germanate glasses.—73-13955
Crystalloides and polymorphism in glasses.—73-13956
$CuInS_2$ effect on spectral characteristics of borate and tellurite glasses.—73-14150
Cuprous-cupric redox equilibrium in binary alkali silicate glasses.—73-10359
Currents of thermostimulated depolarization and internal friction in sodium silicate glasses.—73-00316
Dc conductivity and hopping mechanism in $Bi_2O_3-B_2O_3$ glasses.—73-10427
Dealkalization of container glass surface.—73-00317
Decay function Kohlrausch exponent for the electrical modulus of mixed alkali glasses.—73-00445
Defects in nonoxide glasses.—73-13957
Degradation of transmission of silica glass on excimer laser irradiation.—73-10429
Densification of gel-derived celsian glass.—73-03830
Densities and structural models resulting from extremely modified cesium and rubidium borate glasses.—73-10430
Dental material in powder form, process for its preparation and use.—73-03916
Dependence of sheet glass properties on its composition—review.—73-00608
Dependence of thermomechanical properties of silicate glass on the ratio of charge to cullet.—73-00609
Designing glass material systems using a database.—73-03389
Determination of activation energies for the crystallization of a cordierite-type glass.—73-03783
Determination of fatigue parameters of sodium calcium silicate glass on measurement of strength by different methods.—73-00446
Determination of lead and copper content in surface layers of electrochemically colored glass.—73-00319
Determination of mercury in glass: a new analytical need in the evaluation of the packaging waste quality.—73-06903
Determination of reduction components in glassmaking raw materials—report of the International Commission on Glass Technical Committee 2, "Chemical Durability and Analysis."—73-07117
Determination of surface silanol group on silicate glasses using static SIMS.—73-00320
Determination of surface silanol on silicate glasses using static SIMS.—73-10361
Determination of the content of hydrogen in neodymium ultraphosphate glass.—73-13959
Determination of the fatigue parameters of soda-lime-silicate glass in measurement of strength by different methods.—73-00447
Determining pigments in glass by XFA.—73-00321
Determining the depth of the fissured layer of the polished surface of quartz glass using the method of ir ellipsometry.—73-07009
Development and characterization of the Defense Waste Processing Facility (DWPF) Environmental Assessment (EA) glass standard reference material (U).—73-08293
Development of a new glass thickness selection procedure.—73-13614
Development of a system of computing refractive index, mean dispersion, and density of silicate optical glasses based on their composition.—73-00322
Development of cell structure due to Benard–Marangoni-type convection in $RuO_2$-glass thick films.—73-04074
Development of lead-free glasses for jewelry manufacture.—73-14349
Development of new glass-based superionic conductors.—73-14690
Development of nonlead compositions.—73-10516
Devices for noncontact temperature control of glass under production and laboratory conditions.—73-14351
Devitrification studies of heavy metal fluoride glasses containing alkali fluoride.—73-07118
Dielectric and mechanical relaxation in liquids and glasses: transition from effective medium to percolation treatments.—73-04075
Dielectric ceramic composition containing $ZnO-B_2O_3-SiO_2$ glass, method of preparing the same, and resonator and filter using the dielectric ceramic composition.—73-11010
Dielectric ceramic composition containing $ZnO-B_2O_3-SiO_2$ glass.—73-04201
Dielectric relaxation in dipole glasses, and thermal relaxation and the glass transition in systems with a maximum relaxation time.—73-07010
Dielectric relaxation in glasses: $x Eu_2O_3 \cdot PbO \cdot 2B_2O_3$.—73-14154
Dielectric relaxation of porous glass.—73-03784
Dielectric relaxation of porous glass.—73-14155
Differences in properties of natural and synthetic silica glass on the basis of impurity levels.—73-14157
Diffuse interface theory of nucleation.—73-06904
Diffusion of silver into glasses of the silver-arsenic-selenium-tellurium system.—73-00324
Dimensionally stable graphite-fiber/glass composite.—73-10517
Direct observation of medium-range order in glasses by means of electron field emission.—73-13961
Directional emissivities of semitransparent media: cases of dihedron, infinite cylinder, and cone.—73-07012
Disclination splitting and crystal-glass transformation under mechanical alloying.—73-14352
Discovery of glass surface through analytical techniques.—73-15790
Discrete bond model (DBM) of sodium silicate glasses derived from XPS, Raman, and NMR measurements.—73-06905
Discreteness of high-strength state of glass.—73-14158
Dispersion behavior of alkali-silicate glasses as a function of short-range structural units.—73-00449
Dissolution of a citric acid–hypersoluble silicophosphate glass of agrochemical importance.—73-10363
Dissolution of a simple glass: IV, Behavior in saturating and saturated systems.—73-10364
Distribution and growth of isolated spherical particles of separated AgCl phase in photochromic glass from the standpoint of Greenwood theory.—73-00326
Distribution of $Na^+$ ions in corrosive layer of silicate glasses.—73-03720
Distribution of relief variations in glass strips produced on molten metal.—73-07120
Distribution of silver concentration in surface layer of Simax glass.—73-06907
Doped sol-gel glasses for obtaining chemical interactions.—73-10625
Doped sol-gel glasses for obtaining chemical interactions.—73-10626
Drilling method of glass bead making.—73-09780
DSC study of the effect of water on the nucleation of $Li_2O-2SiO_2$ glass.—73-13963
Ductile mode diamond grinding of optical glasses using electrolytic techniques.—73-14354
Durability of simulated DWPF [Defense Waste Processing Facility] annealed glasses.—73-06908
Dutch goals for glass recycling.—73-10519
Dynamic fracture process of thermally tempered glass studied by the method of caustics.—73-07014
Dynamic fracture process of thermally tempered glass studied by the method of caustics.—73-14160
Dynamics of strong and fragile glass formers: differences and correlation with low-temperature properties.—73-13964
Early use of special glasses in the German electric lamp industry.—73-13615
Early-stage microstructure development in Bi-Sr-Ca-Cu-O glasses.—73-01525
Effect of *d*-elements on the spectral characteristics of thin films.—73-00450
Effect of an internally conductive coating on the electron emission from glass tips.—73-00951
Effect of CaO addition on crystallization processes of $Li_2O-Al_2O_3-SiO_2-TiO_2$ glasses.—73-03721
Effect of CaO addition on crystallization processes of $Li_2O-Al_2O_3-SiO_2-TiO_2$ glasses.—73-10366
Effect of cerium oxide on radiation resistance of alkali fluorophosphate glasses.—73-14161
Effect of composition of the protective atmosphere on the adhesion properties of the surface of silicate glass.—73-03786
Effect of $Cu^+/Cu^{2+}$ ratio on the thermal stability and crystallization in $Bi_2Sr_2CaCu_2O_x$ glass.—73-01527
Effect of diffusion stresses on the properties of ion-exchanged layers of alkali zirconium silicate glasses.—73-00453
Effect of edge defects on strength of plate glass subject to lateral bending.—73-00454
Effect of external action on the optical loss from fiber light guides made of chalcogenide glass.—73-00455
Effect of $Fe^{3+}$ concentration on its molar absorptivity in silicate glasses.—73-13965
Effect of fluorine on phase separation of $CaO-Al_2O_3-SiO_2$ glass.—73-13966
Effect of gas-flame treatment on the structure and properties of the surface of doped quartz glass.—73-00614
Effect of glass additions on $BaO-TiO_2-WO_3$ microwave ceramics.—73-10936
Effect of glass chemistry on the microstructure and properties of self-reinforced silicon nitride.—73-06209
Effect of heat treatment below the glass nucleation temperature on the crystallization of $TiO_2$-containing $MgO-Al_2O_3-SiO_2$ glasses.—73-03834
Effect of humic acids on the dissolution of nuclear waste glasses.—73-08295
Effect of hydrostatic pressure on exciton absorption spectrum of microcrystals of CuI and CuBr in heterogeneous glass.—73-00456
Effect of iron oxides on the state of copper ions and photochromic properties of glasses.—73-00458
Effect of iron oxides on the state of copper ions and the photochromic properties of glass.—73-00459
Effect of laser treatment on the structure and optical properties of the surface of polished quartz glass.—73-00460
Effect of lightweighting on the impact performance of glass containers: further discussions.—73-10522

Effect of manganese oxide on the properties and structure of lead silicate semiconducting glasses.—73-14853
Effect of matrix glass composition on the oxidation of small-sized CdS crystal doped glasses.—73-11159
Effect of melting atmosphere on properties of a glass in the $CaO$-$P_2O_5$-$Fe_2O_3$ system.—73-03835
Effect of modifiers in bioglass on the glass properties and the formation of apatite.—73-03724
Effect of network modifier on spontaneous emission probabilities of $Er^{3+}$ in oxide glasses.—73-14162
Effect of nitrogen on the diffusion coefficients of sodium and iron in yttrium oxynitride glasses.—73-13967
Effect of PbO on some properties, especially light scattering, of glasses with mixed alkalis.—73-10432
Effect of production parameters on strength and manufacture of plate glass.—73-00615
Effect of rare-earth ions on the thermal stability of $AlF_3$-based glasses.—73-07016
Effect of rubidium and cesium fluorides on the structure and properties of phosphate glasses.—73-00462
Effect of $Sb_2O_3$ addition on water durability of $V_2O_5$-$P_2O_5$ glass.—73-10367
Effect of Se and Ag on the crystallization of fluorozirconate glasses.—73-14360
Effect of shock waves on fracture in tempered glass.—73-00463
Effect of silane treatment on the pore structure of porous glasses.—73-10523
Effect of surface charge on subcritical crack growth [SCG] in glass.—73-03787
Effect of surface treatment and annealing on the surface crystallization of the $MgO$-$Al_2O_3$-$SiO_2$ glass.—73-14361
Effect of the addition of $TiO_2$ and $ZrO_2$ on the crystallization of calcium aluminosilicate glasses.—73-14362
Effect of the batch redox number and melting temperature on the redox equilibria in soda-lime industrial glass.—73-00617
Effect of the composition of a protective atmosphere on the adhesion properties of the surface of silicate glass.—73-07124
Effect of the composition of europium-activated tungsten-alkali tellurite glasses on their physicochemical, optical, and spectroscopic characteristics.—73-00466
Effect of the composition of the matrix of multichrome glass on its properties.—73-00467
Effect of the nature of the cation on the P–O bond in vitreous alkali and alkaline-earth polyphosphates.—73-13968
Effect of the temperature of acidic leaching on volume change in porous glass.—73-13969
Effect of uv irradiation on luminescence of sodium borate glasses activated by indium.—73-00468
Effect of wolfram tailing as new flux on melting of soda-lime-silicate glass.—73-14365
Effect of $Yb^{3+}$ codoping on the upconversion emission intensity in $Er^{3+}$-doped ZBLAN fluoride glasses under 800-nm excitation.—73-14164
Effect on compressive strength of the glass content of blast-furnace slag when used as a cementitious constituent.—73-09928
Effective optical constants of porous glass.—73-00469
Effects of Al/P composition ratio on the crystallization of $MgO$-$CaO$-$Al_2O_3$-$SiO_2$-$P_2O_5$ bioglass-ceramic system—[comment].—73-14366
Effects of Al/P composition ratio on the crystallization of $MgO$-$CaO$-$Al_2O_3$-$SiO_2$-$P_2O_5$ bioglass-ceramic system—[reply to comment].—73-14367
Effects of charge preparation technique and type of boron raw material on the working properties of molten glasses.—73-00618
Effects of edge effects on sheet glass bending strength.—73-00470
Effects of electron radiation and gas isostatic treatment on the crystallization of glasses.—73-14368
Effects of gas atmospheres on resistivity of $V_2O_5$-$SrO$-$Sb_2O_3$ glasses at high temperature.—73-14861
Effects of gas composition in the shaping zone on the thermomechanical properties of glass.—73-00619
Effects of glass additions on $(Zr,Sn)TiO_4$ for microwave applications.—73-14699
Effects of glass reactivity, surface corrosion.—73-14166
Effects of OH group on distribution of refractive index in silica glass.—73-10433
Effects of organic substances in the preparation of porous silica glass by the sol-gel process.—73-14369
Effects of oxide of aluminum and phosphorus on liquation in sodium calcium silicate glasses.—73-13971
Effects of particle size and [1 wt%] additions of $Na_2SO_4$ and $NaNO_3$ on the reactions in soda-lime-silica glass batches.—73-10524
Effects of roller diameter and taper angle on glass cutting.—73-01778
Effects of $SiO_2$ substitution on the structure and properties of low-melting phosphate glass.—73-13972
Effects of temperature and radiation on the results of the nuclear waste glass product consistency leach test.—73-08296
Effects of the leachate pH and the ratio of glass surface area to leachant volume [SA/V] on glass reactions.—73-10368
Efficiency in glass quenching.—73-00620
Elastic constants of bismuth-containing gallate glasses.—73-07022
Elastic moduli of glasses in the $Li_2O$-$Na_2O$-$Nb_2O_5$-$SiO_2$ system.—73-00472
Elastic modulus, refractive index, and its change during ion exchange in melts of salts for alkali phosphate glasses.—73-14167
Elastic properties and energetics of sodium germanate glasses containing oxides of group II-VI elements of the periodic table.—73-14168
Elastic properties of sodium magnesium silica and sodium calcium silica glasses by Brillouin scattering.—73-14169
Electric and dielectric properties of $ZrF_4$-$BaF_2$-$LaF_3$ glass.—73-10434
Electric field distribution and near-surface modification in soda-lime glass submitted to a dc potential.—73-07023
Electrical and thermodynamic properties of Li-$V_2O_5$-$P_2O_5$-$Bi_2O_3$ glasses.—73-14700
Electrical behavior of the interface in lithium phosphate glasses.—73-14701
Electrical conductivities of low-alkali and alkali-free glasses and glass-ceramics.—73-00955
Electrical conductivity of field-assisted ion-exchanged glass with molten $PbCl_2$ salt.—73-14170
Electrical conductivity of glasses of the system $2PbO$-$SiO_2$-$Pb(Hal')_2$-$Pb(Hal'')_2$.—73-00473
Electrical conductivity of glasses of the systems $2PbO$-$SiO_2$-$Pb(Hal')_2$-$Pb(Hal'')_2$.—73-00474
Electrical conductivity of glasses of the systems $2PbO$-$SiO_2$-$PbHal_2$ (Hal=Cl, Br, I).—73-00475
Electrical conductivity of glasses of the systems $2PbO$-$SiO_2$-$PbHal_2$ (Hal=Cl, Br, I).—73-00476
Electrical conductivity of halogen telluride glasses.—73-14171
Electrical conductivity of sodium borate glasses containing fluorine and chlorine.—73-14172
Electrical measurements of the porous glasses after impregnation with different ions.—73-14174
Electrical properties of $Bi_2O_3$-$SrO$-$V_2O_5$ glasses and glass-ceramics.—73-14175
Electrical properties of nitrided phosphate glasses.—73-14176
Electrical properties of $Sb_2O_3$-$SrO$-$V_2O_5$ glasses and crystallized ones.—73-10436
Electrical properties of $V_2O_5$-$ZnO$-$TeO_2$ glasses.—73-14177
Electrical relaxation in sodium-calcium-aluminum phosphate glass.—73-14178
Electrical resistivity as a control parameter for glass manufacturing process: I.—73-03838
Electrical resistivity of oxide film coatings on glass.—73-07316
Electrical resistivity of silica glasses.—73-14179
Electrical resistivity studies of Ge-Se glasses at high pressures and low temperatures.—73-10437
Electrical transport phenomena in $ZrF_4$-$BaF_2$-$LaF_3$-$AlF_3$ glasses.—73-07024
Electrical transport properties in semiconducting tellurite glasses.—73-14873
Electrical, optical, and structural properties of binary semiconducting vanadate glasses containing rare-earth oxide.—73-14874
Electrically conducting $Pb_xO_y$-$SiO_2$ glass films deposited by reactive radio-frequency magnetron sputtering.—73-00959
Electrochemical behavior of molybdenum in molten glass.—73-15872
Electromigration process in glasses for optoelectronic applications.—73-14371
Electron irradiation effects in glasses and other insulators.—73-03725
Electron paramagnetic resonance and optical absorption spectra of $Cu^{2+}$ ions in alkali cadmium borosulfate glasses.—73-10369
Electron paramagnetic resonance of X-irradiated lithium thioborate glasses.—73-03726
Electron spin resonance and Mossbauer studies on crystallization process of $BaFe_{12}O_{19}$ from barium iron borate.—73-03727
Electron spin resonance characterization of nonbridging oxygen-hole centers in alkali silicate glasses.—73-13975
Electronic conductivity in copper- and iron-based phosphate glasses exhibiting clustering and spinodal decomposition.—73-14180
Electronic state of transition metals in phosphosilicate glasses in relation to their structure and applications.—73-13976
Electronic states of $SiO_2$-$M_xO_y$ ($M_xO_y$=$P_2O_5$, $TiO_2$, and $ZrO_2$) glasses.—73-13977
Emission spectra of microcrystalline CdS doped in sol-gel-derived glasses.—73-10370
Employment of existing data sets of technical glasses for the development of new glass compositions using a modified simplex method of sequential optimization.—73-03728
Enamels for glass and toxicity problems caused by heavy metals.—73-10525
Energy-saving properties of sol-gel dip-coated indium tin oxide films on a glass pane.—73-00478
Engineering of glass for optimized optical and physical properties.—73-14373
Englishman's experiences with American glass.—73-13617
Enhanced surface crystallization of ß-barium borate [BBO] on glass due to ultrasonic treatment.—73-03839
Environmental question in the glass industry.—73-03841
EPR and optical absorption spectra of $Cr^{3+}$ ion-doped alkali zinc borosulfate glasses.—73-06911
EPR investigations on manganese-doped glasses made by melting and by sol-gel processes.—73-13978
EPR spectra of alkali-metal silicate glasses subjected to ion exchange and γ-irradiation.—73-00336
EPR spectroscopy on sol-gel glasses.—73-10372
EPR structural investigations of transition metal fluoride glasses (TMFG).—73-06912
EPR, ir, and magnetic susceptibility studies of $xCr_2O_3(1-x)(2B_2O_3$·$Li_2O)$ glasses.—73-06913
Erosion of glass as modeled by indentation theory.—73-10439
ESCA study of the surface layers on bioactive glass after the interaction with simulated body fluid.—73-13980
ESR [electron spin resonance] centers in thioborate and oxyborate glasses.—73-13981
ESR method of studying the glass-formation process in chemically synthesized lead silicate batches.—73-00623
ESR studies of iron-containing lithium, sodium, and potassium silicate glasses before and after irradiation with γ- and X-rays.—73-10373
ESR studies of $Mo^{5+}$ ions in potassium borate and soda phosphate glasses.—73-03729
ESR study of short-range ordering in oxide glasses: the role of next nearest neighbors.—73-13982
Estimate of the temperature dependence of the viscosity of vitreous melts of the system $R_2O$-$SiO_2$ and $RO$-$SiO_2$.—73-14376
$Eu^{3+}$-doped luminescence glasses prepared by a sol-gel process.—73-10528
European pressed glass, 1986 to 1990.—73-06568
Evaluating life reliability of aerial glass by timing termination theory.—73-14181
Evaluation of fracture strength and fracture toughness of glass by flat punch.—73-14182
Evaluation of the coordination state of $Mn^{2+}$ ions in glasses of the system (Na, $K)_2O$-$MnO$-$SiO_2$ according to the absorption spectra in the region 2–5 micrometers.—73-00338
Evaluation of the coordination state of $Mn^{2+}$ ions in glasses of the system (Na, $K)_2O$-$MnO$-$SiO_2$ with the absorption spectra in the 2–5 μm region.—73-00966
Everything you ever wanted to know about glass container defects.—73-10529
Evidence of plastic deformation on slow crack growth of borate glass.—73-06410
Evolution of interfacial microstructure between barium titanate and binary glasses.—73-06218
Evolution of mechanical properties during the alcogel-aerogel-glass process.—73-10440
Evolving world of glass and ceramic decorating.—73-09782
EXAFS and XANES study of (Si, Ge) mullite gels and glasses prepared by slow hydrolysis of alkoxides.—73-10374
EXAFS investigation of the coordination state of germanium in $xBi_2O_3(100-x)GeO_2$ glasses.—73-06915
EXAFS study of ternary $ZrF_4$-$BaF_2$-$NdF_3$ glasses.—73-00339
EXAFS study on the coordination state of germanium in $PbO$-$GeO_2$ glasses—relation between structure and optical nonlinearity.—73-16143
Examination of the surface of sparkling wine bottle cullet by means of ESCA, SEM, and EDS.—73-00340
Excitation energy transfer of $Nd^{3+}$-$Yb^{3+}$-$Er^{3+}$ in several glasses.—73-03730
Experimental measurement of residual stress field around a sharp indentation in glass.—73-05046
Experimental thermodynamics and phase equilibria estimation in Zr fluoride glasses.—73-06916
Extinction coefficient of the cupric ion and the cuprous-cupric equilibrium in soda-lime-silica glasses.—73-13985
Fabrication and characterization of carbon-fiber-reinforced glass composites.—73-03842
Fabrication and characterization of optical waveguides in glass by diffusion of silver films.—73-14184
Fabrication and optical properties of lead germanate glasses and a new class of optical fibers doped with $Tm^{3+}$.—73-07127
Fabrication of silica glass in aqueous solution.—73-14378
Fabrication of transparent tellurite glasses containing potassium niobate crystals by an incorporation method.—73-00625
Failure of glass during intensive pulsed action.—73-00479
Failure of glass insulators in electric connectors.—73-00480
Faraday rotation glass.—73-00431
Fast sol-gel preparation of glasses.—73-03917
Fast strengthening glass lenses.—73-03918
Features of formation of radiation-induced $E'$ centers in silica glasses melted of one-type raw materials by different methods.—73-14185
Features of low-temperature relaxation transition in vitreous boric anhydride.—73-13988
Features of photoluminescence of glasses of the system $(GeS_2)_{100-x}Bi_x$ and $(As_2S_3)_{100-x}Bi_x$.—73-14186
Features of the formation of the near-surface layer of fluorine-containing glasses.—73-00481
Features of the structural state of iron in a glass synthesized in a beam of accelerated electrons.—73-00628
Fiber-reinforced glass composite for protecting polymeric substrates.—73-00731
Fibersizable zinc-phosphate glass compositions.—73-14536
Fibrous glass binders.—73-14537
Filter-based power conditions boost productivity at glass plant.—73-10531
First observation of the increase in atomic mean square displacements upon glass formation: inelastic neutron scattering study of $K_{1-x}(NH_4)_xH_2PO_4$ mixed crystals.—73-00342
Flash method for thermal characterization of glass.—73-15799
Flexible, trouble-free process management.—73-10532
Float polishing principle applied to working optical glass components.—73-07129
Flow and fracture of glass cylinders pressed between parallel plates.—73-14188
Fluorescence line narrowing of $Sm^{3+}$ in ZBLAN fluoride glasses.—73-07026
Fluorescence mechanisms and dynamics of $Tm^{3+}$ singly doped and $Yb^{3+}$, $Tm^{3+}$ doubly doped glasses.—73-06918
Fluorescence of silicate fine-pored glasses activated by fractal clusters of organic-dye molecules.—73-14189
Fluorescence properties of $Eu^{3+}$ ions doped in several oxide glasses.—73-10441
Fluoride glasses with dysprosium and europium dopants: their low-temperature and magnetic field dependence of Rayleigh and Brillouin scattering.—73-03789

Fluorine-containing germanate glasses.—73-00343
Fluorine-containing lanthanum borate glasses colored by oxides of the *d* and *f* elements.—73-07130
Fluoroindate glasses for active and passive fibers.—73-14382
Fluorophosphate glass.—73-00732
Foaming phenomena in sol-gel-derived glasses.—73-10533
Forecasting working life for glass components under persistent fluctuating loads.—73-00483
Forehearth colorant.—73-03920
Formation and characteristics of medium-range order in single-phase glasses and their melts.—73-14384
Formation and chemical durability of Na-Si-O-N and Na-Al-Si-O-N oxynitride glasses.—73-00629
Formation and chemical durability of Na-Si-O-N and Na-Al-Si-O-N oxynitride glasses.—73-10534
Formation and properties of neodymium aluminoborate glasses.—73-00484
Formation and properties of yttrium aluminosilicate glasses.—73-00485
Formation mechanism of superconducting crystals in Bi-Sr-Ca-Cu-O glasses.—73-15479
Formation mechanism of the refractive index profile of glass in low-temperature ion exchange $Li^{+}_{solid} \leftrightarrow K^{+}_{molten}$.—73-14190
Formation of a profile of refractive index of sodium silicate glass upon electrodiffusion treatment in a melt of potassium nitrate.—73-00486
Formation of allophane and beidellite during hydrothermal alteration of volcanic glass below 200°C.—73-10376
Formation of CdS crystals in small-sized CdS-doped glasses prepared by the sol-gel process.—73-00630
Formation of cobalt ferrites in glasses based on potassium aluminoborate systems.—73-00344
Formation of cobalt ferrites in glasses based on potassium aluminoborate systems.—73-00345
Formation of platinum particles during the production of optical glasses.—73-14385
Formation of scattering centers in fluoride glass preforms and fibers.—73-06919
Forming aspherical pieces from optical glass by external coupling with force and temperature fields.—73-07131
Forms of water in perlites and genesis of volcanic glasses.—73-13989
Fractographic analysis of hydrothermally treated silica glass.—73-14191
Fracture and subcritical growth characteristics of indented cracks in soda-lime glass.—73-10442
Fracture toughness of multicomponent phosphate glasses.—73-00487
Frequency dependence of conductivity of glass- and ruthenium-oxide-based resistive composition.—73-14192
Frequency upconversion and its new mechanism in $Tm^{3+}$-doped fluoroaluminate glasses.—73-07029
From local chemical order to long-range site percolation in glasses.—73-13990
FTIR investigations of the crystallization of ir-transmitting glasses: application to calcium gallate glass.—73-10377
FTIR studies of gel to glass conversion in TEOS-fumed silica-derived gels.—73-03731
Functional automotive glass. The formulation of colorants.—73-14386
Functional coatings on glass surfaces by the sol-gel process.—73-14387
Fundamentals of Inorganic Glasses.—73-17527
Further $^{29}Si$ MAS NMR study on binary alkali silicate glasses.—73-10378
Gas composition in the annealing zone and glass-working properties.—73-00635
Gas film levitation: a unique containerless technique for the preparation of fluoride glass rods.—73-07132
Gases in glass [investigated] by kinetic mass spectrometry.—73-15801
Generation of secondary cracks in tempered soda-lime-silica glass.—73-14193
Gigantic lattices and gigantic noncrystalline clusters in glasses.—73-06921
Glass and glass-ceramic materials in the $Y_2O_3$-$Al_2O_3$-$B_2O_3$-PbO system.—73-13992
Glass and optical materials for lasers.—73-00489
Glass article inspection and rejection apparatus.—73-12079
Glass blocks.—73-03846
Glass composite materials [GCM's]—a new form of the radioactive waste's immobilization.—73-15700
Glass composites.—73-14392
Glass composition for glass bubbles with increased compressive strength.—73-10628
Glass container promotion boosts soft drink sales.—73-13624
Glass crystallization of $Zn_{0.5}Cd_{0.5}B_2O_4$-$La(BO_2)_3$-$VF_3$ system.—73-13993
Glass dimensional control using ion exchange.—73-00733
Glass edge quality and strength.—73-00490
Glass electrode.—73-14750
Glass fact database INTERGLAD.—73-09717
Glass flow in a tubing bowl.—73-14393
Glass formation and ion conduction in the CuCl-$Cu_2MoO_4$-$Cu_3PO_4$ system.—73-14194
Glass formation and some properties of the Ge-As-Se-Te glasses and amorphous films in a region with Te contents [of] 45–70 at.%.—73-14195
Glass formation and structure of glasses containing $Fe_2O_3$ and $Gd_2O_3$.—73-13994
Glass formation as the recurrent process.—73-13995
Glass formation in systems based on AgX (X=Cl, Br, or I).—73-00346
Glass formation in systems based on AgX (X=Cl, Br, or I).—73-10541
Glass formation in the system $ZrF_4$-$SnF_2$.—73-13996
Glass formation in the systems: $SiO_2$-$ZrO_2$-CaO-MgO and $SiO_2$-$ZrO_2$-$Al_2O_3$-CaO. Structure and alkali resistance.—73-13997
Glass forming processes in silicate systems under the action of a beam of accelerated electrons.—73-07133
Glass forms for incinerator ash immobilization.—73-13998
Glass information center.—73-17483
Glass microstructure and initial crystallization of $Pb_{0.32}Bi_{1.68}Sr_{1.75}$-$Ca_2Cu_3O_x$.—73-06922
Glass molding process and molding apparatus for the same.—73-03921
Glass networks via semiempirical quantum chemical methods.—73-01901
Glass pane with reflectance reducing coating.—73-14541
Glass panel resistant to coloring when irradiated with electron rays.—73-10630
Glass panes for vehicles.—73-03923
Glass pH electrodes.—73-11017
Glass pH electrodes.—73-11018
Glass phases based on the Se-S-X (X=Cu, Zn) system.—73-00347
Glass polishing using cerium oxide produced via the sol-gel process.—73-14394
Glass powders for hermetic seal of semiconductor devices.—73-00493
Glass pressure-vessel for a cathode ray tube.—73-00734
Glass produced from silica from a geothermic plant.—73-14395
Glass production by gas-phase reaction.—73-10543
Glass refining at reduced pressures.—73-10544
Glass Science, Second Edition.—73-17529
Glass sealants for carbon-carbon composites.—73-00494
Glass sensor study to estimate the corrosive stesses at the stained glass windows of Santa Maria del Mar, Barcelona[, Spain].—73-13669
Glass sheets having painted exterior surfaces.—73-14542
Glass shielding effects of protons in space.—73-14196
Glass size compositions and glass fibers coated therewith.—73-03925
Glass substrate for a semiconductor device and method for making [the] same.—73-11019
Glass surfaces and glass-polymer interfaces [investigated] by atomic force microscopy.—73-15802
Glass surfaces at the nanometer scale [observed] using atomic force microscopy.—73-00348
Glass-bonded ceramic composites.—73-03417
Glass-ferrite coatings on ceramics.—73-00495
Glass-forming ability and crystallization tendency evaluated by DTA method in the multicomponent system.—73-13999
Glasses and pyroceramics based on industrial wastes.—73-07134
Glasses doped by $Cu^{+}$, $Cr^{3+}$, $Ce^{3+}$, $Mn^{2+}$ and their optical properties and potential application for high-intensity radiation.—73-14198
Glasses made of pink borosilicates, their manufacture, and articles made of such glasses.—73-10633
Glasses with monolayer oxide film coatings and their physical properties.—73-14199
Glasses with very high index of refraction and low density.—73-10634
Glassmaking innovation brings rewards for perfume specialist.—73-10547
Glassmaking trends in Czechoslovakia.—73-13625
Glassware forming machine having a pivotally supported mold mechanism which facilitates replacement thereof.—73-04975
Glassware forming machine with cooling system.—73-12080
Glassy media (glass and glass-ceramics) for high-density magnetic recording.—73-15328
Glassy phase in ZAS refractories [studied] with Raman probe.—73-14592
Global outlook for reinforced glass composites.—73-06571
Gob forming device having a single rotating blade with a cooling housing.—73-04977
Grain growth studies of silicon nitride dispersed in an oxynitride glass.—73-00349
Green-colored infrared and ultraviolet radiation absorbing glass and method of producing [the] same.—73-14543
Grinding of glass: interaction of single events.—73-14401
Guaranteed heat transfer coefficients in quenching glass.—73-00496
GW-Nd:glass laser system with pulse transmission mode (PTM) *Q*-switching.—73-10445
Hard material coatings on flat glass and their applications.—73-00637
Hardening furnace for sheets of glass and the like.—73-12250
Hardening process for several phosphate glass-containing cements.—73-03476
Healing of cracks in glass.—73-07033
Heat capacity measurements on $Ge_{20}Se_{80-x}Bi_x$ glasses.—73-14200
Heat diffusion through a glass substrate coated by a thin $^4He$ film.—73-00497
Heat exchange in ribbon glass annealing lehrs.—73-15877
Heat-insulating properties of enclosing structures based on foam glass granulate.—73-00098
Heat-treatable sputter-coated glass systems.—73-10635
Heat-treatable sputter-coated glass.—73-00735
Heating process of glass batch.—73-14402
Heavy metal oxide glass optical fibers for use in laser medical surgery.—73-10636
Heterogeneous crystallization in cordierite glasses.—73-14000
Hierachical hopping in glasses.—73-14201
High refractive index glasses for cinematography.—73-00498
High refractive index glasses.—73-14202
High-dispersion optical glass.—73-14544
High-lithium-conducting glass formation by a new flash explosion method.—73-16815
High-power, subpicosecond, 750–1770-nm tunable pulses from travelling wave parametric generator.—73-00499
High-pressure X-ray diffraction of $SiO_2$ glass.—73-06923
High-temperature coatings for the sheet glass.—73-14404
High-thermal-expansion sealing glass.—73-03933
Highly refractive glass for cinephotooptics.—73-00640
Highly refractive ophthalmic and optical glass.—73-03934
History of optical glass production in Bohemia and Moravia.—73-06572
Holmium in ZBLAN: interplay of lasing, colasing, and excited state absorption.—73-07035
Homogeneous fractals in supercritical glass.—73-03734
Hopping transport in vanadium tellurite glasses containing antimony oxide.—73-07569
Hot isostatic pressing of fluoride glasses.—73-07138
Hot-end handling on high-speed production lines.—73-10549
How to control oil/grease in the effluent from glass container plants.—73-03850
Hybrid whisker-fiber-reinforced glass-matrix composites with improved transverse toughness.—73-10447
Hydrochloric acid corrosion of ZBLAN fluoride glasses.—73-06924
Hydrogen loading of $[(Li_2O)(B_2O_3)]_2WO_3$ glasses through electrolyte/glass and Pd/glass interfaces.—73-03791
Hydrogen reactivity as a structural probe for glasses.—73-06925
Hydrogen reactivity of barium galliosilicate and related glasses.—73-10381
Hydrolysis of borate glass surfaces.—73-07036
Hydrolytic resistance of the surface of soda-lime glass coated with silica layer.—73-14002
Hydrophobic surface formation on glass by ion implantation.—73-03736
Identification of defects in glass.—73-14003
Immediate direct EM examination of process of particle growth in glasses under phase separation.—73-14004
Immobilization of radioactive ash in glass.—73-01747
Immobilization of radioactive wastes in glass.—73-01748
Impact of recycled glass on the usage of primary raw materials.—73-01982
Impact strength of glass coatings on prealuminized steel.—73-00240
Improved fluoride glasses for 1.3-μm optical amplifiers.—73-07037
Improved glass sealing process for electronic device package.—73-14203
Improvements in glass composition control techniques by simultaneous measurement of density and softening point.—73-10552
Improving gold decorating techniques.—73-00642
Improving the quality of the charges of colored phosphate glasses.—73-07143
Improving the system of calculating the refractive index, the mean dispersion, and the density of silicate optical glasses on the basis of their composition.—73-00501
In situ radial crack initiation at hardness indentations in strengthened soda-lime-silica glass.—73-14205
Incorporation of $Gd^{3+}$, $Eu^{3+}$, and $Eu^{2+}$ ions in anorthite and related glasses.—73-14005
Increasing of the glass articles' mechanical shock resistance related to their technological history.—73-14206
Indication and characterization of Fe(II) and Fe(III) species in silicate and aluminosilicate glasses.—73-14408
Induction time analysis of nucleation and crystal growth in di- and metasilicate glass.—73-06927
Inelastic deformation of strip glass in a molten metal.—73-07144
Inelastic light scattering in halide glasses at high temperatures: boson peaks and the degree of disorder.—73-07038
$InF_3$-based fluoride glasses.—73-03737
Influence of Ag on nucleation and crystallization of fluorozirconate glasses.—73-06928
Influence of alternating current parameters on corrosion of heating electrodes in molten glass.—73-15881
Influence of alumina content on homogeneous nucleation in 57.5$SiO_2$-21.25$Na_2O$-21.25CaO (mol%) glass.—73-14006
Influence of batch moisture and atmosphere on the melting behavior of $As_2O_3$- and $Sb_2O_3$-containing glasses.—73-10553
Influence of chlorine-fluorine substitution on the electrical properties of some fluoride glasses.—73-07039
Influence of chromium on the oxidation state of an industrially melted amber glass.—73-14409
Influence of forming and surface treatment of products of lead crystal glass on lead leaching.—73-14207
Influence of glass compostion on refining.—73-14410
Influence of glass manufacturing process on glass structure.—73-00646
Influence of heat treatment regime on property variations of surface layers of ion-exchanged glasses.—73-14007
Influence of modifying additions on the crystallization of bioactive glasses containing apatite, wollastonite, and $AlPO_4$.—73-14411
Influence of nitrogen on the mobility of lithium in oxynitride glasses of the Li-Si-Al-O-N system.—73-00503
Influence of reactor radiation on spectroscopic characteristics of quartz glass.—73-14008
Influence of structural-chemical features of silicate glasses on the effect of gaseous leaching.—73-14009
Influence of temperature on infrared-to-visible conversion in tellurite glass doped with erbium and ytterbium.—73-03793
Influence of the composition of europium- and ytterbium-activated tellurite-wolframate glasses on their physicochemical, optical, and spectral-luminescence properties.—73-14208
Influence of the external protective glazing upon conservation of the medieval stained glass window in Orvieto cathedral.—73-06930

Influence of viscosity on the crystallization of some anorthite-diopside glass precursors.—73-00647
Influences of humidity and temperature on weathering of glass substrates coated with sol-gel-derived films.—73-03794
Infrared reflectance investigation of alkali diborate glasses.—73-00351
Infrared reflectance investigation of the structure of mixed alkali glasses.—73-14010
Infrared spectra of quartz glass in the 20–1100°C temperature range.—73-00352
Infrared spectra of quartz glass in the temperature interval 20–1100°C.—73-00353
Infrared spectral investigation of bismuthate glasses.—73-14011
Infrared spectroscopy of wide composition range $xNa_2S+(1-x)B_2S_3$ glasses.—73-00354
Infrared structural studies of silver ion-conducting glasses $xAgI+(1-x)(Ag_2O+nB_2O_3)$.—73-14709
Inhomogeneities in glass structure: clusters or channels.—73-14012
Inhomogeneity of silicate glasses.—73-10382
Inorganic-organic sol-gel processing for glasses and nanocomposites.—73-03852
Inspection of transparent containers with opposing reflection means.—73-01858
Intensities of Raman bands in borate glasses.—73-10383
Interaction between barium titanate and binary glasses.—73-05880
Interaction of components in fluorochalcogenide vitreous systems.—73-14013
Interactions and properties of glasses of the system PbO-$TeO_2$-$WO_3$.—73-16180
Interactions of components in the system $BaO-B_2O_3-P_2O_5$ according to Raman spectra data.—73-14014
Interface engineering in alumina/glass composites.—73-16846
Interface reactions of Fe-Al-Si and Fe-Ga-Si magnetic alloys with oxide glasses.—73-14209
Interfacial reactions between titanium and borate glass.—73-00245
Intermediate-range order study of phosphate glasses by using small-angle X-ray scattering (SAXS) techniques.—73-14018
Internal friction of $16.3Na_2O-33.7MgO-50SiO_2$ glass.—73-14019
Internal friction of mixed alkali aluminogermanate glasses—complexity of mixed alkali peak.—73-00358
Internal friction of mixed-alkali aluminogermanate glasses—complexity of mixed-alkali peak.—73-10386
Internal stress stabilities investigated in tempered glass over 22 years.—73-14210
Interpretation of electrical data of phase-separated glasses.—73-00506
Interpreting the results of 3-D glass flow calculations.—73-00648
Intrinsic and photoinduced elliptical dichroism and birefringence in chalcogenide glasses.—73-14212
Ion implantation into glasses.—73-03739
Ion-conducting glasses—potential solid electrolytes for dry cell batteries.—73-00983
Ionic conduction in the $B_2S_3$-$Li_2S$ glass system.—73-00986
Ionic conductivity and $^{19}F$ NMR investigation of some series of $ZrF_4$-based fluoride glasses containing $LaF_3$ or $YF_3$.—73-07042
Ionic conductivity and structure of cuprous-halide-containing glasses.—73-14713
Ionic conductivity and structure of thallium tellurite glasses containing AgI.—73-07043
Ionic conductivity of alkali silicate glasses.—73-03795
Ionic conductivity of $Li_2O-B_2O_3-P_2O_5$-based glasses.—73-10449
Ionic transport in alkali-rich glassy oxide structures without nonbridging oxygen.—73-14715
Ir absorption spectra of lead aluminoborate glasses.—73-00507
Ir and EPR spectra of aluminoborosilicate and aluminophosphate glasses simulating vitrified radioactive wastes.—73-01749
Ir spectra of iron-containing borophosphate glasses.—73-00359
Ir spectroscopic study of glass structures by the method of recording the second derivative.—73-14021
IRSS investigations of chemical resistance of sealing glasses.—73-00361
Isothermal evaporation of some components of industrial glasses.—73-00649
It was the turning wheel, and not the lathe—mold pressing and mold turning of hot glass in ancient glass vessel production.—73-09787
Kinetic aspects of oxidation of variable valency element compounds in glasses.—73-14022
Kinetics and mechanism of the destruction of $PO_4^{2-}$ centers in phosphate glasses activated by silver.—73-00362
Kinetics of alkali-silicate and aluminosilicate glass reactions in alkali chloride solutions: influence of surface charge.—73-10387
Kinetics of colloid formation of silver in multichromic glasses.—73-14415
Kinetics of crystal nucleation on the surface of cordierite glass.—73-14024
Kinetics of interaction between titanium diboride and molten glasses.—73-00364
Kinetics of leaching and structural features of the surface layers of silicate sheet glass.—73-14213
Kinetics of nonisothermal crystallization of $Bi_2Sr_2CaCu_2O_x$ glasses with different copper valence states.—73-00365
Kinetics of photostimulated crystallization in multichromic glass.—73-14214
Kinetics of porous glass dissolution in the alkaline solutions.—73-14025
Kinetics of silver staining in $Na_2O-CaO-SiO_2$ glass.—73-00650
Kinetics of sintering and crystallization of glass powders of cordierite composition.—73-16847
Kinetics of the formation reaction of two- and three-nuclear complexes of silver in radiophotoluminescent glasses.—73-14026
Laboratory melting of glasses to commercial standards of homogeneity.—73-00651
Laminated glass with an electroconductive layer.—73-14545
Laminated multilayer insulating glass and a spacer for the laminated multilayer insulating glass.—73-03935
Laser aerosol deposition of porous and transparent silica glasses.—73-14416
Laser inspection for liquid crystal display (LCD) screens.—73-12157
Laser-induced change in the optical properties of CdTe-doped glasses.—73-15008
Laser-induced glass layer formation in zeolite mortar.—73-10026
Leaching of lead from lead crystal.—73-03740
Lead-free fine crystal glassware.—73-03937
Letting light in; keeping heat out.—73-03796
Light scattering in halide glasses at high temperatures: anomalous scattering and nanoscale inhomogeneities.—73-07044
Lightweight optical glass of fluorophosphate.—73-00737
Liquid permeability of porous glass membrane and its microstructure.—73-03797
Liquid permeability of porous glass membrane and its microstructure.—73-14215
Literature review of surface alteration layer effects of waste glass behavior.—73-08299
Load dependence of the hardness of silicate glasses—not just due to indenter tip defects.—73-12158
Loading rate effects during indentation and impact on glass with small spheres.—73-14216
Local crystallization of titanium-containing glasses under the action of laser radiation.—73-00652
Local environment around tungsten in mixed valence barium tungsten phosphate glasses [studied] by X-ray absorption spectroscopy.—73-14027
Local environment of Ca in some silicate glasses.—73-14028
Local structures of rare-earth ions in glasses: the crystal-chemistry approach.—73-14029
Lognormal law for size distribution of nanoinhomogeneities in glasses.—73-14417
Long-term corrosion of glass by groundwater.—73-10388
Longitudinal elastic constants of tellurite glasses.—73-01231
Lorentz-force-independent dissipation and vortex glass phase in single-crystal $Bi_2Sr_2Ca_1Cu_2O_x$.—73-11816
Loss characteristics of potassium and silver double-ion-exchanged glass waveguides.—73-07045
Low refractive index fluoride glasses containing barium, indium, and gallium.—73-14217
Low refractive optical glass of a flint glass type.—73-14547
Low-cost cathodic and conductive coating compositions comprising lightweight hollow glass microspheres and a conductive phase.—73-04213
Low-expansion USP type I amber glass.—73-03939
Low-frequency Raman scattering and nanostructure of vitreous solids.—73-14030
Low-melting glass for sealing thick-film microcircuits.—73-00653
Low-melting glasses for the potting of thick film microcircuits.—73-00654
Low-melting, durable phosphate glasses.—73-03940
Low-temperature crack healing in heavy metal fluoride glass.—73-14218
Low-temperature sealing glass composition.—73-10638
Low-temperature specific heat and thermal conductivity of glasses.—73-14219
Luminescence of divalent and trivalent rare-earth ions in SYAM-fluoride glass.—73-10450
Luminescence of europium-activated quartz glass irradiated with protons.—73-00510
Luminescence of $Nd^{3+}$ ions from levels $^2K_{13/2}$+$^2G_{9/2}$+$^4G_{7/2}$ in sulfide glasses.—73-14220
Luminescence of phosphate glass coactivated by $UO_2^{2+}$ and $Ln^{3+}$ ions.—73-00511
Luminescence quenching in Pr-doped glasses for fiber amplifiers.—73-14418
Luminescence thermal quenching of $Nd^{3+}$-doped fluoride BIGaZYTZr glass.—73-07046
Machine for forming glass containers.—73-04980
Machine for video inspection of glass containers with intersecting light beams.—73-04981
Macrokinetics of the etching of porous glass by alkali.—73-14419
Magnetic anisotropy of microcrystals of cobalt ferrite in a glass matrix.—73-01468
Magnetic anisotropy of microcrystals of cobalt ferrite in the matrix of a glass.—73-00370
Magnetic properties and residual stress developed in Mn-Zn ferrite bonded with glass.—73-11660
Magnetic properties of $xCuO(1-x)[Bi_2O_3$-$PbO]$ glasses.—73-07953
Magnetic properties of $xHo_2O_3(1-x)[3B_2O_3$-$PbO]$ glasses.—73-11661
Magnetic property and chemical reaction in the interface of ferrite and glass.—73-11664
Magnetic susceptibility and aspects of magnetic interaction in Gd, Fe, and mixed Gd-Fe lead borate glasses.—73-03798
Magnetooptics of *4f-4f* transitions in rare-earth paramagnetic glasses.—73-14221
Maintaining standards in container production.—73-14420
Making bent chilled items.—73-00655
Manufacture and properties of glasses containing nitrogen.—73-00656
Manufacture of short-fiber-reinforced glasses by extrusion and examinations regarding their structure and mechanical properties.—73-10562
Manufacturing of low-water uv-absorbing quartz glass.—73-14421
Materials design for glass and expert database system.—73-03799
Mathematical and physical modeling of glass conditioning.—73-00658
Mathematical modeling of temperature distribution during $CO_2$ laser irradiation of glass.—73-10563
Mathematical simulation of the thermoactivized densification of the nonhomogeneous glass powders on the base of the phenomenological model of sintering.—73-14422
Maximum rate of aqueous corrosion of glass.—73-14222
Mechanical durability of water-repellent film on glass.—73-14224
Mechanical properties and fracture behavior of some chemically strengthened silicate and borate glasses.—73-10452
Mechanical properties of ZBLAN glasses.—73-07048
Mechanical strength and thermal resistance of porous glass.—73-00514
Mechanism for use in a glassware forming machine.—73-04982
Mechanism of diffusion of water in silica glass.—73-06937
Mechanism of ionic conductivity in glass.—73-14716
Mechanism of the drying process of raw materials for a glass batch.—73-07148
Medium-range structure of glasses: comparison of Raman and diffraction measurements.—73-14034
Melting and forming system for high-quality glass products.—73-01957
Melting, processing, and color control of zinc sulfide glasses.—73-07149
Metal oxide and titanium oxynitride coatings on soda-lime glass.—73-14035
Method and apparatus for coating glassware.—73-10640
Method and apparatus for controlling the temperature of glass sheets in press bending.—73-10641
Method and apparatus for forming a mouth in a glass container.—73-03941
Method and apparatus for handling glass sheets.—73-01862
Method and apparatus for heat-strengthening glass sheets.—73-00739
Method for bending and tempering a glass sheet.—73-00740
Method for determining the peak temperatures for crystallization center formation and crystal growth rates in glass crystallization.—73-15817
Method for forming CVD thin glass films.—73-13918
Method for isostatic or pseudoisostatic pressing employing a surrounding casing of glass.—73-12084
Method for making glass beads with surface decoration.—73-10565
Method for making glass to metal seals.—73-10326
Method for making porous glass optical fiber sensor.—73-03819
Method for preparing a fused silica glass body codoped with a rare-earth element and aluminum.—73-00741
Method for producing an optical fiber of halide glass, particularly an infrared permeable fiber of heavy metal fluoride glass.—73-03943
Method for producing glass preform for optical fiber.—73-00287
Method for producing glass preform for optical fiber.—73-14549
Method for producing glass soot deposit.—73-03944
Method for producing porous glass preform for optical fiber.—73-00660
Method for the controlled formation of voids in doped glass dielectric films.—73-11033
Method for treating fluoroaluminosilicate glass.—73-14551
Method of determining Poisson's coefficient in glasses and devitrified glass.—73-01911
Method of doping porous glass preforms.—73-00743
Method of fabricating glass substrate for disk.—73-00744
Method of fabricating integrated optical guides of glass.—73-03945
Method of forming glass having a $Zn_2SiO_4$ enamel layer thereon.—73-10642
Method of laminating glass sheets.—73-03948
Method of making a semiconductor device using a nanochannel glass matrix.—73-11532
Method of making curved insulating glazing panes.—73-10643
Method of manufacturing a heavy metal fluoride glass composition.—73-03950
Method of manufacturing a silica glass preform.—73-00746
Method of manufacturing glass optical element.—73-10645
Method of minutely roughening substrate surface by etching.—73-00747
Method of predicting glass fracture during tempering.—73-00661
Method of preparing silica glass.—73-00748
Method of printing a glass pane with a decorative coating reaching the peripheral face of the glass pane.—73-03951
Method of processing photosensitive glass with sections of differing exposure energies and article.—73-14553
Method of producing a glass body.—73-10647
Method of producing a glass front panel protected from coloring by electron rays.—73-03952
Method of producing glass preform in furnace for heating glass.—73-03953
Method of reclaiming glass from articles formed of leaded glass.—73-00749
Method to minimize error in determining chemical durability of optical and laser glasses.—73-03801
Mg-Si-Al-O-N glasses prepared by nitriding cordierite powders derived from polymer precursors.—73-03857
Micro-Shirasuballoons (hollow glass microspheres) from the milled Shirasu refined by hydrothermal treatment.—73-00662

Microgravity processing of fluorozirconate glasses to reduce devitrification during fiber drawing.—73-07150
Microhardness as an indicator of the thermomechanical strength of the glass parts of TV picture tubes.—73-07049
Microsheet glass in solar concentrators.—73-06829
Microstructure and fluoride concentration in Fernald waste glasses.—73-07151
Microstructure control of porous silica glass with monodispersed spherical silica particles.—73-00664
Microstructure control of porous silica glass with monodispersed spherical silica particles.—73-10566
Microstructure of glass composite materials in immobilization of radioactive wastes.—73-01754
Microstructure of materials of glass composition for immobilization of radioactive wastes.—73-00516
Microstructure of photodeposited Fe in porous Vycor glass.—73-07050
Microwave absorbing [glass] article.—73-14554
Microwave processing of simulated nuclear waste glass: II.—73-04894
Microwave-induced atmospheric pressure plasma application to fabrication of fluorine-doped silica glass.—73-14430
Middle-range order of glasses.—73-14037
Mixed sintered glasses: I, Properties of the mixed sintered glasses based on ternary mixtures of powdered polydispersive glasses.—73-00517
MNDO calculation of two- and three-body energies in glass-forming oxides.—73-14038
Model for lapping of glass.—73-07051
Model for the complex deformation of sheet glass.—73-00666
Model for three-body abrasion of brittle materials.—73-07052
Model of the medium-range order formation in glasses and their melts.—73-14039
Model of the Nernst-Ettinghausen effect in chalcogenide glasses.—73-01247
Model of the porous-glass-producing process.—73-14431
Model of the process of complex deformation of sheet glass.—73-00667
Modeling of property variations of modified layers of glasses.—73-14229
Modern container glass compositions.—73-03401
Modern ideas concerning chemical structure of glasses.—73-14041
Modern spectrophotometers and data processing for glass manufacturing control and optimization.—73-14433
Modification of optical properties by ion implantation.—73-03803
Modification of the classical theory of crystal nucleation as applied to glasses of nonstoichiometric and stoichiometric compositions.—73-00373
Modifying of metaphosphate glass surface with ammoniac gaseous medium.—73-14042
Modular approach to palletizing.—73-10567
Moisture-resistant low-melting-point glass for magnetic head and magnetic head.—73-03954
Molecular dynamics simulation of the trivalent europium ion doped in silica and sodium disilicate glasses.—73-00374
Molecular dynamics study of vacancy-like defects in a model glass: dynamical behavior and diffusion.—73-14043
Molecular dynamics study of vacancy-like defects in a model glass: static behavior.—73-14044
Molecular structure and nucleation in silicate glasses.—73-00376
Molten glass corrosion resistance of immersed combustion-heating tube materials in soda-lime-silicate glass.—73-10744
Molybdenum disilicide interaction with barium borate glass in air.—73-00377
Monitoring and analyzing waste glass compositions.—73-12209
Monobloc mold for engraving pressed glass containers.—73-01872
Monolithic silica glasses made from alcoholate gels.—73-07153
Mossbauer effect and electron paramagnetic resonance studies on zinc borate glasses containing transition metal oxides.—73-03741
Mossbauer effect, electron spin resonance, and electrical conductivity studies of the effect of iron on the magnetic and electrical properties of sodium silicate glass.—73-07054
Mossbauer spectroscopic study of densified sodium borate glasses containing iron.—73-10389
Mossbauer spectroscopy of glasses based on tin fluorides.—73-14045
Multicomponent glasses from particulate gels.—73-07154
Multipurpose photochromic brown glasses.—73-00750
$Na^+$ coordination in sodium diborate and triborate glasses by X-ray diffraction.—73-06939
Nanocrystalline materials obtained by controlled crystallization of metallic glasses.—73-14435
Nanocrystalline materials.—73-12389
Natural and photoinduced optical activity of chalcogenide glasses.—73-00518
Nature of cracks forming in glass insulators of electrical connectors.—73-00252
Nature of failure and thermal properties of the composites based on glasses reinforced by high-strength fibers.—73-14231
Nature of glass transition and the excess low-energy density of vibrational states in glasses.—73-14048
Nature of nucleation sites at cordierite glass surfaces.—73-14049
Nature of the birefringence of microporous glasses.—73-00520
Nature of the distribution of remelted glass mass in a glass ribbon.—73-07155
Nature of the linear frequency-dependent alternating current conductivity interpolating between conductivity relaxational and vibrational responses in alkali oxide glasses.—73-03804
Nd laser glasses based upon several glass-forming substances.—73-14232
Neutral gray glass composition.—73-10650
Neutral, ultraviolet-absorbing, fixed tint lenses.—73-03955
Neutron diffraction study of the structure of alkali silicate glasses.—73-03743
Neutron diffraction study of the structure of alkali silicate glasses.—73-14050
Neutron scattering investigation of the structure of semiconductor-doped glasses.—73-11346
New applications for glass in the modern building industry.—73-09731
New architectural glass.—73-10460
New chalcogenide glass with conductivity due to copper ions.—73-14233
New comprehensive concept for the conservation of stained glass windows.—73-13671
New concept of semiproduct clamping in processes of utility glassware finishing.—73-14436
New cutting named "Goban-Wari" of glass plates with "elastic working."—73-14437
New fluorogallate glasses.—73-06940
New fluoroindate glass compositions.—73-06941
New glass compositions containing alkali metal derived from BIGaZYbT.—73-06942
New glasses for optical applications.—73-09733
New glasses in the As-V-O system, LAXS and EXAFS studies.—73-14051
New interpretation of the ir reflectance spectra of $SiO_2$-rich films on soda-lime glass.—73-03744
New lithium ion-conducting glasses.—73-04144
New low-heat cement made with $CaO-Al_2O_3-SiO_2$ glass.—73-10065
New mechanism of inhomogeneous broadening in optical spectra of deep defects in dielectric glasses.—73-14234
New polishing technology to turn functional material-clad glass substrate into high-precision thin film and its application.—73-14439
New possibilities for decorating glass, ceramics, and porcelain.—73-00917
New possibilities of glasses for integrated optics.—73-14235
New structural interpretation of the "anomalous" binary magnesium phosphate glass system.—73-14052
Nitridation of $Li_2O-(B_2O_3,P_2O_5)-SiO_2$ glasses prepared by sol-gel.—73-14441
NMR studies of thermal effects on glass structure.—73-14053
Non-Debye relaxation and the glass transition.—73-07055
Nondestructive concentration measurements of rare-earth ions in doped glasses.—73-06944
Nonequilibrium crystallization, critical cooling rate, and transformation diagrams.—73-07156
Nonexponential structural relaxation, anomalous light scattering, and nanoscale inhomogeneities in glass-forming liquids.—73-06946
Nonlead sealing glasses.—73-00751
Nonlead sealing glasses.—73-10651
Nonlinear magnetic susceptibility in a Kramers ion-doped glass.—73-10978
Nonlinear optics, fiber lasers, and microoptics: novel approach of new glasses for optoelectronic applications.—73-14236
Nonlinear switching in semiconductor (CdSSe) doped glass.—73-15062
Nonmetallic glasses prepared by melt spinning method: glass formation, properties, anomalies.—73-14442
Nonresonant-type third-order optical nonlinearity of rare-earth-oxide-containing $GeO_2$ glasses.—73-03805
Nonresonant-type third-order optical nonlinearity of rare-earth-oxide-containing $GeO_2$ glasses.—73-10461
Novel aspects of the structure of glasses.—73-14056
Novel bioactive materials derived from glasses.—73-14443
Nucleation and crystal growth in a fly-ash-derived glass.—73-14057
Nucleation and crystallization mechanism of glasses obtained from Canarian basaltic rocks.—73-14444
Nucleation in a $K_2O-CaO-Al_2O_3-SiO_2$ glass.—73-14445
Numerical model for isothermal and nonisothermal crystallization of liquids and glasses.—73-14447
Observation of the 1*P* excitonic states in Cd(S,Se) glass quantum dots.—73-06947
Obtaining photochromic glasses from synthetic batches.—73-07157
Obtention and characterization of new optical glasses on the $ZnO-CdO-SiO_2$ system depicting high refraction index and low dispersion.—73-14238
Obtention and microstructure of glasses obtained from goethite industrial wastes.—73-14059
Open pore sintered glasses and glass-ceramics: manufacture, properties, and applications.—73-14448
Optical absorption and Raman scattering spectra of Zn–S bonds in silicate glasses.—73-07057
Optical basicity and glass chemistry.—73-00380
Optical basicity study of metal carboxylate glasses at ambient and elevated temperatures.—73-10462
Optical bistability and nonlinear switching in CdSSe microcrystallite doped glass.—73-10463
Optical bistability and photoinduced quenching of light scattering in bulk chalcogenide glasses under sub-band-gap excitation.—73-15070
Optical characterizations of ion-exchanged glass waveguides.—73-14239
Optical composite glasses from reactive deposition of chalcogenides in porous silica.—73-14449
Optical constants and density of oxide elements of group II in the periodic system as components of silicate glasses.—73-14240
Optical constants of bismuth gallate glasses.—73-07058
Optical crown glass having negative anomalous partial dispersion and high uv transmission.—73-10652
Optical doping of soda-lime-silicate glass with erbium by ion implantation.—73-06949
Optical functioning glass and apparatus using the same.—73-00752
Optical functioning glass and fiber amplifier.—73-03956
Optical glass.—73-10653
Optical glass.—73-14555
Optical glasses [investigated] by small-angle X-ray scattering (SAXS).—73-14060
Optical glasses with distributed parameters.—73-14241
Optical limiting in semiconductor nanocrystals in glass.—73-11359
Optical nonlinear property of Au-colloid-doped glass and the laser irradiation stability.—73-14242
Optical nonlinearity of iron ions in glass matrices.—73-10464
Optical parts and equipment using infrared athermal glasses.—73-10654
Optical properties and laser demonstration of Nd-doped sol-gel silica glasses.—73-10465
Optical properties of a chemically durable phosphate glass.—73-00523
Optical properties of $Cr^{3+}$ in thin-film lead-based fluoride glass.—73-07059
Optical properties of fluoride phosphate glasses.—73-14244
Optical properties of new borolanthanum oxyfluoride glasses.—73-14245
Optical properties of pure, $Nd^{3+}$-doped, and $Pr^{3+}$-doped fluoroindate glasses.—73-07060
Optical smoothing of the high-power PHEBUS Nd-glass laser using the multimode optical fiber technique.—73-07061
Optical spectra and structural states of Ni(II) in glass-ceramic-forming glasses of the lithium aluminosilicate system.—73-00381
Optical spectra of copper ions in alkali-lime-silica glasses.—73-03747
Optical waveguide of silica glass film on ceramic substrate.—73-03957
Optically encoded phase-matched second harmonic generation device and self-frequency doubling laser material using semiconductor microcrystallite-doped glasses.—73-04528
Optically induced organization in glasses—second harmonic generation.—73-07062
Optimization of ratio of coloring components during the electric founding of ruby-colored selenide glass.—73-00382
Oriented color centers formed upon anisotropic action of optical irradiation on sodium silicate glass.—73-14061
Origin of inhomogeneous linewidth of $Eu^{3+}$ fluorescence in several oxide glasses.—73-10468
Origin of photostructural changes in chalcogenide glasses.—73-14062
Oscillations in the dissolution kinetics of silica glass in tris-buffered aqueous media.—73-00383
Overcoating inorganic composition.—73-05236
Overview of current glass decorating techniques.—73-10571
Overview of surface analysis on U.S. and international waste glasses.—73-08303
Oxidation of ferrous iron in glass at high temperatures.—73-14451
Oxidation states of transition metals in ZBLAN.—73-06950
Oxide glass structure components by molecular spectroscopy data.—73-14063
Oxide–nonoxide glasses.—73-15968
Oxygen activity measurements in different production glasses.—73-00676
Oxygen gas-sensing properties of semiconductive $V_2O_5$-$SrO$-$Sb_2O_3$ glass at high temperature.—73-15082
Oxygen in fluorozirconate glasses.—73-14064
Oxygen-ion activity and its influence on redox equilibria in a ternary soda-lime-silica glass system.—73-10390
Oxynitride glasses—the material for prospective glass fibers.—73-14452
Paramagnetic centers in glasses and glass-ceramics induced by simulated space irradiation.—73-06951
Paramagnetic centers in lithium thioborate glasses.—73-03748
Parameters affecting the workability of container glass.—73-07159
Partially crystallizable low melting glass.—73-10655
Pentacoordinate silicon complexes as precursors to silicate glasses and ceramics.—73-08690
Performance criterion for glass heat treatment.—73-00678
Performance of SRS [Savannah River Site] waste glass buried in salt at WIPP-MITT program.—73-08304
Ph.D. in glass science—a new graduate degree program at Alfred University.—73-17498
Phase equilibria and properties of glasses in the $Al_2O_3$-$Yb_2O_3$-$SiO_2$ system.—73-14066
Phase equilibria in $Al_2O_3-Y_2O_3-SiO_2$ system and phase separation and crystallization behavior of glass.—73-02376
Phase relations of $Al_{2-x}Y_xO_3-SiO_2-Si_3N_4$ system ($x$=0.75 and 1.06) and properties of oxynitride glasses.—73-00385
Phase relations of $Al_{2-x}Y_xO_3-SiO_2-Si_3N_4$ system ($x$=0.75 and 1.06) and properties of oxynitride glasses.—73-12656
Phase separation and crystallization in glasses [investigated] by means of small-angle scattering with varying contrast.—73-14068
Phase transformations in $SrAl_2Si_2O_8$ glass.—73-14069
Phenomenon of segregation in glasses.—73-14457
Phonon sideband spectra and local structure around $Eu^{3+}$ ions in aluminosilicate glasses.—73-14070
Photochromic and photosensitive glass.—73-00526
Photochromic glasses which darken to a pink hue.—73-10656

Photodarkening mechanism in colored filter glasses.—73-00389
Photoelastic constants of bismuth-containing gallate glasses.—73-07063
Photoinduced anisotropy and gyrotropy in chalcogenide glasses.—73-14247
Photoinduced nonlinear optical phenomena in glasses and optical fibers.—73-00527
Photoinduced processes in the volume of photochromic glass PhKhS-2 and waveguides based upon it.—73-14248
Photoinduced short-lived optical absorption in quartz glass.—73-00528
Photostimulated formation of paramagnetic centers in phosphate glasses, both pure and activated by iron ions.—73-14071
Photostimulated reorientation of color centers in silicate glasses.—73-14249
Photostructural transformations in chalcogenide glassy semiconductor films by photoelectron spectroscopy.—73-01284
Phototransfer of electrons between rare-earth coactivators in alkali silicate glasses.—73-14250
Physical modeling.—73-14458
Physical properties of $Na_2O$-$SiO_2$ glasses: correlations derived using a network theory model developed for nonlinear hydrocarbon polymers.—73-06953
Physical properties of the glass used for comfort in buildings.—73-14251
Physical properties of $ZrF_4$- and $HfF_4$-based melts and glasses.—73-14252
Physicochemical characteristics of the hydroxopolymer method of synthesizing glass batches of multicomponent compositions.—73-00679
Physicochemical properties of glassware treated in electromagnetic field.—73-14253
Plasma-enhanced chemical vapor deposition of $ZrF_4$-based fluoride glasses.—73-07161
Plasma-sprayed lead zirconate titanate–glass composites.—73-11601
Polarizing glasses.—73-03959
Polarographic determination of small amounts of nickel and cobalt in glasses and in some glass raw materials.—73-12178
Polishing of ground lead crystal glasses with $CO_2$ lasers.—73-03863
Porous glass carrier for DNA synthesis.—73-03752
Porous glass carrier for immobilization of brewer's yeast.—73-03753
Portable microprocessor infrared noncontact thermometer for glass.—73-14462
Possibility of synthesizing photochromic glasses for the core of an optical fiber.—73-00680
Post-ion-exchange reactions in glass.—73-14074
Potentiometric determination of boron in borophosphosilicate glasses.—73-00391
Powder glasses.—73-14464
Practical fabrication process of pregrooves on glass disks by the sol-gel method.—73-14465
Precise marking of silicate glass by excimer-laser and TEA-$CO_2$-laser irradiation.—73-14466
Precision measurements of stress-birefringence in glass.—73-14255
Predicting the crystallization capability of aluminosilicate glasses.—73-06954
Prediction of durability of glass articles under the action of variable loading.—73-00531
Prediction of solid solution formation in glass.—73-06955
Preferential paths in alkali ion migration and the mixed alkali effect in silicate glasses.—73-06956
Preparation and application of porous glass.—73-10573
Preparation and characteristics of infrared transmitting glasses in the PbO-$Bi_2O_3$-$Ga_2O_3$ system.—73-10471
Preparation and conductivity measurement of the CuCl-$Cu_2MoO_4$-$CuPO_3$ glasses.—73-01014
Preparation and optical properties of CdS microcrystallites deposited in porous Vycor glass.—73-07064
Preparation and optical properties of CdS microcrystallites deposited in porous Vycor glass.—73-14468
Preparation and optical properties of CuCl-doped $Na_2O$-$B_2O_3$-$SiO_2$ glasses.—73-00681
Preparation and optical properties of transparent $TeO_2$-based glasses containing $BaTiO_3$ crystals.—73-03865
Preparation and optical properties of transparent $TeO_2$-based glasses containing $BaTiO_3$ crystals.—73-10472
Preparation and optical property of highly Au-doped glasses as a nonlinear optical material.—73-14256
Preparation and properties of bonding glass for amorphous magnetic head.—73-00533
Preparation and properties of immobilized mercuric reductase in porous glass carriers.—73-03866
Preparation and properties of immobilized mercuric reductase in porous glass carriers.—73-10393
Preparation and properties of Na-Ca-Si-O-N system oxynitride glasses.—73-07162
Preparation and properties of new zirconium oxyfluoride glass by plasma-enhanced chemical vapor deposition.—73-14470
Preparation and properties of PbO-$B_2O_3$-ZnO-$SiO_2$ glasses of low softening point.—73-14471
Preparation and third-order optical nonlinearity of organic dye-doped glasses.—73-03867
Preparation and third-order optical nonlinearity of organic dye-doped glasses.—73-10575
Preparation of Au-doped silica glass by sol-gel method.—73-03871
Preparation of Au-doped silica glass by sol-gel method.—73-10576
Preparation of colored silica glasses made by sintering of particulate gels.—73-10578
Preparation of copper-ruby glasses by sputtering and their optical properties.—73-03872
Preparation of copper-ruby glasses by sputtering and their optical properties.—73-10579
Preparation of electrochemically treated glass for metallization.—73-00683
Preparation of fine single-crystalline particles of ferroxplana, $Ba_2Zn_2Fe_{12}O_{22}$, from crystallization of glass.—73-10394
Preparation of glasses and glass-ceramics via nonconventional methods.—73-14476
Preparation of gold ruby glasses by the sol-gel method.—73-10581
Preparation of lead titanate particles by crystallization of glass.—73-09264
Preparation of oxynitride silicon glasses. Nitridation of functional silica xerogels.—73-10583
Preparation of porous silica glass by the sol-gel method—change of properties of gel by addition of formamide.—73-07163
Preparation of porous $SiO_2$-$ZrO_2$ glass from sol containing polyethylene glycol [PEG].—73-00685
Preparation of semiconductive tin oxide–glass composite by sol-gel process.—73-15114
Principle and application of the Senarmont method—application technology of glass strain viewers: IV.—73-01925
Problems of protective colored glass shaping drawing the ribbon.—73-03876
Process and device for shaping a gob.—73-00754
Process and device for the production of curved glass sheets.—73-00755
Process for determining the quality of temper of a glass sheet using a laser beam.—73-05099
Process for formation of an aluminum oxide based layer on glass, the product thus obtained, and its use in windows incorporating a conductive layer.—73-00756
Process for producing a curved glass plate partially coated with a ceramic.—73-00757
Process for producing a glass sheet with ceramic color composition and a conductive strip.—73-14556
Process for producing flakes of glass.—73-10658
Process for producing fluorescent or phosphorescent pigments coated with glass.—73-03960
Process for producing rod glass having refractive index distribution.—73-03961
Process for the preparation of a dental prosthesis and the prosthesis produced by said process.—73-03962
Processes of fusion, liquation, and crystallization of magnesia composition glass.—73-14480
Production of composite glass powder of any desired particle size from a particulate multicomponent mixture.—73-10660
Production process of glass beads for accessories.—73-00688
Products of interaction of glass oxide melts with aluminum-coated steel.—73-00689
Profile of the index of refraction of sodium silicate glass in electrodiffusion treatment in potassium nitrate melt.—73-00534
Promising polymeric materials for the jacketing of glass pipes.—73-00690
Properties and structure of binary PbO-$GaO_{1.5}$ glasses as the base of nonlinear optical multicomponent glasses.—73-03808
Properties and structure of boron molybdate glasses.—73-14258
Properties of BaO-$R_2O_3$-$Ga_2O_3$-$GeO_2$ (R=Y, Al, La, and Gd) glasses.—73-03809
Properties of barium gallium germanate glasses.—73-14259
Properties of $Bi_2O_3$-CaO-SrO-CuO glasses.—73-15602
Properties of CaO-$P_2O_5$-$SiO_2$ glasses.—73-07065
Properties of glass tubes made of photochromic glasses.—73-00535
Properties of mixed cadmium halide glasses.—73-14260
Properties of oxynitride glasses in the Ln-Si-Al-O-N systems (Ln=rare earth).—73-14261
Properties of the flow line as a score.—73-00691
Properties of the glasses prepared by rapid quenching in the $V_2O_5$-MO (M=Mg, Ca, and Ba) system.—73-06958
Properties of volume phase holograms on polychromatic glasses.—73-00536
Property modification of silica glass by ultrahigh pressure heating.—73-00538
Property modification of silica glass by ultrahigh pressure heating.—73-10474
Property–structure correlations of glasses in the system PbO-$B_2O_3$-$MoO_3$.—73-10475
Protective atmosphere composition and surface water stability of silicate glass.—73-00692
Protonic conduction in glasses.—73-14262
Protonic conductivity of silicotungstic, phosphotungstic, and phosphomolybdic heteropolyacids adsorbed by porous glass.—73-14263
Pyrolytic route for the preparation of oxynitride glasses.—73-14483
Pyrolytic route to fluoride glasses: I, Preparation and thermal decomposition of metal trifluoroacetates.—73-00693
Pyrolytic route to fluoride glasses: II, Preparation of glasses in the system $ZrF_4$-$BaF_2$-$LaF_3$-$AlF_3$-NaF.—73-00694
Quadrangular bulk ZF-7 glass double layer optical path current sensor.—73-07066
Quantitative analysis of $B_2O_3$ in E-glass by using X-ray fluorescence spectrometer.—73-14075
Quantitative estimation of intergranular glassy phase of silicon nitride ceramics.—73-17187
Quantitative microroughness analyses down to the nanometer scale.—73-17188
Quantum efficiency at 1.3 μm of $Pr^{3+}$ in infrared glasses.—73-14265
Quartz glass crucible for pulling a semiconductor single crystal.—73-10661
Quartz glass crucible for pulling a single crystal.—73-10662
Quartz glass doped with rare-earth element and production thereof.—73-03964
Quartz glass substrate for polysilicon thin film transistor liquid crystal display.—73-14558
Quenching diagram of glass.—73-07166
Quenching system for single-pane safety glass.—73-10589
Radiation effects on thermal expansion of some ternary alkali silicate glasses.—73-00539
Radiative heat transfer in glass manufacture—one- and two-dimensional problems.—73-07167
Radiative properties of glass and cast silicates. Modeling of heat transfer: IV, Measurement of infrared spectra. Determination of $n_\lambda$.—73-10476
Radiative properties of glass and cast silicates. Modeling of heat transfer: V, Diffusing media. Applications: fibrous insulation.—73-10477
Radiative properties of glass and cast silicates. Modeling of heat transfer: VI, Nondiffusing media. Application to sheet glass.—73-10478
Raman and infrared spectra of rare-earth aluminosilicate glasses.—73-10395
Raman scattering study of lithium borate glasses.—73-03755
Raman spectra and constitution of binary tellurite glasses containing typical network-modifying cations.—73-14076
Raman spectra of $BO_{3/2}$-$TeO_2$ glasses.—73-10396
Raman spectral studies of borate glasses.—73-06961
Raman spectroscopy of oxide glass system $(1-x)(yB_2O_3{\cdot}zLi_2O){\cdot}xMO$ (MO=CuO, $V_2O_5$).—73-10397
Raman spectroscopy study of the kinetics of transformations of titanium-containing phases in glass-ceramic-forming lithium aluminosilicate glasses activated by nickel oxide.—73-00392
Rapid method for boron determination in glass by means of inductively coupled plasma emission spectrometry (ICP-AES).—73-15836
Rare-earth-containing frits having a high glass transition temperature and their use for the production of enamels having improved heat resistance.—73-03965
Rare-earth-doped, stabilized cadmium halide glasses.—73-00761
Rates of crystal nucleation and growth in $(100-x)Na_2O{\cdot}2CaO{\cdot}3SiO_2{\cdot}xNaF$ glasses.—73-14484
Recent advances in the sol-gel mechanisms of silica and $SiO_2$-$M_xO_y$ (M=Ca and Al) glassy systems in nontraditional solvents.—73-14077
Recent progress in glass-based materials for biomedical applications.—73-00540
Recessed label panels—another view.—73-10591
Recording media on the basis of porous glasses.—73-14266
Recovery of lead-containing dust when melting crystal glass.—73-14485
Recycling of glass bottles in Japan.—73-10593
Recycling of glass wastes.—73-10594
Recycling waste laminated glass.—73-15750
Red, green, and blue upconversions in erbium-doped fluorozirconate glass.—73-07068
Redox reactions between cations of different polyvalent elements in glass melts: an optical basicity study.—73-10398
Reduced layers of microchannel films studied by methods of X-ray phase analysis and X-ray small-angle scattering.—73-00394
Reducing the detrimental matter in glass in the course of glass melting.—73-14486
Refining of glasses under subatmospheric pressures: II.—73-14487
Refraction and molar volume of bismuth-containing gallate glasses.—73-07069
Refractive index changes in $Ti^{3+}$-doped glass.—73-14268
Refractive index measurement of the TeX glasses.—73-07070
Refractive index modification after ion exchange [of] $Na^+$(glass)-$Li^+$(molten salt) in germanate glasses with tantalum and calcium oxides.—73-14078
Refractive index, mean dispersion, and density of lead oxide in silicate glasses of ordinary systems.—73-00541
Refractive-index dispersion of tellurite glasses in the region from 0.4 to 1.71 μm.—73-14269
Refractories for special glasses.—73-10760
Refractory-glass outgassing—a test procedure evaluation.—73-14619
Regression models of the glass physical properties dependence on temperature and composition and their application to the glass composition optimization.—73-14270
Relation between third-order optical nonlinearity and structure of $Na_2O$-$GeO_2$ glasses.—73-06964
Relationship between crystallization and surface characteristics in MgO-BaO-$SiO_2$-$B_2O_3$ glass.—73-00395
Relationship between crystallization and surface characteristics in MgO-BaO-$SiO_2$-$B_2O_3$ glass.—73-10479
Relationship between structural factor and photochromic behavior of AgX-containing glasses.—73-14271
Relationship between thermomechanical properties and shaping parameters for sheet silicate glass.—73-07072
Relaxation of residual deformations in the surface layers of silicate glasses.—73-00696
Relaxation of the intermediate decay structure of glasses and of solid solutions to a state of complete thermodynamic equilibrium.—73-14272
Reliability of strength testing for glass by the relation between sample size and strength data.—73-14273
Removal method for glass adhered to sintered object during hot isostatic pressing process.—73-05010
Repair of glass by sol-gel coating and heating with microwave or conventional techniques.—73-14488
Repair of glass by sol-gel coating using either conventional or microwave heating.—73-03884

Research and applications of new glasses.—73-06589
Research for improving solarization resistance of glass active laser media.—73-14274
Research on and applications of new glasses.—73-09746
Residual stress analysis in glass specimens of complicated shape using integrated photoelasticity.—73-14275
Residual stress in glass layer coated on ceramic substrate.—73-05628
Resistivity of glass under production conditions.—73-00697
Resistor composition and its use.—73-01068
Role of external additives on the surface crystallization of multicomponent nonalkali glasses.—73-00396
Role of $PO_3^{2-}$ radicals in charge accumulation in irradiation of phosphate glasses with electrons.—73-01022
Role of the radicals $PO_3^{2-}$ in accumulation of charge upon irradiation of phosphate glasses by electrons.—73-00397
Role of water content in the phase separation of soda-lime-silicate glasses: rate of phase separation.—73-06966
Scientific analysis of Roman glass from Augusta Praetoria.—73-06618
Scintillation and thermoluminescence properties of beryllium phosphate glasses containing cerium.—73-00543
Screen printing a glass pane with a decorative coating including blowing away or sucking printing ink from the edge of the glass pane.—73-03429
Sealing glass composite.—73-10663
Second-order optical nonlinearity in corona-poled glass films.—73-07073
Secondary electron emission from lead silicate glasses from the point of plasmon theory of emission.—73-14080
Semiconductive indium oxide glass composite: I, Influence of chemical composition of glass matrix on microstructure and electrical conductivity.—73-04478
Semiconductive indium oxide glass composite: I, Influence of chemical composition of glass matrix on microstructure and electrical conductivity.—73-15158
Sensitivity of spectroscopic parameters of neodymium in phosphate glasses to change in their structures on transition from ultra- to pyrophosphates.—73-00398
Sensitizing effect of $Cr^{3+}$ in Nd:laser glass of silicate system.—73-10480
Service reliability of high voltage glass suspension insulators.—73-01024
Sheet glass strength in relation to production parameters.—73-00700
Short- and medium-range order in the structure of glass.—73-14081
Silica glass flakes with submicron thickness.—73-14489
Silicon nitride ceramics containing crystallized grain-boundary phases.—73-02138
Silicon nitride ceramics containing crystallized grain-boundary phases.—73-12521
Silver-containing surface layer in Simax glass.—73-10276
Silver-glass die attach paste.—73-00763
Simulation of vacancies in a glass by molecular dynamics.—73-06968
Singular influence of calcium on elastic properties in sodium-calcium-silica glasses.—73-14277
Sintered color glass tiles with rough sticking face.—73-10481
Sintering and crystallization of cordierite glass powders.—73-14491
Sintering and crystallization of glasses with roedderite-type composition $(Na,K)_2Mg_5Si_{12}O_{30}$.—73-10598
Sintering and mullite formation from kyanite-glass system.—73-16992
Sintering behavior of glass in two geometric configurations.—73-14493
Sintering of ceramic bodies containing glass.—73-00924
Sintering of electrically conductive silver–glass paste for thick-film devices.—73-10989
Slip-cast glass-silica materials.—73-00701
Slow fading photochromic glass.—73-03967
Small-angle neutron scattering study of the microstructure in container glass in correlation with workability problems.—73-00702
Small-angle neutron scattering study of the microstructure in container glass in correlation with workability problems.—73-07075
Sodium and silver environments and ion-exchange processes in silicate and aluminosilicate glasses.—73-06970
Sodium passivation dependence on phosphorus concentration in tetraorthosilicate plasma-enhanced chemical vapor deposited phosphosilicate glasses.—73-00399
Soft atomic configurations, average order, and structural gross scale of transformations in glasses.—73-14083
Soft modes in RADP dipole glass.—73-03811
Sol-gel formation of silica-zirconia glasses.—73-10602
Sol-gel method of making multicomponent glass.—73-03968
Sol-gel process for forming a germania-doped silica glass rod.—73-03969
Sol-gel process of making gradient-index glass.—73-10665
Sol-gel processing and optical nonlinearity of gold colloid-doped silica glass.—73-03889
Sol-gel processing and optical nonlinearity of gold colloid-doped silica glass.—73-10603
Sol-gel synthesis of high-quality heavy-metal fluoride glasses.—73-00703
Solubility of the chlorides of copper, cadmium, and sodium in borate and aluminoborosilicate glasses.—73-14084
Special equilibria, clustering, and chemical-exchange kinetics in nonoxide glasses and melts. High-temperature $^{31}P$ NMR study of the system phosphorus-selenium.—73-14085
Special purpose glasses continue to multiply.—73-06593
Spectrophotometric analysis of ferrous, ferric, and total iron content in soda-lime-silica glass.—73-03758
Spectrophotometric determination of copper in glass after extraction of copper dithizonate on polyurethane foam.—73-06971
Spectrophotometric determination of ferrous iron and sulfides in industrial hollow soda-lime glass.—73-14086
Spectroscopic and dynamic characteristics of energy transfer of $Nd^{3+} \rightarrow Yb^{3+}$ and $Yb^{3+} \rightarrow Er^{3+}$ in aluminate glasses.—73-03759
Spectroscopic evidence of octahedral iron(III) in soda-lime silicate glasses.—73-10401
Spectroscopic investigation of structural reorganization of surface layers of quartz glass under the action of ion implantation.—73-00400
Spectroscopic investigations of the $Er^{3+}$ fluorescence transitions at 540 nm and 1.5 μm in fluoride phosphate and phosphate glasses.—73-10482
Spectroscopic observations of temperature and composition effects on tellurium oxyhalide glasses.—73-10402
Spectroscopic properties and mechanisms of excited state absorption and energy transfer upconversion for $Er^{3+}$-doped glasses.—73-06972
Spectroscopic studies of pure and chromium-doped lead fluorophosphate glasses.—73-00401
Spectroscopic studies of silicate glasses activated by solid-state solutions.—73-14278
Spectroscopy of defects in germanium-doped silica glass.—73-07077
Stability of quartz glass slips.—73-07175
Stable color dispersions, their preparation and use in ceramic glazes.—73-00928
State of the surface of glass treated by water suspension of sawdust.—73-03760
State of the surface of glass treated with an aqueous suspension of wood flour.—73-07176
Static fatigue crack propagation behavior of glass in a vacuum.—73-10483
Strength and fracture behavior of alkali strontium silicate glass.—73-14280
Strength and fracture of glass.—73-14281
Strength levels of flat glasses.—73-07078
Strength of glass under a prolonged load.—73-00547
Strengthening and toughening of soda-lime glass by a reinforced coating.—73-14500
Strengthening of glasses by sol-gel coating $TiO_2$-$SiO_2$ films.—73-14501
Strengthening of soda-lime-silica glass by gel-derived coatings.—73-14502
Strengthening of soda-lime-silica glass by sol-gel- and melt-derived coatings.—73-00707
Stress and strain in glass industry—application technology of strain viewers: V.—73-00549
Stress-optical coefficient and its dispersion in oxide glasses.—73-14282
Striae in fluoride glass.—73-07079
Structurability of special glasses by means of microtechnique.—73-14087
Structural analysis of new glass—computer-aided modeling of glass structure.—73-03812
Structural and electrical properties of glassy analogs to bismuth-cuprate-based superconductors.—73-01321
Structural and mechanical evolution during the aerogel-glass process.—73-14503
Structural anisotropy and birefringence in porous glass plates.—73-00405
Structural anisotropy and double refraction in lamina of porous glass.—73-00406
Structural imperfections in silica glasses with an optical absorption peak at 3.8 eV.—73-10485
Structural influence of nitrogen in alkaline-earth aluminosilicate glasses: ir absorption spectroscopy.—73-10404
Structural investigation of infrared-transmitting PbO-$Bi_2O_3$-$Ga_2O_3$ glasses by X-ray photoelectron spectroscopy.—73-14093
Structural microstresses in alkali silicate glass induced by low-temperature ion exchange.—73-14095
Structural model of glassy carbon based on Auger spectroscopic analyses.—73-16325
Structural parameters of macroporous glasses.—73-07080
Structural regions of ordering in single-component glasses.—73-14097
Structural relaxation of bismuth germanate glasses.—73-03762
Structural relaxation of glass BK7 during the development of refraction index gradients by Na/K exchange at $T \leq T_g$.—73-00550
Structural relaxation under conditions far from equilibrium.—73-14099
Structural relaxations in irradiated Ni-P metallic glasses.—73-03763
Structural role of fluorine ions investigated by the method of nuclear magnetic resonance of $^{19}F$ in glasses of the system $Al(PO_3)_3$-$BaF_2$ and $Ba(PO_3)_2$-$CdF_2$.—73-00410
Structural role of $GeO_2$ in sodium germanium phosphate glasses.—73-00411
Structural stability of chalcogenide glasses in submicron multilayer films.—73-14100
Structural study of binary tellurite glasses by X-ray radial distribution analysis.—73-14101
Structural study of borophosphate glasses by Raman and infrared spectroscopy.—73-10405
Structural study of fluorozirconates recrystallizing from fluoride glasses ($LnZr_2F_{11}$, $BaNaZr_2F_{11}$, $8BaZr_2F_{10}$): a key for glass structure models.—73-06974
Structural study of undensified and densified silicate glasses containing iron by Mossbauer and infrared spectroscopy: implication for bond deformation in silicate glasses.—73-10406
Structural study on AgI-$Ag_2O$-$CrO_3$ glass.—73-00412
Structural transformation, intermediate-range order, and dynamic behavior of $SiO_2$ glass at high pressure.—73-10407
Structural transformations in a lithium aluminosilicate glass on thermal gradation crystallization.—73-00413
Structural transitions in one-dimensional model of glass.—73-14504
Structural water in volcanic glass.—73-14102
Structure and electrical properties of vanadium tellurite glasses.—73-14284
Structure and molar volumes of alkali silicate glasses.—73-00414
Structure and phase transitions in aluminosilicate glasses and melts.—73-00415
Structure and photochromism of Al-Cd-O-F glasses.—73-10486
Structure and thermal evolution of glasses obtained from porphiric sands, MgO (15%) and $TiO_2$ (0–16%).—73-10408
Structure and vibrational states of [molecular dynamics] MD-simulated silica glass.—73-14104
Structure of alkali and alkaline-earth zinc tellurite glasses.—73-14105
Structure of aluminoborate glasses according to Raman spectroscopy data and their properties.—73-14106
Structure of CdO-$SiO_2$ low-silica-content inverted glasses.—73-14108
Structure of glass based on $BaZr_2F_{10}$.—73-14109
Structure of glass composition materials for immobilizing radioactive waste.—73-04896
Structure of glass: problems and prospects.—73-14110
Structure of glasses of the $B_2O_3$-$Sb_2O_3$ system using small-angle X-ray scattering data.—73-01029
Structure of lithium borate glasses according to data of X-ray scattering at small angles.—73-14111
Structure of manufacturing systems for the automation of a glass container line.—73-14505
Structure of sodium gallotitanate glass in relation to glass formation.—73-14112
Structure of some lead aluminophosphate glasses.—73-03765
Structure of the sol-gel-derived sodium germanate glass—comparison with the melt-derived glass.—73-14113
Structure of tin silicate glasses.—73-03766
Structure-dependent effects on the magnetic behavior of Fe ions in borate and silicate glasses.—73-15369
Structure-transport relationships in lead borate glasses containing $V_2O_5$.—73-03813
Structures obtained by mechanical fragmentation of glass plates.—73-10487
Sub-$T_g$ phenomena—73-14114
Superionic conducting glasses with $Cu^+$ ions.—73-14735
Superionic conduction in rapidly quenched $Li_2S$-$SiS_2$-$Li_3PO_4$ glasses.—73-14736
Suppression of lead leaching in lead crystal products by surface dealkalization.—73-03767
Surface characterization of an $SiO_2$-$ZrO_2$ glass by gas-solid adsorption.—73-14115
Surface characterization of lead- and bismuth-lead-silicate glasses by X-ray photoelectron spectroscopy (XPS).—73-14116
Surface conductivity of silicate glasses.—73-00552
Surface crystallization of glass in an atmosphere of carbon dioxide.—73-14117
Surface layer properties of soda-lime-silicate glass with various water contents.—73-14287
Surface modification of heavy metal fluoride glass by ion implantation.—73-03768
Surface modification of sodium aluminosilicate glasses using microwave energy: II.—73-03891
Surface processing of glass substrates for flat displays.—73-03892
Surface recombination of nonequilibrium electron-hole plasma in laser-modified semiconductor-doped glasses.—73-15194
Surface topography of polished and oxide-coated BK-7 glasses investigated by atomic force microscopy [AFM].—73-07081
Surface treatment of glass by sol-gel technique.—73-07179
Surface-induced devitrification of glasses: the influence of elastic strains.—73-07180
Surface-treated glass for containers.—73-03893
Synthesis and microstructural studies of $Er^{3+}$-doped fluorozirconate devitrified glasses.—73-06976
Synthesis and properties of infrared transmitting oxide glasses.—73-14509
Synthesis and thermal expansion of glasses and melts of the system Te-Cl.—73-14289
Synthesis of organically modified glasses by sol-gel techniques.—73-14510
Synthesis of $SiO_2$-$TiO_2$ glasses by sol-gel process.—73-14511
Synthesis, structure, and properties of sol-gel glasses of the systems: $SiO_2$-$P_2O_5$, $SiO_2$-$P_2O_5$-$Al_2O_3$, $SiO_2$-$P_2O_5$-$Na_2O$.—73-14514
Synthetic silica glass articles and a method for manufacturing them.—73-10666
Systematic study of refractive index variations with composition in heavy metal fluoride glasses.—73-07082
Systematic substitutions in ZBLA and ZBLAN glasses.—73-07083
Systematic survey of experimental and simulated glass formation for the $ZrF_4$-$BaF_2$-NaF system.—73-06977
Technical advances in plate and sheet glasses.—73-03894
Temperature and strain distortion of the shape of optical elements during processing.—73-07183
Temperature dependence of indentation cracking in soda-lime-silicate glass.—73-10488
Temperature dependence of intensity of scattering of visible light in transition of glasses to the state of metastable liquid.—73-00553
Temperature dependence of isostructural viscosity of polyalkali glasses.—73-14517

Temperature dependence of the modulus of elasticity of industrial glasses.—73-07084
Temperature dependence of the threshold of brittle disintegration of quartz glass with a compact pulsed electron beam.—73-03814
Texture transition in thin metal films vacuum condensed on glass: a general consideration.—73-03651
Textured glass for various applications: a review.—73-14292
$T_g$ and electrical conductivity of $Ag_2O$-$B_2O_3$-$P_2O_5$-AgI glasses.—73-14290
Thallium germanate, tellurite, and antimonite glasses.—73-10667
Thallium germanate, tellurite, and antimonite glasses.—73-10668
Theoretical calculation of the hydrolytic surface resistance of glass containers.—73-14293
Theory of a form [of] homogeneous admixed bands of polymers and glasses.—73-10411
Thermal and dielectric properties of silica/glass composites with the controlled amount of tridymite.—73-05652
Thermal and dielectric properties of silica/glass composites with the controlled amount of tridymite.—73-14294
Thermal and electrical properties of $Ag_2O$-$xB_2O_3$ ($Al_2O_3$, $Ga_2O_3$)-$(1.5-x)P_2O_5$ glasses.—73-00554
Thermal annealing behavior of ion-implanted silica glass.—73-06978
Thermal conductivity of aluminofluorophosphate glasses.—73-00555
Thermal expansion and network constraints in Ge-In-Se glasses.—73-07086
Thermal expansion behavior of fiber-reinforced DURAN glass.—73-07087
Thermal oxidation of fluorozirconate glass and fibers.—73-14518
Thermal shock behavior of SiC fiber-reinforced glasses.—73-10489
Thermal shock resistance and microstructure of sintered glass matrix composites.—73-14296
Thermal stability and microstructure of new laser matrix cadmium-zinc glasses.—73-00563
Thermal stability of $Fe_{79-x}M_xB_{18}Si_3$ (M=Co, Cr) glasses.—73-14297
Thermal stresses by joining different glasses depending on cooling rate.—73-00564
Thermally durable antireflective glass.—73-03971
Thermally stimulated depolarization current and Mossbauer spectroscopy of iron-doped niobophosphate glasses.—73-06979
Thermally stimulated polarization and dc conduction in iron phosphate glasses.—73-07088
Thermochemical basis for structural variations and defect formation in sol-gel-derived glasses.—73-14119
Thermochemical modeling of interface reactions in glass matrix composites.—73-06980
Thermodynamic activities in $B_2O_3$-$SiO_2$ melts at 1475 K.—73-00420
Thermodynamics of the ZBN glass-forming system.—73-06981
Thermoelastic contact damage on glass container surfaces.—73-14120
Thermoelastic deformation of optical elements caused by light absorption in glass.—73-07089
Thermomechanical properties of silicate glass as a function of the batch-to-cullet ratio.—73-00712
Thermoplastic low-melting glasses in the system Se-Te-I and their properties.—73-14520
Thermostimulated depolarization currents and internal friction in sodium silicate glasses.—73-00421
Thickness of parison layer formed in blow method.—73-00714
Thickness of parison layer formed in blow method.—73-10608
Thin glass film between ultrafine conductor particles in thick-film resistors.—73-07368
Thin glass for LCD: review of the specifications.—73-14298
Third harmonic generation in PbO-$SiO_2$ and PbO-$B_2O_3$ glasses.—73-10490
Third-order nonlinear optical properties of $As_2S_3$ chalcogenide glass.—73-07091
Three decades of expanding decorating horizons.—73-03425
Ti/borophosphosilicate glass interfacial reactions and their effects on adhesion.—73-06866
Time and temperature in pressing sheet glass components.—73-07184
Time-dependent adhesion between glass surfaces in dilute surfactant solutions.—73-06982
Time-resolved low-temperature luminescence of nonbridging oxygen [NBO] hole centers in silica glass.—73-00567
Time-resolved spectroscopy of chromium-neodymium system in a fluorophosphate glass.—73-14299
Time-resolved spectroscopy of Ni-doped fluorozirconate glasses.—73-07093
Time-temperature-transformation diagrams for DWPF [Defense Waste Processing Facility] projected glass compositions.—73-06983
$TiO_2$-$SiO_2$ glasses prepared by the alkoxide route.—73-10609
Tip-sample interactions in atomic force microscopy: I, Modulating adhesion between silicon nitride and glass.—73-05091
Titanium silica glass [investigated] by vibration spectroscopy.—73-14121
Topologically disordered networks of rigid polytopes: III, Edge and face sharing.—73-14122
Transformation of the vibrational spectrum and structure of glasses after quenching.—73-03771
Transparent quartz glass and process for its production.—73-14560
Transport processes in chalcogenide glasses of silver-copper-arsenic-selenium system.—73-00569
Trends in local optical basicity in sodium borate glasses and relation to ionic mobility.—73-10492
Trends in production and consumption of container glass.—73-03410
Trends in the development of control systems of glass manufacturing.—73-14523
Trichromatic coordinates determination of trace coloration in crystal glasses.—73-14302
Trough system.—73-12099
Turning geothermal waste into glasses and glass-ceramics.—73-01999
Turning of carbon and glass fiber hybrid cloth composite material.—73-04951
$U^{3+}$-doped bulk and fiber fluoride glasses.—73-06985
Ultrasonic detection of microphase separation in binary zinc tellurite glasses.—73-14303
Ultrasonic velocity in cesium borate glasses.—73-00571
Ultraviolet absorbing glasses.—73-10669
Ultraviolet absorbing, green-tinted glass.—73-00764
Ultraviolet optical absorptions of semiconducting copper phosphate glasses.—73-07853
Upconversion and local structure of $Er^{3+}$-doped aluminate glasses.—73-03817
Upconversion and relaxation of high-lying states in rare-earth-doped ZBLAN bulk and fibers.—73-07095
Upconversion in neodymium-doped fluoride glasses.—73-07096
Upconversion laser glasses and their molecular design simulations for fluorozirconate glass.—73-14304
Use in the glass industry of some chemical industry byproducts containing $Na_2O$ and CaO.—73-14524
Use of a simplex-lattice experimental design for studying glasses.—73-07097
Use of different flames for the photometric determination of traces of sodium, potassium, and lithium in glasses.—73-00422
Use of NMR spectroscopy for study of glass structures: I, NMR spectroscopy of the silicate solutions[—literature review].—73-01936
Use of oxide dispersion-strengthened platinum for the production of high-quality glass.—73-10614
Use of platinum in glass feeder systems.—73-14526
Use of waste gas heat for glass batch preheating.—73-03901
Uv absorption limit of glasses of the system $TeO_2$-$P_2O_5$.—73-14306
Uv-laser-induced decay of oxygen-deficient centers in silica glasses.—73-14307
Uv-visible–near-ir and EXAFS study of Co(II) coordination chemistry in postdoped silica sol-gel glasses.—73-12728
Vanadium- and copper-containing glasses for use as filters for light sources intended for use with night vision devices.—73-00765
Variations of the stress of silicon glass during annealing.—73-07099
Variety of crystal glasses.—73-13648
Very low frequency light scattering in glass matrix.—73-10414
Vibrational and vibronic spectra of fluoride- and nitride-activated phosphate glasses.—73-00423
Vibrational anomalies and phonon localization in glasses.—73-07101
Vibrational spectra and structure of fluorindate glasses.—73-06987
View on a structure of amorphous glassy materials.—73-14123
Viscoelastic properties and molecular mobility near the glass transition range.—73-14308
Viscosity and elastic properties of glasses of the system $BaO$-$B_2O_3$-$Al_2O_3$ and $CdO$-$B_2O_3$-$Al_2O_3$.—73-14309
Viscosity measurement of quartz glass.—73-01938
Viscosity of glasses of the system $K_2O$-$P_2O_5$-$Al_2O_3$ in the temperature region of softening and annealing.—73-14310
Viscosity of glasses of the systems $BaO$-$P_2O_5$, $SrO$-$P_2O_5$, and $PbO$-$P_2O_5$ in the temperature ranges of softening and annealing and their elastic properties.—73-00573
Viscosity, configurational energy, and structural relaxation of a silica-soda-lime glass.—73-14311
Viscous flow and glass formation tendency of platinum- and palladium-based metallic glasses.—73-00578
Visible and uv upconversion from diode-pumped neodymium-doped fluoride glasses.—73-03818
Visible light scattering intensity as a function of the temperature in transition of glasses to the state of a metastable liquid.—73-00579
Vitrification and properties of the glass system $Zn_{0.5}Cd_{0.5}B_2O_4$-$La(BO_2)_3$-$YF_3$.—73-14124
Vitrification and the properties of glass systems containing tin tetrafluoride.—73-14125
Vitrification of simulated intermediate-level waste from nuclear power plants: I, Melting behavior and properties of selected glasses.—73-08313
Volatilization of components from lead-containing glass.—73-00719
Volatilization of volatile glass components.—73-10618
Volterra principle in calculating sheet glass deformation.—73-00580
Wall thickness determination for glass hollowware in annealing calculations.—73-00720
Waste glass design based on property composition functions.—73-08315
Waste materials from the production of electrolytic manganese dioxide in the glass container industry.—73-07188
Waste-glass-melting stages.—73-08316
Water-related capacitance-voltage recovery effect in low-temperature-annealed chemical-vapor-deposited phosphosilicate ($P$ glass) films.—73-10493
Water-repellent coatings on glass substrates by the sol-gel process.—73-14528
Water-repellent metal oxide film coated on glass substrate and method of forming [the] same.—73-03972
Water-repellent metal oxide film coated on glass substrate and method of forming [the] same.—73-03973
Water-repellent window glass and method for preparation thereof.—73-10670
Wavelength tuning near 1.54 μm in a phosphate erbium glass laser.—73-00581
Welding glass and its mechanical homogenization with noncooled metal Ni-Cr stirrers.—73-00721
Wet chemical etching of silicate glasses in hydrofluoric acid-based solutions[—review].—73-14529
Window glasses for amenity life.—73-00582
X-ray absorption studies of Ge and Ga environments in $BaO$-$Ga_2O_3$-$GeO_2$ glasses.—73-06989
X-ray absorption study of the Ti coordination in glasses of the system $SrO$-$B_2O_3$-$Al_2O_3$-$TiO_2$.—73-14126
X-ray diffraction study of $TiO_2$-PbO glasses.—73-10415
X-ray photoelectron spectroscopy study of the structure of lead silicate glasses.—73-00428
X-ray spectral investigation of glasses and crystals of the Ge-Se system.—73-16396
XPS and NEXAFS study of fluoride glass structure using synchrotron radiation.—73-14127
XPS, EPMA, and XRD analysis of hot-end-coated glass containers.—73-00430
Yellow high silica glass.—73-00722
Yellow high silica glass.—73-10672
Zinc sulfophosphate glasses.—73-14562
Zirconium-containing fluorophosphate glasses colored with oxides of $d$ and $f$ elements.—73-07189

**glass-ceramics,**
Abrasion testing of glass-ceramics.—73-00432
Acoustic microscopy of ceramic fiber composites: II, Glass-ceramic-matrix composites.—73-09432
Adhesion testing of glass-ceramic thick films on metal substrates.—73-06736
Apatite glass ceramic.—73-14533
Application of glass-ceramics for sensor technologies.—73-14132
Applications of ion-implanted glasses for biomedical uses.—73-03708
Barium aluminosilicate glass-ceramics by a sol-gel route.—73-14329
Bioactive glass-ceramic containing anothite and diopside crystals.—73-13929
Bonding of porous machinable ceramic with castable glass-ceramic by the melt infiltration technique for dental applications.—73-12926
Calcium phosphate type glass-ceramic.—73-00727
Ceramic composite body.—73-03908
Ceramic glass integrated circuit package with integral ground and power planes.—73-04191
Ceramics for cancer treatments.—73-03710
Chemical interaction of bioactive glass-ceramics with a simulated body fluid.—73-03713
Coated metal article.—73-03677
Colored crystallized glass article and method for producing the same.—73-10623
Coloring inorganic oxides in $MgO$-$CaO$-$Al_2O_3$-$SiO_2$ glass-ceramic systems.—73-03715
Controlling bioactive glass-ceramic crystal structure by thermal radiation.—73-07112
Crystallization behavior of $BaO$-$Al_2O_3$-$SiO_2$ intergranular glass compositions in alumina ceramics.—73-08590
Crystallization sequence of barium osumilite and MAS osumilite glass-ceramics with low thermal expansion.—73-06900
Dense-sintered and porous glass-ceramic dielectrics.—73-07294
Design of glass-ceramics.—73-03782
Developing methods and a technology for strengthening glass-ceramics for design purposes.—73-00610
Development of artificial biological glass-ceramic bones.—73-14348
Development of methods and the technology of hardening glass-ceramics for structural use.—73-00611
Distinguishing features of crystallization during preparation of transparent glass-ceramics in $Al_2O_3$-$B_2O_3$-$P_2O_5$ system.—73-13962
Effect of $Cr_2O_3$, $ZrO_2$, $P_2O_5$, and $TiO_2$ nucleators on crystallization of glass-ceramics from antimony-bearing slag.—73-10521
Effect of crystal phases on the properties of sintered glass-ceramics for $CaO$-$MgO$-$Al_2O_3$-$SiO_2$ system.—73-00452
Electrical conductivities of low-alkali and alkali-free glasses and glass-ceramics.—73-00955
Electrical conductivity of a glass-ceramic.—73-08853
Enhancing antioxidizing ability of SiC fiber-reinforced LAS glass-ceramic via sol-gel coating technique.—73-14374
Fabrication of porous glass-ceramics by densification and crystallization of glass compacts.—73-14377
Fast lithium-conducting glass-ceramics in the $Li_2O$-$CaO$-$TiO_2$-$Al_2O_3$-$P_2O_5$ system.—73-00970
Features of hydroabrasive treatment of glass-ceramic components.—73-01899
Features of production of cordierite glass-ceramics applicable for hardening.—73-00626
Flexural creep and creep-rupture behavior of SiC/BN dual-coated Nicalon fiber-reinforced glass-ceramic matrix composites.—73-17320
Fluormica-coated Nicalon fiber-reinforced glass-ceramic composites.—73-14381
Fluormica-coated Nicalon-fiber-reinforced glass-ceramic composites.—73-14383
Fraction and fatigue of a Nicalon/CAS continuous-fiber-reinforced glass-ceramic matrix composite.—73-03295
Fundamentals of controlled formation of glass-ceramics.—73-00634
Glass and glass-ceramic materials in the $Y_2O_3$-$Al_2O_3$-$B_2O_3$-PbO system.—73-13992
Glass powder which is crystallizable to yield a sintered glass-ceramic containing hexagonal cordierite as the principal crystalline phase.—73-03924

Glass-ceramic and artificial dental crown formed therefrom.—73-02040
Glass-ceramic article decorated with ceramic color and process for its production.—73-03926
Glass-ceramic bioimplants.—73-07032
Glass-ceramic bonded abrasive articles.—73-13658
Glass-ceramic coatings for titanium-based metal surfaces.—73-10313
Glass-ceramic joining media.—73-02840
Glass-ceramic marble of $MgO$-$Al_2O_3$-$SiO_2$ system.—73-10545
Glass-ceramic materials in the $Na_2O$-$Nb_2O_5$-$SiO_2$ system and formation of optical materials with variable refractive index therefrom.—73-14197
Glass-ceramics and color methods.—73-03927
Glass-ceramics containing fluorine.—73-10546
Glass-ceramics from altered basalt-clay mixtures.—73-14396
Glass-ceramics of the system $BaO$-$B_2O_3$-$SiO_2$.—73-14398
Glass-ceramics—an overview.—73-14399
Glass-ceramics: an overview.—73-14400
Glass-doped ceramic matrix composites.—73-10631
Hardening of glass-ceramics.—73-00638
High-flexural-strength ceramic fiber-reinforced silicon carboxide composite.—73-03930
High-flexural-strength ceramic fiber-reinforced silicon carboxide composite.—73-03931
High-temperature flexural strength of $SrO$-$Al_2O_3$-$2SiO_2$ glass-ceramic.—73-17345
Hot-pressed cordierite glass-ceramics.—73-00500
Hybrid package glass-ceramic substrate for the hybrid package, and composition for the glass-ceramic substrate.—73-11021
Improvement of chemical and mechanical properties of unidirectionally crystallized calcium phosphate glass-ceramics by reaction with ammonia gas.—73-14204
Increase in hardness and specific shock viscosity of glass-ceramics by the method of combined hardening.—73-00643
Increasing the strength and specific impact strength of glass-ceramics by combined strengthening methods.—73-00644
Interfacial diffusion and reaction mechanisms in coated fiber-reinforced glass-ceramic composites.—73-14015
Interfacial studies of refractory glass-ceramic-matrix/advanced-SiC-fiber-reinforced composites.—73-17151
Internal stresses, structural defects, and mechanical properties of glass-ceramics.—73-14211
Lead-free enamel compositions for the decoration of low-expansion glass-ceramics.—73-14546
Low dielectric constant glass-ceramic composite controlled isolated porosity.—73-04128
Low-dielectric, low-temperature-fired glass-ceramics.—73-04215
Measurement of thermal diffusivity of Pyroceram 9606 by the laser flash method.—73-05065
Mechanical properties of barium-mica-containing glass-ceramics.—73-00513
Mechanical properties of barium-mica-containing glass-ceramics.—73-10453
Mechanical properties of SiC whisker-reinforced glass-ceramic composites: II, Effects of whisker diameter and carbon coating to whisker.—73-06482
Method of inspecting the structural defectiveness of pyrocerams.—73-01913
Method of making a glass-ceramic article having an adherent colored glaze with controlled texture.—73-03949
Microstructure and thermal properties in the $RO$-$MgO$-$Al_2O_3$-$SiO_2$ (R=Ca, Sr, Ba, Zn) glass-ceramic systems.—73-14228
Milling kinetics of glass-ceramic–cement in a ball mill.—73-01799
Modern state of technology of glass-ceramic for construction.—73-10459
Multilayered ceramic substrate and method of manufacturing the same.—73-04224
Nanocomposite machinable glass-ceramics.—73-14434
Nested process controls for a critical process with large batch size.—73-08352
New lithium disilicate glass-ceramics.—73-14438
New possibilities for optical glass-ceramics for integral optics.—73-00521
Obtaining cordierite glass-ceramics suitable for strengthening.—73-00673
Open pore sintered glasses and glass-ceramics: manufacture, properties, and applications.—73-14448
Optical properties and preparation of transparent glass-ceramics containing $Cr^{3+}$ ions.—73-03861
Optimization of heat-treatment schedules for oxynitride glass-ceramics.—73-00675
Outlook for the development of powder technology of glass-ceramics.—73-09229
Oxynitride glasses and glass-ceramics.—73-03862
Perovskite glass-ceramics.—73-14453
Phase composition, microstructure, and nucleation temperature range of zinc aluminosilicate glass-ceramics.—73-14455
Phase formation and crystallization behavior of phosphatic glass-ceramics.—73-14456
Phase separation and crystallization of a $CaO(MgO)$-$Al_2O_3$-$SiO_2$ slag glass-ceramic by DTEM.—73-03749
Plastic deformation of bismuth-containing glass-ceramics.—73-14254
Preparation and magnetic properties of Ca-P-Si-FeO-O glass-ceramics.—73-15359
Preparation and optical properties of transparent glass-ceramics containing cobalt(II) ions.—73-00532
Preparation of glass-ceramics in $Li_2O$-$Al_2O_3$-$TiO_2$-$SiO_2$ system by sol-gel technique: I, Preparation of porous monolithic gel in $Li_2O$-$Al_2O_3$-$TiO_2$-$SiO_2$ system by sol-gel method.—73-10580
Preparation of glasses and glass-ceramics via nonconventional methods.—73-14476
Preparation of high-strength calcium-mica-containing machinable glass-ceramics.—73-00684
Preparation of high-strength calcium-mica-containing machinable glass-ceramics.—73-10582
Preparation of porous glass-ceramics in $Na_2O$-$CaO$-$TiO_2$-$P_2O_5$ system.—73-03875
Principles involved in the formation of solid solutions of glass-ceramics in the strontium-barium system.—73-09275
Process for producing decorated glass-ceramic articles with treatment with an acid prior to decorating and devitrifying.—73-03428
Process of producing multiple-layer glass-ceramic circuit board.—73-11047
Production and study of lead germanate-based glass-ceramics [GC] with oriented surface layers.—73-02981
Production of glass-ceramic plates for decoration by sintering process.—73-10587
Roles of microstructure in super $Na^+$ ionic conduction of glass-ceramic NARPSIO-V.—73-14728
Sample preparation technique for electron microscopic determination of the structure of glass-ceramics (exchange of experience).—73-08440
Single-particle jumps and correlated ionic motions in glass-ceramics.—73-00544
Sintering of the cordierite glass-ceramics.—73-10599
Spray-dried homogeneous cordierite and MLAS [Mg-Li aluminosilicate] glass-ceramic powders.—73-10606
Strengthening glass-ceramics.—73-00706
Structurally characterizing a cordierite glass-ceramic by X-ray diffraction and X-ray absorption spectroscopy.—73-03764
Superconducting glass-ceramics in the Bi-Sr-Ca-Cu-O system[—review].—73-08219
Synthesis and characterization of cordierite glass-ceramics for low firing temperature substrate: II, Properties of cordierite glass-ceramics containing $CeO_2$.—73-10992
Synthesis and characterization of cordierite glass-ceramics for low-firing-temperature substrate: III, Fabrication substrates by tape casting process.—73-14738
Synthesis of monoclinic celsian glass-ceramic from alkoxides.—73-10607
Texture and properties of cordierite glass-ceramics at elevated temperature.—73-14291
Thermal expansion control in metal-cored glass-ceramic substrates.—73-14295
Thermally assisted shorts removal process for glass-ceramic product using an rf field.—73-11055
Toughened glass-ceramic substrates for semiconductor devices subjected to oxidizing atmospheres during sintering.—73-11056
Transparent glass-ceramics on $Al_2O_3$-$SiO_2$ system.—73-03896
Ultrafine copper particles grown in a glass-ceramic.—73-07186

**glassmaking equipment,**
Alignment apparatus for a gob delivery system.—73-04954
Apparatus for batch preheating and pollution abatement in glass manufacture.—73-12070
Apparatus for cutting molten glass for forming glass products.—73-01843
Apparatus for manufacturing a glass and organic composite strand, including a blowing device.—73-15762
Apparatus for production of hollow glass microspheres.—73-04957
Bottle coating first for Europe.—73-08322
Ceramic die for molding glass member.—73-12450
Complete [glass] batch house concept.—73-00600
Computer modeling of the forming process.—73-03827
Contact fixture for hot glass.—73-15764
Designing hoppers and silos for reliable flow.—73-15712
Device and forming finger for forming a mouth area on a glass vial.—73-04970
Device and process for deformation of the heat-softened end of a glass tube.—73-12074
Device for bending glass sheets using fluid barrier.—73-12075
Electronic timing system for glassware-forming machines.—73-01853
Electronic upgrade for air efficiency.—73-15723
Equipment overview: from the simple to the complex.—73-12027
Float-bath ribbon-width control method and system.—73-14538
Glass batch charger having seals which prevents accumulation of batch.—73-04973
Glass bottle forming machine.—73-04974
Glass Problems Conference draws 550 to Ohio State.—73-03848
Glassware forming machine having a pivotally supported mold mechanism which facilitates replacement thereof.—73-04975
Glassware forming machine with cooling system.—73-12080
Glassware forming machine with cooling system.—73-15767
Glassware takeout mechanism with parallel linkage.—73-04976
Gob forming device having a single rotating blade with a cooling housing.—73-04977
Hot end coating [analysis].—73-07137
Industrial experience with oxyfuel-fired glass melters.—73-15880
Inspection of transparent containers with opposing reflection means.—73-01858
Key to trouble-free cold-end handling.—73-10558
Larger, faster, press machines for TV glass production.—73-12041
Lightweight vacuum shuttle.—73-03938
Mechanism for use in a glassware forming machine.—73-04982
Method and apparatus for bending glass sheets.—73-12082
Method and apparatus for forming a mouth in a glass container.—73-03941
Method and apparatus for testing containers.—73-15769
Method for monitoring the performance of a glass container forming machine.—73-15770
Method of molding [glass] products with heating a parison with microwaves.—73-15771
Method of winding glass fibers.—73-10648
Mold clamping mechanism for glass container forming machine.—73-12088
Nonmetallic liners in batch handling equipment.—73-08353
Not too hot to handle.—73-12050
Nozzle with nonsymmetrical feed for the formation of a coating layer on a ribbon of glass, by pyrolysis of a gas mixture.—73-12090
Operational experiences of Skloobal, Ltd., Nemsova, with BDF equipment.—73-00674
Optical measurement of gob weight.—73-12052
Optimizing the IS machine cycle.—73-15741
Plunger assembly for forming glass containers.—73-12092
Plunger mechanism with a Hall sensor movement detection device for a glassware forming machine.—73-15773
Process and device for shaping a gob.—73-00754
Programmable logic takes control [for glass batch plant].—73-01822
Pyrometric measurements in glass furnaces, tanks, feeders, and in the glass-forming area.—73-03879
Quick change shear assembly for glassware-forming machine.—73-01878
Reduced individual section (IS) machine wear through air pressure control.—73-12060
Rotary glass-molding press with cushioned, trunnion-mounted hydraulic drive.—73-12096
South Korean installation.—73-14499
Spanish batch plant success.—73-00704
Spout bowl for molten glass feeder.—73-15774
Step-by-step approach to batch house automation.—73-01831
Tin float bath for manufacturing sheet glass utilizing recuperative gas burners.—73-12098
Trough system.—73-12099
Vetropack profits from automatic drift control.—73-10616

**glassmaking furnaces,**
30 years of scale modeling in SVUS—Glass Institute Hradec Kralove.—73-00715
Advanced vertical melting furnace for high-quality glass.—73-15863
Advantages of oxy-fuel melting.—73-01943
Advantages of using high-zirconia refractories in lead crystal glass electric furnaces.—73-10694
All-electric melting furnace with prolonged durability.—73-15864
Analysis of furnace performance through 3-D physically based modeling.—73-14319
Analysis of the working of a high-productivity flat-glass furnace using a physical modeling method.—73-08462
Application of electrochemical passivation methods for molybdenum electrodes in industrial glass tanks.—73-15866
Applying energy-saving technique of water in oil for the glass tank furnace.—73-05101
Are furnace repairs hazardous to health.—73-10496
Automated bottom temperature control for a glass-melting furnace.—73-15867
Batch handling for glass furnaces.—73-14330
Bubbling in glass furnaces.—73-00591
Bubbling in the three-dimensional flow-temperature model.—73-14332
C-DC melter.—73-12210
Calculation of heat transfer in a tank-type glassmaking furnace with correction for selectivity of the radiation of furnace gases.—73-12211
Calculation of physical decoloration at tank glass melting.—73-14333
Capacity up for high-quality perfume bottles.—73-10504
Cascade heating system reduces $NO_x$.—73-15868
Changing colors in container furnaces.—73-10505
Clean firing of glass furnaces through the use of oxygen.—73-08465
Combustion with pure oxygen at the Arques Glass and Crystal plants.—73-10510
Comparative study on energy-saving technologies for glass furnaces.—73-03825
Continuous furnace for heating glass panes to bending and/or toughening temperature.—73-12248
Control of waste gas and air flows through a regenerative system on a cross-fired glass tank furnace.—73-01944
Controlling and optimizing an oxy-fuel-fired furnace.—73-15869
Crucible-type induction furnace for melting glass.—73-01945
Current density and temperature distribution along a horizontal electrode in an all-electric glass-melting furnace.—73-12212
Design considerations and modeling of the glass melter combustion space for oxy-fuel firing.—73-15870
Devices for inspecting glassmaking furnaces.—73-08394
Doghouse.—73-08469
Dutch glassmaker's survey of energy-saving technology.—73-10518
Electric melting of glass.—73-01947
Electrical heating of glass-toughening furnaces.—73-12217
Electrode assembly for glass-melting furnace.—73-12249
Emissions of selenium compounds of glass-melting furnaces and state of the art of selenium waste gas treatment.—73-14372
Equipment overview: from the simple to the complex.—73-12027

Evaluation of glass quality via 3-D mathematical modeling of glass-melting furnaces.—73-00624
Example of computer control of glass-melting furnace.—73-05113
Experimental reconstruction of medieval glass technology.—73-13668
Forehearth.—73-15893
French all-oxygen conversion trials.—73-12219
Furnace bottom design considerations.—73-07214
Furnace costs compared for nine different melters.—73-08472
Furnace design for melting spectacle glasses.—73-01953
Furnace design in hours with combustion simulation.—73-15875
Furnace emission challenge to French glassmakers.—73-14388
Fused-cast high-zirconia blocks in an electric furnace for lead crystal glass.—73-10730
Glass melt current and homogenizing in electric tank furnaces.—73-15876
Glass melting in pot furnaces.—73-12221
Glass melting.—73-05138
Glass tank geometries [investigated] by means of a mathematical model.—73-12222
Glass-melting furnace with flexible melting capacity.—73-01955
Glass-melting furnaces faced with environmental problems: evolution or revolution.—73-12223
Heat transfer by alkali metals and the possibilities of use in the glass furnace heating system.—73-05118
How encapsulation controls drilling in tank bottoms.—73-10736
Hydraulic tests on devices for examining glass-melting furnaces.—73-01905
In situ replaceable pusher bar for a batch charger pan.—73-01857
Industrial experience with 100% oxy-fuel-fired furnaces.—73-15879
Influence of divided electric boosting on the distribution of temperatures and on flowing.—73-15882
Influence of knot construction, skimming-tank neck, and mechanical mass stirring on the quality of furnace operation for sheet glass production.—73-15883
Influences of heat consumption during glass melting in tank furnaces.—73-15884
Innovation in glass melting.—73-12227
Insulation of silica crown on glass tank furnace.—73-04008
Measuring glass furnace temperature.—73-15815
Melting behavior of batch blanket in glass-melting tanks.—73-14424
Melting of lead crystal with 24% PbO in electric glass-melting furnace with $SnO_2$ electrodes.—73-14426
Method for insulating a furnace and furnace manufactured according to the method.—73-05139
Method of feeding glass batch to a glass-melting furnace.—73-00745
Method of firing glass-melting furnace.—73-01975
Method of producing glass preform in furnace for heating glass.—73-03953
Middle- and small-scale electric glass-melting furnaces.—73-05121
Modeling of the combustion chamber in glass-melting furnaces.—73-05123
Modification of design of dog house in end port glass tank furnace.—73-03859
Modifications on the thermal performance of combustion-heated continuous glass-melting furnaces.—73-15886
Monitoring continuous heat-treatment processes.—73-10568
New high-resistant fused cast refractories for glass-melting furnaces.—73-14606
New method of the calculation of a power field in the melting tank of an all-electric glass-melting furnace.—73-15887
New methodology for furnace monitoring, analysis, and control.—73-12232
$NO_x$ emissions from oxy-fuel-fired glass-melting furnaces.—73-01960
Operating a steam superheater on a glass-melting furnace.—73-01961
Operation of a high-capacity furnace for sheet glass [analyzed] by the method of physical modeling.—73-12235
Physical modeling of an oil-fired glass tank furnace.—73-05128
Pilot electrode furnace for hand manufacturing of glass tableware containing fluoride.—73-15889
Practical experience with raw material preheating on glass-melting furnaces.—73-03864
Production of fluorophosphate glasses for high-efficiency optics by use of a "glove-box" melting furnace.—73-03878
Quartz tank member and method of production thereof.—73-15895
Quick payback for furnace insulation.—73-10590
Rational fuel use in glass furnaces.—73-01966
Recent development of China's refractories for glass furnaces.—73-10758
Recycling of electrostatic precipitator dust from glass furnaces.—73-07169
Reducing $NO_x$ and energy usage via the firing system.—73-15890
Reduction of pollution from glassworks furnaces: a new challenge for French glassmakers.—73-10595
Refractory material application in glass furnace regenerators, Philips' experience in relation to corrosion phenomena.—73-14617
Rise of oxy-fuel system from small to large [glass-melting] furnaces.—73-12241
Selecting the character of glass melt flow in tank melting zones.—73-08486
Simple model of refining in glass-melting furnace with vertical flow and covered level.—73-07172
Simulation and control of glass-melting furnaces.—73-10597
Small-scale melting furnace for colored glasses.—73-12243
Technical question—emission reduction of $NO_x$ formation in gas-fired furnaces.—73-14515
Technological modification of imported large end port glass tank furnace.—73-05131
Top paving solution for glass furnace bottoms.—73-07227
Treatment of filter dusts from glass furnaces for reuse or safe disposal.—73-14522
Two-dimensional simulation of glass flow and heat transfer in a glass-melting furnace after air bubbling.—73-03898
Use of a mathematical model in predicting the density of glass for controlling a tank furnace.—73-07187
Use of a model for predicting glass density for control of a glass furnace.—73-10613
Use of oxygen in regenerative furnaces.—73-12244
Useful new indicators for glass-melting tank furnaces.—73-15892
Verification of 3-D mathematical simulation of glass-melting tank.—73-14527
Vertical glass-melting furnace.—73-01976
Voltammetric sensor for glass tanks.—73-10619

**glazes/glazing,**
Activating crystallization in zirconia glazes.—73-07231
Advanced glazings: practical problems relevant to their optical characterization.—73-06994
Analysis technique for glaze surface defects and its applications.—73-08373
Application of basalts in ceramic glazes: III, Influence of addition of $B_2O_3$/sodium feldspar mixtures.—73-14643
Application of green stock of opalescent glazes to household stoneware.—73-10793
Application of lithia–mica in lead-free low-temperature glaze.—73-10794
Application of superfine zircon powders to glazes for daily fine stoneware.—73-07233
Application of titanium glaze to the ceramic tiles.—73-10795
Application of tremolite to glazed tile fired quickly at low temperature.—73-07234
Application test of spodumene in glazes.—73-10796
Applications of SiC to Jun red glaze.—73-14645
Approach to formation procedure of glaze bubble.—73-10797
Approach to iron-red crystalline glaze.—73-10798
Approach to positioned crystal glaze of glazed tiles.—73-10799
Bismuth-containing lead-free glass enamels and glazes of low silica content.—73-14675
Black glass pastes for glazing and their production.—73-03904
Boron and its "hazy behavior."—73-00306
Cause and prevention of orange glaze during firing of brown glaze.—73-10804
Celadon glaze for Jun ware.—73-07238
Cement-based building material coated with glaze at 900°C.—73-09842
Characterization of laser-glazed, plasma-sprayed yttria-stabilized zirconia coatings.—73-06746
Chinese copper red glazes.—73-10807
Color development of glossy glazes for rapid and single fire processes.—73-00901
Color development using triaxial colors for rapid once-fired systems.—73-07239
Color matching in ceramic glaze systems.—73-08381
Combined interfaces between hydroxyapatite (HAp) coating and metal with electron microprobe analyzer.—73-13809
Composition and technology of glossy/satinized glaze systems for fast firing of earthenware.—73-00902
Concentrated glaze suspensions.—73-14648
Cone 1-3 computer glazes.—73-13666
Decoration of self-glazing ceramic tiles.—73-00903
Deposition of TiN films onto glaze of porcelain by reactive sputtering.—73-00768
Determination of angular optical properties of glazing.—73-14152
Developing glazed tiles from perlite tailings.—73-10812
Developing pearl-glazed tiles.—73-10813
Development of artistic colored glazes fired in oxidizing flame.—73-10815
Development of black glazes based on Fe-Mn system.—73-07242
Development of glazed tiles utilizing Guangfen black talcum.—73-07243
Development of high-temperature raw zirconia opalescent glaze.—73-10819
Development of low-temperature glaze for high-alumina porcelain of spark plugs.—73-16705
Development of phosphorus-titaniferrous glaze.—73-10822
Development of Ti-containing opal glazes with high covering power.—73-10825
Development of titanium-opacified glaze.—73-07245
Dissipative structure and its application to ceramic research.—73-10827
Effect of disubstituted oxides of alkaline earth metals on opacified glazes.—73-07247
Effect of glaze composition on the color and stability of chrome tin pink pigments.—73-07248
Effect of SiC contamination in glazes: blister formation in pink glazes.—73-10830
Effects of glazing technologies on tile surface properties.—73-14654
Effects of $P_2O_5$ in glazes.—73-10835
Effects of particle size of $Nd_2O_3$-$SiO_2$ system pigment on glaze coloring.—73-07250
Effects of underglaze layer on the quality of the surface of glazed ceramic wares.—73-07251
Electron microprobe techniques for in situ glaze analysis.—73-15794
Etched engraving glaze for color-glaze wall and floor tiles.—73-10837
Fabrication of glazed tiles using Qi county weathered clay and sulfuric acid tailings.—73-10839
Fabrication of gold tone glazed tile.—73-10840
Fabrication of imitation silver gloss glazes.—73-10841
Fabrication of low-temperature and -expansion opacified glaze using diopside.—73-14655
Fabrication of plum green glaze of Song Jun ware.—73-10842
Face cracking of glazed tiles.—73-10844
Fast firing of copper luster glaze in roller kilns.—73-10845
Fast firing of textured color glazed tile.—73-14657
Fluorides in zirconia glazes.—73-00907
Flux composition of Jun red glaze and its structure of colored layers.—73-07254
Formation mechanism of glaze cracking and its influencing factors.—73-10848
Fundamentals of leadless glaze development.—73-07255
Furnace transmutation glaze of iron system.—73-10850
Glaze additives—30 years ago and today.—73-00909
Glaze calculation software.—73-13670
Glaze composition.—73-10913
Glaze defects and dry application processes.—73-10851
Glaze preparation with an annular gap mill.—73-01785
Glazes for ceramic wall and floor tiles: evolution and perspectives.—73-07256
Glazing against fire.—73-07135
Glazing an inertized bisque.—73-14658
Glazing of bone china.—73-14659
Glazing today.—73-14660
Gold luster glaze.—73-07257
High whiteness opalescent glaze for once-fired stoneware.—73-10853
High-gloss ceramic frits.—73-03932
High-grade body glaze for underglaze soft porcelain.—73-07258
High-temperature color glaze fired in tunnel kiln.—73-07259
How glaze composition affects chrome-tin pinks.—73-10855
Imitation of ancient glazed architectural pottery.—73-10857
Improving the technology for Gzhel porcelain decorated with underglaze cobalt pigments.—73-00913
Influence of the external protective glazing upon conservation of the medieval stained glass window in Orvieto cathedral.—73-06930
Kaolin-based nonlustrous glaze.—73-10863
Lead-, cadmium-, and barium-free frits for ceramic glazes.—73-03936
Lithium glaze with low thermal expansion.—73-07263
Low-melting zirconia glazes based on glass fiber wastes.—73-04044
Low-temperature transparent green stock glaze using albite and lipidolite.—73-10864
Manufacture of glazed tile utilizing water-granulated slag from blast furnace.—73-10865
Matte glaze of anorthite.—73-10866
Method of making a glass-ceramic article having an adherent colored glaze with controlled texture.—73-03949
Microprocesses during formation of glaze layers.—73-10868
Noble-metal-containing overglaze color composition for ceramics.—73-03427
Opalescent glaze of raw material for stoneware.—73-10873
Opaque raw glazes for once low-temperature firing.—73-10875
Origin of pinholes in porcelain glazes.—73-00920
Overglaze colors for pottery.—73-04053
Pewabic pottery—historic and contemporary: II.—73-09737
Physical chemistry analysis of Jun glaze.—73-10880
Pinholes and introduction of albite in double-firing zircon-glazed tiles.—73-10881
Preparation of ceramic colors on a diopside base.—73-00921
Preparation of low-cost opal glaze for colored tile.—73-10884
Preparation of phosphorus-magnesium opal glaze.—73-14664
Process to increase the drying rate of a glaze for ceramics.—73-10915
Proper techniques for the ball milling of ceramic glazes.—73-04944
Purple copper glaze.—73-10888
Red coloration of iron aventurine glazes.—73-10890
Reflection spectrum and coloring of mixed black glazes colored by ions.—73-10892
Relationship between fineness of glaze and quality of porcelain ware.—73-10893
Stable color dispersions, their preparation and use in ceramic glazes.—73-00928
Sub-bright glaze for fast firing in push bat kilns.—73-14667
Surface degradation and Vickers indentation hardness of glazed ceramic tiles.—73-07273
Synthesis of colored, nonfritted glazes based on mining-ore waste products.—73-00925
Unique tile glaze concept—free of pinholes.—73-07277
Used catalyst as an additive in ceramic glazes.—73-07278
Using lead-free glaze with chrome-tin color underglaze.—73-14674
Vickers indentation method applied to the characterization of ceramic glazes.—73-08459
Wall and floor tile body and glaze formulas for once fast firing at low temperature.—73-10907
Which colors can and cannot be produced in ceramic glazes.—73-07279
Why unleaded.—73-10910

**gloss,**
Fabrication of imitation silver gloss glazes.—73-10841

**goethite,**
Hydrothermal synthesis of barium ferrite fine particles from goethite.—73-13092
Obtention and microstructure of glasses obtained from goethite industrial wastes.—73-14059

**gold,**
- Annealing behavior of Au(Te)/*n*-GaAs contacts.—73-11067
- Au interfaces with epitaxially grown CdTe(111): chemistry and barrier heights.—73-01080
- Characterization of bilayer-metal contacts to high-$T_c$ superconducting films.—73-01501
- Chemical reactions at metal/compound semiconductor interfaces: Au and GaAs.—73-11109
- Comparative scanning probe microscopy study of the surface morphology of Au films grown from the vapor onto glass, fused silica, and muscovite mica.—73-06201
- Composition and electrical properties of Au-$Al_2O_3$ cermet thin films: a critical study.—73-10209
- Electrical and electrochemical properties of gold-plated InP.—73-07481
- Electronic structure of $Ca_3AuN$.—73-16133
- Gold luster glaze.—73-07257
- Gold/high-temperature superconductor interface: metallicity of the near surface region and a search for the proximity effect.—73-01560
- Growth mechanism of gold films on alumina.—73-00236
- Hall effect and magnetoresistance in Au/$SiO_x$ thin films.—73-08877
- Heavy ion irradiation and vortex glass description of the mixed state in $YBa_2Cu_3O_7$ epitaxial films.—73-04732
- High-temperature Au-SiC-6H Schottky diodes.—73-01186
- Improvement of the technology of article decoration with gold.—73-00912
- Improving gold decorating techniques.—73-00642
- Inelastic electron tunneling spectroscopy and atomic force microscopy investigation of ultrathin sputtered amorphous silica films on gold.—73-03154
- Luminescence from gold-passivated GaAs surfaces excited with a scanning tunneling microscope.—73-04389
- Nanocomposite dielectric material: Au/$SiO_2$ gel.—73-04143
- Nonrandom gold-$YBa_2Cu_3O_{7-x}$ composites.—73-08150
- Photoluminescence associated with $Au_{Ga}$ centers in GaAs:Au.—73-01279
- Photosensitivity of Au-GaAs Schottky barriers with a surface microrelief (fundamental optical absorption reaction).—73-01283
- Preparation and optical property of highly Au-doped glasses as a nonlinear optical material.—73-14256
- Preparation of Au-doped silica glass by sol-gel method.—73-03871
- Sol-gel processing and optical nonlinearity of gold colloid-doped silica glass.—73-03889
- Sol-gel processing and optical nonlinearity of gold colloid-doped silica glass.—73-10603
- Superconducting properties of $YBa_2Cu_3O_7$-Au composites.—73-15635
- Template synthesis and optical properties of small metal particle composite materials: effects of particle shape and orientation on plasmon resonance maxima.—73-06111

**gradient index,**
- GRIN [gradient-index] elements with large geometry.—73-13077
- GRIN elements with large geometry.—73-05825

**grain boundaries,**
- 45° grain-boundary junctions in (001)-oriented BiSrCaCuO films.—73-15483
- Atomic arrangement at grain boundaries and interfaces [observed] by high-resolution electron microscopy.—73-06187
- Calculated structures and energies of grain boundaries in α-$Al_2O_3$.—73-05364
- Ceramic Transactions, Volume 41: Grain Boundaries and Interfacial Phenomena in Electronic Ceramics.—73-17521
- Characterization of grain boundaries in superplastically deformed Y-TZP ceramics.—73-17116
- Characterization of HIPed, high-purity $Si_3N_4$ grain boundaries.—73-06195
- Classification of intercrystalline boundaries.—73-16056
- Coherency strain energy and the direction of chemically induced grain-boundary migration in $Al_2O_3$-$Cr_2O_3$ and $Al_2O_3$-$Fe_2O_3$.—73-09439
- Dependence of the internal friction and the mechanical properties of ceramics on their grain-boundary structures.—73-03260
- Direct measurement of the PTC effect of a single grain boundary.—73-01128
- Direct measurement of the PTC effect of a single grain boundary.—73-12769
- Effect of gas pressure on the shape of closed pores on grain boundaries.—73-03135
- Effect of gas pressure on the shape of closed pores on grain boundaries.—73-13390
- Effects of grain-boundary structure on the resistivity phenomenon in doped $BaTiO_3$.—73-11565
- Electrical activity at individual grain boundaries and interfaces in semiconducting oxides.—73-11176
- Electrical characterization of grain boundaries in ultrafine-grained Y-TZP.—73-13393
- Evaluation of grain-boundary phases of ß-SiAlON by cryogenic specific heat measurements.—73-03143
- Flux pinning in a slab model of grain and twin boundaries.—73-11765
- Geometrical rationalization of the special properties of the 14° [001] grain boundary in $YBa_2Cu_3O_{7-ß}$.—73-11772
- Grain-boundary analysis of silicon nitride materials.—73-03147
- Grain-boundary characteristics in PLZT, GBBLC [grain-boundary barrier layer capacitors], and high-$T_c$ superconducting ceramics and their relation to properties.—73-13400
- Grain-boundary degradation of YBCO superconductors sintered in $CO_2$-containing atmospheres.—73-11774
- Grain-boundary effect in Bi-system superconductors.—73-11775
- Grain-boundary microstructure and magnetic properties of low-temperature-fired Ni-Zn-Cu ferrite.—73-11655
- Grain-boundary segregation in semiconducting oxides.—73-11221
- Grain-boundary structure and high-temperature strength of nonoxide ceramics.—73-03306
- Grain-boundary structure of a ZnO-$Bi_2O_3$-CoO varistor.—73-01176
- Grain-boundary structure of $Bi_2O_3$-diffused $BaTiO_3$ BL capacitor.—73-00974
- High-resolution electron microscopy observations of grain-boundary films in silicon nitride ceramics.—73-06225
- High-resolution transmission electron microscopy studies of a near Σ11 grain boundary in α-alumina.—73-06226
- Importance of pore-grain boundary evolution in sintering kinetics.—73-03151
- Influence of grain boundaries on the conductivity and ion-exchange rate of ß´´-alumina polycrystalline isomorphs.—73-04116
- Influence on the grain-boundary interfacial trap levels in $(Ba_{0.76}Sr_{0.24})TiO_3$-based PTCR ceramics by oxidative annealing.—73-11275
- McClintock's statistics and strength safety factor for ceramics.—73-06474
- Microstructural and compositional analyses on grain boundary of low-temperature-sintered $Pb(Zr,Ti)O_3$ ceramics.—73-13418
- Mobility control of ceramic grain boundaries and interfaces.—73-09212
- New grain-boundary phases for nitrogen ceramics.—73-06264
- Qualitative and quantitative evaluation of silicon nitride grain-boundary phase by cryogenic specific heat measurements.—73-08436
- Quantitative evaluation of grain-boundary phases by cryogenic specific heat measurements.—73-03189
- Role of grain boundaries in high-temperature deformation.—73-09666
- Semiconductor Ceramics: Grain Boundary Effects.—73-17537
- Sinter forging of nanocrystalline $TiO_2$.—73-06048
- Solute drag on grain boundary in ionic solids—the space charge effect.—73-03111
- Stability and surface energies of wetted grain boundaries in aluminum oxide.—73-06284
- TEM analysis of grain boundary in $Y_2O_3$-$Nd_2O_3$-doped silicon nitride.—73-03204
- TEM analysis of grain boundary in $Y_2O_3$-$Nd_2O_3$-doped silicon nitride.—73-13458
- Theory of oxygen tracer diffusion along grain boundaries and in the bulk in two-stage oxidation experiments: II, Analysis of type-B regime.—73-09423
- Thermal and electronic diffusion close to a grain boundary.—73-08449

**grain growth,**
- Discontinuous grain growth and the grain boundary in a solid-solid reaction growth method for ferrite single crystals.—73-01452
- Formation of needlelike grains in $Al_2O_3$.—73-16792
- Grain growth during liquid-phase sintering of Sb-doped $BaTiO_3$.—73-17138
- Grain growth in $(Ca_{1-x}Mg_x)Zr_4(PO_4)_6$ ceramics.—73-17139
- Grain growth in ultrafine Y-TZP ceramics.—73-06221
- Grain growth of high-$T_c$ $YBa_2Cu_3O_{7-x}$.—73-11773
- Grain growth of sintered ZnO with alkali oxide additions.—73-17141
- Growth kinetics of Si hemispherical grains on clean amorphous Si surfaces.—73-14947
- Kinetics of ß-$Si_3N_4$ grain growth in $Si_3N_4$ ceramics sintered under high nitrogen pressure—comment.—73-02884
- Microstructural design by selective grain growth of ß-$Si_3N_4$.—73-06249
- Oriented grain growth in $YBa_2Cu_3O_{7-ß}$ by alkali metals (Li, Na, and K) substitution.—73-01622
- Theoretical study of grain growth in porous solids during sintering.—73-06114

**grain size,**
- Analytic procedure for evaluating grain-size and grain-aspect-ratio distribution in polycrystalline sintered bodies based on Monte Carlo simulation.—73-13372
- Analytical procedure for evaluating grain-size and grain-aspect-ratio distribution in polycrystalline sintered bodies based on Monte Carlo simulation.—73-01883
- Aspects of mullite synthesis in relation to the grain size of $Al_2O_3$ and $SiO_2$.—73-02728
- Effect of grain size on strength, fracture toughness, and static fatigue crack growth in alumina.—73-03265
- Effect of grain size on the ballistic performance of aluminas.—73-06380
- Effect of grain size on the microstructure and properties of ceramics.—73-03136
- Effect of grain size on the stress and velocity fields ahead of a crack in a material which deforms by Coble creep.—73-06382
- Estimation of grinding force for ceramics.—73-06406
- Estimation of grinding force for ceramics.—73-16763
- Fine-grain barium titanate for dielectric application.—73-10948
- Grain sizes of ceramics by automatic image analysis.—73-05051
- Growth and morphology of carbon grains.—73-09458
- Hardness–grain-size relation in ceramics.—73-16502
- Interrelationship between two- and/or three-dimensional grain morphology and fracture toughness of $Si_3N_4$ ceramics.—73-03158
- Properties of alumina ceramics having extremely fine grains.—73-09659

**grains,**
- Composite diamond grain and method for production thereof.—73-05295
- Effect of wind transport on the shapes of quartz silt grains.—73-15901
- Interrelationship between two- and/or three-dimensional grain morphology and fracture toughness of $Si_3N_4$ ceramics.—73-13558
- Interstellar SiC grains in meteorites.—73-13410
- Numerical model of polydispersed silica grain dissolution in glass-melting furnaces.—73-10570
- Thickness of cubic surface phase on barium titanate single-crystalline grains.—73-12724

**granite,**
- Alkali reactivity of deformed granitic rocks: a case study.—73-15896
- Densification of spray-dried powders [for imitation granite ceramic tiles].—73-12972
- Geochemical features of quartz from the deep parts of Eldzhurtinsk granite massif (northern Caucasus).—73-15904
- Imitation granite floor tile.—73-10790

**granular materials,**
- Deformation of atomization granules under uniaxial compression.—73-02764
- Deformation of spray-dried granules under uniaxial loading.—73-05034
- Deformation of spray-dried granules under uniaxial loading.—73-12969
- Drying of granular ceramic films: II, Drying stress and saturation uniformity.—73-02776
- Heat-insulating properties of enclosing structures based on foam glass granulate.—73-00098
- Refractories based on hollow periclase-containing granules.—73-00851
- Utilization of granulated blast-furnace slag.—73-00204
- Viscosities and sintering rates of a two-dimensional granular composite.—73-03072

**granulation,**
- Crushing strength determination of individual granules.—73-12962
- Nonthermal builtup granulation as an alternative to spray-dry particle method.—73-01804
- Nonthermal granulation—the effect of additives on granulates and pressed bodies.—73-01805
- Production of spherical granules of alumina with controlled porous structure.—73-02982

**granulometry,**
- Granulometric determination of treated power plant fly ash.—73-12276
- Methods of granulometric analysis: application in the granulometry control of raw materials.—73-08414

**graphite,**
- Adsorption of dextrin onto graphite.—73-08805
- Anisotropy of the properties of magnesia-graphite refractories.—73-07196
- Can graphite materials overcome thermal checking.—73-10503
- Carbonization behavior and graphitization of organic precursor films reported to give graphite.—73-12932
- Composite materials for sliding members.—73-12455
- Crack opening behavior of artificial graphite electrodes in thermal shock test.—73-02565
- Crack opening behavior of artificial graphite electrodes in thermal shock test.—73-10928
- Deintercalation $H_2SO_4$-intercalated graphite fiber.—73-16105
- Determination of $B_4C$ in refractories containing graphite.—73-00797
- Determination of impurities in graphite by ICP–AES.—73-00798
- Development of a combined antioxidant for a periclase-graphite ramming body.—73-00799
- Dimensionally stable graphite-fiber/glass composite.—73-10517
- Direct conversion of graphite into hexagonal diamond under high pressure.—73-16714
- Effect of oxidation on fracture toughness of nuclear graphite.—73-13512
- Electronic properties of sodium hydride and potassium mercury ternary graphite intercalation compounds.—73-16489
- Encapsulation of ZrC and $V_4C_3$ in graphite nanoballs via arc burning of metal carbides/graphite composites.—73-12429
- Etch masks of semimetallic amorphous carbon thin films produced by electron-beam sublimation of graphitic carbon.—73-07510
- Evaluations of the thermal shock resistances and fracture toughnesses of graphite and C-C composites by arc discharge heating.—73-05562
- Fatigue mechanisms in graphite/SiC composites at room and high temperature.—73-06419
- Fracture behavior of chemically-vapor-deposited SiC-coated graphite: I, Experimental results.—73-03296
- Fracture behavior of CVD SiC-coated graphite: II, Conditions for the onset of multiple cracking.—73-06432
- Friction force measurements on potential controlled graphite in an electrolyte environment.—73-15800
- Graphite as a substrate for diamond growth.—73-13076
- Graphite, natural and synthetic particles.—73-12277
- Graphite, synthetic.—73-12278
- Graphite/carbon articles for elevated temperature service and method of manufacture.—73-12466
- Graphite/polymide tabs for high-temperature tensile tests.—73-08403
- High stress–low stress type low cycle fatigue of an HTGR graphite.—73-13545
- High-thermal-conductivity diamond/non-diamond composite materials.—73-05303
- Influences of length of nipple on effective strength of socket at the joint of artificial graphite electrodes.—73-17363

Inside look at graphite.—73-15965
Intercalated hybrid graphite fiber composite.—73-05305
Interfaces in silicon carbide/graphite laminates.—73-03319
Judgments of macroscopic crack initiations of artificial graphite electrodes in fracture toughness test.—73-17367
Lateral forces during atomic force microscopy of graphite in air.—73-06241
Measurement methods of crack extension in HTGR graphite.—73-12161
Measurements of hydrophobic and hydrophilic surface sites by flow microcalorimetry.—73-16537
Microanalysis of a copper-to-graphite solder bond.—73-00250
Onset of crystal growth of bismuth on graphite: an atomic force microscopy study.—73-09497
Optical properties and equilibrium temperatures of titanium-nitride- and graphite-coated Langmuir probes for space application.—73-10259
Oxidation of calcia-stabilized zirconia–graphite refractories containing silicon and/or silicon carbide additives.—73-10750
Pack cemented SiC coating on graphite by experimental design.—73-13488
Powder mixture for monolithic refractories containing graphite and a method of making thereof.—73-00889
Properties of crystalline graphite.—73-00844
Regularities of pyrolytic boron nitride coating formation on a graphite matrix.—73-13442
Residual stresses in TiN-coated graphite.—73-17421
Si-Ti-C-O fiber addition to alumina-graphite refractories.—73-00862
SiC coating on carbon block by the self-propagating high-temperature synthesis method.—73-09319
Stress analysis of nipple in the joint of artificial graphite electrodes.—73-13596
Stress analysis of nippple in the joint of artificial graphite electrodes.—73-03357
Surface treatment of graphite for monolithic refractories.—73-00874
Symmetry of the unoccupied states in Cs graphite intercalation compounds by X-ray absorption.—73-02474
Synthesis, structure, and application of fluorine-graphite intercalation compound.—73-13317
Taimyrsk graphites for producing periclase-carbon ladle refractories.—73-00875
Thermal stress characteristics of graphite coated with $Y_2O_3$.—73-02713
Thermal stress characteristics of graphite coated with $Y_2O_3$.—73-12897
Tundish cover layer containing flux ingredients and expandable graphite.—73-04041
Ultrahigh vacuum scanning tunneling microscopy studies of platinum on graphite.—73-13463
Wear mechanism of fused dolomite–graphite brick.—73-07229

**green body,**
Binder distribution in $Si_3N_4$ ceramic green bodies studied by stray-field NMR imaging.—73-12925
Ceramic green bodies.—73-05200
Change of internal/pore structure in alumina green body during initial sintering.—73-05701
Clean burning green ceramic tape cast system using atactic polypropylene binder.—73-04192
Densified ceramic green sheet and stack having conductors therein.—73-04198
Domestic porcelain body with china stone of Pangyang, Shandong, China.—73-10828
Effect of added organics on mechanical properties of alumina green sheets prepared by doctor blade method.—73-12995
Effect of heat treatment on properties of alumina green sheet.—73-02784
Empirical density estimation of green body formed by uniaxial press.—73-02814
Empirical density estimation of green body formed by uniaxial press.—73-13045
Empirical density estimation of green body formed by uniaxial press.—73-13046
Magnetic plate punch actuator.—73-01861
Microwave characterization of a ceramic green body for an industrial drying process.—73-13137
Modified agar and process for preparing modified agar for use [in] ceramic composition to add green strength and/or improve other properties of a preform.—73-12087
Replacement of transmission mechanism of green brick cutter.—73-12187
Rheological behavior of suspension and properties of green sheet—effect of compatibility between dispersant and binder.—73-02998
Tensile strength of dried gel-cast green bodies.—73-17444

**grinding apparatus,**
From grinding device to roll turning machine—economic servicing of roller shells.—73-04923
Glaze preparation with an annular gap mill.—73-01785
Grinding composites into shape.—73-03415
Grinding with continuous dressing (CD) for improved performance of ceramic-bonded fused alumina grinding wheels: I.—73-01787
High-quality machining of ceramics.—73-16817
Jet mills in the silicate industries.—73-12039
Machine tools and combined machining technology for functional ceramics.—73-04928
Modern plant configurations for grinding granulated blast-furnace slag.—73-12047
New cement grinding plant at Dyckerhoff AG's Neubeckum plant.—73-03504
New raw grinding plant with integral roller press at the Hualien cement works in Taiwan.—73-15738
Opportunities for optimizing roller grinding mills.—73-12051
State of the art in raw meal grinding [in cement industry].—73-10162
Superabrasives for grinding alloys.—73-03416
Three-chamber grinding mixer with improved rotor.—73-01834
True vit: vitrified-bond cBN grinding wheels offer unique benefits.—73-05280

**grinding,**
Application of new grinding media to manufacture of wall and floor tiles.—73-12108
Aspects in grinding of ceramics.—73-16658
Ceramic grinding with self-sharpening diamond wheels.—73-05699
Chatter and surface pattern detection for cylindrical grinding using a fluid coupled acoustic emission [AE] sensor.—73-05026
Clinker grindability and textures of alite and belite.—73-13692
Conception of grinding circuits assisted by an ordinater.—73-01769
$C_1$-axis orientation on ground surface of tetragonal zirconia polycrystals.—73-12542
Design of ultraprecision grinding machines for ductile mode grinding of brittle materials.—73-06371
Diamond grinding of silicon nitride ceramic.—73-05742
Difference in the properties of mullite slurries and cast bodies with dispersant given during or after grinding.—73-16713
Ductile mode diamond grinding of optical glasses using electrolytic techniques.—73-14354
Effect of ductile-regime grinding on the strength of hot isostatically pressed silicon nitride.—73-06377
Effect of fine particles on the kinetics and energetics of grinding coarse particles.—73-01777
Effect of grinding on strength and surface integrity of silicon nitride: I.—73-06383
Effect of grinding on strength and surface integrity of silicon nitride: II.—73-06384
Effect of intergrinding and separate grinding of cement raw mix on the burning process.—73-03456
Effect of mechanical treatment on the crystal structure and thermal behavior of kaolinite.—73-12575
Effect of surface grinding on low-temperature degradation of 3Y-TZP.—73-09099
Efficient and precision grinding technique for ceramics with electrolytic in-process dressing (ELID).—73-04912
Efficient mechanochemical polishing for silicon nitride ceramics.—73-04913
Electrochemical dressing of bronze-bonded diamond grinding wheels.—73-04915
Estimation of grinding force for ceramics.—73-06406
Estimation of grinding force for ceramics.—73-16763
Finishing technology for ceramic materials.—73-02830
Flexural strength and surface grinding properties of alumina.—73-09599
Formation of surface layers of ceramics during grinding and sharpening.—73-06607
Formulation for the effect of surface grinding on strength degradation of ceramics.—73-13533
Grinding advanced ceramics.—73-15728
Grinding and properties of cements with several principal constituents.—73-09976
Grinding damage of ceramics and its effects on mechanical properties.—73-05826
Grinding forces and elastic recovery in ceramic materials.—73-12807
Grinding of ceramic materials: a model for energy consumption and force transformation.—73-05827
Grinding of glass: interaction of single events.—73-14401
Grinding strain of PLZT ceramics.—73-16805
Grinding, mixing, and blending—controlling the hazards.—73-12031
High-density sol-gel alumina-based abrasive vitreous bonded grinding wheel.—73-09771
High-efficiency and high-precision grinding of ceramics—practice and application of ELID grinding technique.—73-05839
High-efficiency grinding of structural ceramics.—73-05840
Highly efficient finishing of ceramics by helical scan grinding.—73-05843
Influence of ductile mode grinding on the strength of silicon-based ceramics.—73-06459
Influence of grinding medium on contamination of powdered silica.—73-01790
Influence of grinding on the surface properties of α-aluminas.—73-02868
Influence of microstructure on grindability of alumina ceramics.—73-06232
Influence of milling atmosphere on the magnetic properties of Nd-Fe-B alloy powders produced by mechanical grinding.—73-04617
Influence of the grinding of hard materials on porcelain and vitreous tableware.—73-01791
Magotteaux-Slegten-Sturtevant optimized cement grinding system.—73-10031
Mathematical modeling of an alumina hydrate grinding station.—73-01796
Mechanical activation of solid-state reactions by grinding and its importance for production of high-technology ceramics[—literature review].—73-13130
Mechanical grinding and reforming process of the Bi-2201 phase.—73-01600
New generation of diaphragms in tube mills for cement grinding.—73-12049
New pearl mills.—73-04934
On-machine electrodischarge truing for metal bond diamond grinding wheels for ceramics.—73-04937
Operation control of the CKP-R pregrinding system.—73-04938
Partial finish grinding: two-stage grinding of cement clinker.—73-00158
Precision form truing and dressing for aspheric ceramic mirror grinding.—73-04942
Preparation of ceramic bodies with special consideration given to the available grinding systems and processes.—73-08357
Properties of AE signal on machining with a surface grinder in glass and new ceramics.—73-02983
Retrofit of cement grinding circuit at Cementos Veracruz Plant, Mexico.—73-03532
Role of material and grinding parameters in grinding of alumina fiber-reinforced aluminum alloys.—73-06025
Roller mill technology.—73-04948
Sample preparation and particle measurement.—73-05084
Strength of ground ceramics at elevated temperature.—73-17434
Systems approach for grinding of ceramics.—73-06106
Systems approach for grinding of ceramics.—73-08365

**grog,**
Determination of the grog content in clay.—73-01892

**ground water,**
Reaction between cement and natural waters containing dissolved carbon dioxide.—73-10129

**grout/grouting,**
Effects of double mixing of high-quality grout for prestressed concrete.—73-09934
Permeability and porosity changes associated with cement grout carbonation.—73-00161

**growth,**
Aggregation at early stage of growth in thin films.—73-09011
Atomically layered growth and properties of high-temperature superconducting single-crystal films and superlattices.—73-07992
$Ba_2Fe_{10}Sn_2CoO_{22}$: growth, crystal structure (120 K), and magnetic properties.—73-02146
Diamond growth in subatmospheric dc plasma-gun reactors.—73-12983
Diamond growth in turbulent oxygen-acetylene flames.—73-12984
Diffusion-controlled growth or dissolution of spheres with variable temperature.—73-09401
Effect of atomic hydrogen and oxygen on diamond growth.—73-03134
Effect of silicon surface treatments on thin silicon nitride growth.—73-05770
Effects of pressure and temperature on epitaxial growth of InP on nonplanar substrates using OMVPE.—73-16753
Effects of pulling direction on directional growth of $YBa_2Cu_3O_{7-x}$ superconductors.—73-11741
Ellipsometric study of ambient-produced overlayer growth rate on $YBa_2Cu_3O_{7-x}$ films.—73-01542
Evaluation of $Zn\{N[Si(CH_3)_3]_2\}_2$ as a *p*-type dopant in OMVPE growth of ZnSe.—73-14894
Growth and properties of high-$T_c$ films in $Y_1Ba_2Cu_3O_{7-x}$ perovskite by molecular beam epitaxy.—73-01561
Growth by self-flux method and postannealing effect of $Bi_2Sr_2Ca_1Cu_2O_x$ single crystals.—73-01562
Growth of Bi-Sr-Ca-Cu-O-based superconducting whiskers.—73-01563
Growth of high-purity InP by chemical beam epitaxy [CBE].—73-11235
Growth of superconducting $Bi_2Sr_2Ca_{n-1}Cu_nO_x$ thin films by atomically layered epitaxy.—73-01564
Hydrothermal growth of quartz from ammonium fluoride solution.—73-16825
In situ laser light scattering for monitoring III-V semiconductor film growth by molecular beam epitaxy.—73-11265
Irradiation-induced growth of new phase inclusion.—73-02309
Layer-by-layer growth of oxide superconductor thin films by laser MBE and their superconducting characteristics.—73-15533
Layer-by-layer growth of SiC at low temperatures.—73-05894
Low-temperature GaAs growth regimes [observed] by real-time ellipsometry.—73-15022
Low-temperature growth and characterization of ZnSe films grown on GaAs.—73-04387
Model of diamond growth in low-pressure premixed flames.—73-13140
Molecular beam epitaxial growth as a self-organized critical phenomenon.—73-09216
New technique for the growth of superconducting $YBa_2Cu_3O_{6+\delta}$ crystals completely separated from flux.—73-01614
OMVPE regrowth of $CH_3I$ vapor-etched GaAs.—73-15065
Pattern dependence of selectivity in low-pressure selective epitaxial silicon growth.—73-15083
Peculiarities of SiC crystal growth under diffusion/mechanism of vapor transfer.—73-09234
Physics of film growth from the vapor phase.—73-05949
Reaction pathway for the growth of alumina on high surface area alumina and in ultrahigh vacuum by a reaction between trimethyl aluminum and water.—73-02988
Surface reaction kinetics of gas-phase diamond growth.—73-03031

**gunite,**
Calculation of the movement and heating of gunite particles in a gas-oxygen jet.—73-00781
Capillary stability of the particles of the primary gunite layer.—73-14576
Structure of calcareous gunite coatings of the converter linings.—73-00872

**gunning,**
Development and application of semidry hot gunning mix for converter.—73-10715
Gunning technology used to speed refractory plastic installation.—73-10732
Properties of CaO-rich gunning material for converter.—73-00843

**Gypsum,**
Changes in the physical properties of hydrated ß-$CaSO_4 \cdot H_2O$ by a drastic reduction of the water/plaster ratio.—73-00033
Commissioning and operation of Universal Cement's Ta-Fu gypsum board plant.—73-03445
Conveying desulfogypsum with hose belt conveyors and shuttle-floor trough conveyors.—73-01770
Design, construction, and first experiences with a production line of plasterboards.—73-00056
Early hydration of tricalcium aluminate-gypsum mixtures in the presence of sulfonated melamine formaldehyde superplasticizer.—73-00067
Effect of gypsum addition on the properties of clinkers with high $Na_2O$ content.—73-09906
Effect of gypsum on early hydration of blast-furnace slag blended cement.—73-09907
Effect of polyacrylic hydrazide addition on properties of compact molded gypsum.—73-09914
Efficient modified gypsum binder for manufacture of gypsum-concrete panels.—73-13715
Electrochemical method of controlling the technological process during manufacture of gypsum and gypsum concrete products.—73-13718
Factors affecting quality of gypsum molds for sanitary porcelain.—73-07253
Gypsum boards and their fire resistance.—73-09978
Gypsum calcination in superheated steam—a new process with lower energy demand and better product quality.—73-09979
Gypsum, the silent partner.—73-06664
Gypsum.—73-12279
Halite pseudomorphs after gypsum in bedded anhydrite—clue to gypsum-anhydrite relationships.—73-15905
Hydration of $4CaO \cdot Al_2O_3 \cdot Mn_2O_3$ in the absence and the presence of gypsum—a comparative study with the hydration of $4CaO \cdot Al_2O_3 \cdot Fe_2O_3$.—73-03478
Hydrothermal reactions in the system $3CaO \cdot SiO_2$-$CaSO_4 \cdot 2H_2O$-$H_2O$.—73-12598
Influence of temperature, particle size, and humidity on the gypsum dehydration process—investigations in a Cahn thermobalance.—73-10016
Ir spectroscopic study on exchange reaction between $H_2O$ and $D_2O$ (heavy water) in gypsum and lime.—73-10022
Low-cost α-calcium sulfate hemihydrate manufacturing process.—73-10029
Manufacture of heat-insulating material—gypsum-cork concrete.—73-13748
Measurement of temperature and time behavior to evaluate hydration characteristics of gypsum.—73-00133
Microstructure of glass-fiber-reinforced water-resistant gypsum binder composites.—73-03499
Mixing proportion, casting, and deformation behavior of decorating gypsum board.—73-10054
Monolithic wall structures of porous concrete based on gypsum-containing materials.—73-00147
Operating experience with the calcination of natural gypsum and desulfogypsum in a grinding and calcining plant.—73-00153
Physical nature of the slip casting process in porous molds.—73-01809
Physical properties of gypsum-cement plastic pastes and hardened mortars: II.—73-06695
Pneumatic handling conveys productivity at British Gypsum.—73-10082
Polymerization of acrylamide in the presence of calcium sulfate hemihydrate: compressive strength and microstructure of the composite.—73-10083
Preliminary study of very early hydration of superplasticized $C_3A$+gypsum by environmental SEM.—73-10090
Preparation of α-gypsum hemihydrate and control of its crystal shape under atmospheric pressure.—73-10091
Production and use of industrial calcium sulfates and the properties of gypsum building materials produced of them.—73-00170
Properties and structure of cementing materials from gypsum and fluidized furnace slag.—73-06703
Rapid hardening cement-gypsum composites for shotcreting on the base of Bulgarian raw materials: I, Introduction, materials, design of the compositions, strength, and deformability.—73-00179
Rapid hardening cement-gypsum composites for shotcreting on the base of Bulgarian raw materials: II, Structural investigations, tests in production conditions, conclusions.—73-00180
Reaction equation of $C_4AF$ hydration in the presence of gypsum.—73-10131
Reexamination of dissolution heat of gypsum and anhydrite in water at 25°C.—73-13773
Relationship between gypsum content, porosity, and strength in cement: I, Effect of $SO_3$ on the physical microstructure of portland cement mortars.—73-00183
Replacement of portlandite by gypsum in the interfacial zone and cracking related to crystallization pressure.—73-03529
Separation and determination of gypsum and hemihydrate in [portland] cement using DSC.—73-10148
Storage and metering of moist desulfogypsum at the Phoenix cement works.—73-10163
Supply and demand trend of gypsum, lime, and cement in Japan in 1992.—73-10174
Temperature distribution in a nailed gypsum-stud joint exposed to fire.—73-13787

**hafnia,**
Comparative study of the solid solutions in the $ZrO_2$-$HfO_2$-MgO(CaO) systems.—73-02165
Effective ionic radius of $Y^{3+}$ determined from lattice parameters of fluorite-type $HfO_2$ and $ZrO_2$ solid solutions.—73-05387
Phase diagram of the system $ZrO_2$-$HfO_2$.—73-05448
Quasi-binary systems $HFO_2$-$ZrO_2$, $ZrO_2$-$Y_2O_3$, and $HfO_2$-$Y_2O_3$.—73-02410
Solid solutions in the $ZrO_2$-$HfO_2$-$SiO_2$ system and obtaining new refractories from them.—73-00865
Sputtered $HfO_2$ thin films on silicon.—73-07357
Structural and superconducting properties of the $YBa_2Cu_3O_{7-\delta}$-$HfO_2$ system.—73-01665
Synthesis and X-ray structural analysis by the Rietveld method of orthorhombic hafnia.—73-02498

**hafnium carbide,**
Phase diagrams of ordered nonstoichiometric HfC and TiN.—73-05449
Preparation and formation processes of HfC fine powders by Mg thermite method.—73-05962
Preparation and formation processes of HfC fine powders by Mg thermite method.—73-16909

**hafnium,**
Effects of dopants on the formation of hafnon via a sol-gel route.—73-16750
Judd-Ofelt analysis and multiphonon relaxations of rare-earth ions in fluorohafnate glasses.—73-00508
Method for manufacturing a hafnium-containing silazane polymer and a method for manufacturing a ceramic from said polymer.—73-12486
Polymorphism of the dioxides of zirconium and hafnium.—73-02396
Preparation and formation process of $HfB_2$ fine powders by Mg thermite method.—73-05961
Preparation and formation process of $HfB_2$ fine powders by Mg thermite method.—73-16908
Preparation of HfN fine powders using thermite method by reduction of Mg.—73-05974
Preparation of HfN fine powders using thermite method by reduction with Mg.—73-13189
Spectrophotometric method for the determination of hafnium and aluminum in zirconia and zircon sand after separation of zirconium with the tri-*n*-butyl phosphate.—73-05087
Ultraviolet luminescence from hafnium pyrophosphate ($HfP_2O_7$).—73-02719
X-ray residual stress measurement in TiN, ZrN, and HfN films using the Seemann-Bohlin method.—73-16649

**halides,**
Anomalous electronic behavior in the layered halides $Pr_2X_5$ (X=Br, I).—73-01078
Crystal structure of $Rb_4CdBr_6$ and $Rb_4CdCl_6$.—73-16093
Effect of hydrostatic pressure on screw dislocation annihilation by cross gliding in alkali halide crystals.—73-17123
Electrical conductivity of glasses of the system $2PbO \cdot SiO_2$-$Pb(Hal', Hal'')_2$.—73-00473
Electrical conductivity of glasses of the systems $2PbO \cdot SiO_2$-$Pb(Hal', Hal'')_2$.—73-00474
Electrical conductivity of glasses of the systems $2PbO \cdot SiO_2$-$PbHal_2$ (Hal=Cl, Br, I).—73-00475
Electrical conductivity of glasses of the systems $2PbO \cdot SiO_2$-$PbHal_2$ (Hal=Cl, Br, I).—73-00476
Glass formation in systems based on AgX (X=Cl, Br, or I).—73-00346
Glass formation in systems based on AgX (X=Cl, Br, or I).—73-10541
Inelastic light scattering in halide glasses at high temperatures: boson peaks and the degree of disorder.—73-07038
Ionic conductivity and structure of cuprous-halide-containing glasses.—73-14713
Light scattering in halide glasses at high temperatures: anomalous scattering and nanoscale inhomogeneities.—73-07044
Luminescence of ytterbium(II) in alkaline-earth fluorohalides.—73-02633
Method for producing an optical fiber of halide glass, particularly an infrared permeable fiber of heavy metal fluoride glass.—73-03943
Neutron diffraction investigation of magnetic phase transitions to long-range antiferromagnetic ordering in the free-electron praseodymium halides $Pr_2X_5$ (X=Br, I).—73-02343
Optical spectra of $In^+$ centers in the NaF crystal.—73-02656
Preparation and optical study of zeolite-AgI inclusion complexes.—73-08709
Preparation and structures of the alkaline-earth iron oxyhalides.—73-02403
Properties of mixed cadmium halide glasses.—73-14260
Rare-earth-doped, stabilized cadmium halide glasses.—73-00761
Refractive index measurement of the TeX glasses.—73-07070
Relationship between structural factor and photochromic behavior of AgX-containing glasses.—73-14271
Spectroscopic observations of temperature and composition effects on tellurium oxyhalide glasses.—73-10402
Structure and electrical properties of $Cu^+$ ion-conducting oxyhalide glasses in the system $CuI$-$CuPO_3$-$Cu_2MoO_4$.—73-01028

**Hall effect,**
Anomalous photo-Hall effect in *p*-type InAs crystals.—73-04243
Disappearance of Hall resistance in one-unit-cell thick $YBa_2Cu_3O_{7-\delta}$: evidence of free vortex-antivortex excitation.—73-08020
Effect of both irradiation energy and annealing temperatures on Hall voltage of new concrete mixer.—73-00072
Hall effect near the vortex glass transition in high-temperature superconductors.—73-11779
Hall effect of vortices parallel to $CuO_2$ layers and the origin of the negative Hall anomaly in $YBa_2Cu_3O_{7-\delta}$.—73-15495
Inelastic light scattering in the regime of the fractional quantum Hall effect.—73-05581
Nonlinear Hall resistivity in $YBa_2Cu_3O_{7-\delta}$ films near the vortex-glass transition.—73-11846
Novel anomalous contribution to the Hall effect in some high-$T_c$ compounds.—73-01619
Universal behavior of the Hall resistivity of single-crystalline $Bi_2Sr_2CaCu_2O_x$ in a thermally activated flux flow regime.—73-15661

**halloysite,**
Synthesis of kaolinite and transformation of halloysite by hydrothermal reaction.—73-09357

**halogenides,**
Characterization of intermediate-range order in superionic $AgPO_3$-AgX (X=I, Br, Cl) glasses by neutron diffraction.—73-00938
Crystallochemical analysis of superionic state in copper and silver halogenides.—73-16101
Manufacturing process of halogen lamps.—73-00657

**hardening,**
Characteristics of hydrated alite in hardened cement body.—73-00034
Creep and shrinkage of ultra-rapid-hardening cement concrete.—73-09873
Development of methods and the technology of hardening glass-ceramics for structural use.—73-00611
Effect of electric current on concrete hardening.—73-13708
Features of production of cordierite glass-ceramics applicable for hardening.—73-00626
Hardening characteristics of some clay minerals.—73-02614
Hardening of glass-ceramics.—73-00638
Hardness–grain-size relation in ceramics.—73-16502
Hydromechanical activation of binder hardening.—73-13733
Increase in hardness and specific shock viscosity of glass-ceramics by the method of combined hardening.—73-00643
Microstructure of hardened cement paste—a new interpretation.—73-00144
Properties of hardened cement paste and reinforcing bars upon cooling from elevated temperatures.—73-13769

**hardness,**
Boron carbide.—73-12260
Brinellium—a harder, stronger, and more wettable form of aluminum oxide.—73-15920
Hardness and elastic [modulus] of TiN based on continuous indentation technique and new correlation.—73-00237
Hot hardness of ceramic cutting tools using depth of penetration measurements.—73-08405
Microhardness of fused silicas.—73-14225
New hardness standard reference materials (SRM's) for advanced ceramics.—73-15824
Poor man's scratch tester.—73-15831
Precision ultra-microhardness measurements of sol-gel-derived zirconia thin films.—73-03343
Reliable hardness testing with a fast ultrasonic method (UCI).—73-12185
Textured growth and orientation dependence of hardness measurement on superconducting $Bi_2Sr_2CaCu_2O_x$.—73-04820
Two-dimensional finite element method simulation of Vickers indentation of hardness measurements on TiN-coated steel.—73-06869
Vickers hardness anisotropy in $RFeO_3$ (R=Yb, Dy) single crystals.—73-07981

**hazardous wastes,**
Government regulation increases for chrome-bearing hazardous waste.—73-17484
Ordinary-portland-cement-based solidification of toxic wastes: the role of OPC reviewed.—73-03512
Pilot-scale vitrification laboratory for treatability studies on hazardous and mixed wastes.—73-09739

**health,**
Measuring lead in man.—73-13629

**heat capacity,**
Accurate measurement of heat capacities using oscillating DSC (differential scanning calorimetry).—73-12101
Heat capacity of hydrous cordierite above 295 K.—73-08634

**heat exchangers,**
Fabrication of ceramic heat exchanger cores by doctor blade process.—73-05801
Finned-tube heat exchanger.—73-02095
Fluidized-bed heat exchangers operating with small-particle solids.—73-16499
High-temperature life prediction of monolithic silicon carbide heat exchanger tubes.—73-17347
Prototype ceramic composite heat exchanger for use in incineration promises energy savings.—73-08523
Very-high-temperature [porous ceramic foam] heat exchanger.—73-15958

**heat resistance,**
Effect of thermal cycling processes on the structure and properties of heat-resistant ceramics.—73-02590
Experimental investigation of optical-thermophysical characteristics of condensed combustion products and heat-resistant materials.—73-12136
Heat resistance of $Si_3N_4$ joined with Ni-Cr alloy interlayer.—73-00238
Heat-resistant compositions based on a three-component binder suspension.—73-10733
Heat-resistant expansion member.—73-02043
Heat-resistant hermetic packages for electronic components.—73-01053
Increasing heat resistance of ceramic materials based on silicon nitride.—73-02619

**heat sink,**
Basalt-block heat-storage plant.—73-12315

**heat transfer,**
Calculation of heat transfer in a tank-type glassmaking furnace with correction for selectivity of the radiation of furnace gases.—73-12211
Experimental determination of the volumetric heat transfer coefficient between stream of air and ceramic foam.—73-05564

Heat flow simulation—the innovative potential of mathematical simulation of heat balances for electronic parts.—73-02615
Heat transfer by alkali metals and the possibilities of use in the glass furnace heating system.—73-05118
Heat transfer mathematical model within a ceramic body during firing process.—73-13085
Improving heat transfer between gas and solid in suspended state—a new material sealing and dispersion device.—73-12147
Measuring furnace/sample heat transfer coefficients.—73-15814
Radiative heat transfer in glass manufacture—one- and two-dimensional problems.—73-07167
Temperature dependence of so-called heat transfer coefficient under thermal shock test.—73-08976
Temperature dependence of so-called heat transfer coefficient under thermal shock test.—73-16611
Two-dimensional simulation of glass flow and heat transfer in a glass-melting furnace after air bubbling.—73-03898

**heat treatment,**
Development and application of multimeasured control of thermal-humid treatment of concrete.—73-00059
Effect of heat treatment on inner product CSH.—73-09908
Effect of heat treatment on the infrared absorption spectra of Sr-Na borosilicate glass.—73-03723
Effects of heat treatment on mechanical and thermal properties of CVD-densified Novoltex carbon/carbon composites.—73-12428
Heat strengthening vs tempering.—73-07136
Heat treatment of strengthened epoxy acrylate-coated silica light guides.—73-00639
Heating conditions to synthesize rod-shaped ß-$LiAlO_2$ crystals.—73-05838
Heliothermal treatment of construction thermal-insulating keramzit concrete.—73-00099
Influence of mass exchanging processes on forming of concrete structure under thermal-humid treatment.—73-00117
Method and apparatus for heat-strengthening glass sheets.—73-00739
Optimization of heat-treatment schedules for oxynitride glass-ceramics.—73-00675
Performance criterion for glass heat treatment.—73-00678
Presintering heat treatment, densification, and mechanical properties of silicon carbide.—73-13213
Process for thermal treatment of glass fiber preform.—73-10659
Theory of heat treatment of resin-bonded refractories.—73-04023
Thermopower of $YBa_2Cu_3O_{7-\delta}$ and its changes during heat treatment.—73-08257

**heat,**
Application of a mass heat extractor to increase the pull of a forehearth.—73-07107
Controlling the composition of the heat-insulating mixtures used for teeming steels.—73-00792
Determination of cement content in a concrete mix by heat flow measurement.—73-00057
Effect of aluminate ions on the heat of hydration of cementitious waste forms.—73-09898
Guaranteed heat transfer coefficients in quenching glass.—73-00496
Heat pulse transport in single-phase ceramics.—73-02616
Improvements of basic knowledge of heat transfer in regenerators based on industrial-scale experiments.—73-15878
Influences of heat consumption during glass melting in tank furnaces.—73-15884
Integrated recuperation of heat between kiln and atomizer.—73-12228
Letting light in; keeping heat out.—73-03796
Optomagnetocaloric effect.—73-15353
Simulated heat improves kiln performance.—73-05130

**heaters/heating,**
Calculation of the movement and heating of gunite particles in a gas-oxygen jet.—73-00781
Ceramic heater.—73-02091
Ceramic heater.—73-05291
Cermet surface-distributive heaters based on nickel-titanium powder.—73-00214
Computation of the critical speed of heating glass.—73-14338
Densification and grain growth of alumina heated by microwave.—73-05732
Direct cyclic electric heating of glass melt.—73-00612
Direct electrical heating of ceramic matrix composites to determine tensile-stressed oxidation properties.—73-12132
Double-layered ceramic heater.—73-15940
Effect of heating on the characteristic loss spectra of the high-temperature superconductor $YBa_2Cu_3O_{7-\delta}$.—73-04701
Effect of microwave heating on the mass transport in ceramics.—73-06156
Formation of hot spots in microwave-heated ceramic rods.—73-05813
Glow plug with improved composite sintered silicon nitride ceramic heater.—73-11020
Honeycomb heater and catalytic converter.—73-15927
Interaction of titanium with single-crystal silicon during rapid electron beam heating.—73-00243
Microwave heating characteristics of rutile.—73-02645
Microwave heating of ceramics in a single-mode mitered bend cavity.—73-05917
Microwave heating of zeolites.—73-13138
Microwave hybrid heating of alumina filaments.—73-05918
Modifications on the thermal performance of combustion-heated continuous glass-melting furnaces.—73-15886
Optimization of direct electrical heating of the forehearth.—73-05126
Pressure exerted by the packing in a blast-furnace air heater on the wall and supporting surface.—73-00839
Rapid heating of ultrafine $Si_3N_4$ powder compacts under controlled thermograms.—73-09290
Rapid-rate sintering of anatase-type $TiO_2$ by microwave heating.—73-16969
Rf-assisted process heating.—73-01969
Substrate heating effect on the growth of a CdTe film on an InSb substrate by vacuum evaporation.—73-01330
Transient temperature behavior of a sphere heated by microwaves.—73-06125

**heating elements,**
Vacuum-molded ceramic fiber electric radiant heating unit with resistance heating coils internally free of fibers.—73-12252

**heavy clay products,**
Development and trends in the erection of heavy clay works.—73-04910
Firing technology in the heavy clay industry: II.—73-01950
Microstructural compromise in the heavy clay industry.—73-03981
Trends in heavy clay technology.—73-10693

**heavy metals,**
Defect centers in heavy-metal fluoride glasses: a review.—73-06902
Development of heavy-metal fluorides with electrofunctionality by reactions under fluorine or hydrogen-fluoride gas atmosphere.—73-14688
Effects of the heavy metal ions on the hydration and microstructure of the cement paste.—73-13714
Heavy metals issues dominate SGCD [Society of Glass and Ceramic Decorators] legislative meeting.—73-09718
Method of manufacturing a heavy metal fluoride glass composition.—73-03950

**helium,**
Heat diffusion through a glass substrate coated by a thin $^4He$ film.—73-00497
Heat exchange during the boiling of helium on the surface of $YBa_2Cu_3O_7$ HTSC ceramics.—73-01567

**hematite,**
Anisotropy of electrical properties in α-$Fe_2O_3$ ceramics.—73-16410
Dependence of magnetooptical activity on exchange fields in crystals with $FeO_6^{9-}$ octacomplexes.—73-15312
Low-frequency dielectric relaxation of hematite and silica sols.—73-08902
Mossbauer study of the hematite phase formed during synthesis of ferri-diopsides.—73-02335
Sintering mechanism of Western Australian pisolitic limonite.—73-09327

**heterogeneity,**
Composition microheterogeneity of uvarovite-grossularite garnets.—73-16060
Computer simulation of fracture sequences in heterogeneous materials.—73-03247
Heterogeneity of carbonatites.—73-08635
Significance of nonelastic deformation in the thermal shock fracture of heterogeneous ceramic materials [HCM's].—73-06518
Structural and induced heterogeneity at the surface of some $SiO_2$ polymorphs from the enthalpy of adsorption of various molecules.—73-16319
Temkin-type model for the description of induced heterogeneity: CO adsorption on group IV transition metal dioxides.—73-08770

**heterostructures,**
Amphoteric doping of Si in InAlAs/InGaAs/InP(311)A heterostructures grown by molecular beam epitaxy.—73-11065
Atomic layer epitaxy for heterostructures.—73-07386
Deep-level transient spectroscopy and admittance spectroscopy of $Si_{1-x}Ge_xSi$ grown by gas-source molecular beam epitaxy.—73-11131
Effect of nature and composition of quaternary $A^{III}B^V$ solid solutions on formation of dislocation structure in epitaxial heterostructures.—73-01136
Electrical properties of oxide-nitride-oxide, ONO, heterostructures fabricated by low-temperature [300°C] remote PECVD.—73-04086
Electronic properties of strained heterostructures.—73-07498
Growth of semiconductor heterostructures on patterned substrates: defect reduction and nanostructures.—73-14952
Heterojunctions of InP with amorphous hydrogenated silicon.—73-11242
Injection-contact phenomena in a heterostructure made of disordered ZnSe.—73-07609
Interface interaction and heteroepitaxy in InPAsSb system.—73-16185
Nature of the temperature dependence of the threshold current density of long-wave-length InAsSbP/InAs and InAsSbP/InAsSb double heterostructure lasers.—73-07690
Photoluminescence study of $Si_{1-y}Ge_y$/Si heterostructures grown by molecular beam epitaxy and ultrahigh vacuum chemical vapor deposition.—73-11388
Quantum wells, excitons, and lasers at blue-green wavelengths in ZnSe-based heterostructures.—73-07757
Si-Ge strained layer heterostructures: device possibilities and process limitations.—73-04479
SNS heterojunctions with new combinations of materials.—73-11899

**high temperature,**
Behavior of elastic constants, refractive index, and lattice parameter of cubic zirconia at high temperatures.—73-08813
Fracture toughness measurement by indentation fracture method at elevated temperature [≤1200°C].—73-06439
High-temperature abrasion of refractories.—73-00820
High-temperature superconducting ceramics.—73-11787
High-temperature superconductivity—current status, our theoretical and experimental work.—73-11788
Strength of ground ceramics at elevated temperature.—73-17434
Technology of high-temperature furnaces.—73-05132
Young's modulus of ceramics at elevated temperature: I.—73-06553
Young's modulus of ceramics at elevated temperature: I.—73-13612

**history,**
200 years of industrial and commercial building with bricks.—73-00015
Ancient Venetian glass: an analytical confirmation of historical sources.—73-13661
Casting from the beginning up to present-day technology.—73-08324
Ceramic innovations—disappeared and rediscovered.—73-03384
Ceramic sequence at Nakbe, Guatemala.—73-06612
Development of kiln construction for the ceramic industry: 1950-1990.—73-12215
Development of thermometer production in a precision glass process at about the turn of the century.—73-01893
Early Bronze Age III pottery from Bahcehisar: the significance of the Pre-Hittite sequence in the Eskisehir Plain, northwestern Australia.—73-09781
Experimental reconstruction of medieval glass technology.—73-13668
Forty years of ceramic development in France 1950-1990.—73-13621
Forty years of development of ceramics in France (1950-1990).—73-06569
Great son of a great father—on the occasion of the 100th birthday of Erich Schott.—73-03394
Heavy-duty bucket elevators—a historical review with current state of development.—73-12034
History and economic aspects of industrial SiC manufacture.—73-12432
History of chamotes: 1950-1990.—73-12280
History of quicklime production and use from early times to the industrial revolution.—73-09982
History of the ceramic whitewares industry [in Hungary], 1920-1994.—73-00911
Ongoing example of advanced ceramics development.—73-12438
Optical glass development, 1875-1918: Germany's contributions.—73-03402
Origins and development of the ceramic industry in the "Kannenbackerland" [Germany].—73-00012
Otto Schott and the invention of borosilicate glass.—73-09735
Pewabic pottery—historic and contemporary: I.—73-09736
Refractories history—1950 to 1990.—73-10761
What does the future material for tableware look like.—73-10908
William Vernon Harcourt: pioneer glass scientist and founder of the British Association.—73-06598

**hole carrier,**
Nature of the hole traps in reoxidized nitrided oxide gate dielectrics.—73-07345
Positive hole-type charge carriers on oxide materials.—73-13363

**holes,**
Effective mass of holes in ferromagnetic semiconductor $HgCr_2Se_4$.—73-14860
Hole "spin" relaxation in the semiconductor quantum wells.—73-07568
Hole distribution and pressure effect in YBCO superconductor ionic model study.—73-11791
Hole frustration contribution to the magnetic susceptibility of $CuO_2$ layers in high-temperature superconductors.—73-08097
Metallic hole conduction in CuS.—73-02327
Photochemical hole burning in optical materials.—73-02919
Picosecond capture of photoexcited holes by shallow acceptors in *p*-type GaAs.—73-07734
Quantum chemical simulation of the self-trapped hole in α-$N_2O_3$ crystals.—73-08716
Stresses around a partly microcracked hole in certain ceramic materials under internal pressure.—73-03358
Theory of the self-trapped hole in a-$SiO_2$.—73-12718
XAS study of hole density and symmetry in a $Bi_2Sr_2CaCu_2O_{8+\delta}$ single crystal.—73-05526

**hollandite,**
Modulated structure of new natural member of hollandite family.—73-16221
Synthesis and properties of hollandite-like $Ba_xLi_{(2x+4y)}Ti_{(8-2x-y)}O_{16}$.—73-12711
Three-dimensional/one-dimensional transition in the $Cs^+$ sublattice of the mixed valence $CsTi_8O_{16}$ hollandite: structures at 297 K and 673 K.—73-02527

**holmium,**
Amplified spontaneous emission in $Ho^{3+}$-doped ZBLA fibers.—73-06995
Analysis of the optical spectra of trivalent holmium in yttrium scandium gallium garnet.—73-12744
Collective magnetic excitations of $Ho^{3+}$ ions in grain-aligned $HoBa_2Cu_3O_7$.—73-04681
Combined electronic-nuclear magnetic ordering of the $Ho^{3+}$ ions and magnetic stacking faults in the high-$T_c$ superconductor $HoBa_2Cu_3O_7$.—73-08002
Critical current density and magnetic properties of a melt-processed $Y_{0.8}Ho_{0.2}Ba_2Cu_3O_x$ superconductor.—73-11708
Crystal structure of holmium aluminate, $HoAlO_3$.—73-16084
Crystal structure of new $HoNi_2B_2$ boride.—73-02204
Effect of Ho addition on properties of Y-system superconductors.—73-04702
Electronic transitions of Ho in $Pb_2Sr_2HoCu_3O_8$ observed by inelastic neutron scattering.—73-04715

Exchange-relativistic interactions and anisotropy of circular magnetooptics in Er and Ho orthoferrites.—73-15323
Exchange-relativistic interactions and magnetooptical properties of orthoferrites.—73-01459
Faraday effect and magnetic moment dynamics in holmium ferrite garnet in superstrong magnetic field.—73-15325
Higher harmonic susceptibilities of Ho ceramic superconductors.—73-01570
Holmium in ZBLAN: interplay of lasing, colasing, and excited state absorption.—73-07035
Magnetic circular X-ray dichroism at high magnetic field and low temperature in ferrimagnetic $HoCo_2$ and paramagnetic $Ho_2O_3$.—73-07949
Magnetic properties of $xHo_2O_3(1-x)[3B_2O_3{\cdot}PbO]$ glasses.—73-11661
Magnetic relaxation of positive muon spin in $HoBa_2Cu_3O_{7-\delta}$ and $Ho_{0.5}Y_{0.5}Ba_2Cu_3O_{7-\delta}$ compounds.—73-15545
Magnetic structure of $Ho_2BaNiO_5$.—73-07957
New type of $Ho_2Ni_{10}B_5$ boride structure.—73-02355
NMR study of spin reorientation in $Ho_{0.07}Y_{0.093}CrO_3$.—73-16231
Normal state and superconducting properties of $Bi_2Sr_2Ca_{1-x}Ho_xCu_2O_y$ compounds.—73-11847
Operation of resonantly pumped Tm:Ho:YAG in active mirror mode.—73-12843
Phase relations in the system Cu-Ho-O and stability of $Cu_2Ho_2O_5$.—73-05450
Strength and fracture toughness of barium titanate ceramics.—73-13591
Superconducting properties of $HoBa_2Cu_3O_7/SrTiO_3/HoBa_2Cu_3O_7$ heterostructures.—73-01676
System $Ho_2S_3$-$In_2S_3$.—73-12715

**holograms/holography,**
Characterization of near-field holography grating masks for optoelectronics fabricated by electron beam lithography.—73-07408
Electron holographic characterization of ferroelectric thin films.—73-04550
Electron holography applied to the study of ceramic materials.—73-08398
Experimental effects of light intensity modulation on the recording and erasure of holographic gratings in BSO crystals.—73-16495
Hologram recording in GaAs through EL2 intracenter absorption.—73-01189
Holographic evaluation of elastic constants.—73-15803
Holographic recording in $Ge_{1-x}Sn_xSe_2$ glassy films.—73-10446
Magnetic lines of force [observed] by electron holography.—73-05063
Photoelectron holography of Si(100)-[2×1] and other surface and thin-film structures.—73-07717
Properties of volume phase holograms on polychromatic glasses.—73-00536
Wavelength multiplexed holographic storage in a sensitive photorefractive crystal using a visible-light tunable diode laser.—73-11629

**homogeneity,**
3-D modeling of homogenization in glass melts.—73-00716
Chemical homogeneity of plasma-sprayed materials.—73-09040
Control of homogeneity of $LiNbO_3$ crystals by measuring the external angle of scalar synchronism of the SHG.—73-07872
Effect of preliminary mechanical treatment on the microhomogenization during heating of hydrous gels as precursors for lead titanate.—73-05767
Evaluation of homogeneity for sintered hydroxyapatite by CT [computed tomography] values.—73-02817
Evaluation of homogeneity for sintered hydroxyapatite by CT-values.—73-13396
Homogeneity in $Si_3N_4$ ceramics [examined] by ultrasonic pulse transmission method.—73-17144
Homogeneity of $Bi_2Sr_2Ca_1Cu_2O_{8+\delta}$ crystal boules grown by the traveling solvent floating zone method [TSFZ].—73-15504
Homogeneity of ceramics prepared by crystallizing $Al_2O_3$-$ZrO_2$-$Y_2O_3$ melts with near-stoichiometric composition.—73-05845
Homogenization theory for fiber composites with imperfect interface at elevated temperatures.—73-03597
Influence of tunnel dryer system on drying homogeneity.—73-12226
Interferometric determination of the homogeneity of float glass.—73-14413
Laboratory melting of glasses to commercial standards of homogeneity.—73-00651
Structural homogeneity of boron carbide thin films fabricated using plasma-enhanced chemical vapor deposition from $B_2H_6$+$CH_4$.—73-12698
Superconducting and structural properties of homogeneous BiSrCaCuO (2212) single crystals prepared by solution growth.—73-08215
Welding glass and its mechanical homogenization with noncooled metal Ni-Cr stirrers.—73-00721

**honeycomb,**
Apparatus for producing dies for extruding ceramic honeycomb bodies.—73-15763
Expansion reduction of cordierite.—73-12363
Honeycomb heater and catalytic converter.—73-15927
Method for producing a honeycomb-shaped ceramic.—73-04988
Method for producing dies for extruding ceramic honeycomb.—73-04991
Method of firing ceramic honeycomb structure.—73-04993
Process for firing ceramic honeycomb structural bodies.—73-05242
Rotary dielectric drying of ceramic honeycomb ware.—73-05141

**hot isostatic pressing,**
Effect of HIPing on defect and strength characteristics in Y-TZP.—73-02786
Effect of HIPing on defect and strength characteristics in Y-TZP.—73-13007
Effects of prior cyclic loading on the strength of HIPed silicon nitride.—73-17300
Grain morphology and intergranular structure of $Si_3N_4$-based ceramics formed by HIP.—73-06222
Hot isostatic pressing of fluoride glasses.—73-07138
Mechanical properties of hot isostatically pressed zirconium nitride materials.—73-03332
Microstructure and grain-boundary characterization of HIPed high-purity silicon nitride.—73-09481
Preparation of dense silicon oxynitride ceramics by HIPing.—73-13186
Preparation of high-density perovskite $LaNiO_3$ by using HIP.—73-02952
Removal method for glass adhered to sintered object during hot isostatic pressing process.—73-05010

**hot-pressing,**
Hot-pressed cordierite glass-ceramics.—73-00500
Hot-pressing of fused silica.—73-10550
Hot-pressing of silicon nitride containing low amounts of $Y_2O_3$ and AlN.—73-05848
Making hot-pressed silicon nitride by use of low-density reaction-bonded body.—73-12478
Method of forming ceramic layer on metallic body.—73-10327
Reaction hot-pressing of α´- and ß´-SiAlON ceramics.—73-06011
Relation between microstructure and color tone of skin layer and bulk area of silicon nitride ceramics.—73-13444
Thermoelectric property and *p-n* transition mechanism of hot-pressed $Bi_{4/3}Sb_{2/3}Te_2$.—73-11481

**humidity,**
Calculation of concrete humidity in reinforced concrete constructions.—73-13685
Effect of water vapor in air on friction and wear of $Al_2O_3$, $Si_3N_4$, and partially stabilized zirconia sliding on various metals.—73-09583
High-temperature humidity sensor using a limiting current type plane oxygen sensor.—73-11250
High-temperature humidity sensor using a limiting-current-type plane oxygen sensor.—73-01188
Humidity dependence on electrical resistance of cement materials.—73-09985
Humidity sensitivity of $La^{3+}$-doped $BaTiO_3$ semiconductor thin film deposited by pulsed excimer laser ablation.—73-01190
Humidity sensor of semiconductor ceramics.—73-11251
Humidity sensor using $Al_2O_3$, $TiO_2$, and $SnO_2$ prepared by sol-gel method.—73-04357
Humidity sensor using $Al_2O_3$, $TiO_2$, and $SnO_2$ prepared by sol-gel method.—73-11252
Humidity sensor using porous $xLi_2O{\cdot}Al_2O_3{\cdot}2SiO_2$.—73-11253
Humidity-sensing effects of the layered oxides $SrO{\cdot}(LaScO_3)_n$ ($n$=1, 2, ∞).—73-07572
Humidity-sensing effects of the layered oxides $SrO(LaScO_3)_n$ ($n$=1, 2, ∞).—73-14969
Influence of mass exchanging processes on forming of concrete structure under thermal-humid treatment.—73-00117

**hydrates,**
Change in S–O bonding states of calcium sulfite hemihydrate during thermal reactions in air.—73-09844
Composition and structure of phases formed in the process of hydrated antimony pentoxide [HAP] thermolysis.—73-02170
Construction and operation of a hydrated lime plant for flue gas desulfurization of the Siersdorf power station.—73-09868
Crystal structure of neodymium and europium chromate heptahydrate: synthesis, infrared spectra, and thermal behavior of lanthanoid chromate heptahydrates, $[Ln_2(CrO_4)_3(H_2O)_5]{\cdot}2H_2O$ (Ln=La, Pr, Nd, Sm, Eu, Gd).—73-02203
Decomposition of praseodymium hydroxy carbonate and praseodymium carbonate hydrate.—73-02227
Dielectric relaxations (1 MHz–10 GHz) in tungsten trioxide hydrates synthesized by sol-gel process.—73-02573
Effects of synthesis conditions on structure and ion-exchange properties of hydrated titanium dioxide.—73-16755
Equilibrium of the protonic species in hydrates of some heteropolyacids at elevated temperatures.—73-00964
Growth mechanism and properties of sectorlike magnesium hydroxide sulfate hydrate.—73-17142
Ion diffusivity in cement hydrates containing silicious mineral admixtures.—73-10021
Low-cost α-calcium sulfate hemihydrate manufacturing process.—73-10029
Mathematical modeling of an alumina hydrate grinding station.—73-01796
Physicochemical investigation of hydrated titanium dioxide and products of sorption of ions $As^V$ and $Na^+$ on it.—73-16273
Preparation of α-gypsum hemihydrate and control of its crystal shape under atmospheric pressure.—73-10091
Production and nature of crystal hydrates of double hydrophosphates of manganese and cobalt.—73-16281
Rapid conversion of calcium aluminate cement hydates, as revealed by synchrotron energy-dispersive diffraction.—73-10126
Structure of X-ray-amorphous hydrated titanium dioxide.—73-16341
Synthesis and crystal structure of a new nickel selenite hydrate $Ni_3(SeO_3)_3{\cdot}H_2O$.—73-02480
Synthesis and property of copper(II) hydrogen phosphate.—73-10175
Thermodynamic investigation of the $CaO$-$Al_2O_3$-$CaSO_4$-$H_2O$ system at 25°C and the influence of $Na_2O$.—73-03546
Transformations of hydrate phases at low temperature.—73-13790

**hydration,**
CaO clinker with improved antihydration property.—73-00782
Comparison between the hydration processes of tricalcium silicate and beta-dicalcium silicate.—73-00046
Development of microstructures in plain cement pastes hydrated at different temperatures.—73-00061
Effects of blast-furnace slag and fly ash on the hydration of portland cement.—73-00080
Effects of clinkering temperature and silicate phase on the hydration of $C_{11}A_7{\cdot}CaF_2$.—73-09931
Effects of complex additives on hydration of fly ash.—73-09103
Estimations of degree of hydration of portland cement pastes.—73-03467
Hydration kinetics of calcium aluminate phases in the presence of various ratios of $Ca^{2+}$ and $SO_4^{2-}$ ions in the liquid phase.—73-00102
Hydration kinetics of cement paste containing concrete admixture.—73-00103
Hydration of $4CaO{\cdot}Al_2O_3{\cdot}Mn_2O_3$ in the absence and the presence of gypsum—a comparative study with the hydration of $4CaO{\cdot}Al_2O_3{\cdot}Fe_2O_3$.—73-03478
Hydration of alite at different pH's.—73-09986
Hydration of alkali-slag cements at 150°.—73-00104
Hydration of $C_3A$ in the presence of additives replacing the effects of gypsum.—73-09988
Hydration of $C_3A$ in the presence of $Ca(OH)_2$, $CaSO_4{\cdot}2H_2O$, and $CaCO_3$.—73-00105
Hydration of calcium dialuminate and its mixtures containing slags.—73-09989
Hydration of highly reactive ß-$C_2S$ prepared from hillebrandite.—73-09991
Hydration of Sr- and Ba-bearing sulfoaluminates in the presence of sulfates.—73-06666
Hydration of tetracalcium phosphate.—73-06667
Hydration process of cement pastes studied by means of oscillatory rheological techniques.—73-00107
Hydration properties of α-tricalcium phosphate in tris solution.—73-16512
Impedance spectroscopy of hydrating cement-based materials: measurement, interpretation, and application.—73-13734
Influence of alumina on the hydration of monocalcium aluminate at different temperatures.—73-13737
Influence of different addition on portland cement hydration heat.—73-03485
Influence of particle sizes of individual minerals on the hydration processes in the system $C_2S$-$C_4A_3\bar{S}$-$C\bar{S}$ [dicalcium silicate-tetracalcium trialuminate sulfate-anhydrite].—73-03486
Influence of the hydration process upon microwave properties of cements.—73-00126
Instrumental investigations of hydration of Class J oil well cement.—73-06679
Kinetics of portland cement hydration in the presence of selected chemical admixtures.—73-06681
Kinetics of tricalcium aluminate and tetracalcium aluminoferrite hydration in the presence of calcium sulfate.—73-00130
Measurement of temperature and time behavior to evaluate hydration characteristics of gypsum.—73-00133
Model for the variations in solution chemistry during tricalcium silicate hydration.—73-10055
Polymerization of acrylamide in the presence of calcium sulfate hemihydrate: compressive strength and microstructure of the composite.—73-10083
Proton high-resolution solid-state NMR study of $C_3S$ [tricalcium silicate] hydration.—73-03522
Proton NMR relaxation study of calcium aluminate [CA] hydration reactions.—73-03523
Rationalized ac impedance model for microstructural characterization of hydrating cement systems.—73-00182
Retardation of calcium silicate and calcium aluminate hydration at 150°C, 86.2 MPa.—73-03530
Simple chemical clock reactions: application to cement hydration.—73-10152
Very early hydration of dicalcium silicate polymorphs.—73-00205

**hydraulics,**
New type [of] hydraulic pusher.—73-12173
Range of Sacmi presses.—73-08360
Structural model and hydraulic activity of granulated cinder in electric factories.—73-00194

**hydrides,**
Crystal growth and structural study of the new series $Y(OH)CrO_4$, $Dy$-$Lu(OH)CrO_4$: crystal structure of $Er(OH)CrO_4$.—73-02177
Decomposition of monohydride and eutectoid transformation in Ti-H (D) system.—73-13656
Generation of fast-switching $As_2$ and $P_2$ beams from $AsH_3$ and $PH_3$ for gas-source molecular beam epitaxial growth of InGaAs/InP multiple quantum well and superlattice structures.—73-11220
Reversible γ→α+δ transformation in zirconium deuteride.—73-16296
Synthesis and characterization of titanium hydride thin films obtained by reactive cathodic sputtering.—73-06081

**hydrocarbons,**
Destruction of halogenated hydrocarbons accompanied by generation of electricity.—73-00946
Microwave diamond synthesis with high-oxygen hydrocarbons—(carbon dioxide, oxygen).—73-16868

**hydrodynamics,**
Activity of cement stone treated by hydrodynamical method.—73-00016

**hydrofluoric acid,**
Effects of predeposition $HF/NH_4F$ treatments on the electrical properties of $SiO_2$/Si structures formed by low-

temperature plasma-assisted oxidation and deposition processes.—73-05551
Growth of $\alpha$-$Al_2O_3$ platelets in the HF-$\gamma$-$Al_2O_3$ system.—73-16807
Reaction of $NH_4F$/HF solutions on Si(100) and Si(111) surfaces.—73-04465

**hydrogel,**
Effects of mechanical activation of inorganic gels on their thermal behavior: I, Crystallization process of titania gels.—73-02247
Effects of mechanical activation of inorganic gels on their thermal behavior: II, Comparison of structure and thermal behavior between zirconia and titania gels.—73-02248
Zirconia hydrogel casting of PZT ceramics.—73-13337

**hydrogen,**
Adsorption of $H_2$ on highly dispersed MgO.—73-12533
Brillouin scattering in $RbHSeO_4$ near the ferroelectric transition.—73-16417
Chemistry of hydrogen on diamond(100).—73-05369
Composition, structure, and mechanical stresses of $SiN_x$:H films obtained in hf-discharge plasma.—73-05375
Compositional investigations of sputtered amorphous $SiO_x$:H.—73-16062
Crystal growth, structure, and magnetic properties of $H_{0.23}Li_{1.68}Mo_{1.05}O_3$.—73-02178
Detection of hydrogen in bulk and thin-film silicon dioxide by hydrogen nuclear magnetic resonance.—73-06204
Diffuse reflectance FTIR studies of H adsorbed on Na zeolites.—73-13387
Dynamics of hydrogen-containing groups in structure of hydrosodalite.—73-02241
Effect of hydrogen dilution on the growth of hydrogenated amorphous silicon studied by in situ phase-modulated ellipsometry.—73-06210
Effect of hydrogen on the electric resistivity of Bi-Sr-Ca-Cu-O superconductors at high temperature.—73-01530
Effect of microstructure and hydrogen content on the characteristics of amorphous hydrogenated carbon protective coatings.—73-03137
Effect of the bias field on the thermal conductivity of $KH_2PO_4$ near $T_c$.—73-16462
Effective interfaces and Urbach slope in a-Si:H/a-$SiN_x$:H multilayers.—73-08839
Effects of uv light on ir absorption in chemically vapor deposited a-$SiN_x$:H films.—73-05552
Elastic properties of a-Ge:H/Si and a-Ge:H/$SiO_2$ heterostructures.—73-12783
Electroluminescence emitted by *p-i-n* structures made of a-$Si_{1-x}C_x$:H.—73-01151
Electron trapping and chemical composition in radio frequency glow discharge a-SiN:H.—73-02813
Electron-nuclear double resonance and electron structure of boron impurity centers in 6H-SiC.—73-04312
Experimental FET based on 4H:SiC polymorph.—73-14901
Fast photoluminescence decay in a-$SiN_x$:H films.—73-05566
High-channel-mobility a-Si:H thin-film transistors [TFT's] with oxide/nitride dielectrics.—73-04109
Hydrogen and $PO_4$ modes of $RbH_2PO_4$.—73-08638
Hydrogen bonding configurations in amorphous silicon carbon alloys and their impact on the silicon carbon stretching vibrations.—73-05415
Hydrogen chemisorption on metal/oxide composite catalysts.—73-08883
Hydrogen in rf reactive magnetron-sputtered silicon nitride films.—73-05849
Hydrogen loading of $[(Li_2O)(B_2O_3)]_2WO_3$ glasses through electrolyte/glass and Pd/glass interfaces.—73-03791
Hydrogen reactivity as a structural probe for glasses.—73-06925
Hydrogen sensor based on bonded hydronium Nasicon.—73-00976
In situ spectroscopic ellipsometry studies of hydrogen ion bombardment of crystalline silicon.—73-07584
Incorporation of hydrogen in $TiO_2$ deduced from polarized Raman scattering.—73-08640
Influence of hydrogen evolution from plasma-deposited silicon nitride on underlying aluminum deformations.—73-10237
Influence of structural inhomogeneity on the conductivity and relaxation processes in a-Si:H and a-$Si_{1-x}N_x$:H.—73-01207
Interaction of atomic hydrogen with ion-bombardment-induced defects at Si/$SiO_2$ interfaces.—73-04121
Linear relation between transition temperature and H-bond distance in $M_3S(SeO_4)_2$ type crystals (M=K, Rb, Cs) with O–D H-bond network.—73-16196
Low-hydrogen-content silicon nitride films from electron cyclotron resonance plasmas.—73-07644
Measurements of hydrogen redistribution in hot electron injection of MOS capacitors.—73-04133
Model of hydrogen behavior in enameling-grade steels: I, Theory.—73-03623
Model of hydrogen behavior in enameling-grade steels: II, Application.—73-03624
Persistent photoconductivity [PPC] in undoped a-Si:H/a-SiC:H multilayers.—73-05611
Photoluminescence of compensated SiC-6H.—73-04439
Reverse-bias annealing kinetics of Mg-H complexes in InP.—73-11422
Role of $H_2^+$ complexes in optimization of *n*-type InSb mixers in the millimeter-wavelength range.—73-11423
Role of substrate temperature and in-chamber annealing in H–Si bonding configurations in sputtered a-Si:H.—73-06027
Scanning tunneling microscopy study of carbon and hydrogen reactions with Si(111) in ultrahigh vacuum.—73-17196
Structural and electrical properties of $SiN_x$:H films.—73-02690
Synthesis, characterization, and inelastic neutron scattering study of hydrogen insertion compounds of $VO_2$ (rutile).—73-02502
Systematic examination of hydrogen ion conduction in rare-earth-doped barium cerate ceramics.—73-01033
Thermal stability of a-$SiN_x$:H [$x \leq 0.4$] films.—73-05673
Thermodynamic model for the hydrogen incorporation in PECVD silicon oxynitride thin layers.—73-04178

**hydrogenation,**
Carbon monoxide hydrogenation on cobalt/alumina and cobalt/NaX catalysts.—73-00213
Photocatalytic hydrogenation of acetylene by molybdenum-sulfur complexes supported on $TiO_2$.—73-16563

**hydrolysis,**
Aluminum nitride hydrolysis.—73-12913
Effect of hydrolysis conditions on thermal transformation of alkoxide-derived titanium dioxide.—73-05761
Effect of hydrolysis conditions on thermal transformation of alkoxide-derived titanium dioxide.—73-16730
Effect of hydrolysis water on the crystallization of sol-gel-derived $GeO_2$—73-02787
Formation of monodispersed oxide particles by hydrolysis of metal alkoxide in octanol/acetonitrile solutions.—73-16791
Synthesis of $K_2Ti_4O_9$ by the hydrolysis of KOH-Ti(iso-$C_3H_7O)_4$ ethanol solution.—73-03048

**hydrothermal process,**
Features of hydrothermal crystallization of quartz under heterogeneous solvent conditions.—73-16781
Hydrothermal growth of $\alpha$-quartz using high-purity $\alpha$-cristobalite as feed material.—73-16824
Hydrothermal reaction characteristics on the ALC [autoclaved lightweight concrete] of pitchstone-lime system—effect of the various pitchstone/CaO ratios.—73-03479
Hydrothermal synthesis and characterization of $CsZr_2(AsO_4)_3$.—73-16827
Hydrothermal synthesis of lead titanate.—73-11584
Hydrothermal synthesis of magadiite and kenyaite.—73-13093
Preparation and properties of calcium hydrosilicate, intended for use as protective coating.—73-06698
Preparation of highly exchanged LaHZSM-5 zeolite.—73-09263
Preparation of pyrochlore-type $Na_{0.39}Bi_{1.47}O_7$ containing $Bi^{5+}$ by low-temperature hydrothermal reaction.—73-08712
Ultrasonic control of the hydrothermal treatment of quartz ceramics.—73-03068

**hydroxides,**
Calcium hydroxide [CH] deposition in the near interfacial zone in plain concrete.—73-03438
Characterization of thermal decomposition products of $\delta$-FeOOH by FTIR spectroscopy and $N_2$ adsorption.—73-12549
Conversion of fluorphlogopite to hydroxyphlogopite in NaOH and LiOH hydrothermal solutions.—73-02173
Design of an apparatus for aluminum hydroxide hydraulic separation.—73-15785
Determination of the essential role of $OH^-$ ions in alkali-silica reaction —73-13703
Effects of OH group [680–850 ppm] on distribution of refractive index in silica glass.—73-00471
Enrichment of aluminum hydroxides and oxides for the advanced ceramics.—73-08513
Hydroxide precursor to zirconia: extended X-ray absorption fine structure study.—73-05416
Mechanism of alkali-silica reaction and the significance of calcium hydroxide.—73-00136
Note on the formation of $Ca(OH)_2$ crystals in polymer-modified mortars.—73-03507
Preparation and thermal decomposition of yttrium hydroxide fluorides.—73-02404
Preparation of iron hydroxide gel and its thermal transformation.—73-13192
Production of spherical granules of alumina with controlled porous structure.—73-02982
Role of sodium hydroxide in the reaction between alkalis and aluminum-silicate-containing granulates.—73-02424
Steplike adsorption isotherms of molecules on $\gamma$-FeOOH and the surface homogeneity of $\gamma$-FeOOH.—73-08742
Various bonding forms of OH groups in hydrogen-treated silica.—73-06986
XPS study on the carbonation process of $Ca(OH)_2$.—73-16400

**hydroxyapatite,**
Adsorption of $CO_2$ on nonstoichiometric strontium calcium HAp.—73-12743
Antibacterial calcium phosphate ceramic.—73-05189
Antimicrobial hydroxyapatite powders containing hinokitiol, protamine, or sorbic acid.—73-05190
Atomic force microscopy imaging of hydroxyapatite.—73-09433
Bioactivity of CaO-$P_2O_5$-$SiO_2$ glasses.—73-10357
Bioceramics: elaboration and properties.—73-12541
Bonelike hydroxyapatite induction by a gel-derived titania on a titanium substrate.—73-06740
Ceramics for adsorption and separation of virus and cells.—73-05161
Characterization of plasma-sprayed hydroxyapatite powders and coatings.—73-09038
Coating of hydroxyapatite on zirconia utilizing a radio-frequency thermal plasma process.—73-05710
Coating of hydroxyapatite on zirconia utilizing a radio-frequency thermal plasma process.—73-12946
Combined interfaces between hydroxyapatite (HAp) coating and metal with electron microprobe analyzer.—73-13809
Effect of $Cu^{2+}$ on the structural stability of synthetic hydroxyapatite.—73-08604
Evaluation of homogeneity for sintered hydroxyapatite by CT [computed tomography] values.—73-02817
Evaluation of homogeneity for sintered hydroxyapatite by CT-values.—73-13396
Fabrication of hydroxyapatite sheet by a sol-gel method and its ion-exchange characteristics.—73-13055
Fabrication of movable artificial eye seat of hydroxyapatite bioceramics.—73-08515
Feasibility study of silicon doping of hydroxyapatite.—73-16780
FTIR study of $CO_2$ adsorption on nonstoichiometric Sr-HAp.—73-16158
Hydroxyapatite ceramics with tetragonal zirconia particles dispersion prepared by HIP postsintering.—73-02856
Hydroxyapatite formation.—73-08516
Hydroxyapatite particles prepared by electrocrystallization from aqueous electrolytes.—73-05851
Hydroxyapatite synthesis by wet-direct and hydrothermal synthesis.—73-09167
Hydroxyapatite/$Al_2O_3$ composite biomaterial implant.—73-05170
Implant material.—73-12372
In vitro differentiation and mineralization in the presence of hydroxyapatite.—73-06231
Influence of the calcination temperature and atmosphere on the morphological evolution of a powder of hydroxyapatite.—73-13102
Inhibition of HAp formation in aqueous solutions of zinc and 1,2-dihydroxy-1,2-bis(dihydroxyphosphonyl)ethane.—73-12604
Injection molding of highly purified hydroxyapatite and TCP utilizing solid-phase reaction method.—73-05879
Medical ceramics based on hydroxyapatite.—73-02016
Microwave sintering of hydroxyapatite-based composites.—73-05923
New developments in bioceramics.—73-05175
New developments in hydroxyapatite ceramics.—73-05176
Plasma spraying of biologically derived hydroxyapatite on implantable materials.—73-16899
Plasma-sprayed hydroxyapatite coatings for enhanced biocompatibility.—73-13880
Preparation of microstructure-controlled porous hydroxyapatite–$\beta$-tricalcium phosphate composites by reaction sintering.—73-13193
Preparation of microstructure-controlled porous hydroxyapatite–$\beta$-tricalcium phosphate composites by reaction sintering.—73-02955
Preparation of spherical $Al_2O_3$ particle-dispersed hydroxyapatite ceramics.—73-09269
Preparation of spherical $Al_2O_3$-particle-dispersed hydroxyapatite ceramics.—73-16936
Preparation of spherical powders of hydroxyapatite by sol-gel process.—73-13205
Properties of functionally gradient composite consisting of hydroxyapatite containing glass-coated titanium and characters for bioactive implant.—73-03636
Properties of functionally gradient composite consisting of hydroxyapatite containing glass-coated titanium and characters for bioactive implant.—73-10267
Pulsed laser deposition: a method for in situ deposition of crystalline hydroxyapatite thin-film coatings.—73-16962
Pyrolytic route for the formation of hydroxyapatite/fluoroapatite solid solutions.—73-16967
Sintering behavior and mechanical properties of hydroxyapatite and dicalcium phosphate [DCP].—73-06052
Sintering of hydroxyapatite powders with SiC platelet dispersion.—73-03009
Sintering of hydroxyapatite powders with SiC platelet dispersion.—73-13267
Slip cast machinable hydroxyapatite ceramics.—73-03016
Spinal disk implant.—73-12406
Submicrometer hydroxyapatite bioceramics.—73-05182
Synthesis and properties of hydroxyapatite-zirconia composite ceramics.—73-13296
Synthesis of compositionally regulated hydroxyapatite from $Ca(OH)_2$ and $H_3PO_4$.—73-17036
Synthesis of hydroxyapatite by an oxidative decomposition method of calcium chelate.—73-03047
Synthesis of hydroxyapatite by an oxidative decomposition method of calcium chelate.—73-13304
Synthesis of hydroxyapatite using phosphate-rich glasses in the system CaO-$P_2O_5$-$H_2O$ and acoustic waves.—73-13305
Synthesis of ultrafine hydroxyapatite powders by hydrothermal reaction.—73-13313

**hydroxyl,**
Effect of doping on energy of OH groups in lithium niobate single crystals.—73-02242
Heterogeneity of hydroxyl groups of zeolites.—73-16165
Synthesis, crystal structure, and magnetic properties of $Co_3(HPO_4)_2(OH)_2$ related to the mineral lazulite.—73-02503

**hysteresis,**
Magnetic hysteresis of $p^+$ and $^3He^{++}$ irradiated melt-textured $YBa_2Cu_3O_{7-\delta}$.—73-11820

**illite,**
Application of illite group raw materials to sanitary pottery body.—73-14644
Compositional end members and thermodynamic components of illite and dioctahedral aluminous smectite solid solutions.—73-12556

**ilmenite,**
Chemical fingerprinting in detrital ilmenite: a viable alternative in provenance research.—73-15899
Comparative study of all-electron and core pseudopotentials basis sets for periodic ab initio Hartree-Fock calculation: the case of $MgSiO_3$-ilmenite.—73-05373

**imaging,**
Application of backscattered electron imaging to concrete materials.—73-08375
Atomic force microscopy imaging of hydroxyapatite.—73-09433

Characterization of Bridgman crystal growth using radiographic imaging.—73-12116
Computer-aided imaging in ceramics.—73-08386
Direct observation of atomic images of ultrathin diamond and diamondlike films.—73-03130
Grain sizes of ceramics by automatic image analysis.—73-05051
Interest of limiting voluntarily the resolution in HREM studies of materials.—73-06236
Piezoelectrics for medical ultrasonic imaging.—73-11600
Quantitative structural study of fresh cement paste by image analysis: I, Image processing.—73-00176
Quantitative structural study of fresh cement paste by image analysis: II, Measurements and their application.—73-00177
Real-space imaging of nanoscale electrodeposited ceramic superlattices in the scanning tunneling microscope.—73-06275
Servo-mechanical load frame for in situ, noninvasive, imaging of damage development.—73-15844
Solid-state imaging device having silicon carbide crystal layer.—73-11052
Stepper focus characterization using diffraction from latent images.—73-12199
Use of complementary imaging techniques in concrete deterioration studies.—73-06730

**immobilization,**
Immobilization of barium, cadmium, and antimony over titania.—73-02290
Immobilization of radioactive ash in glass.—73-01747
Immobilization of radioactive wastes in glass.—73-01748
Immobilization of simulated high level nuclear wastes with tholeiite-type basalt.—73-04891
Immobilization science of cement systems.—73-06670
Microstructure of glass composite materials in immobilization of radioactive wastes.—73-01754
Product composition control system at Savannah River: statistical process control algorithm.—73-08306
Structure of glass composition materials for immobilizing radioactive waste.—73-04896

**impact,**
Effect of relative humidity on repetitive impact behavior of machined silicon nitride.—73-06388

**impedance,**
Application of ac impedance techniques in studies of porous cementitious materials: II, Relationship between ACIS [ac impedance spectroscopy] behavior and the porous microstructure.—73-06625
Impedance analysis as a tool for designing ß´´-alumina microstructures.—73-00978
Impedance of superconductors with random inhomogeneities.—73-04737

**implantation,**
Foreign atom implantation by high-energy electron irradiation.—73-16784
Role of complementary species in P/Be- and Ar/Be-coimplanted InP.—73-15150

**implants,**
Biomaterials for dental surgical implants.—73-15919
Glass-ceramic bioimplants.—73-07032
Implant material.—73-12372
Implant tracking, surveillance, and retrieval.—73-03396
Spinal disk implant.—73-12406

**impurities,**
Absorption of coloring impurities in FK-14 glass.—73-06991
Absorption spectra of coloring impurities in glass from a synthetic batch.—73-06992
Cobalt and magnesium impurity diffusion in $Ni_{1-\delta}O$ single crystals.—73-13340
Cooperative effect of microimpurities during crystallization of forsterite from melt.—73-17075
Correlation of the location in crystal lattice and optical activity of the Yb impurity in III-V compounds.—73-04278
Determination of impurities in graphite by ICP–AES.—73-00798
Discrete mechanism of amorphization of crystals with radioactive impurities.—73-02239
Electron structure of rare-earth impurities in III-V compounds (a review article).—73-11186
EPR study of excess impurity charge compensation mechanisms in $PbZr_{1-x}Ti_xO_3$ ceramics.—73-16141
Formation processes of materials at high pressure.—73-16796
Hydrogen and chlorine impurities' influence on high-temperature defects in fused silica.—73-14001
Impurity and yttrium segregation in yttria-tetragonal zirconia.—73-06229
Impurity distribution near *p*-GaInAsSb/*p*-GaAlAsSb heterojunctions.—73-11260
Impurity effects in cuprate superconductors.—73-01572
Impurity states of InGeTe.—73-01196
Impurity-enhanced self-pumped phase conjugation in the near ir in "blue" $BaTiO_3$.—73-16513
Increase of distribution coefficient of microimpurities in microconcentration regions during melt crystallization (trapping effect). Heterovalent systems[—review].—73-12602
Influence of grinding medium on contamination of powdered silica.—73-01790
Influence of the impurity concentration on the microstructure of compound semiconductors—the example of ZnS:Cr optical spectra.—73-01209
Interface contamination by suboxide transport.—73-13357
Isovalent Ga and As impurity doping of InP grown by LPE.—73-07625
Many-electron effects on the structural properties of *sp* impurities in semiconductors.—73-07661
Nature and origin of residual impurities in high-purity GaAs and InP grown by chemical beam epitaxy.—73-11344
No far-ir spectroscopic gap in clean and dirty high-$T_c$ superconductors.—73-15567
Orthogonal magnetic "impurity" ($Fe^{3+}$ in *c* positions) in orthoferrite $YFeO_3$.—73-07968
Phase formation during heating of brucite.—73-16253
Photo- and thermostimulated charge transfer on impurity ions and intrinsic defects in $Y_3Al_5O_{12}$.—73-17093
Reducing the detrimental matter in glass in the course of glass melting.—73-14486
Self-compensation of electrically active impurities by intrinsic defects in $Pb_{0.8}Sn_{0.2}Te$ solid solutions.—73-01312
Silicon spikes and impurity accumulation at interrupted growth interfaces during molecular beam epitaxy.—73-11445
Structure of deep impurity states of II, III, IV group elements in IV-VI semiconductors.—73-01326

**inclusions,**
Automatic detection of small inclusions in samples of optical glass.—73-01763
Effect of inclusions/oxides on the castability and tensile properties of four SiC particulate Al-Si-Mg composites.—73-06774
Effect of rigid inclusions on the sintering of mullite synthesized by sol-gel processing.—73-09095
Irradiation-induced growth of new phase inclusion.—73-02309
Predictability of the mechanical properties of inclusion-containing ceramics.—73-13578

**indentation,**
Deformation and damage of ceramics by a sharp indenter.—73-06368
Effects of microstructure of ceramics on microfracture induced by round indenter.—73-06396
Elastic-plastic characterization of thin films with spherical indentation.—73-13522
Experimental measurement of residual stress field around a sharp indentation in glass.—73-05046
Fatigue damage in ceramic materials caused by repeated indentation.—73-03292
Indentation behavior of continuous fiber-reinforced ceramic matrix composites.—73-00502
Indentation studies on $Y_2O_3$-stabilized $ZrO_2$: I, Development of indentation-induced cracks.—73-09466
Reliability of ceramic fracture toughness measurements by indentation.—73-06511

**indium antimonide,**
Auger lifetimes in ideal InGaSb/InAs superlattices.—73-11078
Carrier-induced change in the refractive index of $InAs_{1-x}Sb_x$.—73-12748
Characterization of $Ga_{1-x}In_xSb$ thin layers grown on GaAs substrate by infrared reflectivity.—73-07405
Characterization of $Ga_{1-x}In_xSb$ thin layers grown on GaAs substrate by infrared reflectivity.—73-14800
Comparison of $In_{1-x}Tl_xSb$ [ITA] and $Hg_{1-x}Ce_xTe$ [MCT] as long-wavelength infrared materials.—73-11113
Controlled *p*- and *n*-type doping of homo- and heteroepitaxially grown InSb.—73-11120
Equilibrium parameters of deep bulk levels in InSb.—73-04323
Intercalation of lithium in InSb.—73-06163
Interface properties of anodic sulfide and sulfide oxide films on *n*-InSb.—73-04371
Low-threshold GaInAsSb/GaAlAsSb double heterostructure lasers grown by LPE.—73-15025
Magnetotransport and magnetooptical properties of δ-doped InSb.—73-08911
Mandelstamm-Brillouin light scattered by the surface of (111), (110)GaAs and (111)InSb crystals.—73-01238
Metal-insulator transition in heavily doped InSb subjected to a magnetic field.—73-01244
Nature of the long-wavelength shift of the spectrum of coherent radiation emitted from GaInAsSb.—73-07689
Nondegenerate diffraction on transient gratings in InSb.—73-15057
Optical properties and fluctuations of composition in $Ga_{0.77}In_{0.23}As_{0.19}$- $Sb_{0.81}$ alloys.—73-04430
Phase-transition-induced defect formation in III-V semiconductors.—73-15087
Photoluminescence of an epitaxial InSb film on a quasi-insulating *p*-type InSb substrate.—73-07727
Photoreflectance measurements of the $E_1$ and $E_1+\Delta_1$ optical transitions in $In_{1-x}Al_xSb$ epilayers.—73-15099
Properties of CdTe/InSb heterostructures grown by temperature gradient vapor transport deposition.—73-04455
Properties of InAs/(Ga,In)Sb strained-layer superlattices grown on the (111) orientations.—73-11407
Raman scattering from $In_{1-x}Al_xSb$ metastable epilayers.—73-11411
Raman scattering study of CdTe/*p*(111)InSb heterointerfaces grown by rf sputtering in high vacuum.—73-04460
Role of $H_2^+$ complexes in optimization of *n*-type InSb mixers in the millimeter-wavelength range.—73-11423
Role of the native oxide on indium antimonide surface properties.—73-07779
Structural and electrical properties of InSb epitaxial films grown on GaAs by low-pressure MOCVD.—73-15182
Structural and optical properties of $CdIn_2Te_4$ films on *p*-InSb(111) grown by temperature gradient vapor transport deposition.—73-01322
System InSb-$SiO_2$ [investigated] by spectroscopic multiangle ellipsometry.—73-17208
TEM characterization of $In_{1-x}Ga_xSb$ on (001)GaAs heteroepitaxial system.—73-07828
Temperature dependence of the threshold current density of double-heterostructure GaInAsSb lasers.—73-01346
Temperature fluctuations during the deposition of InSb films.—73-09372

**indium arsenide,**
Absorption modulation induced by electron beam excitation of strained $In_{0.2}Ga_{0.8}As$/GaAs multiple quantum wells.—73-11060
Analysis of the high-temperature characteristics of InGaAs-AlGaAs strained quantum-well lasers.—73-07379
Anomalous Andreev conductance in InAs-AlSb quantum wells with Nb electrodes.—73-07380
Anomalous photo-Hall effect in *p*-type InAs crystals.—73-04243
Are there Tamm-state donors at the InAs-AlSb quantum well interface.—73-07383
Auger lifetimes in ideal InGaSb/InAs superlattices.—73-11078
Band-filling effect in quantum well with excitation of 532-nm picosecond laser.—73-11083
Carrier-concentration dependence of velocity-field characteristics in $In_{0.53}Ga_{0.47}As$.—73-11090
Characteristics of LPE and of electrophysical properties of epitaxial $In_{0.53}Ga_{0.47}As$:Sb films.—73-01097
Chemical beam epitaxial growth of InP, InGaP, and InAs heterojunctions using triethylindium and bisphosphinoethane.—73-11107
Chemical beam epitaxy and structural analysis of InAs/InP strained single- and multi-quantum well heterostructures.—73-04269
Chemical beam epitaxy of $In_xAs_{1-x}P$/InP strained single- and multiquantum well structures.—73-11108
Comparison of *pnp* and *npn* InGaAlAs/InGaAs heterojunction bipolar transistors [HBT's].—73-11112
Comparison of steady-state and transient characteristics of lattice-matched and strained InGaAs-AlGaAs (on GaAs) and InGaAs-AlInAs (on InP) quantum-well lasers.—73-01107
Compressively strained 1.3-μm InAsP/InP and GaInAsP/InP multiple quantum-well lasers for high-speed parallel data transmission systems.—73-14815
Creation of radiative hydrogen-related states within strained $In_xGa_{1-x}As$/GaAs quantum wells by hydrogenation.—73-01115
Crossover from heterostructures of the first type to those of the second type in the InAs/InAsSbP system.—73-01116
Cyclotron resonance in $(GaAs)_n(InAs)_m$ superlattices.—73-07431
Defects in strained $In_{0.2}Ga_{0.8}As$/GaAs multiple quantum wells on patterned and unpatterned substrates: a near-infrared cathodoluminescence study.—73-07438
Design of InGaAs-InAlAs multiple-quantum-well optical modulators.—73-01124
Detection and reduction of indium segregation during molecular beam epitaxial growth of InGaAs/GaAs using in situ reflection mass spectrometry [REMS].—73-11133
Determination of the homogeneity of quantum wells in the InGaAs/GaAs system from photomodulation spectra.—73-07442
Development of high-quantum-efficiency, lattice-mismatched, 1-eV GaInAs solar cells.—73-07444
Dynamical properties of $Ga_{1-x}In_xAs$ solid solutions: influence of local distortion effects.—73-04286
Effect of growth temperature on the electrical properties of AlInAs/InP grown by molecular beam epitaxy and metallorganic chemical vapor deposition.—73-11154
Effect of interface composition on the band offsets at InAs/AlSb(001) heterojunctions.—73-07465
Effect of interface roughness and scattering on the performance of AlAs/InGaAs resonant tunneling diodes.—73-11157
Effect of interfacial bond type on the electronic and structural properties of GaSb/InAs superlattices.—73-11158
Effect of strain on confined optic phonons of highly strained InAs/InP superlattices.—73-11163
Effects of reactive ion etching on optical and electrooptical properties of GaInAs/InP-based strip-loaded waveguides.—73-11174
Electric and magnetic field induced dimensionality reduction in InGaAs-GaAs superlattices.—73-07479
Electron intersubband normal incidence absorption in InGaAs/GaAs quantum wells.—73-11185
Electronic properties of strained heterostructures.—73-14883
Energy density distribution of interface states in Au Schottky contacts to epitaxial $In_{0.21}Ga_{0.79}As$:Zn layers grown on GaAs by metallorganic vapor phase epitaxy.—73-11193
Epitaxial tilt of partially relaxed InGaAs layers grown on (100)GaAs substrates.—73-07508
Evaluation of ohmic contacts to GaAs(100) and (111)B using InAs/GaAs short-period superlattice [SPS] and InGaAs intermediate layers.—73-11199
Excitons and electron-phonon interaction in $In_{0.52}Ga_{0.18}Al_{0.3}As$.—73-01162
Fe and Ti implants in $In_{0.52}Al_{0.48}As$.—73-11211
Feasibility of formation of $In_{0.52}Al_{0.48}As$ films isoperiodic with the InP substrate by LPE at low temperature (≈650°C).—73-11212
Femtosecond optical response of low-temperature-grown $In_{0.53}Ga_{0.47}As$.—73-14922
Focused ion-beam implantation in strained InGaAs-GaAs quantum wells.—73-07531
GaInAs/InP and GaInP/GaAs(100) interfaces: an ultraviolet photoelectron spectroscopy study.—73-07543
Gaussian lineshape analysis of the RT photoreflectance of GaAs/AlGaAs and InAs/GaAs multiple quantum wells.—73-14940
Growth and characterization of novel multilayer heterostructures for the monolithic integration of resonant cavity photodiodes and heterojunction bipolar transistors.—73-11225
Growth and properties of AlInAs-GaInAs alloys and quantum wells on (110)InP.—73-11227

Growth mechanism of $(InAs)_n(GaAs)_n$ strained short-period superlattices grown by molecular beam epitaxy.—73-11229

Growth of InAs-AlSb quantum wells having both high mobilities and high concentrations.—73-04353

Growth temperature and annealing effects on deep traps of $In_{0.52}Al_{0.48}As$ grown by molecular beam epitaxy.—73-11237

High-efficiency 50-GHz InGaAs multimode waveguide photodetector.—73-07559

High-performance double pulse doped pseudomorphic AlGaAs/InGaAs transistors grown by molecular beam epitaxy.—73-07563

High-speed $\lambda$=1.3 μm metal-semiconductor-metal [MSM] photodetectors on GaAs.—73-11247

Hot carrier relaxation in bulk $In_{0.53}Ga_{0.47}As$.—73-14967

Improving InAs double heterostructure lasers with better confinement.—73-01195

In situ core-level photoelectron spectroscopy study of indium segregation at GaInAs/GaAs heterojunctions grown by molecular beam epitaxy.—73-11262

In situ detection of InGaAs strained layer relaxation by laser light scattering [LLS].—73-07579

In situ observation of the growth process of the InAs-GaAs heteroepitaxial system using scanning microprobe reflection high-energy electron diffraction–total reflection angle X-ray spectroscopy.—73-05419

$In_xGa_{1-x}As$ (x=0.25–0.35) grown at low temperature [LT].—73-14975

InAs submonolayer and monolayer structures on GaAs(100) and (311) substrates.—73-11266

Influence of monomolecular steps on the first-order structure transition of an InAs(001) surface.—73-14984

Influence of the desorption and growth temperatures on the crystalline quality of molecular beam epitaxy InAlAs layers.—73-07603

Influence of the substrate on the photoconductivity of InGaAs/GaAs quantum wells.—73-04369

InGaAs-InAlAs multiple quantum well optical bistable devices using the resonant tunneling effect.—73-01213

InGaAs/GaAs single quantum-well lasers with monolithically integrated multilayer waveguides for surface-emitted sum-frequency generation.—73-07606

Initial stages of InAs deposition on $SrF_2$-coated $EuBa_2Cu_3O_{7-y}$ thin-film superconductors.—73-11808

Interface luminescence due to above-barrier reflection in an isotypic *p*-InAs/*P*-InAsPSb heterostructure.—73-01219

Interface structure in InAs/AlSb quantum wells grown by molecular beam epitaxy.—73-11280

Interfacial defects and morphology of InGaAs epitaxial layers grown on tilted GaAs substrates.—73-11283

Intersubband absorption line broadening in $In_{0.53}Ga_{0.47}As$/-$In_{0.52}Al_{0.48}As$ quantum wells: a pseudopotential calculation.—73-07620

Intersubband absorption of ir radiation in stressed quantum-well $In_xGa_{1-x}As$-GaAs structures.—73-04376

Lattice tilt and dislocations in compositionally step-graded buffer layers for mismatched InGaAs/GaAs heterointerfaces.—73-07635

Low-frequency noise of a 980-nm InGaAs/GaAs strained quantum well [QW] laser.—73-07643

Low-threshold tensile-strained InGaAs-InGaAs quantum well lasers with single-step separate-confinement heterostructures.—73-15026

Magnetoexcitons in quantum wells in parallel-field configuration.—73-04397

Magnetotransport properties of *p*-type (In,Mn)As diluted magnetic III-V semiconductors.—73-08912

Magnetotransport properties of two-dimensional channels in pseudomorphic and strain-relaxed $In_{0.17}Ga_{0.83}As$ heterojunctions.—73-07657

Model and principles of formation of the structure of the (Ga,In)As solid solution structure.—73-15042

Molecular beam epitaxial growth and characterization of inverted, pulse-doped AlGaAs/InGaAs/GaAs transistor structures.—73-11322

Molecular beam epitaxial growth and characterization of modulation-doped field effect transistor heterostructures using InAs/GaAs superlattice channels.—73-11323

Molecular beam epitaxial growth and optical analysis of InAs/AlSb strained-layer superlattices.—73-11324

Molecular beam epitaxial growth of InAs on GaAs(100) [analyzed] by reflection anisotropy spectroscopy.—73-07678

Molecular beam epitaxy growth of InAs-AlSb-GaSb interband tunneling diodes.—73-07680

Molecular beam epitaxy growth of semiconductor heterostructure optical converter lasers using the InGaAs/AlGaAs materials system.—73-11333

Multiple quantum wells consisting of InAs/GaAs short-period strained-layer superlattice [SPSLS] wells for 1.3–1.55-μm photonic applications.—73-11340

Nondestructive characterization of III-V alloy multilayer structures using spectroscopic ellipsometry.—73-15058

Optically pumped submillimeter wave semiconductor lasers.—73-01267

Optimization of molecular beam epitaxy grown *p-i-n* multiple quantum well electroabsorption modulators for the 1.5-μm wavelength region.—73-11364

Optimum growth temperature determination for GaInSb/InAs strained-layer superlattices.—73-11366

Ordering in InGaAs/InAlAs layers.—73-15079

Partial strain release and surface states formed on the sidewall of InGaAs quantum well wires.—73-07709

Photoluminescence [PL] spectroscopy of near-surface quantum wells: electronic coupling between quantized energy levels and the sample surface.—73-11382

Photoluminescence and photoluminescence excitation spectroscopy of H-related defects in strained $In_xGa_{1-x}As$/GaAs(100) quantum wells.—73-07724

Photoluminescence study of symmetric, coupled, double $In_xGa_{1-x}As$-GaAs quantum well structures.—73-04442

Polarization dependence of the interband optical absorption by an InGaAs quantum well in GaAs.—73-11398

Pressure-induced resonant Raman scattering in an $In_xGa_{1-x}As$/GaAs strained-layer superlattice.—73-11403

Process characterization and evaluation of hydride VPE-grown $Ga_xIn_{1-x}As$ using a Ga/In alloy source.—73-15117

Profiles of isotopes in III-V semiconductor compounds formed as a result of bombardment with high-energy α particles.—73-15119

Properties of epitaxial InAs doped with rare-earth elements.—73-15125

Properties of InAs/(Ga,In)Sb strained-layer superlattices grown on the (111) orientations.—73-11407

Quantitative analysis of $In_xGa_{1-x}As$ by Auger electron spectroscopy.—73-07751

Raman study of a single InP/InAs/InP strained quantum well.—73-04461

Redistribution of Mg in InAs during postimplantation annealing.—73-01300

Reduction of linewidth enhancement factor in InGaAs-InP modulation-doped strained multiple quantum well lasers.—73-15142

Reflection high-energy electron diffraction measurements of molecular beam epitaxially grown GaAs and InGaAs on GaAs(111).—73-15143

Reflection high-energy electron diffraction studies of the growth of InAs/$Ga_{1-x}In_xSb$ strained-layer superlattices.—73-07767

Role of a nucleation layer in suppressing interfacial pitting in InAs films grown on (100)InP substrates.—73-04471

Scaling behavior of delta-doped AlGaAs/InGaAs high electron mobility transistors [HEMT's] with gate lengths down to 60 nm and source-drain gaps down to 230 nm.—73-11429

Spatially indirect intersubband transitions of localized electrons and holes at the staggered band lineup $In_{0.52}Al_{0.48}As$/InP interface.—73-11450

Spectrum of shallow donor states in $(GaAs)_n(InAs)_m$ superlattices.—73-08201

Spin orientation by optical pumping in strained $In_xGa_{1-x}As$/GaAs quantum wells.—73-15174

Strain and the two-dimensional electronic structure of monolayers of Bi/InAs(110) and Bi/GaAs(110).—73-07813

Strain-induced compositional shift in the growth of $InAs_xP_{1-y}$ onto (100)InP by gas-source MBE.—73-07814

Strain-relaxed InGaAs buffer layers grown by molecular beam epitaxy for 1.3-μm Fabry-Perot optical modulators.—73-11455

Strained layer [SL] single quantum well [SQW] double heterostructure optoelectronic switching laser.—73-11456

Structural and electrical properties of low-temperature GaInAs.—73-11459

Structure defects and photoluminescence of epitaxial $In_xGa_{1-x}As$ films.—73-15186

Structure defects in epitaxial InAs films.—73-01325

Sulfide passivation of InAs surface.—73-07820

Surface morphology and quality of strained InGaAs grown by molecular beam epitaxy on GaAs.—73-11466

Surface photo-EF in MOS structures on InAs.—73-04493

Surface stoichiometry and interface formation during molecular beam epitaxy of strained InAs/Al,$Ga_{0.48-x}In_{0.52}As$ heterostructures.—73-11469

Surface-layer modulation of electron concentrations in InAs-AlSb quantum wells.—73-11470

Temperature-dependent hydrogenation on near-surface strained quantum wells.—73-11479

Threshold current density in strained layer $In_xGa_{1-x}As$-GaAs quantum-well heterostructure lasers.—73-01356

Transport in strained relaxed $In_{0.15}Al_{0.85}As$/ $In_{0.17}Ga_{0.83}As$ heterojunctions.—73-06180

Two-phase liquid phase epitaxy of $In_{0.53}Ga_{0.47}As$ on InP.—73-11492

Ultrafast carrier dynamics in III-V semiconductors grown by MBE at very low substrate temperatures.—73-01359

Valence band offset at the asymmetric GaAs/$In_{0.53}Ga_{0.47}As$ interface [determined] by ultraviolet photoemission spectroscopy.—73-11502

Wavelength and threshold current variation in inhomogeneously pumped InGaAs/AlGaAs single and double quantum-well ridge waveguide lasers.—73-07860

Weak-beam stereomicrography of defects in GaAs/$In_xGa_{1-x}As$ interfaces.—73-15227

X-ray photoelectron spectroscopy investigation of the mixed anion GaSb/InAs heterointerface.—73-11510

**indium oxide,**

Conductivity of $ZrO_2$-$Y_2O_3$-$In_2O_3$ ceramics.—73-16424

Conductivity of $ZrO_2$-$Y_2O_3$-$In_2O_3$ ceramics.—73-16425

Current transport processes in an $In_2O_3$-ZnSe-In heterostructure with a submicron ZnSe layer.—73-01117

Depositing $In_2O_3$ films as conductive buffer layers for high-temperature $YBa_2Cu_3O_{7-x}$ superconducting thin films on silicon.—73-15414

E-beam deposition of $In_2O_3$-stabilized $ZrO_2$ films.—73-02777

Effect of annealing on the surface and interface properties of indium oxide–silicon structures.—73-09445

Effect of substrate temperature on ultrahigh vacuum interfaces of indium oxide/GaAs(110).—73-11165

Electrical and optical properties of InN-$In_2O_3$ thin films.—73-16472

Electrical and photoelectric properties of heterostructures formed by Au-*p*-InP→Au-*n*-$In_2O_3$-*p*-InP structural transitions.—73-01143

Electronic field of $Ti^{4+}$, $Zr^{4+}$, and $Ge^{4+}$ dopings upon the physical properties of $In_2O_3$ and Sn-doped $In_2O_3$ ceramics: application to new highly transparent conductive electrodes.—73-07321

Enhancement of photoelectrochroism in *n-p*-$CdSiAs_{2-x}$-$In_2O_3$ structures.—73-04320

Formation of a conducting filament and breakdown in polycrystalline indium oxide.—73-07534

Influence of oxygen pressure on the electrical and optical properties of reactively evaporated indium oxide films.—73-08888

Influence of oxygen pressure on the structure of reactively deposited indium oxide films.—73-06234

Nonmagnetic hard gap in amorphous In/$InO_x$ films in the hopping regime.—73-16550

Phase relations in the $In_2O_3$-$Ga_2ZnO_4$-ZnO system at 1350°C.—73-02386

Photoreduction and oxidation of amorphous indium oxide.—73-09536

Photovoltaic properties of reactive thermal evaporated indium oxide (IO)/silicon junctions.—73-04785

Physicochemical aspects of a limiting oxide-based solid solution in the $In_2O_3$-$TiO_2$ system and indium titanate.—73-16568

Reactive deposition of $In_2O_3$ films on nucleated-crystallite substrates.—73-13233

Semiconductive indium oxide glass composite: I, Influence of chemical composition of glass matrix on microstructure and electrical conductivity.—73-15158

Transparent conductive indium oxide thin films prepared by chemical vapor deposition.—73-14740

**indium phosphide,**

0.98–1.02-μm strained InGaAs/AlGaAs double quantum well high-power lasers with GaInP buried waveguides.—73-15232

0.98-μm InGaAs-InGaAsP-InGaP GRIN-SCH SL-SQW lasers for coupling high optical power into single-mode fiber.—73-15233

1.3-μm $InAs_xP_{1-y}$-InP strained-layer quantum-well, laser diodes grown by MOCVD.—73-15066

1.48-μm high-power GaInAsP-InP graded-index separate-confinement heterostructure multiple quantum well laser diodes.—73-15067

30-mW 690-nm high-power strained quantum well AlGaInP laser.—73-15208

Achievement of near-theoretical-minimum contact resistance to InP.—73-11061

AlGaInP strained multiple quantum well visible laser diodes ($\lambda_L \leq$630-nm band) with a multiquantum barrier grown on misoriented substrates.—73-14767

Amphoteric doping of Si in InAlAs/InGaAs/InP(311)A heterostructures grown by molecular beam epitaxy.—73-11065

Analysis of differential gain in InGaAs-InGaAsP compressive and tensile strained quantum-well lasers and its application for estimation of high-speed modulation limit.—73-14770

Anomalous band bending in metal/InP interface formation.—73-01077

Application of an in situ hydrogen plasma to the epitaxial regrowth of InP grown by molecular beam epitaxy.—73-11071

Asymmetry of the percolation electrical conductivity of compensated *n*-type InP.—73-14778

Atomic layer epitaxy [ALE] in InP using trimethylindium and tertiarybutylphosphine.—73-04244

Atomic layer epitaxy of InP.—73-14779

Atomic scale survey of III-V epitaxial interfaces.—73-07388

Auger recombination, gain, and temperature sensitivity of 1.5-μm compressively strained semiconductor laser.—73-14780

Band offset measurement at the $In_{0.5}Ga_{0.5}P$/GaAs heterojunction by using properties of transition metal.—73-04253

Bi thin-film growth structures prepared at 30 K on GaAs(110) and InP(110).—73-07390

Calculation of heterojunction conduction band for a field-assisted InP/InGaAsP/InP semiconductor photocathode.—73-11089

Carrier lifetimes in strained InGaAsP multiple quantum-well laser structures.—73-07398

CBE-grown 1.5-μm GaInAsP-InP surface-emitting lasers.—73-14793

Characteristics of oxygen-implanted indium phosphide.—73-07404

Charge trapping instabilities in a silicon-nitride/indium-phosphide metal-insulator-semiconductor structure [studied] by the constant-capacitance method.—73-11106

Chemical beam epitaxial growth of InP, InGaP, and InAs heterojunctions using triethylindium and bisphosphinoethane.—73-11107

Chemical beam epitaxy and structural analysis of InAs/InP strained single- and multi-quantum well heterostructures.—73-04269

Chemical beam epitaxy of $In_xAs_{1-x}P$/InP strained single- and multiquantum well structures.—73-11108

Chemical shift low-energy photoelectron diffraction: a determination of the InP(110) clean surface structural relaxation.—73-11110

Clean and oxygen-covered InP(110) surface differential reflectivity.—73-01103

Closed-ampoule diffusion of sulfur into Cd-doped InP substrates: dependence of S profiles on diffusion temperature and time.—73-07415

Comparative characteristics of plasma-etched GaAs and InP.—73-07418

Conditions for light-induced short-time growth of GaAs and InP by chloride epitaxy.—73-04274

Crossover from heterostructures of the first type to those of the second type in the InAs/InAsSbP system.—73-01116

Cryogenic and high-temperature operation of $Al_{0.52}In_{0.48}P$/-$In_{0.7}Ga_{0.8}As$ high electron mobility transistors [HEMT's].—73-11127

Damage introduction in GaAs/AlGaAs and InGaAs/InP heterojunction bipolar transistor structures during electron cyclotron resonance plasma processing.—73-07432

Defects in electron-irradiated GaInP.—73-09397

Defects in III-V materials and the accommodation of strain in layered semiconductors.—73-09398

Dependence of high-speed properties on the number of quantum wells in 1.5-μm InGaAs-InGaAsP MQW L14-shifted lasers.—73-14828

Design of widely tunable semiconductor lasers using grating-assisted codirectional-coupler filters.—73-14832

Distributions of the concentrations of shallow and deep charged centers in the InP layers doped by implantation of Be ions.—73-04284

Double phase conjugate mirror and double color pumped oscillator using band-edge photorefractivity in InP:Fe.—73-01131

Drift leakage current in AlGaInP quantum well lasers.—73-14843

Effect of growth temperature on the electrical properties of AlInAs/InP grown by molecular beam epitaxy and metallorganic chemical vapor deposition.—73-11154

Effect of implant temperature and beam flux on damage accumulation and Si activation of Si-implanted InP.—73-07464

Effect of proton irradiation and annealing on the diffusion length in indium phosphide.—73-11161

Effect of strain on confined optic phonons of highly strained InAs/InP superlattices.—73-11163

Effect of strain on the high-speed modulation of GaAs- and InP-based quantum well lasers.—73-14857

Effect of surface passivation with SiN on the electrical properties of InP/InGaAs heterojunction bipolar transistors.—73-11167

Effect of the recombination in the space charge region of the illuminance characteristics of the surface photo-emf of GaAs and InP.—73-11168

Effects influencing the distribution profiles of implanted ions in crystalline semiconductor III-V targets after ion implantation.—73-01138

Effects of dopants on dynamic behavior of dislocations and mechanical strength in InP.—73-07470

Effects of pressure and temperature on epitaxial growth of InP on nonplanar substrates using OMVPE.—73-16753

Effects of rapid quenching on the impurity site location in Zn-diffused InP.—73-07475

Effects of ytterbium addition on liquid phase epitaxial growth of InGaAs/InP heterostructures.—73-04296

Elastic and plastic contributions to X-ray line broadening of InGaAsP/InP heterostructures.—73-11175

Electric subband studies in an $In_{0.53}Ga_{0.47}As/InP$ one-side-modulation-doped quantum well.—73-01140

Electrical and chemical stability of Al/$SiN_x$/InP metal-insulator-semiconductor diodes with gas-phase polysulfide exposure on InP.—73-07480

Electrical and electrochemical properties of gold-plated InP.—73-07481

Electrical and optical characterization of metal/*n*-InP interfaces formed by a cryogenic process in high vacuum.—73-08848

Electrical and photoelectric properties of heterostructures formed by Au-*p*-InP→Au-*n*-$In_2O_3$-*p*-InP structural transitions.—73-01143

Electrical and photoelectric properties of Pd-*p*-$p^+$-InP diode structures and changes in these properties in a hydrogen atmosphere.—73-07483

Electrical characterization of ITO/*p*-InP heterostructures.—73-02595

Electrical properties of oxygen-ion-implanted InP.—73-11181

Electron microscope studies of liquid-phase epitaxy of InGaAsP/GaAs structures with thin (<10 nm) layers.—73-04310

Electron state of a surface in InP modified by treatment in sulfur vapor.—73-07494

Electron trapping in thin oxide on *n*-InP.—73-11187

Electronic properties of $(NH_4)_2S$-passivated InP(100) surfaces.—73-07497

Electronic properties of low-temperature [LT] InP.—73-14881

Electronic state of the surface of InP modified by treatment in S vapor.—73-01157

Electronic structure of crystalline InP oxides.—73-07500

Ellipsometric characterization of InP-based quantum well structures.—73-14885

Etching of InP(100) 4×2 and molecular beam epitaxially grown GaAs(100)-*c*(4×4) with atomic hydrogen.—73-11198

Evidence for pyroelectricity in single variant spontaneously ordered $GaInP_2$.—73-14895

Evidence of noncommutativity and nontransitivity of band discontinuities in InP-Al(In)As-Ga(In)As heterostructures.—73-04334

Excitation and deexcitation mechanisms of rare-earth ions in III-V compounds: optically detected microwave-induced impact ionization of Yb dopants in InP.—73-04336

Excitation and relaxation processes of impact excitation emission of $Er^{3+}$ ions in InP.—73-04337

Experimental low-energy photoelectron diffraction study of the InP(110) surface.—73-01163

Fabrication of nonlinearly shaped optical waveguide tapers on InP with precise design parameter control.—73-14911

Fabrication of novel self-aligned MISFET's on InP by S interface engineering technique.—73-07523

Fabrication of quantum dot structures using aerosol deposition and plasma techniques.—73-05804

Feasibility of formation of $In_{0.52}Al_{0.48}As$ films isoperiodic with the InP substrate by LPE at low temperature (≈650°C).—73-11212

Features of plasma-grown native oxides on indium phosphide.—73-04102

Formation of periodic-modulated composition structure by coherent separation of phases in quaternary solid solutions of III-V semiconductors.—73-14929

Frequency noise reduction in visible InGaAlP laser diodes by different optical feedback methods.—73-14931

GaInAs/InP and GaInP/GaAs(100) interfaces: an ultraviolet photoelectron spectroscopy study.—73-07543

Gas source molecular beam epitaxial growth and characterization of 600–660-nm GaInP/AlInP double-heterostructure lasers.—73-14937

Gas source molecular beam epitaxial growth and device applications in $In_{0.5}Ga_{0.5}P$ and $In_{0.5}Al_{0.5}P$ heterostructures.—73-14938

Gas source molecular beam epitaxy of InGaP and GaAs on strained-relaxed $Ge_xSi_{1-x}$/Si.—73-11219

Generation of fast-switching $As_2$ and $P_2$ beams from $AsH_3$ and $PH_3$ for gas-source molecular beam epitaxial growth of InGaAs/InP multiple quantum well and superlattice structures.—73-11220

Growth efficiency and distribution coefficient of GaInP-InP epilayers and heterostructures.—73-07549

Growth mechanisms in the metallorganic vapor phase epitaxy of InP.—73-11230

Growth modes and relaxation mechanisms of strained InGaAs layers grown on InP(001).—73-07550

Growth of $Ga_xIn_{1-x}As_yP_{1-y}$ using ethyldimethylindium and tert-butylphosphine.—73-14950

Growth of $Ga_xIn_{1-x}P/Ga_{0.5}In_{0.5}P$ multiple quantum wires by strain-induced lateral layer ordering process.—73-11233

Growth of high-purity InP by chemical beam epitaxy [CBE].—73-11235

Growth of III-V materials by metallorganic molecular beam epitaxy.—73-04352

Guided-wave measurements of real-excitation optical nonlinearities in a tensile-strained InGaAs on InP quantum well at 1.5 μm.—73-14953

Gunn diodes made of *n*-InGaAs/$n^+$-InP heterostructures.—73-07556

Heterojunctions of InP with amorphous hydrogenated silicon.—73-11242

High-resistivity [low-temperature] LT $In_{0.47}Ga_{0.53}P$ grown by gas source molecular beam epitaxy.—73-14960

High-speed (≥6 GHz) InGaAs/InP avalanche photodiodes grown by gas source molecular beam epitaxy with a thin quaternary grading layer for high bit rate (≥5 Gbit/s) systems.—73-14961

High-speed (≥6 GHz) InGaAs/InP avalanche photodiodes grown by gas source molecular beam epitaxy [GSMBE] with a thin quaternary grading layer for high bit rate (≥5 Gbit/s) systems.—73-07566

High-speed 1.3-μm InGaAsP Fabry-Perot laser for digital and analog applications.—73-14962

High-speed operation on strained InGaAs/InGaAsP MQW laser under zero-bias condition.—73-14963

Highly doped GaInAs using diethylberyllium by MOCVD for InP-based heterostructure bipolar transistor applications.—73-04355

Implant-damage isolation of InP and InGaAsP.—73-07573

Impurity doping in InP layer grown by metallorganic vapor phase epitaxy using tertiarybutylphosphine and organic doping sources.—73-11261

In situ characterization of InP surfaces after low energy hydrogen ion cleaning.—73-07578

In situ optical characterization of GaAs and InP surfaces during chloride atomic layer epitaxy [ALE].—73-04364

Indium vacancy in as-grown InP: a positron annihilation study.—73-03097

Influence of a hydride preflow on the crystalline quality of InP grown on exactly oriented (100)Si.—73-11268

Influence of hydrogen plasma treatment upon native oxides plasma grown on InP.—73-04117

Influence of isochronous annealing upon the near-band-edge photoluminescence spectra of the electron-irradiated *n*-InP.—73-07596

Influence of sulfiding on the state of the surface and photoelectric properties of InP and GaAs.—73-01208

Infrared study and characterization of Zn diffused InP.—73-07605

InGaAs/InGaAsP MQW electroabsorption modulator integrated with a DFB laser fabricated by band-gap energy control selective area MOCVD.—73-14992

InGaAs/InP quantum wells on vicinal Si(001): structural and optical properties.—73-07607

InP digital optical switch: key element for guided-wave photonic switching.—73-14994

InP on Si substrates characterized by spectroscopic ellipsometry.—73-11276

Interface luminescence due to above-barrier reflection in an isotypic *p*-InAs/*P*-InAsPSb heterostructure.—73-01219

Interface strain in organometallic vapor phase epitaxy grown InGaAs/InP superlattices.—73-04373

Interfacial reactions in Pt/InP contacts.—73-10242

Investigation and optimization of InGaAs/InP heterointerfaces grown by chemical beam epitaxy using spectroscopic ellipsometry and photoluminescence.—73-15001

Ion implantation of a donor impurity in InP.—73-11284

Ion-implantation–damage-created *n*-type conductivity in InP after high-temperature annealing.—73-07624

Isovalent Ga and As impurity doping of InP grown by LPE.—73-07625

K-nonconserving transition in heavily doped LPE-grown *n*-type $In_{0.5}Ga_{0.5}P$.—73-07626

Localized deposition of GaAs/GaInP heterostructures using LP-MOVPE.—73-15013

Long-range effects in semiinsulating semiconductors GaAs and InP irradiated with argon ions.—73-04383

Low-temperature mobility of a 2-D electron gas and the quality of a heterojunction in InGaAs/InP heterostructures grown by LPE.—73-01233

Low-threshold-strained GaInP quantum well ridge lasers with AlGaAs cladding layers.—73-11301

Luminescence properties of Yb-doped InP.—73-04393

Mapping of dopant concentrations in photorefractive InP:Fe wafers.—73-07662

Measurement of indium desorption activation energy from InP layers by laser-induced fluorescence [LIF].—73-11308

Measurement of polarization characteristics in 1.3-μm InGaAsP/InP ridge-waveguide laser diode.—73-11309

Measurement of radiative and nonradiative recombination rate in InGaAsP-InP LED's.—73-01241

Mechanism for radiation-stimulated changes of the position of the maximum of an "impurity" luminescence band of GaAs and InP.—73-11311

Metastability and chemical bonding of S-induced defects in GaAs and InP.—73-11314

MeV energy sulfur implantation in GaAs and InP.—73-04404

Molecular beam epitaxially grown InP/InGaAsP heterostructure for inversion-channel devices.—73-11331

Monolithic InGaAsP-InP laser amplifier gate switch matrix.—73-15046

Monolithic integration of a waveguide InGaAs/InP *pin* photodiode with a locally ion-implanted JFET for receiver OEIC applications.—73-15047

Monolithically integrated DWDM receiver.—73-15048

Multiwafer growth of highly uniform InGaP/GaAs by low-pressure MOVPE.—73-15050

Nature and origin of residual impurities in high-purity GaAs and InP grown by chemical beam epitaxy.—73-11344

Nonlinear dynamics of directly modulated 1.55-μm InGaAsP DFB semiconductor laser.—73-15060

Operational wavelength range of GaInAs(P)-InP intersectional optical switches using field-induced electrooptic effect in low-dimensional quantum-well structures.—73-01262

Optical activity of $Yb^{3+}$ in MeV ion-implanted InP.—73-04425

Optical and structural properties of MOVPE grown $Ga_xIn_{1-x}As/InP$ strained multiple quantum well structures.—73-15069

Optical limiting in semiconductor nanocrystals in glass.—73-11359

Optical waveguide formed of compound semiconductor materials and process of fabricating the optical waveguide.—73-01380

Optically detected magnetic resonance studies of low-temperature InP.—73-15076

Optimization and characteristics of Al-free strained-layer InGaAs/GaInAsP/GaInP SCH-QW lasers (λ≈980 nm) grown by gas-source MBE.—73-15077

Orientation-dependent growth of InGaAs/InP for applications in laser-diode arrays.—73-11368

Parameters of the energy band structure of epitaxial films in $In_{1-x}Ga_xAs/InP$ heterojunctions.—73-01270

Phase equilibria in the Pt-In-P system.—73-12654

Phase transformations of amorphous binary semiconductors under pulsed laser irradiation.—73-01272

Photoluminescence and surface photovoltaic spectra of strained InP on GaAs.—73-01278

Photosensitivity of surface-barrier InP structures with microrelief interface.—73-15101

Plasma and wet chemical etching of $In_{0.5}Ga_{0.5}P$.—73-15104

Polarized piezomodulated reflectance study of spontaneous ordering in $GaInP_2$.—73-07741

Praseodymium dioxide doping of $In_{1-x}Ga_xAs_yP_{1-y}$ epilayer grown with liquid phase epitaxy.—73-04447

Pulse asymmetry in actively mode-locked InGaAsP lasers.—73-01293

Pulse asymmetry in actively mode-locked InGaAsP lasers.—73-07748

Pure effects of strain in strained-layer multiple quantum well lasers.—73-15128

Quantitative study of the contribution of deep and shallow levels to the compensation mechanisms in annealed InP.—73-11409

Quantum and classical relaxation times and properties of a heterojunction in selectively doped $InP/In_{0.53}Ga_{0.47}As$ heterostructures.—73-15130

Radiative performance of strained-layer lasers.—73-15135

Raman study of a single InP/InAs/InP strained quantum well.—73-04461

Reactions between Pd thin films and InP.—73-15140

Reactive-ion-etching-induced damage studies and application to self-aligned InP/InGaAs heterojunction bipolar transistor [HBT] technology.—73-11414

Reverse-bias annealing kinetics of Mg-H complexes in InP.—73-11422

Review of III-V semiconductor-based metal-insulator-semiconductor structures and devices.—73-15149

Role of a nucleation layer in suppressing interfacial pitting in InAs films grown on (100)InP substrates.—73-04471

Role of complementary species in P/Be- and Ar/Be-coimplanted InP.—73-15150

Role of outdiffusion in the activation of high-dose Mg implantations in InP.—73-15152

RT operation of GaInAs/GaInAsP/InP SCH lasers with quantum-wire size active region.—73-15153

Sb-induced surface stabilization of InP(100) wafer beyond 500°C.—73-11428

Scanning tunneling microscopy of GaInAs/InP multiquantum well (110) surfaces observed under an ultrahigh vacuum.—73-11433

Schottky contacts on *n*-$Ga_{0.51}In_{0.49}P$ [studied] by low-pressure metallorganic chemical vapor deposition.—73-11437

Schottky diodes on *n*-type InP with $CdO_x$ interfacial layers grown by the adsorption and oxidation method.—73-11438

Selective regrowth of III-V epitaxial layers by low-pressure organometallic vapor phase epitaxy [OMVPE] using $CCl_4$.—73-07791
Self-aligned bend waveguide AlGaInP visible laser diode with small beam astigmatism.—73-11441
Self-consistent calculations of carrier distribution and energy bands in InGaAs/InP *p-i-n* diodes.—73-04475
Semiinsulating properties and photoluminescence quenching in Cu-diffused InP.—73-11444
Simple model for rare-earth impurities in the compound semiconductors.—73-04481
Simultaneous operation of ten-channel tunable DFB laser arrays using strained InGaAsP multiple quantum wells.—73-15163
Solution to the wave equation in the numerical simulation of buried heterostructure lasers.—73-15166
Spatially indirect intersubband transitions of localized electrons and holes at the staggered band lineup $In_{0.52}Al_{0.48}As$/InP interface.—73-11450
$Sr_{1-x}Er_xF_{2+x}$ luminescent thin films epitaxially grown on InP(100).—73-04489
Strain-induced compositional shift in the growth of $InAs_yP_{1-y}$ onto (100)InP by gas-source MBE.—73-07814
Strain-induced effects on the performance of AlGaInP visible lasers.—73-11454
Study of harmonic distortion and period doubling in DFB ridge waveguide laser with strong current modulation.—73-01328
Submicron InP transferred electron devices.—73-07819
Substrate orientation effects on dopant incorporation in InP grown by metallorganic chemical vapor deposition.—73-01331
Superposed multiquantum barriers for InGaAlP heterojunctions.—73-01332
Surface-type conversion of InP by $H_2S$ plasma exposure: a photoemission investigation.—73-07826
Temperature dependence of near-ir photoluminescence in $Ga_{0.5}In_{0.5}P$ epilayer grown on GaAs substrate by metallorganic chemical vapor deposition (MOCVD) method.—73-11476
Temperature dependence of the photoluminescence of modified InP:Sn crystals.—73-15199
Temperature drift of modulation characteristics in semiconductor lasers.—73-15200
Theoretical and experimental studies of the effects of compressive and tensile strain on the performance of InP-InGaAs multi-quantum-well lasers.—73-01348
Thermal behavior of visible AlGaInP-GaInP ridge laser diodes.—73-01349
Thermal desorption of uv/ozone oxide onto InP.—73-07837
Thermally stable, buried high-resistance layers in *p*-type InP obtained by MeV-energy Ti implantation.—73-07839
Thermodynamics of surface-induced ordering in the $Ga_{1-x}In_xP$ alloy.—73-08782
Threshold current analysis of compressive strain (0–1.8%) in low-threshold, long-wavelength quantum well lasers.—73-15209
Transport properties of low-resistance ohmic contacts to InP.—73-17104
Two 2-D hole gas in a GaInP/GaAs heterojunction.—73-15219
Two-wave mixing in InP:Fe at 1064 nm by linear and quadratic photorefractive effect.—73-09004
Type inversion of sulfide-treated *p*-InP.—73-01358
Ultrafast semiinsulating InP:Fe-InGaAs:Fe-InP:Fe MSM photodetectors: modeling and performance.—73-01360
Wafer bonding for hybrid circuit technology using solid-state reactions.—73-01363
Wavelength-tunable InGaAsP-InP multiple-λ/4-shifted distributed feedback laser.—73-15226
Wet and dry etching characteristics of $Al_{0.5}In_{0.5}P$.—73-07861
Wide-bandwidth low-noise InGaAsP-InAlAs superlattice avalanche photodiode with a flip-chip structure for wavelengths of 1.3 and 1.55 μm.—73-15229

**indium selenide,**
Challenges and progress in the scale-up of $CuInSe_2$ thin-film photovoltaic technology.—73-07402
Characterization of *n*-CdS/*p*-$CuGa_xIn_{1-x}Se_2$ thin-film heterojunctions.—73-11100
Characterization of Cu(Ga, In)$Se_2$ thin films and heterojunctions grown by close-spaced vapor transport.—73-16668
Conduction mechanism in crystalline $InSe-In_6Se_7$ composite.—73-01109
Creation of a new In-based material by laser irradiation of chalcopyrite-type ternary semiconductors.—73-07425
Determination and observation of electronic defect levels in $CuInSe_2$ crystals and thin films.—73-03089
Determination of the crystal orientation of $CuInSe_2$ by Raman spectroscopy.—73-08598
Effect of intercalation with sodium and potassium nitrites on physical properties of indium monoselenide.—73-16459
Exciton structure of the fundamental absorption edge of $CuInSe_2$.—73-07519
Fabrication and properties of isotypic heterostructures based on *n*-type $CuInSe_2$.—73-04341
High-temperature behavior of impurities and dimensionality of the charge transport in unintentionally and tin-doped indium selenide.—73-07567
Homojunction diode of $CuInSe_2$ thin film fabricated by nitrogen implantation.—73-09163
Influence of intercalation of Li and Ba on the electrical properties of InSe.—73-14982
Influence of pressure on the electrical conductivity and Hall effect in indium selenide.—73-07598
Ir investigation of phonon modes in $(Ga_xIn_{1-x})_2Se_3$ solid solution in the $0.1 \le x \le 0.4$ concentration range.—73-09414
Meyer-Neldel rule in emission rates from defects in copper indium diselenide.—73-17086
Ohmic contacts to *p*-$CuInSe_2$ crystals.—73-07700
Optical-constant heterojunctions formed from $CuInSe_2$ films.—73-04431
Photoacoustic spectroscopy of defect states in $CuInSe_2$ single crystals.—73-04434
Photoelectric properties of *n*-CdS:In-*p*-$CuInSe_2$ heterojunctions.—73-15092
Photoelectric properties of In-*p*-$CuInSe_2$ Schottky diodes.—73-07715
Photosensitivity of In-*p*-$CuIn_xGa_{1-x}Se_2$ thin-film structures.—73-15100
Polarization photosensitivity of thin-film *p*-$CuInSe_2$-*n*-CdS structures.—73-07740
Preparation of copper indium diselenide by selenization of copper indium oxide.—73-09259
Raman scattering in layer indium selenide under pressure.—73-15139
Stimulated emission [of radiation] in layered InSe and GaSe crystals.—73-15179

**indium telluride,**
Comparative study of the crystal structure of synthesized $CuGa_{1-x}In_xTe_2$ compounds.—73-16058
Diffusion model for indium in $Hg_{1-x}CdTe$.—73-01127
Impurity states of InGeTe.—73-01196

**indium tin oxide,**
Conduction mechanism in indium tin oxide/electroinactive polypyrrole/indium tin oxide sandwich structures.—73-10925
Deposition of indium tin oxide films on acrylic substrates by radio-frequency magnetron sputtering.—73-10929
Effect of ion implantation on the electrical and microstructural properties of tin-doped indium oxide thin films.—73-02581
Electrical and optical properties of indium tin oxide thin films deposited on unheated substrates by dc reactive sputtering.—73-02594
Electrical characterization of ITO/*p*-InP heterostructures.—73-02595
Electrical, optical, and chemical properties of indium-tin oxidized films grown by sequential electron beam deposition of indium and tin.—73-12792
Electronic and optical properties of room-temperature sputter-deposited indium tin oxide.—73-16487
Energy-saving properties of sol-gel dip-coated indium tin oxide films on a glass pane.—73-00478
Formulation of a statistical thermodynamic model for the electron concentration in heavily doped metal oxide semiconductors applied to the tin-doped indium oxide system.—73-01169
Highly conductive and transparent films of tin- and fluorine-doped indium oxide produced by APCVD.—73-10955
Increases in photovoltage of "indium tin oxide/silicon oxide/mat-textured *n*-silicon" junction solar cells by silicon preoxidation and annealing processes.—73-12813
Indium tin oxide films radio frequency sputtered from specially formulated high-density indium tin oxide targets.—73-02863
Influence of indium tin oxide deposition on the transport properties at InP junctions.—73-17081
Influence of manufacturing process of indium tin oxide sputtering targets on sputtering behavior.—73-13097
Large-scale and low-resistance ITO films formed at high deposition rates.—73-03854
Low-pressure and -temperature deposition of transparent conductive indium tin oxide (ITO) films by the face target sputtering (FTS) process.—73-05897
Micrograin structure influence on electrical characteristics of sputtered indium tin oxide films.—73-13415
Microstructure of a sputtered Ti film on an indium tin oxide substrate.—73-17167
Near-room-temperature deposited indium tin oxide films as transparent conductors and counterelectrodes in electrochromic systems.—73-14720
Optical properties of $In_2O_3$-coated cover glass for solar collectors.—73-10466
Photoelectrochemical characterization of tin-doped indium oxide.—73-07716
Preparation of indium tin oxide films at room temperature by pulsed laser deposition.—73-16923
Preparation of ITO thin films by sol-gel methods.—73-14257
Properties of indium tin oxide films prepared by the electron beam evaporation method in relation to characteristics of indium tin oxide/silicon oxide/silicon junction solar cells.—73-12869
Properties of transparent-conducting oxides deposited at room temperature.—73-12873
Rf magnetron sputtered indium tin oxide film on a reactively ion-etched acrylic substrate.—73-09305
Semiconductive indium oxide glass composite: I, Influence of chemical composition of glass matrix on microstructure and electrical conductivity.—73-04478
Sintering and electrical properties of titania- and zirconia-containing $In_2O_3$-$SnO_2$ (ITO) ceramics.—73-04169
Structures and properties of electron-beam-evaporated indium tin oxide films as studied by X-ray photoelectron spectroscopy and work-function measurements.—73-02470
Superconductivity in transparent Sn-doped $In_2O_3$ films.—73-01679

**indium,**
$A_x^{III}B_{2-x}^{III}C_3^{VI}$ crystals of tetradymite structure.—73-03074
Adatom location on the Si(111)7×7 and Si(111)$\sqrt{3}\times\sqrt{3}$-In surfaces by the X-ray standing wave and photoemission techniques.—73-08547
Advanced dielectrics for passivation of InSb.—73-04056
Band offset determination in parabolic and triangular quantum wells of GaAs/AlGaAs and GaInAs/AlInAs.—73-11081
Composition of the vapor phase in the ternary system In-As-P.—73-16061
Crystal structure and luminescent properties of indium titanate.—73-08586
Determining lattice mismatch or the composition of a single ultrathin GaInAs layer grown on InP.—73-04282
Effect of crystalline defects on electrical properties of heavily Si-doped strain-relaxed $In_{0.5}Ga_{0.5}As$ layers grown by molecular beam epitaxy on GaAs.—73-11151
Electrical, thermoelectric, and magnetic properties of In-doped $Cd_{0.2}Hg_{0.8}Te$.—73-07487
Electronic state of In impurities in narrow-gap semiconductors $Pb_{0.82}Sn_{0.18}Te$ and $Cd_{0.2}Hg_{0.8}Te$.—73-07499
Epitaxial GaAs and InGaAs picosecond photoresistors grown by low-temperature metallorganic chemical vapor deposition technique.—73-04321
Equilibrium phase diagram of the system In-As-Pb.—73-12581
Fabrication and characterization of InN and InAlN crystalline thin films by microwave-excited metallorganic vapor phase epitaxy.—73-14904
Fabrication of *p-n* junctions from CdTe:In by laser annealing.—73-14906
Fluoroindate glasses for active and passive fibers.—73-14382
Growth of InN for ohmic contact formation by electron cyclotron resonance metallorganic molecular beam epitaxy.—73-13082
Growth of textured ZnO:In thin films by chemical spray deposition.—73-09158
$In_{0.53}Ga_{0.47}As$ *p-i-n* photodiode for detection in the 1.3 to 1.6 μm spectral range.—73-15510
$In_{0.53}Ga_{0.47}As$ PIN photodiode for detection in the 1.3 to 1.6 μm spectral range.—73-11800
Indium impurity states in $Pb_{1-x}Sn_xSe$ solid solutions.—73-01197
Indium vanadates of sodium and cesium, their physical-chemical properties.—73-16173
$InF_3$-based fluoride glasses.—73-03737
Influence of In on the energy spectrum of $Pb_{1-x}Sn_xTe$.—73-07595
Influence of substrate temperature on the growth of InGaAs layers on (111)B-GaAs.—73-11273
Injection and thermostimulated currents in $MnIn_2S_4$ single crystals.—73-08890
Interface profile optimization in novel surface passivation scheme for InGaAs nanostructures using Si interface control layer.—73-07612
Isostructural phase transition in semiconducting $CdIn_2S_4$ spinel.—73-15003
Laser-assisted chemical vapor deposition of InN on Si(100).—73-17152
Low-temperature transport properties of $Cd_{0.91}Mn_{0.09}Te$:In and evidence for a magnetic hard gap in the density of states.—73-09416
MOCVD of polycrystalline tetragonal InS thin films.—73-07675
Molecular beam epitaxial growth of InSb on GaAs and Si for infrared detector applications.—73-11330
Mossbauer study of $Y_{3-x}Fe_{5-x}O_{12}$ and $Y_{3-x}In_xFe_5O_{12}$ ($x$=0, 0.18, 0.33) system.—73-08673
New fluoroindate glass compositions.—73-06941
Nonlinear *I-V* characteristics of $YBa_2Cu_3O_{7-x}$-In contacts.—73-08147
Nonmagnetic hard gap in amorphous $In/InO_x$ films in the hopping regime.—73-16550
Ohmic contact study for quantum effect transistors and heterojunction bipolar transistors with InGaAs contact layers.—73-07699
Optical constants of indium nitride.—73-05601
Optical properties of pure, $Nd^{3+}$-doped, and $Pr^{3+}$-doped fluoroindate glasses.—73-07060
Optoelectronic properties of In-doped ZnSe.—73-04432
Phase transitions sequence in ß-$TlInS_2$ layered crystal.—73-16268
Photoelectric properties of $CuInSe_2$.—73-05613
Photoluminescence and Hall characterization of pseudomorphic GaAs/InGaAs/AlGaAs heterostructures grown by molecular beam epitaxy.—73-11383
Preparation and characterization of Mn-doped sprayed *p*-$CuInS_2$ films.—73-07742
Rectifying contact formation with indium on polycrystalline *p*-type hot-filament chemical-vapor-deposited diamond utilizing molecular ion implantation.—73-07355
Relaxation of the delayed photoconductivity of $Pb_{1-x}Sn_xTe$:In alloys in an electric field.—73-04467
Spectral dependence of differential gain, mode shift, and linewidth enhancement factor in an InGaAs-GaAs strained-layer single-quantum-well laser operated under high-injection conditions.—73-15168
Structural and electrical properties of reactively sputtered InN thin films on AlN-buffered (00.1) sapphire substrates: dependence on buffer and film growth temperatures and thicknesses.—73-08971
Structural, electrical, and optical properties of In-doped CdS thin films prepared by vacuum coevaporation.—73-07816
Structure defects and photoluminescence of epitaxial $In_xGa_{1-x}As$ films.—73-15186
Surface roughness of strained $In_{0.1}Ga_{0.9}As$ films grown on GaAs substrates by molecular beam epitaxy.—73-03202
System $Bi_2Se_3$-InSe.—73-12714
System $Ho_2S_3$-$In_2S_3$.—73-12715
Thermal expansion and network constraints in Ge-In-Se glasses.—73-07086
Thermal stability of indium nitride single-crystal films.—73-05675
Transmission model InGaAs photocathode for night vision system.—73-04537
Vibrational spectra and structure of fluorindate glasses.—73-06987

**induction,**
Crucible-type induction furnace for melting glass.—73-01945
High energy density induction plasma system for materials processing.—73-08340
Use of induction melting for synthesis of oxide ceramics in the $ZrO_2$-$Y_2O_3$-$Al_2O_3$ system.—73-04953
**infiltration,**
Cofire technology: quantifying glass infiltration in the ceramic-metal interfacial region.—73-13382
Liquid infiltration in $ZrO_2$ ceramics.—73-09192
Making ceramic composites by melt infiltration.—73-09195
Method for producing composite ceramic structures using dross.—73-03690
Method of making ceramic composites.—73-00289
Method of producing ceramic composite bodies.—73-10332
Pressure infiltration processing of reinforced aluminum.—73-06843
Reactive vapor infiltration of molybdenum disilicide: kinetics and composite processibility.—73-09297
Self-supporting bodies.—73-10347
Self-supporting composite bodies.—73-10348
**infrared techniques,**
In situ infrared measurements of film and gas properties during the plasma deposition of amorphous hydrogenated silicon.—73-05855
Infrared line scanning helps ensure quality production for Ford.—73-10557
Ir temperature sensors: single point vs multi point.—73-08407
Role of infrared spectroscopy in the ceramic industry.—73-12190
**infrared,**
Far-ir investigation on $YBa_2Cu_3O_7$ films with the use of a reflection Fabry-Perot interferometer.—73-08077
Gas-distributing and infrared-radiating block assembly.—73-04031
Improvement of output voltage in ir sensor using semiconductive fiber by treatment of high-voltage pulse.—73-14973
Phenomenology of the ir properties of the CuO superconductors.—73-08163
Preparation and characteristics of infrared transmitting glasses in the PbO-$Bi_2O_3$-$Ga_2O_3$ system.—73-10471
**inhibitors,**
Inhibition of HAp formation in aqueous solutions of zinc and 1,2-dihydroxy-1,2-bis(dihydroxyphosphonyl)ethane.—73-12604
**inhomogeneity,**
Effect of inhomogeneous particle distributions on the mechanical properties of metal matrix composites.—73-09578
Inhomogeneity of internal stresses and X-ray elastic constants of ceramic materials.—73-12819
Inhomogeneous characteristics of fusion-cast refractories.—73-07217
Lognormal law for size distribution of nanoinhomogeneities in glasses.—73-14417
Measuring inhomogeneities in thermocouple wires.—73-12163
Pressureless sintering and HIPing of inhomogeneous ceramic compacts.—73-05991
Visualization of electrical inhomogeneities in semiinsulating GaAs.—73-11507
**injection molding,**
Aqueous process for injection molding ceramic powders at high solids loadings.—73-04958
Binder degradation and redistribution during pyrolysis of ceramic injection moldings.—73-09023
Ceramic injection molding and related processes.—73-04903
Compound and process for an injection molding.—73-04967
Experimental evaluation of the mixing process for the preparation of feedstock for powder injection molding.—73-09123
Fabrication of engineering ceramics by injection molding a suspension with optimum powder properties: I, Processing and microstructure.—73-09132
Fabrication of engineering ceramics by injection molding a suspension with optimum powder properties: II, Mechanical properties and wear behavior.—73-09595
Factors influencing fluidity of hot injection molding slips.—73-12028
Homogeneity effects on feedstock viscosity in powder injection molding.—73-05844
Injection molding of ß-TCP powder.—73-05878
Injection molding of ß-TCP powder.—73-13104
Injection molding of ceramic composites.—73-01792
Injection molding of highly purified hydroxyapatite and TCP utilizing solid-phase reaction method.—73-05879
Injection molding of metal or ceramic powders.—73-04979
Injection molding of powder materials.—73-01793
Injection molding of silicon carbide seal rings.—73-04925
Injection molding of silicon nitride powders treated with coupling agents.—73-09184
Low-pressure injection molding.—73-12043
Molding composition for the production of inorganic sintered products.—73-05002
Near net shaping engineering ceramics by injection molding.—73-02899
Preparation of sintered zirconia body.—73-15953
Preparation of zirconia sintered body.—73-02058
Reaction injection molding of silicon nitride ceramics having crystallized grain-boundary phases.—73-02132
Role of particle packing density in powder injection molding.—73-13241
Selection of a powder for ceramic injection molding.—73-06030
Structural examination of injection-molded ceramics by polarized transmission microscopy.—73-06289
**inks,**
Inks for the marking or decoration of objects, such as ceramic objects.—73-03426
**inorganic materials,**
Application of inorganic waste residue.—73-09818
Development of inorganic microwave dissolution.—73-15789
Fundamentals of Inorganic Glasses.—73-17527
Inorganic intelligent materials.—73-06574
Layered inorganic-organic nanocomposites: application to photofunctional materials and conversion to inorganic microporous materials.—73-05895
Manufacturing and properties of inorganic porous materials.—73-12044
Prediction of inorganic compounds: experiences and perspectives.—73-09741
**inspection,**
Changing user demands drive T&I (test and inspection) technology improvements.—73-12115
Continuous process inspection of refractory ceramics.—73-07201
Devices for inspecting glassmaking furnaces.—73-08394
Glass article inspection and rejection apparatus.—73-12079
Inspection of transparent containers.—73-01859
Key to trouble-free cold-end handling.—73-10558
Laser inspection for liquid crystal display (LCD) screens.—73-12157
Machine for video inspection of glass containers with intersecting light beams.—73-04981
Machine vision can keep quality high and production lines moving.—73-15813
Quality inspection of incoming raw materials.—73-15747
Simple base inspection.—73-14490
**instruments,**
DTA instrumentation for high-temperature materials characterization.—73-05041
In-line ratiometric turbidimeters are highly accurate, easy to use.—73-05057
Ir spectroscopy ellipsometry: instrumentation and results.—73-12152
Molecular directions in nanotechnology.—73-05068
Regression calibration method for rotating element ellipsometers.—73-12184
Self-referencing DSC (differential scanning calorimetry).—73-12192
Spectroscopic ellipsometry [SE] under external excitation.—73-12197
Substitute for the comparison microscope.—73-15852
Technique for differential scanning calorimetry (DSC).—73-12201
True resolution in laser diffraction particle sizing: I.—73-05092
True resolution in laser diffraction particle sizing: II.—73-05093
**insulators/insulation,**
Anomalous behavior of semiinsulating silicon-rich amorphous silicon nitride.—73-04242
Ceramic fiber insulation boards with improved thermal shock resistance.—73-00783
Composite flexible blanket insulation.—73-12453
Conductivity in insulators due to implantation of conducting species.—73-00942
Depth profiling of nonconductive powders using low-pressure radio-frequency plasma.—73-09066
Efficient insulation of oil refinery vessel and piping utilizing calcium silicate.—73-07210
Elevated-temperature fracture characterization of advanced fibrous ceramic thermal insulators.—73-17305
Evaluation of ceramic insulators for lithium electrochemical reduction cells.—73-00965
Failure of glass insulators in electric connectors.—73-00480
Forming of alumina insulation layers by double-step electrophoretic deposition.—73-02834
Forming of alumina insulation layers by double-step electrophoretic deposition.—73-10951
Forsterite insulation board for alloy steel concasting tundish.—73-04003
Gage measures hot erosion of insulation.—73-12142
Glass fiber insulation bonded with a uv-cured system.—73-10629
Improved composite flexible blanket insulation.—73-07215
Improved sprayable insulation.—73-07216
Influence of corrosive media on ceramic insulators.—73-09529
Influence of the chemical composition of glass on heat transfer through glass fiber insulations in relation to their morphology and temperature of use.—73-00504
Insulating ceramic fiber batting module, anchoring system, ladle cover assembly and method of assembly.—73-00887
Insulating shaped articles comprising inorganic fibrous matrices and xanthan gum/cationic starch binders.—73-10781
Insulation assembly.—73-10637
International comparison of laboratory results measuring heat conductivity of heat-insulating materials.—73-15808
Manufacture of more efficient infrared heaters through use of electrical insulating cement.—73-03494
Measurement of thickness and heat conductivity of fibrous thermal insulators.—73-01910
Method of manufacturing inorganic insulation.—73-12385
Microporous thermal insulation material.—73-10784
Nanosecond four-wave mixing in semiinsulating GaAs.—73-00998
Nature of cracks forming in glass insulators of electrical connectors.—73-00252
Novel Raman-active electronic excitations near the charge-transfer gap in insulating cuprates.—73-10979
Production of a sintered reaction-bonded silicon nitride insulator.—73-11048
Quick payback for furnace insulation.—73-10590
Reoriented insulation assembly and method.—73-00762
Role of dielectric properties in the tribological behavior of insulators.—73-09665
Service reliability of high voltage glass suspension insulators.—73-01024
Stoichiometry measurement and electric characteristics of thin-film $Ta_2O_5$ insulators for ultra-large-scale integration.—73-07358
**integrated circuit,**
Ceramic glass integrated circuit package with integral ground and power planes.—73-04191
Ceramic-glass ic package assembly having multiple conductive layers.—73-11008
Echelle grating–curved waveguide demultiplexer for photonic integrated circuits.—73-07459
Effect of temperature on stress-induced open failure in aluminum interconnects of LSI's.—73-10223
Electronic apparatus [made of GaAs] with improved thermal expansion match.—73-14749
Fabrication of high-$T_c$ superconducting integrated circuits.—73-11760
Integrated circuit fabrication process to reduce critical dimension loss during etching.—73-04211
Integrated circuit package.—73-11023
Low-temperature firing ceramic substrates for ic package.—73-00992
Method for fabricating a semiconductor integrated circuit device.—73-04520
Method for moisture sealing integrated circuits using silicon nitride spacer protection of oxide passivation edges.—73-11030
Method of forming an integrated circuit capacitor dielectric and a capacitor formed thereby.—73-04220
Method of forming isolated regions of oxide.—73-05229
Method of making laser-generated ic pattern for masking.—73-04523
Molding technique for ceramic parts for closure of integrated circuits.—73-01801
Nitride capped MOSFET for integrated circuits.—73-14756
Pinned ceramic chip carrier.—73-11042
Pressing ceramic components for integrated circuit frames.—73-01818
Sintered ferrite materials and chip parts.—73-11678
Superconducting lead on integrated circuit.—73-12000
Thin films on the integrated circuit industry: requirements and deposition methods.—73-06118
**intercalation,**
Clay-organic nanocomposite: preparation of a kaolinite-poly(vinylpyrrolidone) intercalation compound.—73-12945
Computer simulation studies of alkali and alkaline-earth metal intercalation into uranium oxides.—73-12008
Delamination of kaolinite by intercalation of urea.—73-04908
Delamination of kaolinite by intercalation of urea.—73-12970
Effect of $(HBO_2)_n$ intercalation on the surface acidity of kaolinite.—73-05543
Effect of intercalation with sodium and potassium nitrites on physical properties of indium monoselenide.—73-16459
Effect of the structure of carbon fibers on the structure of fiber intercalated compounds.—73-12577
Electrochemical intercalation of alkali metals into superconducting oxide phases.—73-11743
Electronic properties of sodium hydride and potassium mercury ternary graphite intercalation compounds.—73-16489
Intercalation complex of montmorillonite as model system: II.—73-08642
Intercalation of benzenecarboxylate ions into the interlayer of hydrotalcite.—73-00981
Metallization of the resistivity tensor in $Bi_2Sr_2CaCuO_x$ through epitaxial intercalation.—73-11830
Physical properties of $GaSe(MeNO_2)$ (Me=Na, K) and of biintercalates based on them.—73-11393
Preparation of Ag-I intercalated $Bi_2Sr_2CaCu_2O_y$ superconductor.—73-15593
Thermal behavior of octacalcium phosphate intercalated with ß-dihydromuconate.—73-12889
**interfaces,**
Application of electrical conductivity methods in interfacial cement chemistry.—73-06626
Atomic structure of Al-GaAs(110) interfaces.—73-08554
Azimuthal anchoring energy at an $SiO_x$-nematic interface.—73-16412
Ballistic electron emission spectroscopy of noble metal-GaP(110) interfaces.—73-01082
Bioactive glass interfacial reactions [analyzed] using Fourier transform infrared reflection spectroscopy.—73-06885
Ceramic materials: microstructural and interface analysis as the prerequisite for the optimization of microstructures: V, The microstructure of long-fiber-reinforced ceramics and glasses.—73-13374
Ceramic Transactions, Volume 41: Grain Boundaries and Interfacial Phenomena in Electronic Ceramics.—73-17521
Ceramic-metal interfaces brazed with Al-base alloys.—73-03563
Characterization of interface states in submicrometer MOS transistors by different charge pumping techniques.—73-14803
Characterization of interfaces in nickel-matrix composites.—73-06745
Characterization of Si-$SiO_2$ interface states: comparison between different charge pumping and capacitance techniques.—73-07410
Characterization of surfactant and polymer aggregates at the ceramic solid-solution interface using in situ spectroscopic techniques.—73-08378
Characterization of Tb at the interface of SiN/TbFeCo film by Auger electron spectroscopy.—73-03567

Chemically induced interface migration in oxides.—73-13339
Comparison of the geometric structure and electron reflectivity of A/B-NiSi$_2$/Si(111) and U/F-Si(111)-7×7 interfaces.—73-08825
Compositional nonuniformities and strain relaxation at misoriented In$_x$Ga$_{1-x}$As/GaAs interfaces.—73-14814
Computer simulation of thin-film heteroepitaxial ceramic interfaces using a near-coincidence-site lattice theory.—73-08580
Contactless electromodulation investigations of surface/interface electric fields in semiconductor microstructures.—73-11118
Contribution to the formation mechanism of the transition zone between rock-cement paste.—73-00049
Coverage-dependent surface photovoltage induced by synchrotron radiation at metal/GaAs interfaces.—73-01114
Crack deflection at bimaterial interfaces.—73-06345
Design, analysis, and application of an improved push-through test for the measurement of interface properties in composites.—73-15786
Development and electroanalytical investigation of a novel rectifying semiconductor/polymer interface.—73-07443
Dielectric/semiconductor interfaces.—73-10932
Effect of fiber coating thickness on the interfacial properties of a continuous fiber ceramic matrix composite.—73-17285
Effect of heat treatment on the parameter of an interface in Si-SiO$_2$ structures after irradiation.—73-11155
Effect of interface states on applied voltage dependence of double Schottky barrier: I, Theoretical calculation.—73-16460
Effect of interfacial properties on fracture toughness in fiber-reinforced ceramic composites.—73-03267
Effect of interfacial properties on fracture toughness in fiber-reinforced ceramic composites.—73-13508
Electrical and optical characterization of metal/*n*-InP interfaces formed by a cryogenic process in high vacuum.—73-08848
Electrokinetics of the silica-solution interface: a flat plate streaming potential study.—73-16483
Electron properties of dielectric-semiconductor interfaces in SiO$_2$-α-Si:H Langmuir-Blodgett film structure.—73-01155
Electronic properties of semiconductor-insulator interfaces in a thin-film SiO$_2$/a-Si:H/Langmuir-Blodgett film transistor structure.—73-14882
Electronic structure of a metal-insulator interface.—73-00963
Evaluation of interfacial properties of fiber-reinforced ceramic composites using a mechanical properties microprobe.—73-03284
Experimental observation of the failure mechanisms of metal/ceramic interfaces under mode I loading.—73-13835
Finite element analysis of thermal residual stresses at graded ceramic-metal interface: I, Model description and geometrical effects.—73-06791
Finite element analysis of thermal residual stresses at graded ceramic-metal interfaces: II, Interface optimization for residual stress reduction.—73-06792
Fourier transform infrared spectroscopy of hydrous oxide/aqueous solution interfaces.—73-09145
Fracture and sliding in the fiber-matrix interface in ceramic composites.—73-06427
Functional interfaces for oxide/oxide composites.—73-15926
Handbook on Characterization Techniques for the Solid-Solution Interface.—73-06604
Heterodimensional Schottky metal–two-dimensional electron gas interfaces.—73-11241
Homogenization theory for fiber composites with imperfect interface at elevated temperatures.—73-03597
How does the chemical nature of the interface modify the band offset.—73-07570
In situ investigation of amorphous silicon/silicon nitride interfaces by infrared ellipsometry.—73-06230
Influence of crystallography and oxide and metallic types on the structure and properties of metal-ceramic interfaces.—73-13845
Influence of surface roughness on the electrical properties of Si-SiO$_2$ interfaces and on second harmonic generation at these interfaces.—73-12817
Inhomogeneous and wide range of barrier heights at metal/molecular beam epitaxy GaAs(100) interfaces observed with electrical measurements.—73-07608
Initial formation of the CaF$_2$ interface: a theoretical study.—73-02623
Interface conditions and interparticle forces.—73-09186
Interface contamination by suboxide transport.—73-13357
Interface of multiphase ceramic composites.—73-03156
Interface properties of anodic sulfide and sulfide oxide films on *n*-InSb.—73-04371
Interface science of controlled metal/metal and metal/ceramic interfaces prepared using ultrahigh vacuum diffusion bonding.—73-00244
Interface structure between diamond film and silicon substrate.—73-13407
Interface structure of Si$_3$N$_4$ matrix composite with nanometer-scale SiC particles.—73-06237
Interface structures and bonding strength of Si$_3$N$_4$/304 stainless steel joints.—73-03606
Interfaces in GaAs/AlAs: perfection and applications.—73-07616
Interfacial atomic composition and Schottky barrier heights at the Al/GaAs(001) interface.—73-11282
Interfacial characterization of β-SiAlON powder prepared from Hadong kaolin.—73-03157
Interfacial stress measurements on ceramic matrix composites.—73-17364
Interfacial structure between Ag-Cu-Ti alloy and sintered SiC with various additives.—73-03609
Interfacial structure of Si$_3$N$_4$ brazed with an Ag-Cu-Ti alloy.—73-03610
Interfacial structures between Ag-Cu-Ti alloy and sintered SiC with various additives.—73-13852
Interpretation of data from the four-point bending delamination test to measure interfacial fracture toughness.—73-03320
Ion microprobe investigations of interfacial phenomena in composites.—73-06810
Junction formation and characteristics of CdS/CuInSe$_2$/metal interfaces.—73-05586
Lateral *p-n* junctions between quasi-two-dimensional electron and hole systems at corrugated GaAs/AlGaAs interfaces.—73-07634
Local mechanical stability of the aluminum/carbon (amorphous) and aluminum/SiO$_2$ (amorphous) interface at extrinsic dislocations.—73-00248
Materials Interfaces: Atomic-Level Structure and Properties.—73-06605
Measurement of interface strength by the modified laser spallation technique: II, Application to metal/ceramic interfaces.—73-09629
Mechanics and mechanisms of crack growth at or near ceramic-metal interfaces: interface engineering strategies for promoting toughness.—73-09644
Metal–semiconductor interfaces.—73-01243
Metal-ceramic adhesion: quantum mechanical modeling of transition metal–Al$_2$O$_3$ interfaces.—73-06824
Microdesigned interfaces: new opportunities for materials science.—73-02895
Micromechanical modeling of fiber/matrix interface effects in transversely loaded SiC/Ti-6-4 metal matrix composites.—73-00251
Microstructural analysis of interface between YBa$_2$Cu$_3$O$_{7-x}$ [Y123] and Ag/Pd alloys.—73-11832
Microstructural characterization of the transition zone in cement systems by means of ac impedance spectroscopy.—73-06687
Nanoscale engineering of metal/semiconductor interfaces.—73-07686
New method of enhancing cement-aggregate interfaces: I, Ideal aggregate and its effects on interfacial microstructures.—73-10066
Photoemission investigation of the electronic structure at polycrystalline CuInSe$_2$ thin-film interfaces.—73-11377
Reaction layer of silicon nitride ceramics to metal joints using Ni-base solder.—73-00262
Reduced interface densities for remote microwave plasma silicon nitride.—73-09299
Regrowth of GaAs at the Au-Ge-Ga/GaAs interface under an As flux.—73-01301
Schottky barrier height—do we really understand what we measure.—73-11436
Several methods to investigate the microstructural features of the interfacial zone between a steel fiber and cement paste matrix.—73-10150
Shear bond strength of nickel-alumina interfaces diffusion bonded by HIP.—73-13897
Stability of interfaces in high-temperature metal matrix composites.—73-06858
Stress and anisotropy effects in the interfacial reactions of Al and TiN$_x$.—73-03645
Stress-corrosion cracking at ceramic-metal interfaces.—73-00268
Structure and properties of confined liquids: a molecular model of the clay–water interface.—73-08974
Surface photovoltage effects in photoemission from metal/GaP(110) interfaces: temperature-dependent Fermi level movement.—73-01335
Surface roughness effects at lithium silicate glass/blocking metal interfaces.—73-01338
Temperature formation of structural defects in the interface of GaAs Schottky barrier.—73-11478
Thermochemical modeling of interface reactions in glass matrix composites.—73-06980
Transient thermal fracture of ceramic-to-metal interfaces.—73-03660
Two experimental techniques for studying the effects of the interfacial zone between cement paste and rock.—73-08452
Using rapid infrared forming to control interfaces in titanium matrix composites.—73-06871
Uv photon-assisted control of interface charge between CdTe substrates and metallorganic chemical vapor deposition CdTe epilayers.—73-11497
Valence band offset at the asymmetric GaAs/In$_{0.53}$Ga$_{0.47}$As interface [determined] by ultraviolet photoemission spectroscopy.—73-11502
Wetting, adhesion, and electronic structure of metal/ceramic interfaces: a comparison with metal-semiconductor Schottky contacts.—73-03667
X-ray photoelectron spectroscopy study on the electrical double layer at an Al$_2$O$_3$-Al interface.—73-06881

**interferometers/interferometry,**
Characterization of III-V materials by optical interferometry.—73-07407
Characterization of III-V materials by optical interferometry.—73-14802
Design and operation of monolithic X-ray inteferometers for super-precision metrology.—73-05035
Optical interferometry of surfaces.—73-01923

**intermetallics,**
Infiltrated fiber-reinforced metallic and intermetallic alloy matrix composites.—73-03685
New trends of intermetallics development—summary report of the symposium held in Sendai, Japan.—73-10257
Photoemission and absorption spectroscopy of Mn$_2$Sb, MnAlGe, Mn$_2$As, Cr$_2$As, and Fe$_2$As.—73-08699
Synthesis of nanocrystalline intermetallic compounds by MA [mechanical alloying] and EDC [electro-discharge compaction].—73-06091

**iodides,**
Ac conductivity and dielectric relaxation studies in AgI-based fast ion-conducting glasses.—73-00929
Application of the model of quasi-ideal solutions for consideration of the phase equilibria in the system Zr-ZrI$_4$.—73-16033
Crystal structures of Hg$_4$Sb$_2$I$_3$ and Cd$_6$Sb$_2$I$_3$.—73-02220
Diffuse scattering in K$_{1-x}$(ND$_4$)$_x$I mixed crystals.—73-05383
Dry eching of III-IV semiconductors in CH$_3$I, C$_2$H$_5$I, and C$_3$H$_7$I discharges.—73-07455
Electron diffraction and electron microscopy studies of phase transitions in thin Ag$_2$CdI$_4$ films.—73-16129
Electronic conductivity and chemical diffusion coefficient of cadmium-doped cuprous iodide.—73-03093
Equilibrium defect behavior in α- and β-CuI.—73-06159
Fast ion transport in the new mixed system (CuI)$_x$·[(Ag$_2$O)$_2$·(V$_2$O$_5$)]$_{100-x}$ (40≤x≤80).—73-09406
Frequency response analysis of the fast ion-conducting system cuprous iodide–silver chromate.—73-07326
Glass formation and conductivity of the AgI-AgO$_{0.5}$-TeO$_2$ system.—73-00491
Infrared structural studies of silver ion-conducting glasses *x*AgI·(1−*x*)(Ag$_2$O·*n*B$_2$O$_3$).—73-14709
Orientational disorder in Ni(NH$_3$)$_4$I$_2$. Evidence for rotation-translation coupling.—73-05444
Particle size effect of conductivity enhancement in BaTiO$_3$-dispersed AgI.—73-01006
Phase transition and optical properties of thin films of Ag$_2$CdI$_4$ superionics.—73-02390
Photoinduced currents in superionic conductor RbAg$_4$I$_5$.—73-14723
Solution flow rate effects on the response time of selective electrodes having iodide and bromide functions.—73-14732
Structural modification with copper(I) iodide at pressures up to 27 kbar.—73-08751
$T_g$ and electrical conductivity of Ag$_2$O-B$_2$O$_3$-P$_2$O$_5$-AgI glasses.—73-14290
Thermal constants of fusion of lutetium iodide.—73-16370
Thermographic investigation of gadolinium iodide.—73-16380
Thermostimulated luminescence of CsI:Na crystals with different contents of the activator in the region of destruction of Na$^0$ centers.—73-02715
Transformation-range viscosities and thermal properties of AgI-based superionic glasses.—73-14301
Variable temperature $^{127}$I MAS NMR of β-AgI: sensitivity of the $^{127}$I MAS linewidth to Ag$^+$ diffusion.—73-06183

**iodine,**
Coefficient of thermal expansion of glasses and melts of the Te-I system.—73-14144
Crystal structure of KInS$_2$·I.—73-02198
Electron microscopic study of the interaction of YBa$_2$Cu$_3$O$_6$ with iodine.—73-04713
Photoluminescence of *n*-type CdTe:I grown by molecular beam epitaxy.—73-02666
Raman spectra of iodide species in intercalated IBi$_2$Sr$_2$CaCu$_2$O$_{8+\delta}$.—73-11885

**ion exchange,**
Cation-exchange in synthetic zeolite L: the exchange of hydronium and ammonium ions by alkali metal and alkaline earth cations.—73-08563
Cation-framework interaction in alkali-cation-exchanged zeolites: an XPS study.—73-16046
Characterization of protonically exchanged Nasicon.—73-02161
Estimation of the contribution of various components of the ion-exchange interdiffusion coefficient.—73-00337
Formation mechanism of the refractive index profile of glass in low-temperature ion exchange Li$^+_{solid}$↔K$^+_{molten}$.—73-14190
High-temperature centrifuge method to study ion exchange in glass melts avoiding convective processes.—73-12144
Hydronium exchange of polycrystalline K-Na β˝/β-Al$_2$O$_3$.—73-04110
Ion exchange in zeolites: I, Prediction of Ca$^{2+}$-Na$^+$ equilibria in zeolites X and Y.—73-08647
Ion exchange in zeolites: II, Hydrolysis and dissolution of zeolites NaX and NaY.—73-12612
Ion exchange in zeolites: III, Hydrolysis and trace $^{45}$Ca$^{2+}$ and $^{22}$Na$^+$ exchanges in zeolites X and Y.—73-12613
Ion-exchange reaction of granulated blast-furnace slag in acid solution.—73-08648
Mechanism of diffusion and ion transport of chloride ions on hydrous ceric oxide.—73-06167
Model for Sr-Cs-Ca-Mg-Na ion-exchange equilibria on chabazite.—73-16217
Na to K vapor-phase exchange in polycrystalline β˝-alumina.—73-03104
Post-ion-exchange reactions in glass.—73-14074

**ion implantation,**
Analytical electron microscopy [AEM] of Al$_2$O$_3$ implanted with iron ions.—73-03120
Application of ion-implantation technology for optoelectronics.—73-05694
Applications of ion-implanted glasses for biomedical uses.—73-03708
Chemical and compositional changes induced by N$^+$ implantation in amorphous SiC films.—73-08575
Chemical and physical modifications in ion-implanted glasses.—73-13938
Chemical effects in ion-implanted glass waveguides.—73-03712
Chemical states of implanted aluminum ions in silica and silicon ions in alumina.—73-16053
Colloid size distribution in ion-implanted glass.—73-06890
Conductivity in insulators due to implantation of conducting species.—73-00942

Depth profiles of ion-implanted fluorine in tin oxide films prepared by atmospheric pressure chemical vapor deposition.—73-02231
Distribution of defects created by xenon implantation into silica.—73-06906
Effect of boron, oxygen, and fluorine in ion-implanted GaAs.—73-04287
Effect of Ga implantation on the intermixing of InGaAs/GaAs strained quantum wells.—73-04289
Effect of ion implantation on the electrical and microstructural properties of tin-doped indium oxide thin films.—73-02581
Effects of alkali-earth metal ion implantation into alumina surface layer on its acidic-basic properties.—73-16464
Electrical properties of oxygen-ion-implanted InP.—73-11181
Electrical surface conductivity in quartz induced by ion implantation.—73-12791
Formation of photosensitive materials by ion implantation of oxygen ions in silica.—73-07028
Formation of ultrathin SIMOX structures by low-energy implantation.—73-04106
Growth of single-crystal α-$Si_3N_4$ in buried layers formed by low-rate implantation of $N^+$ ions in heated Si.—73-01180
Hydrophobic surface formation on glass by ion implantation.—73-03736
Indentation fracture of pure and MeV energy ion-implanted sapphire.—73-06456
Influence of double implantation of Si and F atoms on the electrical parameters of semiinsulating GaAs.—73-01203
Influence of implantation of compensating impurity ions on the optical properties of $n^+$-type GaAs.—73-07594
Ion implantation for biomaterials.—73-10244
Ion implantation in $PbTiO_3$ films.—73-12614
Ion implantation into glasses.—73-03739
Ion implantation of a donor impurity in InP.—73-11284
Lateral straggle of Si and Be focused ion beam implanted in GaAs.—73-11292
Localization and electric-field-modulated electron spin resonance of a shallow donor in SIMOX.—73-04127
Metal ion implantation for large-scale surface modification.—73-08351
Modification of optical properties by ion implantation.—73-03803
Ni-implanted vitreous electrolyte $AgAsS_2$: ESR, ionic, and electronic conductivity.—73-01001
Nondestructive depth profiling of silicon ion implantation induced damage in silicon(100) substrates.—73-15059
Optical activation of ion-implanted rare earths.—73-04424
Optical spectra of Pb-implanted fused silica.—73-00525
Radiation damage behavior of $LiNbO_3$ crystal by MeV F ion implantation.—73-07915
Radiation hardening of SIMOX buried oxide by nitridation.—73-04160
Raman scattering spectroscopy of ion-implantation-doped GaAs layers.—73-01297
Self-recovery of implanted semiconductors.—73-11442
Spectroscopic studies of the structural reorganization of the surface layer of vitreous silica after ion implantation.—73-00402
Surface modification of heavy metal fluoride glass by ion implantation.—73-03768
Thermal annealing behavior of ion-implanted silica glass.—73-06978
Thermally stable, buried high-resistance layers in *p*-type InP obtained by MeV-energy Ti implantation.—73-07839
Tribology of amorphous diamond films grown or modified by ion implantation.—73-03661
Utilization of an electroconductive surface layer on an $Si_3N_4$ ceramic formed by ion implantation as a crack gage and a strain gage.—73-04184
Variations of surface hardness of alumina induced by ion implantation.—73-16647

**ionic conductors/ionic conduction,**
Calculation of the activation energy for ionic conduction in glasses.—73-06999
Description of electron, X-ray, and neutron Bragg scattering in crystals of superionic conductors.—73-14686
Development of $Na^+$ superionic conductors using new rare-earth silicophosphate materials by means of glass-ceramic processing.—73-14689
Development of new glass-based superionic conductors.—73-14690
Doppler broadened and ionic conductivity studies on Nasicon analog.—73-00950
Electrochemical characterization of BIMEVOX oxide ion conductors.—73-00961
Experimental study of the precrystallization process in the amorphous fast ionic conductor $0.6AgI\text{-}0.25Ag_2O\text{-}0.15P_2O_5$.—73-00967
Fabrication and properties of oxysulfide glassy lithium ion conductors.—73-04100
Fast lithium-conducting glass-ceramics in the $Li_2O\text{-}CaO\text{-}TiO_2\text{-}Al_2O_3\text{-}P_2O_5$ system.—73-00970
Hydronium and ammonium Nasicons: investigations of conductivity and conduction mechanism.—73-00977
Improved precursor ceramics for proton-conductive β/β″-aluminas.—73-04113
Influence of oxygen ion conduction on nitric oxide decomposition.—73-16519
Ion conductivity of Nasicon ceramics: effects of texture and doping with $B_2O_3$ and $Al_2O_3$.—73-07329
Ion conductivity of solid solutions $Ca_{1-x}Th_xF_{2+2x}$ and $Ca_{1-x}U_xF_{2+2x}$.—73-00982
Ionic ceramic materials used in potentiometric electrochemical sensors.—73-00984
Ionic conduction associated with polaronic hopping in $KTiOPO_4$ single crystals.—73-13358
Ionic conduction in partially ion-exchanged Sr β-alumina; $Sr_{1-x}Na_{2x}MgAl_{10}O_{17}$.—73-00985
Ionic conduction in the $B_2S_3\text{-}Li_2S$ glass system.—73-00986
Ionic conductivity of (Ag, Na) nitrite sodalites.—73-04124
Ionic conductivity of $Ba_{1-x}Gd_xF_{2+x}$ crystals [x=0.25 and 0.4–0.41] at high temperatures.—73-16524
Ionic conductivity of ceramics prepared by sintering of $M_2O\text{-}Ln_2O_3\text{-}2SiO_2$ mixtures (M=Li, Na, K, Rb, Cs; Ln=La, Nd, Sm, Gd, Dy, Y, Ho, Er, Yb).—73-14714
Ionic conductivity of crystals subjected to radiation and mechanical processing.—73-04125
Ionic conductivity of $Li_2O\text{-}B_2O_3\text{-}P_2O_5$-based glasses.—73-10449
Ionic conductors for solid oxide fuel cells.—73-01055
Limits of complex impedance spectroscopy in ionic conductor thin-film measurements.—73-05062
Mechanism of ionic conductivity in glass.—73-14716
Mixed conduction in β-alumina-type materials: a critical review.—73-14719
Mixed ionic-electronic conductors for oxygen separation and electrocatalysis.—73-04222
New lithium ion-conducting glasses.—73-04144
Preparation and ac/dc conductivity of tin-zeolite-Y materials.—73-01012
Process for the preparation of an ion-conduction ceramic material.—73-01066
Protonic conductivity of Hyceram, a bonded hydronium Nasicon.—73-04158
Protonic conductivity of hydrotalcite-type compound thick films: application to a humidity sensor.—73-01292
Raman scattering in superionic conductors $Li_3Sc_{2-x}Fe_x(PO_4)_3$ ($0 \le x \le 2$).—73-16288
Raman scattering study of the $Ba_{1-x}R_xF_{2+x}$ superionic conductors.—73-05466
Refinement of atomic structure of the ionic conductor $Na_{4+x}FeP_2O_{8+x}F_{1-x}$.—73-16289
Secondary compensation effect on conductivity of ionic crystals.—73-01023
Sn-*K*, Pb-$L_3$, and Ba-$L_3$ EXAFS, X-ray diffraction, and $^{119}Sn$ Mossbauer spectroscopic studies of ordered $PbSnF_4$ and $BaSnF_4$ fluoride ionic conductors with α-$PbSnF_4$ structure.—73-02434
Solid electrolytes with high ionic conductivity.—73-04172
Structure and dynamics of solid-state ionics.—73-04174
Theory of cation substitution effect in ionic conductors.—73-01037
Transient ionic conductivity in fused silica.—73-00568

**ionization,**
Theoretical calculation of impact ionization rate in $SiO_2$.—73-08982

**ions,**
$^{19}F$ nuclear magnetic resonance study of the structural role of fluorine ions in glasses of the system $Al(PO_3)_3\text{-}BaF_2$ and $Ba(PO_3)_2\text{-}CdF_2$.—73-00341
Action of chloride ions on hydrated cement pastes: influence of the cement type and long-time effect of the concentration of chlorides.—73-03433
Activation barriers for dc conductivity in ionic glasses: classical calculations using the small-cluster approximation.—73-04055
Characteristic surface and maximum invariant components of $B_{\Delta M}$ tensor of spin Hamiltonian of $Mn^{2+}$ ions in crystals of calcite, magnesite, and dolomite.—73-02159
Diffusion of aluminum, scandium, and gallium ions into lithium niobate single crystals.—73-06152
Distribution and chemical states of ions around the interfaces between sol-gel-derived silicate films and substrates.—73-10365
EPR of thermally populated $Er^{3+}$ excited states in garnets.—73-02270
ESR studies of $Mo^{5+}$ ions in potassium borate and soda phosphate glasses.—73-03729
Etch mechanism in the reactive ion etching of silicon nitride.—73-02816
Focused ion-beam-induced deposition and ion milling as a function of angle of ion incidence.—73-09135
Formation region of cryptomelane with different K ion occupancy and elutriation of K ion with water.—73-05404
Formation region of cryptomelane with different K ion occupancy and elutriation of K ion with water.—73-16157
Influence of ion energy in plasma deposition of a-$SiO_2$ films.—73-03851
Ion diffusion in microcracked concrete.—73-03493
Ion emission studies of pulsed laser evaporation of $YBa_2Cu_3O_7$.—73-08116
Microscopic model of the mixed mobile ion effect.—73-14226
Microwave field effects on ionic transport in ionic crystalline solids.—73-06168
Migration of ions in concrete due to cathodic protection current.—73-03502
Optical properties and preparation of transparent glass-ceramics containing $Cr^{3+}$ ions.—73-03861
Optical spectra of copper ions in alkali-lime-silica glasses.—73-03747
Preparation and optical properties of transparent glass-ceramics containing cobalt(II) ions.—73-00532
Reactive ion etched nanometer size trenches [studied] using a combined scanning electron microscope and scanning tunneling microscope.—73-17190
Relative sensitivity factors for positive atomic and molecular ions sputtered from Si and GaAs.—73-01303
Specific effect of ions on the rate of alkali-silica reaction.—73-10161
Structural levels of destruction of ionic crystals under dynamic loading.—73-17436
Structural role of fluorine ions investigated by the method of nuclear magnetic resonance of $^{19}F$ in glasses of the system $Al(PO_3)_3\text{-}BaF_2$ and $Ba(PO_3)_2\text{-}CdF_2$.—73-00410
Superconducting correlations and ion dynamics in metal-oxide compounds.—73-08217
Technology and application of filamentless rf ion sources in ion beam sputter deposition.—73-04950
Titanium oxide formation by dynamic ion beam mixing.—73-03064
Use of luminescence of $Mn^{2+}$ and $Cr^{3+}$ in probing the disordering process in $MgAl_2O_4$ spinels.—73-05683

**iridium oxide,**
Design model for electrochromic windows and applications to the $WO_3/IrO_2$ system.—73-07296
Ir(VI) stabilized in a perovskite-type lattice: $Ba_2CaIrO_6$.—73-08653
Structural and analytical characterization of an iridium oxide thin layer.—73-12693
Weak ferromagnetism in $BaIrO_3$.—73-07982
X-ray photoelectron spectroscopy and electrochemical surface characterization of $IrO_2$+$RuO_2$ electrodes.—73-14741
XRD, TEM, and XPS characterization of $IrO_2$+$Ta_2O_5$ films.—73-12739

**iridium,**
Crystal structure of polymeric pyrite-type $Ir_3Te_8$.—73-02209
Iridium coatings on carbon-carbon composites produced by two different sputtering methods: a comparative study.—73-10245
Vibrational resonance Raman spectra and the valence force field of iridium dichalcogenides $IrS_2$ and $IrSe_2$.—73-02538

**iron oxide (black),**
Ferromagnetic resonance and spin anisotropy in iron oxide thin films and iron oxide/nickel oxide superlattices.—73-04612
Magnetic iron oxide powder production by ferrous pentacarbonyl liquid phase oxidation with ozone.—73-15335
Magnetic properties of copper-magnetite nanocomposites prepared by ball milling.—73-04623
Preparation of $Zn_xFe_{3-x}O_4$ fine powders by thermite method with zinc.—73-16943
Preparation of $Zn_xFe_{3-x}O_4$ fine powders by thermite method with Zn.—73-09273
Structural and magnetic ordering in iron oxide/nickel oxide multilayers by X-ray and neutron diffraction.—73-04655
Surface structure determination of oxide films grown on a foreign substrate: $Fe_3O_4$ multilayer on Pt(111) identified by LEED.—73-17207

**iron oxide (red),**
Barium-doped iron oxide pigments for high-density magnetic recording: thermal stability and magnetic properties.—73-15306
Characterization of epitaxial iron oxide films by conversion electron Mossbauer spectroscopy [CEMS].—73-15308
Characterization of thermal decomposition products of δ-FeOOH by FTIR spectroscopy and $N_2$ adsorption.—73-12549
Crystallographic study of cobalt treatment on γ-$Fe_2O_3$.—73-04600
Direct deposition of highly coercive gamma iron oxide thin films for magnetic recording.—73-12991
Effect of additions of oxides of calcium, magnesium, and aluminum on the crystallization of aegirine in glasses of the $Na_2O\text{-}Fe_2O_3\text{-}SiO_2$ system.—73-00613
Effect of heat treatment on the magnetic properties of a rapidly quenched $ZnO\text{-}Bi_2O_3\text{-}Fe_2O_3$ system.—73-15316
Electronic and molecular dynamics of chemisorption on α-$Fe_2O_3$ with time-delayed injection of donor-acceptor gases.—73-08862
Formation of oxide phases in the system $Fe_2O_3\text{-}Gd_2O_3$: II.—73-12586
Glass formation and structure of glasses containing $Fe_2O_3$ and $Gd_2O_3$.—73-13994
Glass formation in $V_2O_5\text{-}MoO_3\text{-}Fe_2O_3$.—73-10380
Glass-ceramics and color methods.—73-03927
Hyperfine interaction of $^{111}Cd$ impurities in $Mn_2O_3$, $Mn_3O_4$, and β-$Fe_2O_3$.—73-12599
Influence of grain size and secondary phase on the fracture toughness of sintered MgO bodies: II, Addition of $Fe_2O_3$.—73-17357
Interactions in the system $Fe_2O_3\text{-}SO_3\text{-}Cl_2$ investigated by the mass spectrometric method.—73-16181
Iron-oxide-doped alkali-lime-silica glasses: I, EPR investigations.—73-06931
Iron-oxide-doped alkali-lime-silica glasses: II, Voltammetric studies.—73-06932
Low-temperature preparation of ultrafine $Fe_2O_3$ powder from organometallic precursors.—73-13123
Magnetic and optical properties of γ-$Fe_2O_3$ nanocrystals.—73-02635
Method of preparing electrographic magnetic carrier particles.—73-11677
Microstructure and $NO_2$ sensing properties of $Fe_2O_3$ thin films.—73-17161
Microstructures and LPG sensing properties of maghemite (γ-$Fe_2O_3$).—73-03177
Neutral gray glass composition.—73-10650
Phase diagram of the subsolidus region of the quasi-binary system $BeAl_2O_4\text{-}(BeFe_2O_3)$.—73-16247
Polarization-dependent photomagnetic effect in α-$Fe_2O_3$:Eu, Ga crystals.—73-04635
Preparation and characterization of iron(III) oxide films by a novel spray pyrolysis method.—73-02932
Preparation of γ-$Fe_2O_3$-containing silica glasses by the sol-gel process.—73-14474
Preparation of ultrafine α-$Fe_2O_3$ powders.—73-09271
Reduction of supported iron oxide studied by temperature-programmed reduction combined with Mossbauer spectroscopy and XRD.—73-12674
Reflectance spectroscopy of oxide films of α-$Cr_2O_3$ and α-$Fe_2O_3$.—73-08722
Resonant X-ray diffraction near the iron *K*-edge in hematite (α-$Fe_2O_3$).—73-08725
Sintering behavior of NiO-$Fe_2O_3$ composites.—73-16993

Steplike adsorption isotherms of molecules on γ-FeOOH and the surface homogeneity of γ-FeOOH.—73-08742
Structure of the $Fe_2O_3$-$Al_2O_3$(0001) interface.—73-06292
Structure of the $Fe_2O_3$-$Al_2O_3$(1102) interface.—73-06293
Third-order nonlinear optical susceptibility of α-$Fe_2O_3$ thin film prepared by the sol-gel method.—73-05679
Third-order nonlinear optical susceptibility of α-$Fe_2O_3$ thin film prepared by the sol-gel method.—73-12901
X-ray magnetic dichroism of antiferromagnet $Fe_2O_3$: the orientation of magnetic moments observed by Fe 2*p* X-ray absorption spectroscopy.—73-15376

**iron oxides,**
Dependence of magnetic properties of $(Co,Fe)_3O_4$ film on microstructure control through phase separation.—73-11650
Development of new biomagnetic materials.—73-15313
Effect of iron oxides on the service life of periclase-spinellide refractories.—73-10722
Effect of iron oxides on the service life of periclase-spinellide refractories.—73-14586
Effect of iron oxides on the state of copper ions and photochromic properties of glasses.—73-00458
Effect of iron oxides on the state of copper ions and the photochromic properties of glass.—73-00459
Effects of iron [on] the "whiteness" of porcelain, particularly during dry preparation: I, Investigative methods.—73-10832
Effects of iron on the "whiteness" of porcelain, particularly during dry preparation: II, Tests, results, and discussion.—73-10833
Effects of several kinds of anisotropy on the coercivity behaviors of iron oxides.—73-04608
Electron spin resonance and Mossbauer studies on crystallization process of $BaFe_{12}O_{19}$ from barium iron borate glass.—73-13974
Electronic and spin state of high-valent iron oxides studied by a DV-Xα cluster method.—73-02258
Formation of iron oxide films from stabilized magnetite sols—magnetic liquids.—73-04614
Influence of pyrite candle-end phase composition on iron phosphate astringent compound properties.—73-16841
Ion-beam mixing of iron oxide marker layers in doped and undoped alumina thin films.—73-05173
Nonstoichiometry and thermodynamics of the solid solution $(Fe,Mn)_{1-δ}O$ at 1200°C.—73-12642
Optical properties at high temperature of molten soda-lime-silica glasses containing iron oxide.—73-14243
Oxide surface layer on fine iron particles.—73-08687
Physicochemical investigation of phase development in the system $LiFeO_2$-$Li_4TiO_4$.—73-12659
Preparation and structure of 1–8 monolayer-thick epitaxial iron oxide films grown on Pt(111).—73-08711
Preparation of fine single-crystalline particles of ferroxplana, $Ba_2Co_2Fe_{12}O_{22}$, from crystallization of glass.—73-09262
Reduction of FeO dissolved in CaO-$SiO_2$-$Al_2O_3$ slags by Fe-C droplets.—73-17234
Settling behavior of iron oxide suspensions.—73-06035
Thermal conductivity, thermal diffusivity, and specific heat of slags containing iron oxides.—73-16623
Thermoelectric properties and microstructure of Fe-Si-O thin films prepared by ICB [ionized cluster beam] method.—73-02714
Transport properties of manganese-doped ferrous oxide at high temperature.—73-02717

**iron,**
Analytical electron microscopy [AEM] of $Al_2O_3$ implanted with iron ions.—73-03120
Anisotropic grating recording in photorefractive $KNbO_3$:Fe.—73-08807
Anisotropy of the magnetization of isolated $Fe^{2+}$ ions in II-VI compounds.—73-01075
Antiferromagnetic phase diagram of $YBa_2(Cu_{1-x}Fe_x)_3O_y$.—73-05357
Application of magnetooptical and optical spectroscopy to investigation of spin fluctuation in weakly ferromagnetic alloy $Fe_2P$ in paramagnetic region.—73-15305
Brick made from iron ore tails without pressing, firing, and steam curing.—73-06629
Calculated electronic structure of $SnFe_3N$.—73-05363
Change of electrical properties of Co-doped and Cr-doped $FeSi_2$ thin films during amorphous-to-crystalline transformation.—73-01092
Change of electrical properties of Co-doped and Cr-doped $FeSi_2$ thin films during amorphous-to-crystalline transformation.—73-12749
Changes in the valence and structural state of the iron ion upon melting of $Ba_2FeSi_2O_7$.—73-08566
Cluster spin glass ordering in diluted spinel $CoFe_{1-x}Al_{1+x}O_4$.—73-08576
Comparative study of FMR [ferromagnetic resonance] and Brillouin light scattering on FeNiB alloys.—73-11649
Comparison of iron and aluminum silicates with the ion topology.—73-12554
Compositional effects on the iron redox state in model glasses for nuclear waste immobilization.—73-08289
Conversion electron Mossbauer characterization of Fe-Ti and Fe-TiN interfaces in dependence on pretreatments and bias voltage in physical vapor deposition.—73-17119
Crystal field levels and fine structure of the ground orbital state for high spin $Fe^{2+}$ and $Fe^{4+}$ ions in $YBa_2(Cu_{1-x}Fe_x)_3O_{7-δ}$.—73-04690
Crystal structure of $Sc_{1.2}Fe_8Si_{9.8}$.—73-02211
Crystal structure of the sodium ion conductor α-$Na_7Fe_3(P_2O_7)_4$: evidence for a long-range ordering of the $Na^+$ ions.—73-02216
Crystallographic and magnetic properties of $Fe_{0.5}Cu_{0.5}Cr_2Se_xS_{4-x}$.—73-08592
Decomposition of iron spinel under low oxygen partial pressure.—73-02226
Defect clustering and color in Fe,Ti: α-$Al_2O_3$.—73-05540
Determination of standard Gibbs energies of formation of $FeWO_4$ and $Fe_2WO_6$ by electromotive force measurement.—73-02234
Determination of the lattice site of Fe in photorefractive $LiNbO_3$.—73-05381
Development and future aspects of ironmaking technology in Japan.—73-17473
Development of a new method for the determination of iron content of hydraulic cementitious materials and pozzolans.—73-06645
Development of black glazes based on Fe-Mn system.—73-07242
Domain wall [DW] interaction with elastic waves in $FeBO_3$.—73-01453
Double phase conjugate mirror and double color pumped oscillator using band-edge photorefractivity in InP:Fe.—73-01131
Dynamics of spontaneous spin reorientation in $Fe_3BO_6$.—73-16114
Effect of rare-earth elements on microstructure and wear resistance of laser-remelted iron alloy coatings containing metalloids.—73-13828
Effects of substitution of Fe for Cu in $La_{1.85}Sr_{0.15}CuO_{4-δ}$ polycrystalline samples.—73-08048
Effort on preparing sintered bodies of $Fe_4N$.—73-05785
Electron and hole spin lifetimes in $Zn_{1-x}Mn_xSe$- and $Zn_{1-y}Fe_ySe$-based heterostructures.—73-07491
Electronic and vibrational properties of semiconducting crystalline $FeSi_2$ layers grown on Si(111).—73-01156
Energy gap distribution in a $YBa_2(Cu_{1-0.04}Fe_{0.04})_3O_7$ film using the Si reflection Fabry-Perot method.—73-08059
Epilayer-induced structural transition to bcc Co during epitaxial growth of Co/Fe superlattices.—73-16136
Epitaxial growth of α-$FeSi_2$ on Si(111) at low temperature.—73-16137
EPR of surface bound $Fe^{3+}$ ion in polycrystalline quartz.—73-02268
EPR study on the incorporation of Fe(III) ions in ZSM-5 zeolites in dependence on the preparation conditions.—73-05395
EXAFS study of lithium-intercalated iron thiophosphate.—73-02273
Features of electrical and magnetic properties of MeS-$Fe_2O_3$ oxysulfides [Me=V, Fe, Mn].—73-16496
Features of manifestation of giant ΔE-effect in amorphous Fe-B-P alloys.—73-02274
Features of the structural state of iron in a glass synthesized in a beam of accelerated electrons.—73-00628
FMR [ferromagnetic resonance] doublet in two-layer ferrite-garnet films.—73-11654
Formation and magnetic properties of rapidly quenched $R_2Fe_{17}C_x$ (R=Gd and Ho) compounds with higher C concentrations.—73-05569
Formation of epitaxial CsCl-type iron silicide on Si(111).—73-16156
Formation of nanocrystalline Fe/SiC composite by mechanical alloying.—73-03589
Furnace transmutation glaze of iron system.—73-10850
Geometric and electronic structure of epitaxial iron silicides.—73-05409
Ground state of transition elements of the Fe group in GaAs and GaP.—73-07548
High-$T_c$ superconducting phases in the system $^{57}Fe_{0.05}$:$Bi_{1.7}Pb_{0.4}Sr_{1.5}Ca_{2.5}Cu_{3.6}O_x$ studied by Mossbauer spectroscopy.—73-15500
High-temperature photorefractive effects in $LiNbO_3$:Fe.—73-01418
Inclusion removal in ceramic green body by acid treatment: zirconia ceramic capillary for optical-fiber connector as an example.—73-02862
Influence of iron doping on the microstructure of $YBa_2(Cu_{1-x}Fe_x)_3O_{7-δ}$ ceramics.—73-01576
Iron modification in the mold using foam-ceramic filters.—73-00828
Iron nitride magnetic fluids prepared by vapor-liquid reaction and their magnetic properties.—73-07945
Iron phosphate coatings on cold-rolled steel: morphology formation and intrinsic adhesion mechanisms.—73-13853
Iron–alumina nanocomposites obtained by mechanosynthesis.—73-13854
Iron-related levels in *n*-type silicon studied by Hall effect and DLTS measurements.—73-15002
Kondo-like anomalies in point-contact characteristics of ferromagnetic $EuFe_2P_2$.—73-07946
Local environment of iron in heavy ion-irradiated amorphous magnetic oxides by Mossbauer and X-ray absorption spectroscopy.—73-01467
Low-temperature magnetic phase transition in $YBa(Cu_{1-x}Fe_x)_3O_{7+δ}$ system ($0.15≤x≤0.3$) accompanied by change in electronic structure of Fe atoms.—73-15541
Low-temperature magnetic state of amorphous invarous iron-boron alloys.—73-15331
Magnetic and Mossbauer effect study of $Er_2Fe_{17}C_2$.—73-07948
Magnetic and optical properties of $SiO_2$ surface layers containing small α-Fe ferromagnet particles produced by ion bombardment.—73-02636
Magnetic phase diagrams of the system $YBa_2(Cu_{1-x}Fe_x)_3O_y$.—73-08661
Magnetic properties and exchange interactions in disordered $Fe_xMn_{1-x}S$ system.—73-01469
Magnetic structure of $Fe_3GaAs$.—73-15029
Magnetic susceptibility and Mossbauer effect in Fe-doped CdS.—73-16208
Magnetically ordered states in $YBa_2(Cu_{1-x}Fe_x)_3O_{7+δ}$ with $0.15<x<0.3$.—73-07960
Magnetoelastic channel for nuclear-spin excitation in $FeBO_3$.—73-15348
Manifestation of $FeBO_3$ domain structure in [NMR] signals in strong rf fields.—73-01473
Manifestation of superconducting transition in Raman spectra of bismuth-based (4413) crystals.—73-15550
Mapping of dopant concentrations in photorefractive InP:Fe wafers.—73-07662
Mechanism of reaction sintering of iron–iron boride cermets.—73-06822
Method for producing iron-nitride powders.—73-16002
Microbiotic deferrization of the upper cretaceous quartz sands of Weferlingen (Germany).—73-01986
Microstructure of iron nitride–titanium nitride films prepared by CVD.—73-09489
Microstructure of iron nitride-titanium nitride films prepared by CVD.—73-17170
Microstructure of photodeposited Fe in porous Vycor glass.—73-07050
Model of $Sm_{11}Fe_{17}C_{18}$ crystal structure.—73-16219
Morphology of $NiFe_2O_4$ precipitation in NiO.—73-17177
Mossbauer and magnetization study of the mixed spinel $CoFe_{2-x}Cr_xO_4$.—73-11667
Mossbauer effect, electron spin resonance, and electrical conductivity studies of the effect of iron on the magnetic and electrical properties of sodium silicate glass.—73-07054
Mossbauer investigation of the surface and volume spin-reorientation phase transition in $Fe_3BO_6$.—73-12634
Mossbauer spectrometry study of a compound of perovskite structure containing tetravalent iron by means of a dimagnetic $^{119}Sn^{4+}$ probe.—73-16222
Mossbauer study of $Gd_2Fe_{17}C_{20}$ compound prepared by melt quenching.—73-08672
Mossbauer study of the 2212 phase of the bismuth superconductor.—73-08139
Neutron diffraction study of excitation and damping of magnetoelastic vibrations in $FeBO_3$ crystal.—73-01476
Neutron diffraction study of $Y_3Fe_{14}BN_{1-δ}$.—73-02347
Neutron diffraction study of $YBa_2Cu_{2.7}Fe_{0.3}O_x$.—73-08140
Optical nonlinearity of iron ions in glass matrices.—73-10464
Optical properties of the diluted magnetic semiconductors $Zn_{1-x}Fe_xSe$ thin films.—73-07705
Oxidation of ferrous iron in glass at high temperatures.—73-14451
Phase studies of the Cd-Fe-Se system in the Cd-rich region.—73-05453
Photoionization of an $Fe^{2+}$ ion in ZnS: lattice relaxation.—73-11380
Possible nature of the forms of Fe(II) in iron-containing vitreous sodium polyphosphates.—73-14073
Preparation and characterization of silica-supported maghemite.—73-13172
Preparation and structures of the alkaline-earth iron oxyhalides.—73-02403
Preparation of iron hydroxide gel and its thermal transformation.—73-13192
Process for the deferrization of kaolin, quarztrose sand, paper filler, white pigment, pumice, and electronics materials.—73-05008
Raman scattering by $3d^6$ electrons of $Fe^{2+}$ in zinc blende diluted magnetic semiconductors.—73-04459
Raman scattering in $FeBO_3$ at high pressures: phonon coupled to spin-pair fluctuations and magnetodeformation potentials.—73-07973
Raman spectroscopy in $Cd_{1-x}Fe_xS$—iron energy levels and spin-flip Raman scattering.—73-08718
Reactions during preparation and sliding of sintered Fe-Mo-S wear-resistant materials.—73-05470
Real structure and thermodynamic properties of olivine solid solutions of $(Fe_{1-x}Ni_x)_2SiO_4$.—73-05471
Recent developments in iron ore sintering: II, Research studies on sintering and sinter quality.—73-06847
Recent developments in iron ore sintering: III, Granulation and strand feeding.—73-06848
Recent developments in iron ore sintering: IV, The sintering process.—73-06849
Reduction behavior of $Fe^{3+}$/$Al_2O_3$ obtained from the mixed oxalate precursor and the formation of the $Fe^0$-$Al_2O_3$ metal-ceramic composite.—73-05472
Reversal of magnetic anisotropy of $Cd_{1-x}Fe_xS$ at high magnetic fields.—73-07974
Selective growth of diamond using an iron catalyst.—73-13249
Service of iron ladles with a monolithic lining.—73-00859
Si(111)/$FeSi_2$ heterostructures: formation and properties of the low-temperature metallic (gamma) and semiconducting (beta) disilicide phases.—73-07798
$Sm_2Fe_{17}N_y$ powder with high coercivity prepared by high-energy ball milling.—73-17003
Solubility limit in the tetragonal series of the $Fe(Ta_xNb_{1-x})_2O_6$ system.—73-08734
Spectrophotometric analysis of ferrous, ferric, and total iron content in soda-lime-silica glass.—73-03758
State of iron atoms and exchange interactions in solid solutions of $LaSrFe_xAl_{1-x}O_4$ and $YCaFe_xAl_{1-x}O_4$.—73-12691
Structural and magnetic properties of $Bi_2Sr_2Ca-Cu_{2(1-x)}Fe_{2x}O_{8+δ}$.—73-04656
Structural features of the superionic phase transition in $Na_3Fe_2(PO_4)_3$.—73-08750
Structural positions and magnetic ordering of Fe atoms in $YBa_2(Cu_{1-x}Fe_x)_3O_y$ system enriched in or depleted of oxygen.—73-15632
Structure and magnetic properties of $Ge_xFe_{3-x}O_4$ oxides [x=0, 0.2, 0.4, 0.6, 0.8, 1].—73-15367
Structure and magnetic properties of $Sr_2FeO_4$ and $Sr_1Fe_2O_7$ studied by powder neutron diffraction and Mossbauer spectroscopy.—73-15368
Structure defects in rare-earth-iron carbides with the hexagonal $Th_2Ni_{17}$ structure type: a study by means of high-resolution electron microscopy.—73-03113
Structure-property relationships in M-type hexaferrites: hyperfine interactions and bulk magnetic properties.—73-04657

Synthesis and crystal structure of ammonium analog of leucophosphite, $NH_4[Fe_2[PO_4]_2(OH)(H_2O)]\cdot H_2O$.—*73-16350*
Synthesis and magnetic property of $NaFe_3V_8O_{19}$.—73-02487
Synthesis of Fe-B system thin films from powder mixtures under the influence of laser radiation.—73-09355
Synthesis of high moment and high coercivity iron nitride particles.—73-04658
Synthesis of nanocrystalline Fe-based particles by $CO_2$ laser pyrolysis.—73-06090
Synthesis, crystal structure, and properties of new iron phosphate, $Fe_2^{3+}Fe_3^{2+}[P_2O_7]_4$.—73-16356
Temperature dependence of equatorial Kerr effect in $FeBO_3$.—73-16360
Tensimetric investigation of solid solutions $Cr_{2.83}Fe_{0.1}Te_4$.—73-16363
Thermal conductivity of twinned $YBa_2Cu_3O_{7-\delta}$ and tweeded $YBa_2(Cu_{0.95}Fe_{0.05})_3O_{7-\delta}$ in a magnetic field: evidence for intrinsic proximity effect.—73-08254
Thermal decomposition of the cesium ferrate(VI).—73-12719
Thermally stimulated polarization and dc conduction in iron phosphate glasses.—73-07088
Thermodynamics of the $Fe^{2+}$-$Fe^{3+}$ equilibrium in glass melts.—73-14519
Thermoelectric properties and microstructure of Fe-Si-O thin films prepared by ICB method.—73-12899
Two-wave mixing in InP:Fe at 1064 nm by linear and quadratic photorefractive effect.—73-09004
Ultrafast semiinsulating InP:Fe-InGaAs:Fe-InP:Fe MSM photodetectors: modeling and performance.—73-01360
Ultrathin Fe films on $TiO_2$(110): growth and reactivity.—73-06870
Variation of crystal-field coefficients with carbon content in the $Sm_2Fe_{17}C_{3-\delta}$ series of compounds.—73-09005
Wettability and interfacial reaction between molten iron and zirconia substrates.—73-00275
X-ray absorption near-edge structure analysis of CdFeTe: XANES experiment and theoretical LMTO calculations.—73-01365
$YBa_2(Cu_{1-x}Fe_x)_3O_{7-\delta}$ in strong magnetic fields.—73-08277

**irradiation,**
Anisotropic changes induced by ion irradiation on Bi-based high-$T_c$ superconductors.—73-15386
Cathodoluminescence and micro-Raman analysis of oxygen loss in electron-irradiated $YBa_2Cu_3O_{7-x}$.—73-11699
Coupled thermostimulated luminescence/electron spin resonance study in pure vitreous silica: application to alpha radiation damage study.—73-07006
Effect of 14-MeV fast neutron irradiation on melt-textured $YBa_2Cu_3O_{7-\delta}$.—73-11729
Effect of both irradiation energy and annealing temperatures on Hall voltage of new concrete mixer.—73-00072
Effect of fast-neutron irradiation on critical current MTG bulk YBCO superconductors.—73-04700
Effect of high-energy ion irradiation and electron irradiation on textured $Bi_2Sr_2CaCu_2O_x$.—180-MeV $Cu^{11+}$ and $B^{11+}$ irradiations and 3-MeV electron irradiation.—73-08032
Effect of ionizing and displacive radiation on the thermal conductivity of alumina.—73-02582
Effect of irradiation with neutrons of low fluence on $T_c$ of $Bi_2Sr_2CaCu_2O_x$.—73-11734
Effects of electron irradiation on the local structural change in oriented $Bi_2Sr_2CaCu_2O_x$ superconductors.—73-15443
Electron irradiation effects in glasses and other insulators.—73-03725
Laser irradiation of amorphous thin films.—73-13115
Laser-generated ultrasonic characterization of irradiated glass optical fibers.—73-06934
Lifetime control in thyristors by proton irradiation.—73-04381
Mathematical modeling of temperature distribution during $CO_2$ laser irradiation of glass.—73-10563
Morphological and electrical modifications in silicon submitted to high-intensity laser irradiation.—73-11339
Oxygen molecules stably caged in a uv-irradiated thin film from peroxo polytungstic acids.—73-05943
Photodarkening and paramagnetism in ultraviolet-exposed lead lanthanum zirconate ceramics.—73-07905
Self-diffusion of barium and cesium cations in neutron- and gamma-irradiated high-silica zeolites and boron zeotypes.—73-09421
Thermal shock fracture by laser irradiation.—73-05669

**isostatic pressing,**
Chemical products and additives for isostatic pressing.—73-10806
Features of molds for quasi-isostatic pressing.—73-07128
Influence of basic raw materials on the behavior of isostatically pressed flatware during porcelain bisque firing.—73-00914
Isostatic pressing of bone china.—73-10861
Isostatic pressing of flat porcelain tableware: II.—73-00915
Method for isostatic or pseudoisostatic pressing employing a surrounding casing of glass.—73-12084
Special process features of isostatic pressing of whiteware bodies.—73-10898
Use of quasi-isostatic pressing technology in the tableware industry.—73-01836
Utilization of isostatic pressing in the industry of vessels.—73-12069

**isotopes,**
Anharmonic phonons and site-selective isotope effects in $YBa_{2-x}M_xCu_3O_7$ (M=La, Sr).—73-04670
Anomalous isotope effects due to linear energy-dependent electronic density of states in high-$T_c$ superconductors.—73-04673
Diffusion of isotopes in surface layers of some oxides.—73-13345
Profiles of the isotopes formed in GaAs by bombarding it with α particles of energies of 12, 16, and 20 MeV.—73-15120

**Jahn-Teller effect,**
Bonding in $Ti_8C_{12}$ and the substantial Jahn-Teller effect.—73-08556

**Japan,**
Application of carbon fibers to construction materials in Japan—a review.—73-12411
Center for Ceramics Research, Research Laboratory of Engineering Materials, Tokyo Institute of Technology.—73-03382
Ceramics center indigenous to Okayama [Japan].—73-03385
Fine ceramics in Japan.—73-05168
Glass science and glass industry in Japan.—73-06570
High-performance/high-temperature materials in Japan.—73-17486
Influence of Japanese/American culture on technological innovation in advanced ceramic materials.—73-03397
Japan's usage of metal alkoxides in advanced ceramics.—73-03400
Perspective on intelligent materials.—73-06586
Progress in Japanese refractory industry.—73-04014
Progress in silicon nitride ceramics in Japan.—73-05272
Recent steelmaking technology in Japan.—73-00850
State of the art in Japan for joining ceramic materials[—a review].—73-03644
Status of metal matrix composite research and development in Japan.—73-06859
Supply and demand trend of gypsum, lime, and cement in Japan in 1992.—73-10174
Trend of Japanese patents on fine ceramics: III.—73-03409

**jewelry,**
Development of lead-free glasses for jewelry manufacture.—73-14349

**joining,**
Active brazing alloy containing carbon fibers for metal-ceramic joining.—73-13794
Ceramic injection molding and related processes.—73-04903
Ceramic joining: I, Partial transient liquid-phase bonding of alumina via Cu/Pt interlayers.—73-06744
Ceramic Transactions, Volume 35: Structural Ceramics Joining II.—73-17518
Electric joining method of material including ceramics.—73-10310
Fundamental concepts for joining $Si_3N_4$ and metals.—73-03592
Fundamentals of the SHS joining process.—73-01784
Glass-ceramic joining media.—73-02840
Heating mechanism in the electrical joining process of $Si_3N_4$ ceramics.—73-15964
High-speed joining of aluminum metal matrix composites using continuous wave and pulsed lasers.—73-00239
Joining ceramics using microwave energy.—73-02882
Joining of 8 mol% YSZ solid electrolyte and perovskite $LaMnO_3$.—73-00989
Joining of AlN plate and composite of the system Al-AlN using all ultrafine particle.—73-03612
Joining of carbon-carbon composites by graphite formation.—73-12433
Joining of chromized carbon steel and $Si_3N_4$.—73-13855
Joining of metal films to carbon-carbon composite material by metal plasma immersion ion implantation.—73-00246
Joining of silicon carbide by chemically reduced, precipitated NiP interface layers.—73-02883
Joining technique using multilayer lead-indium-gold composite deposited in high vacuum.—73-01226
Method for joining parts of ceramic high-temperature superconductor material.—73-01712
Method of joining corrugated glass plates of borosilicate glass.—73-03947
Method of making a shaped part comprising a metallic member and a ceramic member.—73-10328
Microwave joining of Bi-based 2223 superconductor and its microstructure features.—73-04774
Microwave joining of ceramics, silicon nitride and silicon carbide.—73-05919
Microwave joining of ceramics, silicon nitride and silicon carbide.—73-16869
Microwave joining of dissimilar SiC ceramics.—73-05920
New approaches to joining ceramics for high-temperature applications.—73-03627
Potential interlayer materials for the microwave joining of alumina.—73-16902
Problems and opportunities in microwave joining of ceramics.—73-05993
Rapid infrared joining [RIJ] of titanium alloys and titanium matrix composites.—73-00261
Reaction layer of silicon nitride ceramics to metal joints using Ni-base solder.—73-00262
Reaction layer of silicon nitride ceramics to metal joints using Ni-base solder.—73-10270
Reliability factors in ceramic/metal joining.—73-00264
State of the art in Japan for joining ceramic materials[—a review].—73-03644
Surface-activated bonding [SAB]—an approach to joining at room temperature.—73-03648
TEM investigation of microwave-joined Si-SiC/Si-SiC and α-SiC/Al/α-SiC.—73-00270
Thermal stresses by joining different glasses depending on cooling rate.—73-00564
Transient liquid phase ceramic bonding.—73-00302
Transient liquid phase joining of reaction-bonded silicon carbide.—73-03659
Wetting and joining of mullite ceramics by active-metal braze alloy.—73-03665

**joints,**
Bonding strength of alumina joint bonded under the alternating stress.—73-06335
Design criteria and limitations for SiC-metal and $Si_3N_4$-metal joints derived from phase diagram studies of the systems Si-C-metal and Si-N-metal.—73-03574
Development of high-strength, active-brazed silicon nitride and silicon carbide joints.—73-00220
Effect of joint designs on vibration natural frequencies of carbon-carbon satellite truss.—73-12426
Effect of surface preparation on strength of ceramic joints brazed with active filler metal.—73-03582
Evaluation and selection of joint designs for a carbon-carbon satellite truss.—73-12430
Evaluation of joint between the original concrete and the repair materials by ultrasonic testing method.—73-09952
High-pressure ceramic joint.—73-05216
High-temperature strength of ion-implanted SiAlON and nickel joints.—73-03596
Insert for identifying an implantable ceramic joint head.—73-02045
Joining ceramics by brazing.—73-13108
Load transfer and failure of joints in carbon-carbon material.—73-13560
Measurement of the hardness of metal/high-temperature superconductor contact joints.—73-11827
Microwave joining of yttrium-based superconductor and its microstructure features.—73-08135
Movement joints in facing masonry.—73-03982
Numerical modeling of residual stresses in graded ceramic-metal joints.—73-03630
Principles of joining, operations and applications to SiC.—73-12440
Reaction processing and properties of SiC-to-SiC joints.—73-02989
Stress analysis of nipple in the joint of artificial graphite electrodes.—73-13596
Temperature distribution in a nailed gypsum-stud joint exposed to fire.—73-13787
Toward an understanding of the reaction sequences in brazed joints: investigation of the Ti-Cu-O ternary at 945°C.—73-00273

**Josephson effect,**
Critical junction.—73-04688
Interlayer Josephson coupling of thermally excited vortices in $Bi_2Sr_2CaCu_2O_{8-y}$.—73-15521
Intrinsic Josephson effects in $Bi_2Sr_2CaCu_2O_8$ single crystals.—73-08113
Manifestation of Josephson medium in tunneling in Bi-Sr-Ca-Cu-O: experiment and model.—73-15549

**junctions,**
Critical junction.—73-04688
Degradation mechanism of Au/$AlO_x$/Al tunnel junction.—73-07292
Electroluminescence and photoluminescence from microporous silicon *p-n* junctions.—73-07489
Energy diagram of a $Pb_{1-x}Mn_xTe/PbTe$ heterojunction.—73-11194
Fabrication of $YBa_2Cu_3O_x$-$La_{0.7}Ca_{0.3}MnO_x$- $YBa_2Cu_3O_x$ coplanar junctions and their anisotropic current-voltage characteristics.—73-08076
Heterodimensional Schottky metal–two-dimensional electron gas interfaces.—73-11241
Interaction of electrodes in $YBa_2Cu_3O_{7-x}$/metal tunnel junctions.—73-08111
Interfacial atomic structure and band offsets at semiconductor heterojunctions.—73-07617
Isothermal and thermally stimulated relaxation of the current and capacitance in a weakly asymmetric *p-n* junction with an inhomogeneous doping profile in the *n*- and *p*-type regions.—73-11288
Linear conductance backgrounds in tunnel junctions.—73-08899
Millimeter-wave detection by YBaCuO step-edge microbridge Josephson junction.—73-08137
Molecular beam epitaxy for high-electron-mobility modulation-doped two-dimensional electron gases.—73-16874
Oscillations of the tunnel conductance of an *n*-GaAs:Te/Au junction with a Schottky barrier.—73-07707
Photosensitivity of *n*-$Cd_{0.8}Zn_{0.2}$-*p*-$CuInSe_2$ heterojunctions.—73-11392
Photovoltaic properties of reactive thermal evaporated indium oxide (IO)/silicon junctions.—73-04785
Radiation recombination in type-II *n*-GaInAsSb/*n*-GaSb heterojunctions.—73-15133
Rectification effect by a *p-n* junctioned oxide film.—73-16584
Semiconductor heterojunctions at the Conference on the Physics and Chemistry of Semiconductor Interfaces: a device physicist's perspective.—73-11443
Trilayer lift-off metallization process using low-temperature-deposited $SiN_x$.—73-07843
Tunneling spectroscopy of YBCO "break junctions."—73-08269

**kaolin,**
AKW kaolins and feldspars for the [European] ceramic industry.—73-01977
Correlation of physical properties of casting kaolins.—73-07240
Dielectric permeability of dehydrated kaolin of various chemical compositions.—73-02568
Effects of $Al_2O_3$ and glass on formation of needlelike mullite from kaolin.—73-13025
European protoporcelain: the social context of the history of a sixteenth century ceramic technology known as Saint-Porchaire.—73-00007
Influence of the fineness of calcined kaolin on the sintering of electrical ceramic bodies based on Angrensk kaolins.—73-02873
Kaolin-based nonlustrous glaze.—73-10863
Kaolin.—73-12281
Kaolins from Zhana-Daursk as local materials for ceramic tile production.—73-01984
Nitridation behavior of kaolin with reduced alumina content obtained by acid treatment.—73-02907
Pozzolanic activation of metakaolin.—73-10089
Preparation and some properties of porous mullite ceramics using needlelike crystals.—73-02938

Role of sodium hydroxide in the reaction between alkalis and aluminum-silicate-containing granulates.—73-02424
Sampling and analysis of KGa-1B well-crystallized kaolin source clay.—73-12678
Sedimentary structure in gray kaolin of Georgia.—73-12296
Stability of clay suspensions—effect of pH and polyethylenimine.—73-03027
Surface activity of calcined kaolins having different degrees of crystallinity.—73-02699
Synthesis of 13X zeolite from calcined kaolins and sodium silicate for use in detergents.—73-17028
Use of Spanish natural clays as additional silica sources to synthesize 13X zeolite from kaolin.—73-17068

**kaolinite,**
5A zeolite/kaolinite adsorbent for gas purification.—73-12365
Absorbed cations and water film thickness on the kaolinitic clay surface.—73-16651
Charge reversal of kaolinite by hydrolyzable metal ions: an electroacoustic study.—73-12754
Clay-organic nanocomposite: preparation of a kaolinite-poly(vinylpyrrolidone) intercalation compound.—73-05709
Clay-organic nanocomposite: preparation of a kaolinite-poly(vinylpyrrolidone) intercalation compound.—73-12945
Delamination of kaolinite by intercalation of urea.—73-04908
Delamination of kaolinite by intercalation of urea.—73-12970
Effect of $(HBO_2)_n$ intercalation on the surface acidity of kaolinite.—73-05543
Effect of mechanical treatment on the crystal structure and thermal behavior of kaolinite.—73-12575
Flash calcines of kaolinite: kinetics of isothermal dehydroxylation of partially dehydroxylated flash calcines and of flash calcination itself.—73-12803
Hydrophilicity-hydrophobicity of the kaolinite surface.—73-05579
Hydrothermal synthesis of kaolinite from serpentinite.—73-02854
Kaolin.—73-12281
Kaolinite particle sizes in the <2 μm range using laser scattering.—73-12154
Local ordering structure of meta-kaolinite and meta-dickite by the X-ray radial distribution function analysis.—73-08656
Measuring the surface conductance of kaolinite particles.—73-08915
Nature of the surface charge of kaolinite.—73-16547
Phenol removal from kaolinite by electrokinetics.—73-15911
Pozzolanic reaction of metakaolinite and its effect on portland cement hydration.—73-00167
Sedimentation behavior of a fine kaolinite in the presence of fresh Fe electrolyte.—73-13246
Selective flocculation of kaolinite from mixtures with tribasic calcium phosphate [TCP] using hydrolyzed polyacrylamides.—73-01995
Synthesis of kaolinite and transformation of halloysite by hydrothermal reaction.—73-09357
Time-temperature-transformation curves [T-T-T curves] for kaolinite–α-alumina.—73-12725

**keramzit,**
Extension of the raw material base for keramzit production.—73-15903
Heliothermal treatment of construction thermal-insulating keramzit concrete.—73-00099
Influence of composition and structure on crack resistance of keramzit concrete.—73-00113
Keramzit concrete on keramzit gravel impregnated by solution of SDO.—73-13745
Strength of concrete at the compression on very small flats.—73-13782

**kiln car,**
Applications of steel fiber-reinforced refractory to kiln car.—73-10700

**kiln furniture,**
Cordierite and mullite-containing kiln furniture with low thermal expansivity.—73-10711
High-temperature strength of silicon-nitride-bonded silicon carbide for kiln furniture.—73-10734
Mullite-based kiln furniture materials.—73-07219
Optimizing the design of kiln furniture arrangements.—73-01964
Oxidizing kinetics of SiC kiln furniture at different temperatures.—73-10751
Quality assurance during manufacture of refractory kiln furniture according to DIN ISO 9000.—73-00845
Refractory materials for kiln furniture in the ceramic industry.—73-00856
Resistance of thermal shock of SiC kiln furniture.—73-10767
SiC kiln furniture materials.—73-07223
Silicon carbide kiln furniture with improved heat shock resistance.—73-10770
Strengthening coating for desks of silica alumina magnesia.—73-10772
Temporary melt phases—importance for applications of cordierite-mullite kiln furniture.—73-04022

**kilns,**
Application of air as thermal insulating material to kilns.—73-15865
Bellows' nozzles, tuyeres, and kiln firing supports.—73-09777
Calculation on design of small shaft kiln for firing bricks.—73-08463
Can you teach your old kiln new tricks.—73-08464
Change in design reduces preheater disturbance—an experience.—73-05103
Continuous kiln.—73-01974
Development by simulation.—73-05108
Development of kiln construction for the ceramic industry: 1950-1990.—73-12215
Dry scrubbing: controls kiln emissions.—73-15871
Fast firing technology in the brick and tile industry—a technical evaluation.—73-05115
Firing technology in the heavy clay industry: II.—73-01950
Improving structure of annular kilns.—73-08473
Kiln operation and firing practices.—73-08478
Morphology and microstructure features of clinker from vertical shaft kiln.—73-10058
New data on raw mixes burning in dry process kilns on the basis of an artificial clayish component.—73-10064
Once firing of wet green bricks in annular kilns.—73-07193
Operating experiences from a multichamber shaft kiln [for lime burning].—73-12234
Rapid burning temperature, time, and raw meal modulus range in portland cement.—73-10125
Simplified mathematical model for the heat economy of counterflow lime kilns.—73-10153
Simulated heat improves kiln performance.—73-05130
Spanish colonial kiln tradition of Moquequa, Peru.—73-13672
Study and application on high-quality cement clinker calcining with low heat consumption in shaft kiln.—73-10169
Successful kilns for structural ceramics.—73-08488
Use of solid electrolyte probes in production kilns for porcelain.—73-01972
Waste-oil fired kiln.—73-12245

**kinetics,**
Effects of transient nucleation and size-dependent growth rate on phase transformation kinetics.—73-06909
Evaluation of parameters and form of kinetic equation of the sintering process.—73-16765
Kinetics of the forming gob.—73-03853

**kinking,**
Step and kink energetics on GaAs(001).—73-15178

**kyanite,**
Kyanite and fireclay from Vietnam.—73-01985
Sintering and mullite formation from kyanite-glass system.—73-16992

**laboratory,**
Laboratory profile: Museum Applied Science Center for Archaeology (MASCA), The University Museum, The University of Pennsylvania, Philadelphia, Pennsylvania.—73-03423
POLAB laboratory automation system.—73-03518

**ladle,**
Application of new gas purging systems in ladle metallurgy.—73-10698
Corundum hydraulically hardening compound with addition of titanium slag for steel ladle vacuum degassers.—73-00794
Improvement of service life of ladle shroud.—73-00823
Service of iron ladles with a monolithic lining.—73-00859
Taimyrsk graphites for producing periclase-carbon ladle refractories.—73-00875
Wear mechanism of monolithic linings for steel ladles.—73-00884

**laminates,**
Architects turn to laminated glass.—73-06557
Characterization of damage onset in glass-ceramic matrix composites angle-ply laminates.—73-03244
Correlation of interfacial and macroscopic toughness in SiC laminates.—73-03249
Cracking and debonding of microlaminates.—73-09557
Damage mechanisms of cross-ply Nicalon/CAS-II laminates under cyclic tension.—73-17271
Desktop manufacturing: LOM [laminated object mfg.] vs pressing.—73-15713
Device for and method of detecting positioning marks for cutting ceramic laminated body.—73-01851
Electrophoretic deposition to synthesize advanced ceramic/ceramic laminar composites.—73-09116
Fracture behavior of ceramic laminates in bending: I, Modeling of crack propagation.—73-06430
Fracture behavior of ceramic laminates in bending: II, Comparison of model predictions with experimental data.—73-06431
High-temperature strength and toughness of electrophoretically deposited alumina/lanthanum aluminate laminates.—73-17348
Interfaces in silicon carbide/graphite laminates.—73-03319
Laminated film.—73-04839
Laminated multilayer insulating glass and a spacer for the laminated multilayer insulating glass.—73-03935
Low-temperature processing of ceramic woven fabric/ceramic matrix composites.—73-05902
Method of fabricating ceramic laminated electronic component.—73-04219
Method of laminating glass sheets.—73-03948
Modeling the stress-strain behavior of unidirectional ceramic matrix composite laminates.—73-09653
Numerical simulation of the tensile behavior of 2D-SiC/SiC crossply laminates.—73-06496
Oxide superconductor lamination.—73-11986
Piezoelectric ceramic laminate device.—73-11636
Piezoelectric effect device.—73-04586
Process for making ceramic/metal and ceramic/ceramic laminates by oxidation of a metal precursor.—73-05006
Processing of tape-cast laminates prepared from fine alumina/zirconia powders.—73-16952
Thermal insulation by layered, fibrous, two-material laminated mats.—73-00880
Thermal residual stresses in SiC/Ti (0/90) laminate.—73-13902

**lamps,**
Early use of special glasses in the German electric lamp industry.—73-13615
Fluorescent lamps having reduced interference colors.—73-03919
High-pressure discharge lamp with ceramic vessel.—73-05217
Manufacturing process of (cold cathode discharge lamp-type) neon sign tubes.—73-03856
Manufacturing process of halogen lamps.—73-00657

**lanthanides,**
Chemistry of electron-doped $Ln_{2-x}Ce_xCuO_4$ superconductors.—73-11703
Citrate gel processing of the perovskite lanthanide chromites.—73-05707
Crystal structures of the high-temperature forms of $Ln_2Si_2O_7$ (Ln=La, Ce, Pr, Nd, Sm) revisited.—73-16099
Electronic structures of lanthanide analogs of Y-Ba-Cu-O superconductors.—73-08055
Intermediate and metastable phases on synthesis of some lanthanide phosphates.—73-02303
Low-temperature preparation and characterization of pure-phase lanthanide chromates(V) by the citrate gels process.—73-05900
Luminescent determination of Tm in lanthanide oxides.—73-02634
Periodicity in change of crystallographic properties of the lanthanide dichlorides.—73-12647
Substitution effects on the thermoelectric power of $La_{2-x}Sr_xCu_{1-y}M_yO_4$ (M=Zn and Ni) and $YBa_2Cu_{3-z}Zn_yO_{7-\delta}$.—73-02697
Synthesis and structure of $Ln_2Ta_2Se_2O_8$ (Ln=La, Ce, Pr, Nd).—73-02492
Tetragonal and cubic crystal structures of some binary and ternary metal dicarbides in the series Ce-Er, Ce-Lu, U-La, and U-Ce.—73-02518

**lanthanum oxide,**
Characterization of dispersions and surface states of NiO/γ-alumina and NiO/$La_2O_3$-γ-alumina catalysts.—73-06141
Complex impedance analysis of unusual dielectric properties in (Pb,La)$TiO_3$ ceramics.—73-02563
Energy band structure of $La_2O_3$ crystal and $F^+$, $F$ centers.—73-02265
Formation of $LaCoO_3$ highly dispersed on $ZrO_2$.—73-16790
Influence of constituent metal cations in substituted $LaCoO_3$ on mixed conductivity and oxygen permeability.—73-04115
Influence of $La_2O_3$ additions on the dielectric properties of the ceramic $Sr_{0.3}Ba_{0.7}Nb_2O_6$.—73-16518
Li-doped $LaCrO_3$ ceramics.—73-03100
Li-doped $LaCrO_3$ ceramics.—73-13117
Preparation of high-density perovskite $LaNiO_3$ by using HIP.—73-13190
Preparation of perovskite-type oxide, $LaCrO_3$ by thermal decomposition of $La[Cr(CH_2(COO)_2)_3]\cdot 6H_2O$ *[at RT–1000°C]*.—73-02962
Role of structural defects and oxygen ion migration in the catalytic activity of $La_2O_3$.—73-13366
Solid electrolytes on the basis of the $Li_2O$-$La_2O_3$ system.—73-14730
Solubility of lanthanum oxide in barium titanate.—73-02435
Subsolidus relations in the $La_2O_3$-CuO-CaO phase diagram and the $La_2O_3$-CuO binary join.—73-16342

**lanthanum,**
Ac conductivity in $La_2CuO_4$.—73-08799
Anionic vacancy distribution in reduced barium-lanthanum ferrites: $Ba_xLa_{1-x}FeO_{3-x/2}$ ($1/2\le x\le 2/3$).—73-03121
Anomalous pressure dependence of the $La_2CuO_4$ superexchange interaction: an evidence of band antiferromagnetism.—73-15390
Anomalously enhanced satellite in metastable atom electron spectrum of $LaCoO_3$.—73-12536
Atomic structure of nonstoichiometric $Pb_{0.3}La_{0.7}F_{2.7}$ crystal (fluoritelike phase at high pressure).—73-16035
Binary La-Pd oxide catalyst and method of making the catalyst.—73-02022
$C_{60}$ solid-state rotational dynamics and production and EPR spectroscopy of fullerenes containing metal atoms.—73-16038
Characterization of single crystals of high-$T_c$ superconductor $La_{2-x}Sr_xCuO_4$.—73-11701
Charge dynamics across the $CuO_2$ planes in $La_{2-x}Sr_xCuO_4$.—73-07998
Charge modulations in $La_{2-x}Sr_xNiO_{4+y}$: ordering of polarons.—73-16050
Charge-transfer spectrum and its temperature dependence in $La_2CuO_4$.—73-08820
Comparative infrared spectroscopic study of electronic superconductors of the type $Ln_{2-x}M_xCuO_{4-y}$.—73-08003
Comparison of band structures of $La_2CuO_4$ and $Nd_2CuO_4$.—73-08578
Compositional phase separation in $La_{2-x}Ba_xCuO_4$ near the optimum composition for superconductivity.—73-08008
Copper and oxygen isotope effects in $La_{2-x}Sr_xCuO_4$.—73-15405
Correlations between the structural distortion of LaCuO lattice and the resulting physical properties.—73-05376
Cross-sectional observation of $YBa_2Cu_3O_x/La_{0.7}Ca_{0.3}MnO_y$/-$YBa_2Cu_3O_x$ trilayered films.—73-11715
Crystal structure of $La_{1.85}Ba_{0.15}CaCu_2O_{6+y}$ determined by neutron powder diffraction.—73-08588
Crystal structure of $LaFe_3Ge_3O_{13}$: $LaFe_3[GeO_4][Ge_2O_7]O_4$.—73-02199
Crystal structure of the new metallic copper oxide, $La_2Sr_6Cu_8O_{18-\delta}$.—73-08013
Crystal structures of $La_2Ti_2O_7$ and $La_5Ti_5O_{17}$: high-resolution electron microscopy.—73-02222
Cu charge fluctuations and anomalous behavior in the phonon spectrum of $La_2CuO_4$.—73-08594
Dc polarization of defect perovskite $LaTa_3O_9$.—73-09393
Dependence of lattice parameters and $T_c$ on the hole concentration determined by precise measurement of the oxygen content of $M_xLa_{2-x}CuO_{4-y}$ (M=Ba, Sr, Ca).—73-01517

Determination of yttrium and lanthanum in high-$T_c$ superconducting materials by potassium ferrocyanide amperometric titration.—73-01522

Diamagnetic shielding and Meissner effect in the high-$T_c$ superconductor $Sr_{0.2}La_{1.8}CuO_4$.—73-15417

Dielectric properties and defect structure of $Sr_{1-x}La_xTiO_3$ ceramics.—73-04076

Disappearance of superconductivity in overdoped $La_{2-x}Sr_xCuO_4$ at structural phase boundary.—73-08021

Dopant microdomains and magnetic fluctuations in $La_{2-x}Sr_xCuO_4$.—73-01454

Dynamic spin properties of $La_{1.98}Sr_{0.02}CuO_4$.—73-08026

Effect of lanthanum doping on the electrical properties of sol-gel-derived ferroelectric lead zirconate titanate for ultra-large-scale integration dynamic random access memory [DRAM] applications.—73-11563

Effect of preparation method on chemical stability of sinterable calcium-doped lanthanum chromites.—73-16736

Effect of temperature on the radiation-induced optical absorption of lithium lanthanum phosphate glass.—73-00465

Effects of substitution of Fe for Cu in $La_{1.85}Sr_{0.15}Cu_{1-\delta}O_{4-\delta}$ polycrystalline samples.—73-08048

Elastic and magnetic properties of $La_2CuO_{4-\delta}$ single crystals.—73-08843

Electrical and magnetic properties of sodium solid solutions in lanthanum manganites.—73-01458

Electrical conduction of $La_2Cu_{1-x}Zn_xO_{4+\delta}$ at high temperature.—73-12788

Electrical properties of $Sr_{1-x}La_xTiO_3$ ($0 \le x \le 0.1$) single crystals grown by the floating zone method.—73-02603

Electrical resistivity of lanthanum–manganite-based complex oxides.—73-16481

Electrochemical oxidation and superconductivity of the system $La_{2-x}A_xCuO_{4+\epsilon}$ (A=Cd, Pb).—73-15450

Electrochemical oxidation of $La_2CuO_4$ and $La_{2-x}A_xCuO_4$ (A=Bi and Pb).—73-01538

Electron paramagnetic resonance studies on $YBa_{2-x}La_xCu_3O_n$ high-temperature superconductors.—73-08052

Electronic structure of $La_2CuO_4$ in the self-interaction-corrected density functional formalism.—73-08863

Energetics of $La_{2-x}Sr_xCuO_{4-y}$ solid solutions ($0 \le x \le 1$).—73-02264

Evidence for new phases in Ln-doped $La_{1.875}Ba_{0.125}CuO_4$ (Ln=Nd, Sm).—73-08620

Experimental and theoretical investigation of the temperature dependence of $La_2CuO_4$ sublattice magnetization.—73-05563

Ferroelectricity and phase transitions in stilwellite, $LaBGeO_5$.—73-15265

Filling dependence of electronic properties on the verge of metal-Mott-insulator transition in $Sr_{1-x}La_xTiO_3$.—73-16498

Fluorination of $La_2NiO_4$ and $La_2CuO_{4+\delta}$.—73-08081

Fluorine-containing lanthanum borate glasses colored by oxides of the *d* and *f* elements.—73-07130

Fluxed lanthanum chromite for low-temperature air firing.—73-12367

Grain size dependence of high-temperature dielectric properties of (Pb, La)$TiO_3$ ceramics.—73-02612

Grain-size dependence of high-temperature dielectric properties of (Pb,La)$TiO_3$ ceramics.—73-11581

High ionic conductivity in $Li_{0.35}La_{0.51}TiO_{2.94}$.—73-07327

High-$T_c$ cuprates as 2-D quantum antiferromagnets.—73-08093

Humidity sensitivity of $La^{3+}$-doped $BaTiO_3$ semiconductor thin film deposited by pulsed excimer laser ablation.—73-01190

Improvement of the critical magnetization currents in $La_{1.85}Sr_{0.15}CuO_4$ by hydrogen treatment.—73-12811

Incommensurate magnetic correlations in $La_{1.8}Sr_{0.2}NiO_4$.—73-07939

Infrared anomaly in $(La_{1-x}Sr_x)_2NiO_{4+\delta}$.—73-08110

Ionic and electronic conductivities of $LaCoO_3$- and $LaMnO_3$-based perovskite-type oxides measured by the ac impedance method with electron-blocking electrodes.—73-07330

$La_2Zr_2O_7$ formed at ceramic electrode/YSZ contacts.—73-07332

Lanthanum boride type single crystal and method for growing the same.—73-02101

Lattice dynamics of $La_2NiO_4$ in the charge fluctuation model.—73-16194

Lattice dynamics of $LaTa_7O_{19}$ crystals.—73-16195

Lattice instabilities in cuprate superconductors: a possible limiting mechanism for $T_c$.—73-08122

Linear field dependence of flux flow resistance in high-temperature superconductors.—73-04756

Localization of spin excitations and disruption of long-range order in weakly doped $La_2CuO_4$.—73-05431

Low-energy excitations in superconducting $La_{1.86}Sr_{0.14}CuO_4$.—73-15537

Low-frequency spin dynamics in undoped and Sr-doped $La_2CuO_4$.—73-15539

Magnetic dilution of $La_{1.85}Sr_{0.15}CuO_{4-\delta}$ in $K_2NiF_4$-type diamagnetic $LaSrAlO_4$.—73-07950

Magnetic dynamics of superconducting $La_{1.86}Sr_{0.14}CuO_4$.—73-08126

Magnetic field on $^{63}Cu$ nuclear relaxation rates in $YBa_2Cu_3O_7$ and in $La_{1.85}Sr_{0.15}CuO_4$ above and below $T_c$.—73-11819

Magnetic order of Cu moments in $La_{2-x}Ba_xCuO_4$ around $x$=0.12 observed by positive muon spin rotation.—73-11821

Magnetic phase diagram of lightly doped $La_{2-x}Sr_xCuO_4$ from $^{139}La$ NQR.—73-15336

Magnetization and spin-wave velocities in $La_2CuO_4$.—73-07962

Metal semiconductor transition and spin glass properties of $La_{(2-4/3)}Ba_{(1+1/3)}Mn_{1-x}Cu_xO_3$.—73-12833

Microstructure of epitaxial ferroelectric $YBa_2Cu_3O_{7-x}/Pb_{0.9}La_{0.1}\cdot(Zr_{0.7}Ti_{0.8})_{0.975}O_3$-$YBa_2Cu_3O_{7-x}$ heterostructures on $LaAlO_3$ [LAO].—73-03171

Mossbauer study of $^{57}Fe$-doped $La_{2-x}Sr_xCuO_4$: local magnetic properties in the semiconducting, superconducting, and normal metallic regions of the phase diagram.—73-08671

Neutron diffraction study of nonstoichiometric phase $La_{0.85}Sr_{0.15}F_{2.85}$.—73-02346

New homologous series of lanthanum copper oxides.—73-02350

New preparation method of $LaMnO_3$ perovskite using electrochemical oxidation.—73-02903

New reduced ternary titanates from borate fluxes.—73-02353

NMR study of local structure in metallic $La_2Cu_{4+\delta}$.—73-16230

NQR study of local structure and cooling-rate-dependent superconductivity in $La_2CuO_{4+\delta}$.—73-04779

Optical absorption of the high-$T_c$ superconductors $Y_1Ba_2Cu_3O_{7-\delta}$, $LaCuO_{4+\delta}$, and $Bi_2Sr_2Ca_{1-x}Y_xCu_2O_{8+\delta}$.—73-04781

Optical conductivity of $La_{2-x}Sr_xCuO_4$ and soft electronic modes.—73-16554

Optical $Nd^{3+}$ centers in lanthanum oxysulfide crystals.—73-16556

Origins of the anomalous doping effects of the Hall constants of $La_{2-x}Sr_xCuO_4$ and $Nd_{2-x}Ce_xCuO_{4-\delta}$.—73-08155

Out-of-plane orbital characters of intrinsic and doped holes in $La_{2-x}Sr_xCuO_4$.—73-08156

Oxygen content, microstructure, and $T_c$ variation of $La_{1.84}Sr_{0.16}CuO_y$.—73-15574

Oxygen dope in bismuth- and lead-substituted lanthanum copper oxides by electrochemical and oxygen-HIP methods.—73-08157

Oxygen tracer diffusion in lanthanum-doped single-crystal strontium titanate.—73-17090

Phase separation and finite size scaling in $La_{2-x}Sr_xCuO_{4+\delta}$ ($0 \le x$, $\delta \le 0.03$).—73-15578

Phase separation, CDW's, and magnetism in $LaNiO_{4+\delta}$ ($\delta$=0.105).—73-15357

Phase transition and electrical conductivity of La-Ni-O system.—73-02389

Phase transition and thermal expansion of $LaCrO_3$ solid solutions.—73-16263

Phase transition from antiferromagnetic [AF] insulator to ferromagnetic metal in $La_{2-x}Sr_xCoO_4$—magnetization and NMR studies.—73-08696

Phase transitions in perovskite $La_{1-x}Ca_xMnO_3$.—73-08697

Photoinduced reflection of light in single crystal of $La_2CuO_{4+y}$.—73-11861

Physicochemical studies on $LaYO_3$ perovskite prepared at low temperature.—73-02922

Point defect modeling of $La_2CuO_4$-based superconductors.—73-04786

Point-contact spectroscopy of $La_{1-x}Ce_xB_6$.—73-08703

Point-contact spectroscopy of $LaCeAl_2$ and $LaCeB_6$ alloys.—73-08704

Positron annihilation study of $SrTiO_3$-based ceramics.—73-03108

Preparation of $(La_{1-x}Sr_x)_2MnO_4$ with the $K_2NiF_4$ structure and its electrical properties.—73-11400

Preparation of nanocrystalline $LaFeO_3$ using a stearic acid-sol method.—73-13197

Preparation of oxygen excess $SrLaFeO_{4+\delta}$ and its electrical and magnetic properties.—73-11670

Preparation of perovskite-type oxide, $LaCrO_3$, by thermal decomposition of $La[Cr(CH_2(COO)_2)_3]\cdot 6H_2O$.—*73-13198*

Resonating valence bond state and high-$T_c$ superconductivity—a mean field theory.—73-15613

Scanning Hall-probe microscopy of a vortex and field fluctuations in $La_{1.85}Sr_{0.15}CuO_4$ films.—73-08194

Sol-gel processing and pyroelectric properties of lanthanum-modified $PbTiO_3$ thin films.—73-06064

Solid defect structure and catalytic activity of perovskite-type catalysts $La_{1-x}Sr_xNiO_{3-\lambda}$ and $La_{1-1.333x}Th_xNiO_{3-\lambda}$.—73-08732

Spin bags, polarons, and impurity potentials in $La_{2-x}Sr_xCuO_4$ from first principles.—73-08202

Spin gaps and spin dynamics in $La_{2-x}Sr_xCuO_4$ and $YBa_2Cu_3O_{7-\delta}$.—73-15625

Spin susceptibility in $La_{2-x}Sr_xCuO_4$ system from underdoped to overdoped regimes.—73-15626

Spin-orbit coupling and spirals in doped $LaCuO_4$.—73-08738

Spin-spin correlation in the quantum critical regime of $La_2CuO_4$.—73-15628

Stability of superconducting $La_{1.8}Sr_{0.2}CaCu_2O_6$ with respect to oxygen partial pressure.—73-08205

Stabilized tetragonal phase of $La_2O_3$ in the La-Pd-O system.—73-02443

Strain and proximity effect in $(La,Sr)_2CuO_4$-based superconducting superlattices.—73-15630

Strontium-doped La(Cr, Mn)$O_3$ for solid oxide fuel cells [SOFC's].—73-01027

Structure modification of radio frequency sputtered $LaB_6$ thin films by internal stress.—73-03030

Superconducting ceramics: preparation, XRD, SEM, and EPR measurements to study the influence of compositional variations on superconductivity of La-(Ba/Sr/Ca)-CuO ceramic systems.—73-08216

Superconducting properties of $La_{2-x}Sr_xCuO_4$ within the framework of the phonon-mediated pairing mechanism.—73-08220

Superconductive La-Sr cuprate stability in NaF hydrothermal solutions at high temperature and pressure.—73-01677

Superconductivity of doped $La_2CuO_4$.—73-04814

Superconductivity of $La_{2-x}Nd_xCuO_{4+\epsilon}$ prepared under high oxygen pressure: suppression of the phase separation seen in $La_2CuO_{4+\epsilon}$.—73-01680

Superconductivity of $La_{2-x}Sr_xCuO_4$ with high strontium concentration by sulfur doping.—73-08230

Surface morphology and crystal quality of in situ grown epitaxial $La_{2-x}Sr_xCuO_4$ thin films.—73-15642

Synchrotron X-ray topography study of Er-doped $LaP_5O_{14}$ crystal.—73-11624

Synthesis and ionic conductivity of nanophase $Ca_{1-x}La_xF_{2+x}$.—73-04176

Synthesis of $LaMnO_3$ using poly(acrylic acid) [PAA].—73-08768

System $LaPO_4$-$K_3PO_4$.—73-02510

Systematic evolution of temperature-dependent resistivity in $La_{2-x}Sr_xCuO_4$.—73-08243

Thermal expansion and electrical conductivity of yttria-substituted lanthanum strontium manganites.—73-16626

Thermal expansion mismatch and intergrowth types in the system $La_{2-x}Nd_xCuO_4$.—73-01690

Thermal expansion properties of A-site-deficient La(Sr)$CrO_3$.—73-08988

Thermal expansion properties of A-site-deficient La(Sr)$CrO_3$.—73-16630

Thermogravimetric analysis and defect models of the oxygen nonstoichiometry in $La_{2-x}Sr_xCuO_{4-y}$.—73-15656

Tunneling observation of phonon structures in $La_{1.85}Sr_{0.15}CuO_4$.—73-08268

Ultrasonic spectroscopy of an $La_2Cuo_4$ Crystal in the vicinity of the tetra-ortho phase transition.—73-08786

X-ray photoelectron spectroscopy and Auger electron spectroscopy studies of ferroelectric (Pb,La)$TiO_3$ thin films prepared by a multi-ion-beam reactive cosputtering technique.—73-07925

**lapping,**

Ceramic machining.—73-04904

Device on a double disk lapping machine.—73-15765

Lapping abrasive of alumina–zirconia system and method for producing the same.—73-00001

Model for lapping of glass.—73-07051

Platey alumina.—73-12393

Speedfam-Spitfire Machine Tool Group: the first in flat part machining.—73-03407

Three-body abrasion of brittle materials as studied by lapping.—73-07092

**lasers,**

*Q*-switched Nd-doped phosphate glass fiber lasers.—73-14264

0.98–1.02-μm strained InGaAs/AlGaAs double quantum well high-power lasers with GaInP buried waveguides.—73-15232

0.98-μm InGaAs-InGaAsP-InGaP GRIN-SCH SL-SQW lasers for coupling high optical power into single-mode fiber.—73-15233

1.3-μm $InAs_yP_{1-y}$-InP strained-layer quantum-well, laser diodes grown by MOCVD.—73-15066

1.48-μm high-power GaInAsP-InP graded-index separate-confinement heterostructure multiple quantum well laser diodes.—73-15067

15-W single-frequency operation of a cw diode laser-pumped Nd:YAG ring laser.—73-08870

30-mW 690-nm high-power strained quantum well AlGaInP laser.—73-15208

Active and passive *Q*-switching of a 2.79-μm Er:Cr:YSGG laser.—73-12742

Additive-pulse mode locking of non-cw Nd lasers.—73-08802

AlGaInP strained multiple quantum well visible laser diodes ($\lambda_L \le$630-nm band) with a multiquantum barrier grown on misoriented substrates.—73-14767

Athermal laser glass compositions with high thermal loading capacity.—73-14532

Block gage and method of making ceramic material.—73-04960

Bridging THz frequency gaps in the near ir by coherent four-wave mixing in GaAlAs laser diodes.—73-01085

Buried stripe AlGaAs heterolasers fabricated by one-stage LPE.—73-01087

Carbon dioxide laser cutting of a carbon-fiber–silicon carbide-matrix composite.—73-05697

Carrier lifetimes in strained InGaAsP multiple quantum-well laser structures.—73-07398

Carrier-carrier scattering effects in InGaAs-GaAs strained layer lasers.—73-14792

CBE-grown 1.5-μm GaInAsP-InP surface-emitting lasers.—73-14793

Characterization below threshold of GaInAsSb/GaAlAsSb double-heterostructure lasers emitting near 2.37 μm.—73-14797

Characterization of laser-glazed, plasma-sprayed yttria-stabilized zirconia coatings.—73-06746

Comparison of steady-state and transient characteristics of lattice-matched and strained InGaAs-AlGaAs (on GaAs) and InGaAs-AlInAs (on InP) quantum-well lasers.—73-01107

Compressively strained 1.3-μm InAsP/InP and GaInAsP/InP multiple quantum-well lasers for high-speed parallel data transmission systems.—73-14815

Continuous wave, *Q*-switched, and mode-locked operation of a laser-pumped Nd:LNA laser.—73-16428

Continuously tunable coherent source over 202–3180 nm based on a Ti:sapphire laser.—73-16429

Control of differential gain, nonlinear gain, and damping factor of high-speed application of GaAs-based MQW lasers.—73-14817

Cw laser machining of hard ceramics: I, Effects of three-dimensional conduction, variable properties, and various laser parameters.—73-09054

Cw laser machining of hard ceramics: II, Effects of multiple reflections.—73-09055

Dependence of the frequency shift of the optical-microwave double resonance signal in the Cs $D_2$ line on the pumping frequency and power of a GaAs semiconductor laser.—73-01122
Design of widely tunable semiconductor lasers using grating-assisted codirectional-coupler filters.—73-14832
Detection of overtone vibration spectrum of water vapor by AlGaAs diode laser.—73-11134
Determination of the fundamental laser parameters of an acoustooptical device.—73-16441
Efficient, scalable, internally folded Nd:YAG laser end pumped by laser diodes.—73-14864
Electrically pumped rare-earth-doped semiconductor lasers.—73-04307
Evaluation of absorption and emission properties of $Yb^{3+}$-doped crystals for laser applications.—73-16494
Excimer laser processing of BK7 and BGG31 glasses.—73-10530
Excimer lasers and their treatment of advanced ceramic materials.—73-04918
Excimer lasers and their treatment of advanced ceramic materials.—73-04919
Experimental study of xenon flash lamp pumped $Nd_xY_{1-x}Al_3(BO_3)_4$ (NYAB) *Q*-switched laser and its characteristics.—73-12801
Fabrication of nonconventional distributed feedback lasers with variable grating periods and phase shifts by electron-beam lithography.—73-14910
GaAs/AlGaAs first-order gratings fabricated with electron beam lithography and very narrow linewidth long cavity DBR laser diodes.—73-14933
Gain-switched GaAs vertical-cavity surface-emitting lasers.—73-14935
Glass and optical materials for lasers.—73-00489
GW-Nd:glass laser system with pulse transmission mode (PTM) *Q*-switching.—73-10445
Heavy metal oxide glass optical fibers for use in laser medical surgery.—73-03929
HgCdTe double heterostructure diode lasers grown by molecular beam epitaxy.—73-07557
High-power individually addressable monolithic four-beam array of GaAlAs window diffusion stripe lasers.—73-01185
High-power, subpicosecond, 750–1770-nm tunable pulses from travelling wave parametric generator.—73-00499
High-speed 1.3-μm InGaAsP Fabry-Perot laser for digital and analog applications.—73-14962
High-speed operation on strained InGaAs/InGaAsP MQW laser under zero-bias condition.—73-14963
Improving InAs double heterostructure lasers with better confinement.—73-01195
Influence of defocus length on hole features in laser drilling of ceramics.—73-16836
Influence of spatial hole burning effects on relaxation oscillations in waveguide-distributed feedback $Nd^{3+}$:YAG lasers.—73-16520
InGaAs/GaAs single quantum-well lasers with monolithically integrated multilayer waveguides for surface-emitted sum-frequency generation.—73-07606
Intracavity frequency doubling effect of ß-$BaB_2O_4$ (BBO) in colliding pulse mode-lock (CPM) unstable resonator Nd:YAG laser.—73-08894
Intracavity frequency doubling of double-heterostructure junction-diode laser array (DH-LDA) pumped Nd:YAG laser.—73-12823
Ion laser tubes.—73-15998
Ion-laser including a silicon carbide discharge tube having a small arithmetic roughness.—73-15999
Laser characteristics of forsterite $Mg_2SiO_4$:Cr crystals.—73-02627
Laser inspection for liquid crystal display (LCD) screens.—73-12157
Laser machining of ceramics.—73-04927
Laser machining of silicon nitride ceramics.—73-05890
Laser-assisted hot machining of ceramics and composite materials.—73-05891
Lateral *npn* junction and semiinsulating GaAs current confinement structure for index-guided InGaAs/AlGaAs lasers by MBE.—73-15010
Long-wavelength low-threshold lasers based on III-V compounds.—73-15015
Low-frequency noise of a 980-nm InGaAs/GaAs strained quantum well [QW] laser.—73-07643
Low-frequency noise of a 980-nm InGaAs/GaAs strained quantum well laser.—73-15019
Low-threshold GaInAsSb/GaAlAsSb double heterostructure lasers grown by LPE.—73-15025
Low-threshold tensile-strained InGaAs-InGaAs quantum well lasers with single-step separate-confinement heterostructures.—73-15026
Low-threshold-strained GaInP quantum well ridge lasers with AlGaAs cladding layers.—73-11301
Mathematical modeling of temperature distribution during $CO_2$ laser irradiation of glass.—73-10563
MBE growth and microstructural evaluation of Zn(S, Se)-based LED's and diode lasers.—73-04398
Measurement of laser ablation threshold on doped BiSrCaCuO high-temperature superconductors by the pulsed photothermal deflection technique.—73-08130
Mode-locking of the 1.66-μm transition of an Er:$YAlO_3$ laser.—73-07676
Monolithic AlGaAs-GaAs single quantum-well ridge lasers fabricated with dry-etched facets and ridges.—73-01253
Monolithic InGaAsP-InP laser amplifier gate switch matrix.—73-15046
Monolithic integration of glass waveguides with semiconductor lasers.—73-01254
Nano- and picosecond 3-μm Er:YSGG lasers using InAs as passive *Q* switchers and mode lockers.—73-07685
Nature of the temperature dependence of the threshold current density of long-wave-length InAsSbP/InAs and InAsSbP/InAsSb double heterostructure lasers.—73-07690
Nd laser glasses based upon several glass-forming substances.—73-14232
New approaches for a solar-pumped GaAs laser.—73-04416
New mode locking technique for continuous-wave Nd:YAG laser.—73-15055
Noise of semiconductor laser arrays.—73-07695
Nondestructive testing of ceramics by confocal laser scanning microscopy.—73-05076
Nonlinear dynamics of directly modulated 1.55-μm InGaAsP DFB semiconductor laser.—73-15060
Optical nonlinear property of Au-colloid-doped glass and the laser irradiation stability.—73-14242
Optical smoothing of the high-power PHEBUS Nd-glass laser using the multimode optical fiber technique.—73-07061
Optically pumped submillimeter wave semiconductor lasers.—73-01267
Optimization and characteristics of Al-free strained-layer InGaAs/GaInAsP/GaInP SCH-QW lasers (λ≈980 nm) grown by gas-source MBE.—73-15077
Optimizing the efficiency and stored energy in quasi-three-level lasers.—73-08941
Output property of a doped lithium niobate He-Ne phase conjugate laser in steady state.—73-11594
Personal computer-based simulation of laser interactions with materials.—73-13160
Photoluminescence and FTIR investigation of laser gettering of GaAs.—73-07723
Picosecond and femtosecond pulse generation in a regeneratively mode-locked Ti:sapphire laser.—73-07733
Plasma expansion produced by excimer laser evaporation of $YBa_2Cu_3O_{7-x}$ target.—73-11865
Possibilities of laser diffraction application for a comparison of pozzolan materials.—73-12179
Preparation and characterization of ceramic powders—powders-laser: balance and perspectives.—73-13171
Properties and uses of $In_{0.5}(Al_yGa_{1-y})_{0.5}P$ and $Al_yGa_{1-y}As$ native oxides in heterostructure lasers.—73-11406
Prospects for using high-power $CO_2$ lasers to machine and weld quartz glass products.—73-01823
Pulse asymmetry in actively mode-locked InGaAsP lasers.—73-01293
Pulse asymmetry in actively mode-locked InGaAsP lasers.—73-07748
Radiative performance of strained-layer lasers.—73-15135
Reduction of linewidth enhancement factor in InGaAs-InP modulation-doped strained multiple quantum well lasers.—73-15142
Relaxation oscillation in an AlGaAs laser.—73-01304
Reliability of GaAs-based semiconductor diode lasers: 0.6–1.1 μm.—73-15146
Remarkable improvement in the temperature characteristics of GaAs lasers using an InGaAlP cladding layer.—73-15147
Research for improving solarization resistance of glass active laser media.—73-14274
Rod-imaging super-Gaussian unstable resonator for high-power solid-state lasers.—73-08964
RT operation of GaInAs/GaInAsP/InP SCH lasers with quantum-wire size active region.—73-15153
Second harmonic generation and sum frequency mixing of dual wavelength Nd:$YAlO_3$ laser in flux-grown $KTiOPO_4$ crystal.—73-07789
Self-frequency-doubling glass-fiber laser.—73-07074
Sensitivity of intracavity absorption measurements with Ti:sapphire laser.—73-16593
Sensitizing effect of $Cr^{3+}$ in Nd:laser glass of silicate system.—73-10480
Side-pumped Nd:YAG epitaxial waveguide laser.—73-01314
Simultaneous operation of ten-channel tunable DFB laser arrays using strained InGaAsP multiple quantum wells.—73-15163
Single-ended ir photothermal radiometric measurement of quantum efficiency and metastable lifetime in solid-state laser materials: the case of ruby ($Cr^{3+}$:$Al_2O_3$).—73-15847
Solution to the wave equation in the numerical simulation of buried heterostructure lasers.—73-15166
Strain-induced effects on the performance of AlGaInP visible lasers.—73-11454
Study of harmonic distortion and period doubling in DFB ridge waveguide laser with strong current modulation.—73-01328
Submilliampere-threshold multi-quantum-well AlGaAs laser without facet coating using single-step MOCVD.—73-01329
Surface modification of ceramic materials using excimer lasers.—73-17016
Synchronous pumping of a visible dye laser by a frequency-doubled mode-locked Ti:sapphire laser and its application for difference frequency generation in the near ir.—73-08975
Technology in pulsed Nd:YAG laser drilling of an Al-Li-based/SiC metal matrix composite.—73-06109
Temperature drift of modulation characteristics in semiconductor lasers.—73-15200
Temporal characteristics of gain-switched $Ti^{3+}$:$Al_2O_3$ laser.—73-08981
Theoretical analysis of self-sustained pulsation phenomena in narrow-stripe semiconductor lasers.—73-15203
Theoretical and experimental studies of the effects of compressive and tensile strain on the performance of InP-InGaAs multi-quantum-well lasers.—73-01348
Theory of cw passive mode locking of solid-state lasers with addition of nonlinear index and group velocity dispersion.—73-05651
Thermal analysis of GaAs-AlGaAs etched-well surface-emitting double heterostructure lasers with dielectric mirrors.—73-15205
Threshold current analysis of compressive strain (0–1.8%) in low-threshold, long-wavelength quantum well lasers.—73-15209
Threshold current density in strained layer $In_xGa_{1-x}As$-GaAs quantum-well heterostructure lasers.—73-01356
Time synchronization measurements between two self-mode-locked Ti:sapphire lasers.—73-16642
Tunable ps pulses below 200 nm by external frequency conversion of cw mode-locked Ti:$Al_2O_3$ laser radiation.—73-09002
Ultrafast electron tunneling in reverse-biased, high-efficiency quantum-well laser structure.—73-07849
Ultraviolet semiconductor laser structures with pseudomorphic ZnCdSSe quaternary alloys on GaP substrates.—73-04504
Use of ZnS as an additional highly nonlinear intercavity self-focusing element in a Ti:sapphire self-mode-locked laser.—73-15223
Very low chirping of InGaAs-InGaAlAs MQW, DFB, BRS lasers under 10 Gbit/s modulation.—73-15225
Wavelength tuning near 1.54 μm in a phosphate erbium glass laser.—73-00581
Wavelength-tunable InGaAsP-InP multiple-λ/4-shifted distributed feedback laser.—73-15226

**laterite,**
Silicate bonding of laterites: an ancient process for construction components.—73-00014

**lattice,**
Anisotropic vortex lattice in $YBa_2Cu_3O_7$.—73-15387
Excitation and diffraction of elastic waves by oscillating domain lattices in magnetic garnet films.—73-04611
FTIR study of the protonation of the protonation of the zeolite lattice—influence of Si:Al ratio and structure.—73-12592
Influence of doping and heat treatment on lattice parameter in homoepitaxial GaAs layers obtained by LPE.—73-01202
Ir(VI) stabilized in a perovskite-type lattice: $Ba_2CaIrO_6$.—73-08653
Lattice distortion of $Ba(Zn_{1/3}Ta_{2/3})O_3$ with ordering of B-site cations.—73-03099
Lattice dynamics of $M^{+}XTaO_4$ crystals.—73-02316
Measurement of local lattice strain through convergent-beam electron diffraction.—73-05435
Neutron measurements of the vortex lattice in $YBa_2Cu_3O_7$.—73-04777
Relaxation of the lattice due to photoionization of different deep impurities.—73-11418
Small-angle neutron scattering study of flux line lattices in twinned $YBa_2Cu_3O_7$.—73-15623
Structural features of lattices formed during the crystallization of a dispersed phase.—73-08749

**layers,**
Annealing, toughening, strengthening, obscuring, and creating layers on glass.—73-14320
Anomalous optical and electrical properties of the M/$MoO_3$/M sandwich structure.—73-16411
Atomic layer epitaxy of InP.—73-14779
$BaBiO_{2.5}$: a new bismuth oxide with a layered structure.—73-02147
Bridging the Ruddlesden-Popper and the Dion-Jacobson series of layered perovskites: synthesis of layered oxides, $A_{2-x}La_2Ti_{3-x}Nb_xO_{10}$ (A=K, Rb), exhibiting ion exchange.—73-08557
Buried $SiO_2$ layer formation in Si with an MeV O ion beam.—73-03122
Calculation of interphase mass exchange coefficient in a hydrosuspended layer of a dispersed phase.—73-16041
Can nuclear magnetic resonance resolve epitaxial layers.—73-08377
Capillary stability of the particles of the primary gunite layer.—73-14576
Characterization of crystalline low-temperature GaAs layers annealed from an amorphous phase.—73-14798
Chemical vapor deposition and characterization of undoped and nitrogen-doped single-crystalline 6H-SiC.—73-12944
Colored interference layers with high calorimetric purity prepared by sol-gel method.—73-03779
Comparative study of radiation-induced electrical and spin active defects in buried $SiO_2$ layers.—73-13341
Composition and structure of the intermediate layer on the boundary between metal and protective coating.—73-06760
Compositional analysis of HgCdTe epitaxial layers using secondary ion mass spectrometry.—73-07419
Compound layer formation during plasma nitriding and plasma nitrocarburizing.—73-16682
Conduction mechanism in indium tin oxide/electroinactive polypyrrole/indium tin oxide sandwich structures.—73-10925
Design and synthesis of functional layered nanocomposites by intercalation reactions.—73-16699
Diamond and diamondlike layers.—73-12982
Dielectric properties of some compounds with mixed bismuth oxide layer structure derived from $Bi_7Ti_4NbO_{21}$.—73-12766
Effect of orientation of substrate surface on properties of homoepitaxial GaAs layers grown by liquid phase epitaxy technique.—73-14854
Effects of AlN nucleation layer on magnetron-sputtered indium nitride films.—73-08840
Effects of underglaze layer on the quality of the surface of glazed ceramic wares.—73-07251
Electrical characterization of low-temperature GaAs layers, and observation of the extremely large carrier concentrations in undoped material.—73-07485

Electrical properties of the thermal-induced degradation in $TiSi_2$/TiW/AlSi layered structures.—73-08857
Electronic structure and conductivity of $SiO_2$ layers obtained at 100°C.—73-05558
Energy dispersion in the singlet correlated impurity band in layered cuprates.—73-16492
Epitaxial layers Si:(Sn,Yb) produced by the crystallization from the melt solution on the basis of Sn.—73-04322
Evidence for layered structure of $YBa_2Cu_3O_{7-x}$ single crystals.—73-01547
Fabrication of protective layers on surfaces of $YBa_2Cu_3O_{7-\delta}$ superconducting thin films.—73-08075
Fabrication of tunnel junctions with YBCO/insulator/YBCO layered structure using (013)-oriented films as base layer.—73-15469
Fabrication of YBCO/PBCO/$SrTiO_3$/PBCO/YBCO layered structure for superconductor-insulator-superconductor tunnel-type Josephson junction.—73-15471
Features of the formation of the near-surface layer of fluorine-containing glasses.—73-00481
Formation of a new series of 1222 layered cuprates $MSr_2(LnR)_2Cu_2O_y$ [M=Ti, Nb, Ta; Ln=Pr, Nd; R=Ce, Th].—73-02276
Growth and characterization of ZnSe epitaxial layers grown by the solution growth method.—73-11226
Growth mode of Bi and Sb layers on GaAs(110) and InP(110).—73-01179
Growth of oxide layers on CrSi-O films.—73-05833
Heat resistance of $Si_3N_4$ joined with Ni-Cr alloy interlayer.—73-00238
High-stability titanium-nitride-based solar control films.—73-16505
Humidity-sensing effects of the layered oxides $SrO·(LaScO_3)_n$ ($n$=1, 2, ∞).—73-07572
Hydrogen-acceptor pairing in CdTe epitaxial layers grown by OMVPE.—73-04358
Improved CdTe layers on GaAs and Si using atomic layer epitaxy [ALE].—73-11257
Impurity doping in InP layer grown by metallorganic vapor phase epitaxy using tertiarybutylphosphine and organic doping sources.—73-11261
InAs submonolayer and monolayer structures on GaAs(100) and (311) substrates.—73-11266
Incommensurate two-layer structures with complex crystal chemistry: minerals and related synthetics.—73-05420
InP on Si substrates characterized by spectroscopic ellipsometry.—73-11276
Internal barriers in GaAs epitaxial layers produced by delta-doped dipoles.—73-07618
Interrelation of technology parameters and the quality of thin-layer coatings.—73-07041
Ir investigation of mixed-layer minerals from Seilitz.—73-01983
Ir spectroscopic investigation of condensation in $SiO_2$–sol-gel layers.—73-00360
Lateral and vertical isolation by arsenic implantation into MOCVD-grown GaAs layers.—73-15011
Layered perovskite with alternating Cu-$O_2$ and C-O planes.—73-04755
Liquid phase epitaxy of layers of $A^{III}B^{V}$ compounds at two-dimensional nucleation on {111} planes.—73-01230
Lossy mode cutoff conditions in planar waveguides with semiconductor guiding layer.—73-15016
Manipulating solid-surface properties with polymeric agents.—73-09196
Mechanics of crack growth in layered materials.—73-06486
Method for manufacturing semiconductor device having grown layer on insulating layer.—73-11528
Microprocesses during formation of glaze layers.—73-10868
Microstructure and abrasive wear of composite layers formed by laser processing.—73-13873
Misfit layer compounds $(MS)_nTS_2$ (M=Sn, Pb, Bi, rare-earth metals; T=Nb, Ta, Ti, V, Cr; 1.08≤n≤1.23): structures and physical properties.—73-05436
Modeling of property variations of modified layers of glasses.—73-14229
Modification of proton-exchanged $LiNbO_3$ layers for guiding modes with ordinary polarization.—73-15272
Preparation and properties of sol-gel nanostructured thin ceramic layers.—73-13177
Preparation of piezoelectric ceramic layers on glass and metallic substrates.—73-04568
Process for depositing a thin layer of a ceramic composition and a product obtained thereby.—73-01874
Properties and use of cycled grown OMVPE GaAs:Zn, GaAs:Se, and GaAs:Si layers for high-conductance GaAs tunnel junctions.—73-11405
Reflection high-energy electron diffraction intensity monitored homoepitaxial growth of $SrTiO_3$ buffer layer by pulsed laser deposition.—73-06017
Spin precession in GaAs inversion layers using antilocalization.—73-07805
Stability of strained $Si_{1-y}C_y$ random alloy layers.—73-13449
Stimulation of superconductivity in metal oxide layered superconductors.—73-01663
Strained epitaxial layers [studied] by Raman techniques.—73-07815
Structure of GaAs heteroepitaxial layer grown on GaP(001) by molecular beam epitaxy.—73-01327
Structure of plasma-deposited $ZrO_2$-$Y_2O_3$ ceramic layers.—73-16337
Surface roughness and optical properties of high-quality Si epitaxial layers.—73-17205
Surface structure determination of oxide films grown on a foreign substrate: $Fe_3O_4$ multilayer on Pt(111) identified by LEED.—73-17207
Synthesis of infinite layered superconductor under high pressure.—73-01684
Thickness of parison layer formed in blow method.—73-10608
Use of elastic recoil detection for stoichiometry determination of reactively evaporated TiN layers.—73-08454
X-ray phase analysis and small-angle X-ray scattering study of the reduced layer of microchannel plates.—73-00427
XRD and Raman studies of low-temperature-grown GaAs epilayers.—73-15231

**leaching,**
Leaching of ceramic materials.—73-15946
Leaching of lead from lead crystal.—73-03740
Mathematical modeling of radioactive waste leaching.—73-04892
Properties of $Y_2O_3$-$Al_2O_3$-$SiO_2$ glasses as a model system of grain-boundary phase of $Si_3N_4$ ceramics: II, Leaching characteristics.—73-00537
Suppression of lead leaching in lead crystal products by surface dealkalization.—73-03767

**lead lanthanum zirconate titanate (PLZT),**
*c*-axis perovskite thin films grown on silicon dioxide.—73-01849
Application of PLZT for photoprinter.—73-07869
Combustion synthesis and properties of fine-particle dielectric oxide materials.—73-10924
Crystallization and crack formation in sol-gel PLZT thin films.—73-04542
Development of PLZTN for shear type accelerometer.—73-01398
Dielectric properties of tetragonal lanthanum-modified lead zirconate titanate ceramics.—73-07879
Effects of oxygen partial pressure on lead content of PLZT thin films produced by excimer laser deposition.—73-11566
Effects of porosity on electric fatigue behavior in PLZT and PZT ferroelectric ceramics.—73-07884
Fabrication of sol-gel-derived ferroelectric $Pb_{0.865}La_{0.09}Zr_{0.65}$- $Ti_{0.35}O_3$ optical waveguides.—73-04551
Ferroelectric PLZT thin films prepared by sol-gel route.—73-11576
Grinding strain of PLZT ceramics.—73-16805
Growth of epitaxial PLZT film by CVD.—73-02846
Hierarchical domain structures and in situ domain migration in the antiferroelectric ceramic PLSnZT.—73-08636
Intelligent processing of ferroelectric films.—73-15269
Interfaces and wetting properties between PLZT ceramics and electrode metals.—73-03607
Lead oxide coatings on sol-gel-derived lead lanthanum zirconium titanate thin layers for enhanced crystallization into the perovskite structure.—73-07896
Origin of *F* spots and stress sensitivity in lanthanum lead zirconate titanate.—73-11593
Photodarkening and paramagnetism in ultraviolet-exposed lead lanthanum zirconate ceramics.—73-07905
Preparation of coprecipitated ferroelectric ceramic powders by two-stage calcination.—73-01427
Reactions taking place during the sol-gel processing of PLZT.—73-06014
Role of drying-control chemical additives on the preparation of sol-gel-derived PLZT thin films.—73-15286
Self-diffusion of oxygen in PLZT ceramics.—73-04570
Structural and dielectric properties of PLLZT ceramics.—73-16603
Synthesis of PLT/PLZT ferroelectric thin films by a sol-gel method.—73-15290
Synthesis of PLZT ceramics by the coprecipitation method and the effects of grinding on synthesis and sintering behavior of powders.—73-06094
Thermal decomposition of polyvinylbutyral/PLZT, PMN dielectric powder composite.—73-10996
Transverse electrooptic properties of magnetron-sputtered PLZT thin films.—73-04576
Ultrahigh strain ceramics with multiple field-induced phase transitions.—73-15299

**lead magnesium niobates (PMN),**
Chemical structure of a complex alkoxide as a precursor of $Pb(Mg_{1/3}Nb_{2/3})O_3$.—73-16054
Crystal structural studies of thermal decomposition process of $PbMg_{1/3}Nb_{2/3}O_3$ single crystal into pyrochlore-type compound.—73-16080
Diffuse phase transitions and random-field-induced domain states of the "relaxor" ferroelectric $PbMg_{1/3}Nb_{2/3}O_3$.—73-07880
Effect of excess MgO on dielectric electrostrictive properties of $0.99Pb(Mg_{1/3}Nb_{2/3})O_3$ $0.01Pb(Mn_{2/3}W_{1/3})O_3$.—73-12772
Effects of $PbTiO_3$ addition on dielectric properties and extent of PbO loss in Nd-doped $Pb(Mg_{1/3}Nb_{2/3})O_3$ system.—73-10940
Electrical state and surface composition of the $PbMg_{1/3}Nb_{2/3}O_3$ single crystal.—73-07886
Ferroelectric $Pb(Mg,Nb)O_3$ ceramics with various Mg/Nb ratios.—73-01412
Formation of perovskite-type $Pb(Mg_{1/3}Nb_{2/3})O_3$ under hydrothermal conditions.—73-17136
Interfacial phenomena and dielectric properties of $Pb(Mg_{1/3}Nb_{2/3})O_3$ ceramics with excess PbO.—73-13408
Low- and high-frequency dielectric relaxations in lead magnesium niobate ceramics.—73-07333
Low-frequency sonar projector and method.—73-01056
Piezoelectric properties of hot-pressed 18PMN–41PZ–41PT ceramics.—73-07906
Piezoelectric properties of niobium-doped 18PMN-41PZ-41PT ceramics.—73-07907
Piezoelectric properties of $PbMg_{1/3}Nb_{2/3}O_3$-based perovskites.—73-11599
Polarization variations in lead magnesium niobate from dielectric constant measurements and Raman spectra.—73-16572
Preparation and dielectric properties of $BaTiO_3$-$Pb(Mg_{1/3}Nb_{2/3})O_3$ solid solutions.—73-16573
Preparation and dielectric properties of $BaTiO_3$-$Pb(Mg_{1/3}Nb_{2/3})O_3$.—73-05616
Size estimation of ordered domains in $Pb(Mg_{1/3}Nb_{2/3})O_3$ ceramics.—73-11614
Synthesis of $0.4Pb(Mg_{1/3}Nb_{2/3})O_3$-$0.3Pb(Mg_{1/2}W_{1/2})O_3$-$0.3PbTiO_3$ ceramics by metal alkoxide method, and its dielectric properties.—73-01031
Synthesis of ferroelectric perovskites through aqueous-solution techniques.—73-15289
Synthesis of $Pb(Mg_{1/3}Nb_{2/3})O_3$ by $Li_2SO_4$-$Na_2SO_4$ molten salts.—73-13308
Synthesis of $Pb(Mg_{1/3}Nb_{2/3})O_3$ powder by the spray pyrolysis with ultrasonic atomizer.—73-13309
Synthesis of perovskite lead magnesium niobate using partial oxalate method.—73-17045
Thermal decomposition of polyvinylbutyral/PLZT, PMN dielectric powder composite.—73-10996
Variation of dielectric constant with grain size of pyrochlore phase in the PMN-pyrochlore diphasic mixtures.—73-12905
Variation of dielectric constant with the volume fraction of pyrochlore phase in the PMN-polychlore diphasic system: application of general effective media equation.—73-09006
X-ray and neutron diffraction studies of the diffuse phase transition in $PbMg_{1/3}Nb_{2/3}O_3$ ceramics.—73-02541

**lead oxide,**
Chemical and tribological characterization of PbO-$MoS_2$ films grown by pulsed laser deposition.—73-16670
Combined thermodynamic and neutron scattering investigation of glasses in the system PbO-$B_2O_3$.—73-13945
Effect of PbO on sintering of undoped $PbTiO_3$ ceramics prepared by sol-gel processing.—73-02791
Effect of PbO on some properties, especially light scattering, of glasses with mixed alkalis.—73-10432
Electrodeposition of lead dioxide from nitrate and other media.—73-05787
Evidence for oxygen nonstoichiometry in a stabilized Bi-Ca-Pb-O fluorite-type phase.—73-08621
EXAFS study on the coordination state of germanium in PbO-$GeO_2$ glasses—relation between structure and optical nonlinearity.—73-16143
Fabrication and properties of superconducting wire formed by extruding method.—73-11756
Influence of forming and surface treatment of products of lead crystal glass on lead leaching.—73-14207
Influence on dielectric properties and evaporation of PbO according to substituting $Nd^{3+}$ for $Pb^{2+}$ in $Pb(Mg_{1/3}Nb_{2/3})O_3$ system.—73-08889
Interfacial phenomena and dielectric properties of $Pb(Mg_{1/3}Nb_{2/3})O_3$ ceramics with excess PbO.—73-13408
Leaching of lead from lead crystal.—73-03740
Lead oxide coatings on sol-gel-derived lead lanthanum zirconium titanate thin layers for enhanced crystallization into the perovskite structure.—73-07896
Lead—beginning of the end.—73-13628
Local structure around aluminum in glasses of the system $Al_2O_3$-PbO-CdO.—73-06935
Magnetic properties of $xCeO_2$–$(1-x)(3B_2O_3$:*PbO) glasses.*—*73-00512*
Melting of lead crystal with 24% PbO in electric glass-melting furnace with $SnO_2$ electrodes.—73-14426
Melting properties of PbO-$B_2O_3$-$SiO_2$ system flux.—73-10564
Microstructure of glass and crystalline phases in the system PbO-$TeO_2$-$B_2O_3$.—73-14036
Partially crystallizable low melting glass.—73-10655
$Pb_2KNb_5O_{15}$ ferroelectric ceramics: elaboration, control of stoichiometry, and dielectric properties.—73-11595
Phase relation and electric properties of $Pb(Mg_{1/3}Ta_{2/3})O_3$-$PbTiO_3$-$PbZrO_3$ ceramics.—73-08947
Properties and structure of binary PbO-$GaO_{1.5}$ glasses as the base of nonlinear optical multicomponent glasses.—73-03808
Property–structure correlations of glasses in the system PbO-$B_2O_3$-$MoO_3$.—73-10475
Refractive index, mean dispersion, and density of lead oxide in silicate glasses of ordinary systems.—73-00541
Sol-gel preparation and optical nonlinearity of lead(II) oxide–titanium(IV) oxide amorphous monoliths.—73-06062
Specificity of phase transitions of lead monoxide.—73-12687
Structural model for PbO-$Ga_2O_3$-$SiO_2$ glasses.—73-00409
Synthesis of $Pb(Mg_{1/3}Nb_{2/3})O_3$ powder by spray pyrolysis with ultrasonic atomizer.—73-03050
Synthesis of solid solutions of the $Pb(Mg_{1/3}Ta_{2/3})O_3$-$Pb(Yb_{1/2}Ta_{1/2})O_3$ system having no compositional fluctuation.—73-09364
Third harmonic generation in PbO-$SiO_2$ and PbO-$B_2O_3$ glasses.—73-03816
X-ray diffraction study of $TiO_2$-PbO glasses.—73-10415

**lead selenide,**
Characteristic features of self-compensation in PbSe:Tl:$Pb_{ex}$ films.—73-14796
Electronic and lattice characteristics of lead selenide studied by low-temperature (1–4 K) calorimetric spectroscopy.—73-16131
Growth of $PbSe_{0.78}Te_{0.22}$ lattice matched with $BaF_2$.—73-05412
Multiwave scattering processes of fast electrons in textured PbSe films.—73-15051
Photostimulated changes in the position of $Mn^{2+}$ ions in the crystal lattice of PbSe.—73-07732
Position and charge state of the Eu impurity in the PbSe lattice.—73-01288

**lead sulfide,**
Heterojunctions of the ZnTe-PbS type.—73-01182
Preparation of PbS quantum dot materials by the sol-gel process.—73-11402
Properties of compensated lead cadmium sulfide films.—73-15124

**lead telluride,**
- Deep states in Ga-doped $Pb_{1-x}Sn_xTe$ solid solutions.—73-11130
- Deformation potentials of PbTe.—73-01120
- Electron localization in $Pb_{1-x}Sn_xTe(In)$ in high magnetic fields.—73-12795
- Energy diagram of a $Pb_{1-x}Mn_xTe/PbTe$ heterojunction.—73-11194
- Energy spectrum of PbTe:Zn* deduced from optical absorption data.—73-14889
- ESR and electrophysical properties of single-crystal PbTe:Mn films grown by the method of laser epitaxy.—73-01159
- ESR of rare-earth impurities ($Dy^{3+}$, $Er^{3+}$, $Yb^{3+}$) in the narrow gap semiconductor PbTe.—73-04330
- Formation and annealing of radiation defects during proton bombardment of *p*-type $Pb_{0.78}Sn_{0.24}Te$ films.—73-07532
- Frozen-in photoconductivity in PbTe:O films.—73-05570
- Growth of $PbSe_{0.78}Te_{0.22}$ lattice matched with $BaF_2$.—73-05412
- Increase in the diffusion length of carriers in polycrystalline PbTe films.—73-14978
- Influence of doping with Ga on the properties of $Pb_{1-x}Ge_xTe$ solid solutions.—73-14979
- Influence of In on the energy spectrum of $Pb_{1-x}Sn_xTe$.—73-07595
- Influence of the In impurity on the electrophysical properties of $Pb_{1-x}Sn_xTe$ with $x>0.3$.—73-01210
- Influence of Tm on the properties of lead telluride.—73-01212
- *I-V* characteristics and switching to a low-resistivity state in PbTe:Ga at low temperatures.—73-01192
- Kinetics and spectrum of the photoconductivity of $PbTe/Pb_{1-x}Sn_xTe$ heterostructures grown on $BaF_2$ substrates.—73-07628
- Magnetic susceptibility of $Pb_{1-x}Mn_xTe$ solid solutions.—73-15030
- Mandelshtam-Brillouin light scattering spectrum study of pseudosurface acoustic wave propagation in (110)- and (111)-cut PbTe crystals.—73-15036
- Molecular beam epitaxy of PbTe/EuTe superlattices and their structural investigation by X-ray diffraction using reciprocal space mapping.—73-11336
- Nature of changes in the properties of PbTe:Ga due to changes in the degree of doping.—73-07687
- Radiative and nonradiative recombination in quaternary $Pb_{1-x}Sn_xSe_{1-y}Te_y$ solid solutions.—73-01295
- Relaxation of the delayed photoconductivity of $Pb_{1-x}Sn_xTe$:In alloys in an electric field.—73-04467
- Resonant energy band of radiation defects in *p*-type $Pb_{1-x}Sn_xTe$ ($x$=0.2) alloy irradiated with electrons.—73-03110
- Resonant states in doped and undoped PbTe crystals.—73-01306
- Row of defects in acceptor doping of PbTe-type semiconductors with group I elements.—73-07781
- Self-compensation of electrically active impurities by intrinsic defects in $Pb_{0.8}Sn_{0.2}Te$ solid solutions.—73-01312
- Substructural transformations in irradiated and aged PbTe films.—73-16343
- Thermo-emf in semiconducting structures of lead chalcogenides under irradiation of short laser pulses.—73-04498
- Tm doping of lead telluride.—73-04499
- Transport phenomena on $Pb_{0.78}Sn_{0.22}Te$ with high impurity concentrations.—73-15217

**lead titanate,**
- Acoustic emission in ferroelectric lead titanate ceramics: origin and recombination of microcracks.—73-15248
- Characteristic dispersion frequencies of resonance-type soft mode system of lead titanium oxide in far infrared.—73-02555
- Chemical processing and microstructure of piezoelectric lead titanate ceramics.—73-15251
- Complex impedance analysis of unusual dielectric properties in $(Pb,La)TiO_3$ ceramics.—73-02563
- Crystallization behavior in precursor-modified sol-gel lead titanate powders.—73-04543
- Crystallization of amorphous $PbTiO_3$ thin film.—73-12964
- Crystallization of lead titanate $PbTiO_3$ in gel-derived solder glasses.—73-10513
- Cyclic fatigue of electrically poled piezoelectric ceramics.—73-06365
- Deposition and characterization of $PbTiO_3$ thin films on silicon wafers using metallorganic sources.—73-07878
- Development of superplastic functional ceramics through grain refinement.—73-01399
- Effect of PbO on sintering of undoped $PbTiO_3$ ceramics prepared by sol-gel processing.—73-02791
- Effect of preliminary mechanical treatment on the microhomogenization during heating of hydrous gels as precursors for lead titanate.—73-05767
- Effect of rare-earth additives on electromechanical properties of modified lead titanate ceramics.—73-00952
- Effects of deposition parameters on sputter deposition of lead titanate thin films.—73-13030
- Effects of $Li_2O$ and $Na_2O$ addition on growth and electrical properties of $PbTiO_3$ single crystals.—73-00954
- Effects of $Li_2O$ and $Na_2O$ addition on growth and electrical properties of $PbTiO_3$ single crystals.—73-12778
- Effects of mineralizers on $PbTiO_3$ films prepared by hydrothermal method.—73-09104
- Effects of mineralizers on $PbTiO_3$ films prepared by hydrothermal method.—73-13829
- Effects of $PbTiO_3$ addition on dielectric properties and extent of PbO loss in Nd-doped $Pb(Mg_{1/3}Nb_{2/3})O_3$ system.—73-10940
- Effects of substrate orientation and cooling rate on microstructure of $PbTiO_3$ thin films grown by metallorganic chemical vapor deposition.—73-13391
- Electrical properties of $PbTiO_3$ single crystals grown from $PbO-Cu_2O$ flux method.—73-16479
- Experimental determination of the surface acoustic wave properties of new fine-grain piezoelectric ceramics.—73-11572
- Fabrication of undoped $PbTiO_3$ ceramics via sol-gel processing.—73-05806
- Formation of $PbTiO_3$ thin films by thermal diffusion from multilayers.—73-10950
- Generation of metal titanate powders by spray pyrolysis using single-source precursors.—73-09148
- Grain size dependence of high-temperature dielectric properties of (Pb, La)$TiO_3$ ceramics.—73-02612
- Grain-boundary-layered PTCR ceramics based on $PbTiO_3$-$TiO_2$.—73-11222
- Grain-size dependence of high-temperature dielectric properties of $(Pb,La)TiO_3$ ceramics.—73-11581
- Hydrostatic piezoelectric properties of "$d_{31}$-zero" 0-3 composite of polymer and ceramic powder mixture of PZT and $PbTiO_3$.—73-04555
- Hydrostatic piezoelectric properties of "$d_{31}$-zero" 0-3 composite of polymer and ceramic powder mixture of PZT and $PbTiO_3$.—73-11583
- Hydrothermal synthesis of fibrous lead titanate powder.—73-16828
- Hydrothermal synthesis of lead titanate.—73-11584
- Hysteresis measurements on ferroelectric composites.—73-11585
- Ion implantation in $PbTiO_3$ films.—73-12614
- Lead-titanate-based piezoelectric ceramic material.—73-04580
- Low-frequency sonar projector and method.—73-01056
- Mechanism of formation of ferroelectric lead-titanate-based ceramics by wet chemical methods.—73-07899
- Origin of orientation in sol-gel-derived lead titanate films[—correction].—73-15274
- $(Pb,Ca)[(Mn_{0.5}W_{0.5})Ti]O_3$ ceramics: X-ray and dielectric studies.—73-08946
- Phase transition in $PbTiO_3$ ultrafine particles of different sizes.—73-01423
- Preparation of lead titanate particles by crystallization of glass.—73-09264
- Preparation of $Pb(Zr_{1-x}Ti_x)O_3$ ceramic fibers by the alginate method.—73-16928
- Preparation of $PbTiO_3$ thin films by laser ablation.—73-11602
- Pressure dependence of optical absorption in $PbTiO_3$ to 35 GPa: observation of the tetragonal-to-cubic phase transition.—73-12866
- Properties of ferroelectric $PbTiO_3$ films grown in an ionized cluster beam system.—73-07912
- Second harmonic generation from $PbTiO_3$-based ferroelectric thin films.—73-11612
- Sol-gel processing and pyroelectric properties of lanthanum-modified $PbTiO_3$ thin films.—73-06064
- Sol-gel-derived lead titanate films.—73-13282
- Structural and dielectric properties of $(1-x)Pb(Fe_{1/2}Nb_{1/2})O3-xPbTiO_3$ prepared by precalcination method.—73-16602
- Structural and dielectric properties of $PbTiO_3$ ferroelectric thin film prepared by sol-gel processing.—73-11620
- Synthesis and properties of highly *c*-axis-oriented $PbTiO_3$ thin films prepared by an MOCVD method.—73-09350
- Synthesis of $0.4Pb(Mg_{1/3}Nb_{2/3})O_3$-$0.3Pb(Mg_{1/2}W_{1/2})O_3$-$0.3PbTiO_3$ ceramics by metal alkoxide method, and its dielectric properties.—73-01031
- V-shape characteristics of $(Pb_{0.6}Sr_{0.4})TiO_3$ ceramics.—73-11499
- X-ray photoelectron spectroscopy and Auger electron spectroscopy studies of ferroelectric $(Pb,La)TiO_3$ thin films prepared by a multi-ion-beam reactive cosputtering technique.—73-07925

**lead zirconate titanate (PZT),**
- Anomalous dilatation-temperature curves of PZT-$ZrO_2$ composites.—73-12745
- Application of X-ray photoelectron spectroscopy to quantitative analysis of PZT composition.—73-05359
- Application of X-ray photoelectron spectroscopy to quantitative analysis of PZT composition.—73-16034
- Barrier layer at metal-ceramic interface in ferroelectric MIM [metal-insulator-metal] structures.—73-07870
- Characteristics of PZT thin film deposited on new buffer layer by sputtering.—73-09036
- Characterization of epitaxially grown CVD $Pb(Zr, Ti)O_3$ films with high deposition rate.—73-17115
- Characterization of material interaction for a nonaqueous lead zirconate titanate (PZT) lead casting slip.—73-05704
- Colloidal processing of $PbZr_{1-x}Ti_xO_3$ thin films.—73-12947
- Combustion synthesis and properties of fine-particle dielectric oxide materials.—73-10924
- Control of leakage resistance in $Pb(Zr,Ti)O_3$ thin films by donor doping.—73-16430
- Cyclic fatigue of electrically poled piezoelectric ceramics.—73-06365
- Dependence of electrical properties on film thickness in $Pb(Zr_xTi_{1-x})O_3$ thin films produced by metallorganic chemical vapor deposition.—73-08832
- Deposition behavior of $Pb(Zr_xTi_{1-x})O_3$ thin films by metallorganic vapor deposition.—73-12974
- Device effects of various Zr/Ti ratios of PZT thin films prepared by sol-gel method.—73-11560
- Dielectric properties of $(Pb_{1-x}X_x)(Zr_{0.7}Ti_{0.3})O_3$ (X=Ca, Sr, Ba) ceramics.—73-14691
- Diffusion penetration of silver from electrodes into PZT ceramics.—73-13346
- Effect of heating rate on the crystallizstion behavior of amorphous PZT thin films.—73-02785
- Effect of lanthanum doping on the electrical properties of sol-gel-derived ferroelectric lead zirconate titanate for ultra-large-scale integration dynamic random access memory [DRAM] applications.—73-11563
- Effect of mechanical stress and electric field on the morphotropic tetragonal and rhombohedral phase boundary in PZT system: thermodynamic consideration.—73-16118
- Effect of Pb content on the phase transformation of sputter-deposited PZT thin film during RTA.—73-16121
- Effect of substrate on crystallization of PZT films prepared by laser sputtering.—73-16742
- Effects of ferroelectric switching on the dielectric and ferroelectric properties in lead zirconate titanate ceramics and their modeling.—73-07882
- Effects of grain size on the degradation phenomena of PZT ceramics.—73-01406
- Effects of porosity on electric fatigue behavior in PLZT and PZT ferroelectric ceramics.—73-07884
- Electric fatigue in lead zirconate titanate ceramics.—73-04548
- Electrokinetic characteristics of $Pb(Ti,Zr)O_3$ and its oxide constituents.—73-09112
- Enhanced electrical properties of ferroelectric $Pb(Zr_{0.5}Ti_{0.5})O_3$ thin films grown with low-energy oxygen ion assistance.—73-07887
- EPR study of excess impurity charge compensation mechanisms in $PbZr_{1-x}Ti_xO_3$ ceramics.—73-16141
- Fabrication and characterization of PZT/thermoplastic polymer composites for high-frequency phased linear arrays.—73-15261
- Fabrication of current-carrying surface layers on piezoceramics of lead zirconate titanate.—73-01410
- Fast decay component of the remanent polarization in thin-film PZT capacitors.—73-11573
- Ferroelectric domain structure and array of tetragonal and rhombohedral phase in PZT ceramics at MPB [morphotropic grain boundary] composition.—73-15263
- Ferroelectric memory programs in Canada.—73-11574
- Ferroelectric $PbZr_{0.2}Ti_{0.8}O_3$ thin films on epitaxial Y-Ba-Cu-O.—73-11575
- Filament-assisted pulsed laser deposition of epitaxial $PbZr_xTi_{1-x}O_3$ films: morphological and electrical characterization.—73-11579
- Formation of epitaxial $Pb(Zr,Ti)O_3$ thin film by CVD.—73-02832
- Four-point and biaxial flexure strength of PZT ceramics: a probabilistic approach.—73-17323
- Fracture behavior and degradation of piezoelectric properties in PZT.—73-11580
- Fracture behavior of cyclically loaded PZT.—73-14930
- Grain-oriented ferroelectric PZT thin films on lattice-matched substrates.—73-07892
- Growth of PZT crystal by using PbO-KF-$PbCl_2$ flux.—73-05834
- Hot-stage transmission electron microscopy studies of phase transformations in tin-modified lead zirconate titanate.—73-09460
- Hydrostatic piezoelectric properties of "$d_{31}$-zero" 0-3 composite of polymer and ceramic powder mixture of PZT and $PbTiO_3$.—73-04555
- Hydrostatic piezoelectric properties of "$d_{31}$-zero" 0-3 composite of polymer and ceramic powder mixture of PZT and $PbTiO_3$.—73-11583
- Influence of the calcining temperature on the sintering and properties of PZT ceramics.—73-09180
- Jet vapor deposition of lead zirconate titanate (PZT) for thin-film pyroelectric detectors.—73-04557
- Lead zirconate titanate ferroelectric thin films by laser ablation deposition.—73-04558
- Lead zirconate titanate films from a diol-based sol-gel method.—73-09191
- Lead zirconate titanate hollow-sphere transducers.—73-10965
- Low-temperature synthesis of chemically homogeneous lead zirconate titanate (PZT) powders by a semiwet method.—73-13124
- Mechanical and electromechanical properties of monoclinic $ZrO_2$ fiber/PZT composites.—73-17376
- Mechanical-vibration-cancelling piezoceramic microphone.—73-04581
- Metallorganic chemical vapor deposition of ferroelectric $Pb(Zr,Ti)O_3$ thin films.—73-11589
- Method for making a semiconductor device having an anhydrous ferroelectric thin film.—73-04583
- Microstructural and compositional analyses on grain boundary of low-temperature-sintered $Pb(Zr,Ti)O_3$ ceramics.—73-13418
- Modified envelope method for obtaining optical properties of weakly absorbing thin films and its application to thin films of $Pb(Zr,Ti)O_3$ solid solutions.—73-08421
- Obtaining current-carrying surface layers on the piezoceramics based on lead zirconate titanate.—73-01003
- Permittivity in tetragonal and rhombohedral phase PZT ceramics after poling.—73-05445
- Physical properties and output characteristics of piezoelectric transformer of $Pb(Mg, Te, Mn, Nb)O_3$-PZT ceramics with addition of $CeO_2$.—73-11597
- Physical properties of radio-frequency magnetron-sputtered $Pb(Zr, Ti)O_3$ thin films: direct determination of oxygen composition by Rutherford backscattering spectroscopy and nuclear reaction analysis.—73-15279
- Piezoelectric properties of hot-pressed 18PMN–41PZ–41PT ceramics.—73-07906
- Piezoelectric properties of niobium-doped 18PMN-41PZ-41PT ceramics.—73-07907
- Piezoelectric properties of PZT ceramics sintered at low temperature with complex oxide additives.—73-15280

Piezoelectric, pyroelectric, and dielectric properties of La- and Sm-doped PZT ceramics.—73-15282

Plasma-sprayed lead zirconate titanate–glass composites.—73-11601

Preparation and properties of sol-gel nanostructured thin ceramic layers.—73-13177

Preparation of coprecipitated ferroelectric ceramic powders by two-stage calcination.—73-01427

Preparation of PZT film on (100)Pt/(100)MgO subtrate by CVD and its properties.—73-16930

Preparation of PZT thin films by sol-gel process and properties.—73-01428

Preparation, microstructure, and ferroelectric properties of laser-deposited thin $BaTiO_3$ and lead zirconate titanate films.—73-11603

Process-dependent electrical characteristics and equivalent circuit model of sol-gel-based PZT capacitors.—73-11604

Raman scattering study of lead zirconate titanate thin films prepared on silicon substrates by radio-frequency magnetron sputtering.—73-12669

*R*-curve behavior of PZT ceramics near morphotropic phase boundary.—73-06508

Relationship between the internal bias field and the tetragonal structure of PZT ceramics containing low manganese additions.—73-11611

Separation between first overtone and fundamental resonant frequencies in PZT ceramic resonators.—73-04571

Silver diffusion in lead zirconate titanate.—73-17100

Slip casting of monoclinic $ZrO_2$ fiber/PZT composites.—73-17000

Sol-gel processing of Nb-doped Pb(Zr, Ti)$O_3$ thin films for ferroelectric memory applications.—73-11615

Spectroscopic ellipsometry studies on ion beam sputter deposited Pb(Zr, Ti)$O_3$ films on sapphire and Pt-coated silicon substrates.—73-09508

Stability of PZT piezoelectric ceramics under vibration level change.—73-15288

Structure and properties at the ferroelectric/electrode interface between lead zirconate titanate and copper.—73-01434

Structure and the piezoelectric properties of thin $Pb(Zr_{0.53}Ti_{0.45}W_{0.01}\cdot Cd_{0.01})O_3$ films.—73-07921

Structure development study of Pb(Zr,Ti)$O_3$ thin films by an optical method.—73-11623

Subnanometer-equivalent PZT thin films fabricated by low-temperature MOCVD.—73-04573

Synthesis and characterization of $Pb(Zr_xTi_{1-x})O_3$ thin films produced by an automated laser ablation deposition technique.—73-03037

Temperature-time texture transition of $Pb(Zr_{1-x}Ti_x)O_3$ [PZT] thin films: II, Heat treatment and compositional effects.—73-17055

Temperature-time texture transition of $Pb(Zr_{1-x}33Ti_x)O_3$ [PZT] thin films: I, Role of Pb-rich intermediate phases.—73-16362

Thermally activated rejuvenation of ferroelectric properties in electrically fatigued lead zirconate titanate ceramics.—73-07923

Transformation process of laser-ablated PZT thin films.—73-04575

Transmission electron microscopy investigation in the $R3m \rightarrow R3c$ phase transition in Pb(Zr,Ti)$O_3$ ceramics.—73-06298

Use of transmission electron microscopy for the characterization of rapid thermally annealed, solution-gel, lead zirconate titanate films.—73-09520

Vibration absorption of PZT piezoelectric ceramics.—73-15300

X-ray fluorescence analysis of piezoceramic materials based on PZT.—73-15302

Zirconia hydrogel casting of PZT ceramics.—73-13337

**lead,**

Aluminum alloy wetting by lead glasses with additives preventing lead reduction.—73-00434

Annealing effect on critical temperature and resistivity of $(Bi,Pb)_2Sr_2Ca_2Cu_3O_y$ superconductor irradiated by Co-60 gamma rays.—73-11689

Atomic structure of nonstoichiometric $Pb_{0.3}La_{0.7}F_{2.7}$ crystal (fluoritelike phase at high pressure).—73-16035

Changes in diamagnetic susceptibility and critical current of $Bi_{1.6}Pb_{0.4}Sr_2Ca_2Cu_3O_y$ caused by mechanical stresses.—73-07995

Chemical and mechanical stability of the Ba-added high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O system.—73-01504

Chemical and mechanical stability of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O system: IV, Formation of the high-$T_c$ phase in amorphous powder prepared by mechanical grinding.—73-01505

Chemical control of high-$T_c$ superconductivity: metal-superconductor-insulator transition in $(Tl_{1-x}Pb_x)Sr_2(Ca_{1-y}Y_y)Cu_2O_7$.—73-11702

Chemical nature of the barrier in $Pb/YBa_2Cu_3O_{7-x}$ tunneling structures.—73-01506

Cofiring of semiconducting (Ba,Sr)$TiO_3$ and (Ba,Pb)$TiO_3$ ceramics.—73-14809

Comparative analysis of the state of surfaces of lead silicate glasses and microchannel films.—73-00309

Comparative study of the synthesis techniques to obtain high-$T_c$ single phase in bismuth-based superconductors.—73-01508

Component evaporation from lead-bearing glasses.—73-00310

Composition dependence of carrier concentration and conductivity in $(Ba_{1-x}Sr_x)PbO_{3-\delta}$ system.—73-08827

Corrosion of refractory materials in molten lead silicate glasses.—73-07202

Corrosion resistance of ceramic refractories and platinum to lead phosphate glasses.—73-07203

Cross relaxation averaging EPRS spectra in $Pb_5Ge_3O_{11}$:$Gd^{3+}$.—73-15253

Crystal structure analysis and phase transition in lead orthovanadate $Pb_3(VO_4)_2$.—73-08585

Crystal structures of double pseudopyrovanadates $PbM'V_2O_7$ (M'=Mg,Zn).—73-02219

Crystallization in lead-bearing glasses and melts based on $BaSrCaMgAl_2F_{14}$.—73-07007

Decreasing lead exposure from lead crystal by sol-gel coating.—73-00606

Delamination and oriented molding of the Bi(Pb)-Sr-Ca-Cu-O system for higher critical current density.—73-08016

Densification of $Bi_{1.8}(Pb)_{0.35}Sr_{1.9}Ca_{2.1}Cu_3O_x$ and texture development through sinter-forging.—73-11722

Densification of Bi-Pb-Sr-Ca-Cu-O bulk superconductor by hot-press sintering and critical current density.—73-11723

Densification of Bi-Pb-Sr-Ca-Cu-O bulk superconductors by hot-press sintering and critical current density.—73-01516

Dielectric properties and electrical conductivity in the system $BaPbO_3$-$PbTiO_3$.—73-12765

Dielectric properties of Ge-Pb-O thin films obtained by rf sputtering.—73-00948

Differential resistance and critical current distribution in Ag-clad $(BiPb)_2Sr_2Ca_2Cu_3O_{10+y}$ tape.—73-15418

Dopants in high-$T_c$ superconductors from rapidly quenched $Bi_{1.6}Pb_{0.4}Ca_2Sr_2Cu_3O_x$ glasses.—73-08025

DSC and Raman studies of lead borate and lead silicate glasses.—73-00327

Effect of $^{58}Ni$ ion irradiation on the resistivity of $Bi_{1.7}Pb_{0.35}Sr_2Ca_2Cu_3O_{10+x}$ at low ion fluence.—73-11728

Effect of additives on the properties of the lead borosilicate glasses and the thin-film coatings based on them.—73-07302

Effect of $Ca_2CuO_3$ on the formation of (2223) phase in the Bi-Pb-Sr-Ca-Cu-O system.—73-01526

Effect of $Ca_2PbO_4$ on the formation of the (2223) phase in the Bi-Pb-Sr-Ca-CuO system.—73-08028

Effect of heat treatment conditions on $T_c$ and phase structure of 110-K superconductor in BiPbSrCaCuO system.—73-11732

Effect of Sb additions on the formation of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O superconducting thick films.—73-08038

Effect of silver addition to the bismuth-lead-strontium-calcium-copper-oxygen superconductor: enhancement in critical current density.—73-08039

Effect of sintering time on the stabilization of the Bi-Pb-Sr-Ca-Cu-O superconducting phase.—73-04705

Effect of the cooling rate on superconductivity of Bi-system superconductor.—73-15435

Effect of thermal cycling on two-step enhanced superconducting transition in $Bi_{1.6}Pb_{0.4}Sr_2Ca_1Cu_2O_{8+x}$.—73-15436

Effect of water or organic solvent on $J_c$ or repress-formed superconductors in Bi(Pb) system.—73-15440

Effects of cerium doping on the resistivity of PTCR barium lead titanate.—73-07468

Effects of rolling process on the microstructural and superconducting properties of [Ag-sheathed] Bi-Pb-Sr-Ca-Cu-O tape.—73-11742

Elaboration and characterization of lead perovskites from colloidal solution.—73-13039

Elastic and magnetoelastic properties of $PbFe_{12}O_{19}$ single crystals.—73-16470

Electrically conducting $Pb_xO_y$-$SiO_2$ glass films deposited by reactive radio-frequency magnetron sputtering.—73-00959

Electron paramagnetic resonance study of paramagnetic centers in antiferroelectric $Pb_2MgWO_6$.—73-16486

Equilibrium phase diagram of the system In-As-Pb.—73-12581

ESR method of studying the glass-formation process in chemically synthesized lead silicate batches.—73-00623

Evolution of microstructure and V-shaped positive temperature coefficient of resistivity of $(Pb_{0.6}Sr_{0.4})TiO_3$ materials.—73-07513

Experimental determination of the binodal temperature in the lead borate system.—73-08623

Fabrication of $Bi_{1.7}Pb_{0.4}Sr_{1.6}Ca_{2.4}Cu_{3.6}O_x$ superconducting films on silver substrates by the electrophoretic deposition technique.—73-15467

Fabrication of nonfired brick using lead-zinc tails.—73-06653

Features of synthesis of Bi(Pb)-Sr-Ca-Cu-O superconductors via precursors.—73-01550

Formation of 2223 phase in Bi-system superconductor containing Pb.—73-11767

Formation of Bi-Pb-Sr-Ca-Cu-O superconductor from precursors prepared by the citrate method.—73-15480

Formation of high-$T_c$ $Bi_{1.6}Pb_{0.4}Sr_2Ca_2(Cu_{0.9}Ti_{0.1})_3O_x$.—73-11770

Formation of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O in samples enclosed in silver pipe.—73-01557

Formation of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O system in various atmospheres.—73-01558

Fracture of brittle spheres under compression and impact loading: II, Results for lead glass and sapphire spheres.—73-09600

Future of crystal.—73-10538

Future of lead.—73-10539

Grain-boundary-phase identification of a lead-based relaxor by X-ray photoelectron spectroscopy.—73-14708

Heat-generating ceramic materials of $(Ba_{0.65}Pb_{0.35})TiO_3$ semiconductors.—73-11239

High dielectric constant ceramics in the $PbSc_{0.5}Ta_{0.5}O_3$-$PbZrO_3$ and $PbSc_{0.5}Ta_{0.5}$-$PbTiO_3$ systems.—73-00975

High-temperature X-ray diffraction of the PbBi-2223 phase superconductor in different atmospheres.—73-08096

How much lead leaches from crystal glassware.—73-03735

Impedance relaxation of $Pb_5Ge_3O_{11}$ single crystals.—73-05580

Improving the technology for making cupelas used in lead-alloy cupellation.—73-00826

Influence of annealing on the properties of Ca-rich Bi-Pb-Sr-Ca-Cu-O superconducting thin films.—73-01574

Influence of oxygen deficiency on electrical properties in the superconductor (Bi, $Pb)_2Sr_2Ca_2Cu_3O_x$ phase.—73-15514

Influence of oxygen partial pressure and temperature on Bi-Pb-Sr-Ca-Cu-O 110-K superconductor phase formation and its stability.—73-08107

Influence of Pb on structural properties of 2212 single crystal in Bi-Sr-Ca-Cu-O system.—73-08108

Ionic mobility in sodium-doped $PbMoO_4$ crystals.—73-17083

Ir absorption spectra of lead aluminoborate glasses.—73-00507

Lead minerals and compounds.—73-12282

Macrodefect formation in single crystals of lead germanate, $Pb_5Ge_3O_{11}$, during their layer-by-layer growth from melt.—73-17085

Magnetic field dependence of microwave absorption through *H-T* irreversibility line in $Bi_{2-x}Pb_xSr_2Ca_{n-1}Cu_nO_{4+2n}$.—73-02637

Magnetic susceptibility and aspects of magnetic interaction in Gd, Fe, and mixed Gd-Fe lead borate glasses.—73-03798

Magnetization and flux pinning in recold-pressed Bi-based bulk materials.—73-11824

Manifestation of the proximity effect in break junctions based on Bi-Sr-Ca-Cu-O:Pb.—73-08129

Measuring lead in man.—73-13629

Mechanical properties of (Bi,Pb)-Sr-Ca-Cu-O/Ag superconducting composite.—73-03329

Mechanism for the flow of the current in thin-film single-crystal *p-n* junctions based on PbS.—73-11312

Method of preparing 2223 phase (Bi,Pb)-Sr-Ca-Cu-O superconducting films.—73-15688

Method of preparing Pb-Sr-Ca-Ln-Cu-O metal oxide superconductor.—73-01723

Method of reclaiming glass from articles formed of leaded glass.—73-00749

Microstructural and magnetic studies of sinter-forged (Bi, $Pb)_2Sr_2Ca_2Cu_3O_x$ superconductor.—73-15554

Microstructure and properties of lead ferroniobate [PFN] ceramics $(Pb(Fe_{0.5}Nb_{0.5})O_3)$.—73-13426

Microstructures and the role of Pb in doped Bi-Sr-Ca-Cu-O superconductor.—73-04773

Modified lead calcium titanate ceramics with a relatively large dielectric constant for hydrophone applications.—73-04561

Mossbauer study of the high-temperature BiPbSrCaCuSnO superconductor.—73-02336

Neutron and X-ray Rietveld analysis of the three phases of lead orthovanadate $Pb_3V_2O_8$: importance of the electronic lone pairs in the martensitic transitions.—73-02342

Neutron powder diffraction study of the phase $Sr_4Pb_3CuO_{12}$.—73-02348

Noncrystalline BiPbSbSrCaCuO and its heat-treatment effect.—73-11845

Nonlinear electrical properties of lead lanthanum titanate thin films deposited by multi-ion-beam reactive sputtering.—73-07903

Optical spectra of Pb-implanted fused silica.—73-00525

Orthorhombic structures of $Pb_2MgWO_6$ and $Pb_2CoWO_6$.—73-08686

Oxide superconductor $Bi_{1.6}Pb_{0.4}Sr_{2-x}M_xCa_2Cu_3O_y$ (M=Mg, Ba).—73-11858

Oxygen sorption-desorption behavior and superconductivity of Bi-based oxide superconductor (2212 phase).—73-01626

Pb/GaAs(100): band bending, adatom-induced gap states, and surface dipole.—73-11372

Phase formation in the processes of synthesis of lead magnoniobate.—73-02383

Phase transition in lead germanate in strong electromagnetic field.—73-16264

Photoelectric properties induced by microinhomogeneities and macroinhomogeneities in epitaxial $Pb_{1-x}Sn_xS$ films and structures made from them.—73-07714

Photoresponse of granular (Pb)BiSrCaCuO films to millimeter-wavelength radiation.—73-11862

Physicochemical properties of melts of the system PbTe-Mn.—73-02394

Polishing of ground lead crystal glasses with $CO_2$ lasers.—73-03863

Preferred orientation of ß-lead fluoride grains formed within micropores of porous alumina.—73-16905

Preparation and transport properties of superconducting BPSCCO thin films.—73-15590

Preparation of *c*-plane-oriented $Pb_5Ge_3O_{11}$ film by the sol-gel method.—73-05965

Preparation of (Bi, Pb)-Sr-Ca-Cu-O superconducting thin films by the mist microwave-plasma chemical vapor deposition method.—73-11869

Preparation of Bi-Pb-Sr-Ca-Cu-O superconductor by the citrate method.—73-15594

Preparation of Bi-Pb-Sr-Ca-Cu-O superconductor using $Bi(Sr_{0.5}Ca_{0.5})O_x$ as a starting material.—73-15595

Preparation of lead-based perovskite-type thin films by an alternate evaporation method.—73-09265

Preparation of lead-based perovskite-type thin films by an alternate evaporation method.—73-16924

Preparation, processing, and tunneling in $YBa_2Cu_3O_{7-\delta}$-Pb native-barrier structures.—73-15600

Presintering processing of a Bi-based bulk superconductor by slurry pressing.—73-11874

Pressure effect, anisotropic transport properties, and irreversibility line of $Pb_2Sr_2Y_{1-x}Ca_xCu_3O_8$ crystals.—73-04794

Pressure-induced amorphization in crystalline $PbGe_3O_{11}$.—73-05460

Process for producing Bi-Pb-Sr-Ca-Cu-O superconducting films.—73-11995
Process for the production of lead metal niobates.—73-12399
Processing of thin films of the three-layer superconducting phase in the Pb-doped Bi-Sr-Ca-Cu-O system by metallorganic deposition.—73-04795
Processing-microstructure-property relationships of $Al_2O_3$-fiber-reinforced high-temperature superconducting $(Bi,Pb)_2Sr_2Ca_2Cu_3O_x$ composite.—73-15601
Production and study of lead germanate-based glass-ceramics [GC] with oriented surface layers.—73-02981
Real structure and phase transitions [PT's] in nitrates of divalent elements.—73-02420
Recovery of lead-containing dust when melting crystal glass.—73-14485
Reduced layers of microchannel films studied by methods of X-ray phase analysis and X-ray small-angle scattering.—73-00394
Refractory-oxide corrosion resistance in molten high-lead silicate glasses.—73-00858
Regulatory and research methods used by the U.S. FDA for determination of lead in ceramic foodware.—73-07270
Removal of lead from ceramic tableware.—73-10895
Resistivity and permittivity for $(Ba,Pb)TiO_3$ PTCR ceramics.—73-15285
Resonance structure in *I-V* characteristics of break junctions based on Bi-Sr-Ca-Cu-O:Pb.—73-08190
Role of 2-D electron-hole lattice system in modulated structure of high-$T_c$ superconductor $Bi_{2-x}Pb_xSr_2CaCu_2O_{8+\delta}$.—73-15614
Role of lattice system on ferroelectric phase transition in $PbHPO_4$.—73-07918
Scanning tunneling microscopy of defect structures and growth spirals in bulk single crystals of the high-$T_c$ superconductor $Pb_2Sr_2(Y, Ca)Cu_3O_{8+\delta}$.—73-01654
Schottky barrier formation at nonreactive interfaces: Ga/GaAs(100) and Pb/GaAs(100).—73-04472
Secondary electron emission from lead silicate glasses from the point of plasmon theory of emission.—73-14080
Sensibility of the Bi-Pb-Sr-Ca-Cu-O superconductive films in weak magnetic field.—73-01657
Shear modulus and Poisson's ratio of $Bi_{1.6}Pb_{0.4}Sr_2Ca_{2.5}Cu_{3.5}O_y$.—73-15619
Simplified method of synthesis for Bi-Pb-Sr-Ca-Cu-O superconductors via solid-state reaction.—73-04805
Simplified method of synthesis for Bi-Pb-Sr-Ca-Cu-O superconductors via solid-state reaction.—73-15620
Single-particle tunneling in BiPbSrCaCuO (2:2:1:2 and 2:2:2:3 phases).—73-08197
Special features of electrophysical characteristics of thin PbS films with a low concentration of an oxidant.—73-04486
Spectroscopic studies of pure and chromium-doped lead fluorophosphate glasses.—73-00401
$Sr^{2+}$ doping effect on the phase transition in $Pb_5Ge_3O_{11}$ single crystals.—73-16599
Stability of high-$T_c$ phase in $Bi_{1.6}Pb_{0.4}Sr_2Ca_2Cu_3O_z$ compounds prepared by hot isostatic pressing.—73-01662
Stabilized single-domain state and dielectric hysteresis loop [DHL] in $Pb_5Ge_3O_{11}$ crystals.—73-01433
Structural acentricity in $PbHPO_4$ near the ferroelectric transition investigated by Raman spectroscopy.—73-07920
Structural and electrical resistivity studies on $Bi_{1.6}Pb_{0.4}Sr_2Ca_4Cu_5O_x$ composition synthesized by different routes.—73-08208
Structural studies in lead germanate glasses: EXAFS and vibrational spectroscopy.—73-06973
Structure and crystallization behavior of amorphous $Bi_{0.90}Pb_{0.24}SrCaCu_{1.6}O_{5+y}$ high-temperature superconductor material.—73-08212
Structure of lead(II) tetrafluorostannate(II) prepared by hydrothermal synthesis.—73-05502
Structure of some lead aluminophosphate glasses.—73-03765
Superconducting Bi(Pb)-Sr-Ca-Cu-O fibers drawn from melt-quenched glasses.—73-04811
Superconducting fluctuation study above $T_c$ of Bi(Pb)-Sr-Ca-Cu-O thin films made by sputtering.—73-08218
Superconducting fluctuations in the thermoelectric power and resistivity of Bi-based polycrystalline cuprates.—73-01674
Superconducting properties of $Tl_{1-x}Pb_xCaSr_2Cu_2O_7$: role of Pb and oxygen stoichiometry.—73-08221
Superconducting proximity effect in $YBa_2Cu_3O_{7-\delta}$-Ag-Pb junctions.—73-08222
Superconductivity in Pb-based 1212 cuprates: evidence for underdoping from thermoelectric power.—73-15639
Superconductivity of the Ba-doped $Bi_2Pb_2Sr_2Ca_2Cu_3O_x$ system.—73-04816
Superconductor crystal and process for preparing the same.—73-01742
Suppression of lead leaching in lead crystal products by surface dealkalization.—73-03767
Synthesis and $^{17}O$ NMR characterization of the high-$T_c$ phase in the Bi-Pb-Sr-Ca-Cu-O superconductor.—73-11922
Synthesis of BiPbSrCaCuO superconductor.—73-12006
Synthesis of bismuth-based superconductors using poly(acrylic acid).—73-08237
Temperature dependence of electric quadrupole interaction in high-$T_c$ superconductor $Bi_{1.7}Pb_{0.7}Sr_2CaCu_2O_{8+\delta}$.—73-08245
Tentative phase diagram of the system $PbF_2$-$BiF_3$.—73-02516
Testing procedures for food contact hollowware.—73-15854
Thermoelectric power of bulk and thin-film Bi high-$T_c$ superconductors.—73-11935
Thin-film BiPbSrCaCuO dc SQUID's operating at liquid nitrogen temperature.—73-11936
Tunnel state parameters in lead chalcogenides.—73-16386
Tunneling characteristics of $YBa_2Cu_3O_{7-\delta}$-Pb: Josephson junctions.—73-08264
Tunneling investigations of Bi-Pb-Sr-Ca-C-O films with $T_c$=100 K.—73-08266
Tunneling studies of $BaPb_{0.75}Bi_{0.25}O_3$.—73-12903
Twin (domain) boundaries of *S*-type in $PbZrO_3$ crystals.—73-15297
Twin texture of tetragonal lead-metaniobate-based ferroelectric solid solutions.—73-15298
Variable-temperature X-ray diffraction analysis of the behavior of the mobile fluorine ions in a superionic conductor ß-$PbF_2$.—73-02537
Vibrational spectra of $PbMoO_4$ crystals.—73-02539
Volatilization of components from lead-containing glass.—73-00719
X-ray diffraction study of $PbZrO_3$ ferroelectric phase induced by strong electric field.—73-15301
X-ray photoelectron spectroscopy study of the structure of lead silicate glasses.—73-00428
Zero resistance of quenched $Bi_{1.5}Pb_{0.4}Sb_{0.1}Sr_2Ca_2Cu_3O_x$ at 140 K.—73-04828

**lead-free,**
Characterization of lead-free 2212 phase of Bi superconductor with $T_c$ of 93 K.—73-04679
Development of lead-free glasses for jewelry manufacture.—73-14349
Development of nonlead compositions.—73-10516
Environmental concerns spur development of lead-free colors.—73-03840
Fundamentals of leadless glaze development.—73-07255
Lead-free fine crystal glassware.—73-03937
Lead-free glass coatings.—73-10914
Nonlead sealing glasses.—73-10651
Properties of lead-free frits for glazes.—73-10887
Using lead-free glaze with chrome-tin color underglaze.—73-14674
Why unleaded.—73-10910

**legislation,**
Compliance's contribution to quality and productivity.—73-17468
Current trends in environmental protection legislation in the Federal Republic of Germany and in Europe.—73-03388
Lead—beginning of the end.—73-13628
Legislative challenges facing the EC container sector.—73-17493
Waste water legislation in the Federal Republic of Germany. The goal: prevention–reduction–salvage.—73-03412

**lehrs,**
Computational fluid dynamics assist lehr design.—73-10511
Heat exchange in ribbon glass annealing lehrs.—73-15877
Lehr belt switch improves plant's production efficiency.—73-12042
Lehr stackers: taken seriously at last.—73-10560

**lenses,**
Application of planar microlens arrays to liquid crystal devices.—73-14133
Forming aspherical pieces from optical glass by external coupling with force and temperature fields.—73-07131
Neutral, ultraviolet-absorbing, fixed tint lenses.—73-03955
Optical glass development, 1875-1918: Germany's contributions.—73 03402

**leucite,**
Kinetics of isothermal phase transformations in a dental porcelain.—73-16192

**levitation,**
Theory for lateral stability and magnetic stiffness in a high-$T_c$ superconductor–magnet levitation system.—73-08251

**light,**
Letting light in; keeping heat out.—73-03796
Manifestation of irregularity and inhomogeneity in spectra of scattered light.—73-14032
$MoSi_2$ infrared light source.—73-05270
$MoSi_2$ infrared light source.—73-15966
New material—quartz light-diffusing glass.—73-00671
Nonlinear propagation of incoherent light in single-mode semiconductor-doped glass fiber with saturable nonlinearity.—73-15061
Semiconductor light-emitting element.—73-11546
Temperature dependence of intensity of scattering of visible light in transition of glasses to the state of metastable liquid.—73-00553
Very low frequency light scattering in glass matrix.—73-10414
Visible light scattering intensity as a function of the temperature in transition of glasses to the state of a metastable liquid.—73-00579

**lightweight,**
Improvement of the life of lightweight refractory bricks and radiant roof burners.—73-14595
Theoretical and practical principles for obtaining lightweight refractories from self-densifying bodies.—73-14629

**lignosulfonates,**
Increasing efficiency of concrete by admixture of modified lignosulfonates.—73-00109
Simple and rapid method for determination of lignosulfonate admixture in concrete using a flow-injection analytical system.—73-10151

**lime,**
Acceleration of strength gain of lime-pozzolana cement by thermal activation.—73-06620
Alteration of polished sections of free-lime-containing cement clinker by short-term atmospheric exposure.—73-00022
Construction and operation of a hydrated lime plant for flue gas desulfurization of the Siersdorf power station.—73-09868
Determination of trace levels of free carbon in lime.—73-09885
Emergence and duties of the International Lime Association (ILA) and the European Lime Association (EuLA).—73-09944
European standards for building lime products.—73-09948
Fuel gas obtained from tree bark for operating a rotary lime kiln in a sulfate pulp plant.—73-01952
Hydraulic binders based on condensed silica fume and slaked lime.—73-13732
Improving properties of magnesia lime products.—73-06673
Influence of lime on the reaction between alkalis and aluminosilicate aggregates.—73-00116
Ir spectroscopic study on exchange reaction between $H_2O$ and $D_2O$ (heavy water) in gypsum and lime.—73-10022
Kinetic study of the hydrothermal reaction between lime and rice-husk-ash silica.—73-10023
Nonmetallic mineral industries in Europe, with particular reference to the lime industry.—73-15910
Operating experiences from a multichamber shaft kiln [for lime burning].—73-12234
Phase composition of sintered lime refractories with $TiO_2$ addition.—73-14610
Problems in production of autoclaved lime–fly ash bricks and their preventive measures.—73-10096
Rapid thermoprocessing methods used for fine-grained lime production.—73-13772
Role of sintering additives in the production of lime refractories.—73-04020
Round up of recent European lime and dry mortar projects.—73-03533
Simplified mathematical model for the heat economy of counterflow lime kilns.—73-10153
Solidification/stabilization of a synthetic electroplating waste in lime–fly ash binder.—73-10156
Supply and demand trend of gypsum, lime, and cement in Japan in 1992.—73-10174

**limestone,**
Assessment of the suitability of limestone for producing portland limestone cement.—73-00027
Effect of fluorine-bearing limestone on clinker quality.—73-09904
Effects of limestone powder of hydration of super-low-heat cement.—73-09936
Flue gas cleaning with limestone.—73-01783
Limestone additions to portland cement: uptake, chemistry, and effects.—73-13747
Particle size distribution of jointly ground [portland cement] clinker and limestone.—73-10076
Potentials of using dolomitic limestone in making sulfoaluminate-silicate cements.—73-13762

**linings,**
Application of wear-resistant nonmetal lining to extruder barrel.—73-12109
Castable lining technique to bottom of teeming ladle.—73-14578
Ceramic linings for waste incinerators: I.—73-00784
Change in properties of dinas parts in service in the lining of large coke ovens.—73-00785
Compounds for semidry hot repair of the lining of the legs of a circulation vacuum degasser.—73-00790
Development of ceramic lining materials for granulated blast-furnace slag systems.—73-10717
Development of chimney lining bricks using fly ash.—73-06647
Effect of thermal cycling on the strength of dinas used in coke oven.—73-00809
Immersion nozzle for prevention of alumina clogging.—73-00822
Improving the composition and investigating the properties of modified zirconia concrete by hydration hardening for high-temperature linings.—73-00825
Jet spraying for refractory linings in USTK units.—73-00829
Lining of the oblique movement zone of a unit for dry quenching of coke after service.—73-00830
Lining recommendation for high thermally stressed lime recovery kilns.—73-04010
Nonmetallic liners in batch handling equipment.—73-08353
Production of ceramic port liners for piston engines by slip casting.—73-12181
Refractories for lining mobile mixtures.—73-00853
Refractory installation and tearout.—73-14615
Refractory lining of a furnace for pyrolysis of dichlorethane.—73-14616
Refractory lining of waste incineration plants.—73-10765
Robotic-sprayed tundish linings at Sparrows Point.—73-14622
Rotary kiln with a polygonal lining.—73-12251
Service of iron ladles with a monolithic lining.—73-00859
Sprayed ceramic fiber substrates. Reinforcing and anchoring linings with refractive textiles.—73-00867
Stressed and strained condition of the checkerwork, lining, and shell of a blast-furnace hot-blast stove with poured checkerwork.—73-00870
Tests of thermal insulation plates of the unpreheated lining of continuous casting machine tundishes.—73-00877
Thermomechanical behavior of refractory linings.—73-04024
Walking a tightrope or modern methods for kiln linings.—73-01973
Wear mechanism of monolithic linings for steel ladles.—73-00884

**liquid phase epitaxy,**
Growth of superconductive $Bi_2Sr_2CaCu_2O_x$ film by liquid phase epitaxy.—73-15494
Interface interaction and heteroepitaxy in InPAsSb system.—73-16185
Liquid phase epitaxy of layers of $A^{III}B^{V}$ compounds at two-dimensional nucleation on {111} planes.—73-01230

**liquid phase,**
Adiabatic molding of ceramics.—73-15705
Precipitate coarsening by liquid film migration in (Mg,Ca)-PSZ's.—73-17183
Redistribution of the liquid phase during sintering of silicon nitride.—73-16973

**liquids,**
- Classification and properties of various liquids.—73-16420
- Composition, structure, and activity of liquid slag from coal-fired cyclone furnaces.—73-08495
- Method for determining the barodiffusion coefficient of liquid in ceramic suspension, describing its behavior on pouring into a porous form.—73-09208
- Method for determining the effective diffusion coefficient of liquid in the system mold–body–suspension.—73-08412
- Nonexponential structural relaxation, anomalous light scattering, and nanoscale inhomogeneities in glass-forming liquids.—73-06946
- Predictive modeling of liquids spreading on solid surfaces.—73-10470
- Role of clinker liquid in promoting the clinkerization and its impact on clinker morphology and microstructure.—73-10141
- $SiO_2$–$Al_2O_3$ liquids: in situ study by high-temperature $^{27}Al$ NMR spectroscopy and molecular dynamics simulation.—73-02433
- Standardless X-ray fluorescence (XRF) analysis of liquids.—73-08446
- Structure and dynamics in calcium aluminate liquids: high-temperature $^{27}Al$ NMR and Raman spectroscopy.—73-12702

**lithia,**
- Ac conductivity in $B_2O_3$-$Li_2O$ films.—73-00930
- Application of lithia–mica in lead-free low-temperature glaze.—73-10794
- Classical nucleation theory with a size-dependent interfacial tension: $Li_2O$-$2SiO_2$ crystal nucleation.—73-00308
- Crystallization studies of $30Li_2O$-$70TeO_2$ glass.—73-06901
- DSC study of the effect of water on the nucleation of $Li_2O$-$2SiO_2$ glass.—73-13963
- Effect of γ-ray radiation on $Li_2O$ ceramics.—73-02575
- Effect of lithium oxide upon high-$T_c$ bismuth system superconductor (2223 phase).—73-08033
- Effect of nonexchange processes on electrode characteristics of lithium borosilicate glasses.—73-14163
- ESR of vanadyl ions in $Li_2O$-$BaO$-$B_2O_3$ glasses.—73-06914
- Estimates of Anderson's electron-phonon coupling constants of small polarons localized at oxygen ions in $Ni_{1-x}Li_xO$ using a polarizable point-ion shell model.—73-08865
- Lithia finds new applications in the glass industry.—73-12283
- Lithium as intensifier in the formation of dicalcium silicate phase.—73-10028
- Sintering characteristics in LAS ($Li_2O$-$Al_2O_3$-$SiO_2$) system.—73-06055
- Structural and physical characterization of the $Li_2O$:$P_2O_5$:$CrO_{1.5}$ ion-conducting glasses.—73-07360
- Structure of rapidly quenched glasses in the system $Li_2O$-$SiO_2$.—73-06975
- Thermal resistance strength with the formation of the zircon phase in LAS system.—73-12893
- Thermal stability and defect structure of the solid solution $Li_xNi_{1-x}O$.—73-06178

**lithium fluoride,**
- Electron localization on the surface of particles of mechanically fractured lithium fluoride crystals.—73-05390
- Interaction between dislocations and phonons in LiF crystals.—73-16177
- Large local deformations under high-temperature loading of LiF crystals.—73-16528
- Piezospectroscopic study of anti-Stokes color centers in LiF.—73-02670
- Shape changes by {100} lithium fluoride ridge-channel arrays and of lithium fluoride particles at sintering temperatures.—73-17198
- Spectroscopy and laser performance of Nd-doped gadolinium lithium fluoride.—73-08969

**lithium niobate,**
- $^1H$ atomic motion in proton-exchanged $LiNbO_3$.—73-11582
- All-fiber frequency shifter using $LiNbO_3$ sound area wave (SAW) device.—73-01391
- Backward conical photorefractive scattering on $LiNbO_3$.—73-11555
- Calculation of hybrid modes in uniaxial planar optical waveguides: application to proton-exchanged $LiNbO_3$ waveguides.—73-11557
- Characteristics of holographic memory and phase conjugate of Ce:Fe:$LiNbO_3$ crystal.—73-02557
- Cherenkov second harmonic generation in multilayer waveguide structures.—73-01395
- Cherenkov-type SHG from an $LiNbO_3$ waveguide with a periodic domain grating.—73-04541
- Composition dependence of lithium diffusivity in lithium niobate at high temperature.—73-13342
- Computation of the efficiency of semiconductor laser second harmonic generation in $LiNbO_3$.—73-01108
- Control of homogeneity of $LiNbO_3$ crystals by measuring the external angle of scalar synchronism of the SHG.—73-07872
- Coupling of orthogonally polarized waves in $LiNbO_3$ optical waveguides.—73-07874
- $Cr^{3+}$ centers in $LiNbO_3$: experimental and theoretical investigation of spin Hamiltonian parameters.—73-16071
- Crystallization of $LiNbO_3$ films from metal alkoxides.—73-07876
- Crystallization of $LiNbO_3$ in tellurite glasses.—73-07114
- Defect structure of congruently melting lithium niobate.—73-09394
- Deposition and analysis of lithium niobate and other lithium niobium oxides by rf magnetron sputtering.—73-11559
- Determination of the lattice site of Fe in photorefractive $LiNbO_3$.—73-05381
- Dielectric response of $Li_{0.4}K_{0.6}NbO_3$ crystal in the frequency domain.—73-15256
- Diffusion of aluminum, scandium, and gallium ions into lithium niobate single crystals.—73-06152
- Diffusion profiles of neodymium in lithium niobate [determined] by means of spatially resolved fluorescence measurements.—73-13347
- Direct measurement of ordinary refractive index of proton-exchanged $LiNbO_3$ waveguides.—73-01402
- Effect of doping on energy of OH groups in lithium niobate single crystals.—73-02242
- Effect of doping on the Raman modes in MgO-doped lithium niobate crystals.—73-02243
- Elastic properties of sodium lithium niobate piezoelectric ceramics at low temperatures.—73-04547
- Electrical and optical properties of $LiNbO_3$.—73-15259
- Elimination of phase noise of pulsed laser diodes in electrooptic sampling systems.—73-15260
- Evidence of refractive index change by Ti indiffusion into $LiNbO_3$ substrate as a result of multipulse free-running ruby laser irradiation.—73-08866
- Fluorescence and laser operation in single-mode Ti-diffused Nd:MgO:$LiNbO_3$ waveguide structures.—73-01167
- Fully packaged high-speed TiLi$NbO_3$ waveguide Mach-Zehnder intensity modulator.—73-15266
- Growth of $LiNbO_3$ crystals by Czochralski technique.—73-04554
- Growth of MgO-doped $LiNbO_3$ single crystal fibers by a novel drawing down method.—73-02848
- Guided mode field distributions of Ti:$LiNbO_3$ optical waveguides.—73-07893
- High-index proton-exchanged MgO:$LiNbO_3$ optical waveguides using adipic acid.—73-01417
- High-temperature photorefractive effects in $LiNbO_3$:Fe.—73-01418
- Influence of shallow traps on the properties of $LiNbO_3$ waveguides.—73-07894
- Laser-induced damage in LN [$LiNbO_3$] crystals.—73-11586
- Lateral field FBAR.—73-01442
- $LiNbO_3$ waveguide devices.—73-04559
- $LiNbO_3$ waveguide devices.—73-11587
- Lithium niobate waveguide.—73-11632
- Luminescence of stoichiometric lithium niobate crystals.—73-07897
- Measurement of low-frequency electric field using Ti:$LiNbO_3$ optical modulator.—73-15271
- Measurements of principal refractive indices and their thermal coefficients of $LiNbO_3$ crystals heavily doped with magnesium.—73-11588
- MgO-induced effects on the optical properties of Er-doped $LiNbO_3$.—73-16542
- Modification of proton-exchanged $LiNbO_3$ layers for guiding modes with ordinary polarization.—73-15272
- Nonphotorefractive impurities in lithium niobate: magnesium and zinc.—73-02649
- Optical and structural properties of annealed PE:$LiNbO_3$ waveguides formed wth pyrophosphoric and benzoic acid.—73-01420
- Optical breakdown of lithium niobate crystals doped with ions of transition elements.—73-04562
- Optical damage resistance and crystal quality of $LiNbO_3$ single crystals with various [Li]/[Nb] ratios.—73-11592
- Output property of a doped lithium niobate He-Ne phase conjugate laser in steady state.—73-11594
- Phonon focusing and incomplete electric breakdown orientation in lithium niobate.—73-15276
- Photoproduction of needlelike domains in lithium niobate crystals.—73-17181
- Photorefractive phase conjugation of an image field: fidelity analysis.—73-02667
- Portuguese-Spanish collaboration on $LiNbO_3$.—73-07909
- Potassium-lithium-niobate crystals and the manufacture thereof.—73-15951
- Powerful continuously tunable parametric generator of ir radiation on $LiNbO_3$ crystals with high optical homogeneity.—73-02674
- Radiation damage behavior of $LiNbO_3$ crystal by MeV F ion implantation.—73-07915
- Radiative energy transfer from $Cr^{3+}$ to $Nd^{3+}$ in $LiNbO_3$:Nd,Cr.—73-11610
- Raman investigation of the nonlinear optical phenomenon of polarization rotation in Ti:$LiNbO_3$ channel waveguides.—73-07916
- Refractive and hydrotropic properties of $LiNbO_3$ crystal upon twisting.—73-02680
- Refractive indices of lithium niobate as a function of wavelength and composition.—73-02681
- Sensitivity of surface acoustic wave velocity in lithium niobate to electric field or biasing stress.—73-07919
- Sensitization of $Nd^{3+}$ luminescence by $Cr^{3+}$ in NdMgO:$LiNbO_3$ crystals.—73-05637
- Solid electrolytes on the basis of the $Li_4SiO_4$-$Li_3NbO_4$ system.—73-14731
- Special traits of the defect structure of $LiNbO_3$ single crystals and their effect on the optical properties of titanium-diffusion waveguides.—73-11617
- Spectral dependence of the photorefractive effect in lithium niobate at 77 K.—73-01432
- Spectroscopy and energy levels of $Cr^{3+}$ in magnesium-doped lithium niobate.—73-04572
- Superposition model analysis of zero-field splitting of $Mn^{2+}$ in $LiNbO_3$.—73-02472
- Tapered, both in dimension and in index, velocity coupler: theory and experiment.—73-15291
- $TE_0$ mode polarizer of Ti:$LiNbO_3$ optical waveguides in 1.5-μm wavelength.—73-01436
- Temperature dependence of dc drift of Ti:$LiNbO_3$ optical modulators with sputter-deposited $SiO_2$ buffer layers.—73-01437
- Temperature effect of two-beam coupling efficiency in Ce:Fe:$LiNbO_3$ crystals.—73-15293
- Test structures for characterization of electrooptic waveguide modulators in $LiNbO_3$.—73-15294
- Theoretical analysis of Cherenkov second harmonic generation [CSHG] in proton-exchanged *c*-cut MgO:$LiNbO_3$ optical waveguides.—73-07922
- Thermal fixing technique of Ti-diffused $LiNbO_3$ waveguide characteristics.—73-01438
- Threshold of self-enhancement in lithium niobate.—73-01439
- Ultraviolet absorption edge of $LiNbO_3$ crystal from solid-liquid congruent point composition.—73-11628
- Wavelength multiplexed holographic storage in a sensitive photorefractive crystal using a visible-light tunable diode laser.—73-11629

**lithium oxide,**
- $^{22}Na^+$ sorption from lithium-aluminosilicate solutions with electrode glass.—73-14046
- Crystallization behavior of $Li_2O$-$2SiO_2$ melt and a melt model.—73-13951
- Heating conditions to synthesize rod-shaped ß-$LiAlO_2$ crystals.—73-16812
- Raman spectroscopy of oxide glass system $(1-x)(yB_2O_3$-$zLi_2O)$-$xMO$ ($MO$=$CuO$, $V_2O_5$).—73-10397
- Solid electrolytes on the basis of the $Li_2O$-$La_2O_3$ system.—73-14730
- Synthesis and characterization of $LiMeO_2$ (Me=Ni, Ni/Co, and Co) for 4-volt secondary nonaqueous lithium cells.—73-10993
- Thermal, mechanical properties of LAS with the addition of mullite.—73-13604

**lithium,**
- Acoustic emission [and sound velocity and absorption] in ionic conductor $Li_2B_4O_7$.—73-14676
- Acoustic mechanism of sound absorption in $Li_2B_4O_7$.—73-01390
- Adsorbent with $Li^+$ ion-memory effect.—73-16404
- Alkoxide–hydroxide route for the preparation of γ-$LiAlO_2$-based ceramics.—73-05688
- Blue-violet tunable $LiB_3O_5$ single-pulse ps laser.—73-11556
- Cation distribution investigation of the system $Li_{0.5}Fe_xGa_{2.5-x}O_4$ by X-rays, electrical conductivity, and Mossbauer studies.—73-16045
- Characteristics of periodically domain-inverted $LiTaO_3$.—73-12750
- Characteristics of the thermal evolution of the ferroelectric soft mode in $Li_2Ge_7O_{15}$ crystals.—73-01393
- Comparison of $Li^+$ transport in $Na_{1+x}V_3O_8$ and $Li_{1+x}V_3O_8$ by $^7Li$ NMR investigation.—73-17074
- Comparison of particulate and platelet reinforcement of a lithium disilicate glass-ceramic.—73-07003
- Component region for the synthesis of rod-shaped ß-$LiAlO_2$ crystals.—73-02168
- Composition dependence of discontinuous magnetization in Li-Ti ferrites.—73-15309
- Compound $Li_3Ln_2(BO_3)_3$ in the systems $Li_2O$-$Ln_2O_3$-$B_2O_3$.—73-16063
- Conductivity enhancement mechanism of interstitial-type $Li^+$ conductor, $Li_{4+x}B_xSi_{1-x}O_4$ ($0 \le x \le 0.7$).—73-04068
- Correlation between optical and electrical properties in reduced lithium niobate crystals.—73-01396
- Critical broadening of EPR lines in $Li_2Ge_7O_{15}$:$Mn^{2+}$ crystals near ferroelectric phase transition.—73-16073
- Crystal growth, structure, and magnetic properties of $H_{0.23}Li_{1.68}Mo_{1.05}O_3$.—73-02178
- Crystal structure of α-$Li_{2.5}Al_{0.5}SiO_4$.—73-02185
- Crystal structure of $LiYF_4$.—73-12562
- Crystal structure of new pyroelectric $RbLiCrO_4$ at room temperature.—73-02207
- Crystallizing phases and kinetics of crystal growth in lithium germanate glasses.—73-13955
- Decomposition of ferroelectric $LiH_3(SeO_3)_2$.—73-07877
- Defect-induced smoothing of the superionic phase transition in $Cs_{1-x}M_xHSO_4$ protonic conductors: II, Lithium substitution.—73-03087
- Deformation electron density map in $LiB_3O_5$.—73-02228
- Devitrification of $Li_2O$-$5GeO_2$ glass.—73-00323
- Dielectric behavior of mixed lithium-zinc ferrites.—73-02567
- Dielectric relaxations and electrical transport due to nonadiabatic small polarons in *p*-type NiO doped with Li.—73-12767
- Difference-frequency generation of near-infrared picosecond pulses by noncritical temperature twinning of $LiB_3O_5$.—73-12768
- Domain structure of weak ferroelectric $Li_2Ge_7O_{15}$.—73-01403
- Edge luminescence of electron-bombarded ZnSe:Li.—73-14847
- Effect of $Ar_2$ annealing on properties of $Bi_2Sr_2CaCu_{1.7}Li_{0.8}O_x$.—73-11730
- Effect of Li addition to the low-$T_c$ phase in the Bi-Sr-Ca-Cu-O system: II.—73-01531
- Effect of Li doping on the superconducting properties of $EuBa_2Cu_3O_7$ by ac susceptibility measurement and Li NMR.—73-04703
- Effect of lithium salts on the ionic conductivity of lithium silicate gels.—73-10431
- Effect of $Nb_2O_5$ addition on the phase change in $Li_2Ti_3O_7$.—73-16119
- Effect of porosity on magnetic and electrical properties of lithium ferrite.—73-15319
- Effect of precursors on the ionic conductivity in lithium silicate gels.—73-05548
- Effect of temperature on the radiation-induced optical absorption of lithium lanthanum phosphate glass.—73-00465
- Electric conduction of single-crystal and glass of $Li_2B_4O_7$.—73-11569
- Electrical and optical properties of thermally evaporated $LiBO_2$ films.—73-12784
- Electrical and surface properties of thin film of Li glass solid electrolyte.—73-10942
- Electrical behavior of the interface in lithium phosphate glasses.—73-14701
- Electrical characterization of phase changes in lithium titanate.—73-16474

Electrical conductivity of polyphosphates—$Li_3Ba_2(PO_3)_7$, $LiPb_2(PO_3)_5$, $LiCs(PO_3)_2$, and $\alpha$-$LiK(PO_3)_2$.—73-02599
Electrical properties of $\beta$-$Li_xV_2O_5$ thin layers prepared by the sol-gel process.—73-08855
Electrical property and sinterability of $LiTi_2(PO_4)_3$ mixed with lithium salt ($Li_3PO_4$ or $Li_3BO_3$).—73-04089
Electrochemical and in situ X-ray diffraction studies of lithium intercalation in $Li_xCoO_2$.—73-02251
Electron paramagnetic resonance of X-irradiated lithium thioborate glasses.—73-03726
Electronic structures of $BaB_2O_4$ and $LiB_3O_5$.—73-02609
EPR and AFMR of $Li_2CuO_2$ in submillimeter wave region.—73-02266
EPR of $Mn^{2+}$ ions in lithium heptagermanate crystals.—73-02267
Evaluation of ceramic insulators for lithium electrochemical reduction cells.—73-00965
Fast lithium-conducting glass-ceramics in the $Li_2O$-$CaO$-$TiO_2$-$Al_2O_3$-$P_2O_5$ system.—73-00970
Ferroelectric phase transition in $Li_{2-x}Na_xGe_4O_9$ ($x$=0.5).—73-01413
Ferroelectric-phase-transition-induced pseudo-Stark splitting in spectra of $Li_2Ge_7O_{15}$:$Cr^{3+}$ crystals.—73-15264
Formation mechanism, nucleation, and crystallization of $Li_2TiO_3$ from fused salts.—73-12584
Generation of tunable coherent vacuum uv radiation in $LiB_3O_5$ crystals.—73-01415
Glass dimensional control using ion exchange.—73-00733
Growth of $Li_2B_4O_7$ single crystal.—73-05831
Growth of lithium triborate (LBO) single-crystal fiber by the laser-heated pedestal growth method.—73-02847
Heating conditions to synthesize rod-shaped $\beta$-$LiAlO_2$ crystals.—73-05838
High ionic conductivity in $Li_{0.35}La_{0.51}TiO_{2.94}$.—73-07327
High-lithium-conducting glass formation by a new flash explosion method.—73-16815
Hydrothermal synthesis and morphology of lithium tetraborate crystals.—73-09463
Hyperfine interactions and magnetic studies of $Li_{0.5-0.5z}Mg_zFe_{2.5-0.5z}O_4$.—73-01466
Hyperfine interactions in ordered lithium ferrite: NMR investigations with diamagnetic substitution and hydrostatic compression.—73-08639
Impedance of the Li electrode in $Li/Li_xMnO_2$ accumulators at open-circuit voltage.—73-06803
Influence of low-temperature annealing on the defect structure of CdS:Li crystals.—73-01206
Influence of nitrogen on the mobility of lithium in oxynitride glasses of the Li-Si-Al-O-N system.—73-00503
Interaction of components in Li-Mg, Al-Si systems.—73-16178
Intercalation of lithium in InSb.—73-06163
Internal friction in lithium aluminosilicate glass-ceramics.—73-07040
Ionic conduction of $Li_2Ti_3O_7$ and $Li_4Ti_5O_{12}$.—73-14712
Ionic conductivities of spinel-type quaternary lithium chlorides: phase diagrams of $LiCl$-$M^{II}Cl$-$M^{III}Cl_3$ ($M^I$=Cu, Na; $M^{II}$=Mn, Cd, Mg).—73-05426
Ionic conductivity and phase transitions in the $Li_2SO_4$-$Li_2WO_4$ system and their relation to ion transport mechanism.—73-03098
Li deintercalation in lithium transition metal nitride, $Li_3FeN_2$.—73-10966
$Li_{3-x}Ti_2(PO_4)_3$ ($0\leq x\leq 1$): a new mixed valent titanium(III/IV) phosphate with a Nasicon-type structure.—73-02318
Li-doped $LaCrO_3$ ceramics.—73-03100
Li-doping effect on Bi-Sr-Ca-Cu-O superconductor prepared by arc-melting method.—73-15534
Lithium chemicals.—73-12284
Lithium extraction from orthorhombic lithium manganese oxide and the phase transformation to spinel.—73-16197
Lithium glaze with low thermal expansion.—73-07263
Lithium insertion into pyrochlore $WO_3$.—73-02319
Lithium insertion into the layered perovskites $LiCa_2Nb_3O_{10}$ and $LiLaNb_2O_7$.—73-05430
Lithium minerals review.—73-12285
Lithium minerals.—73-12286
Lithium-aluminate-doped lithium orthosilicate: sol-gel ceramics and lithium dynamics.—73-02887
Luminescence in the pentaborate $LiBa_3B_5O_{10}$.—73-02630
Mechanistic studies on the electrochemically lithiated spinel $LiCuVO_4$.—73-02326
Microstructures and electrical properties for $LiXSiO_4$ (X=Al, Y, La, Nd, Sm, Gd, Dy, Ho, Er, Yb).—73-03176
Nature of active sites in the oxidative coupling of methane to ethane over Li/MgO catalysts.—73-08675
Neutron diffraction refinement of atomic structure of $\alpha$- and $\gamma$-phases of $Li_3Sc_2(PO_4)_3$ crystals at 293 and 573 K.—73-02344
New lithium disilicate glass-ceramics.—73-14438
New SiC-whisker-reinforced lithium aluminosilicate composite.—73-02905
Optical properties of lithium tungsten bronze thin films.—73-08933
Optical spectra and structural states of Ni(II) in glass-ceramic-forming glasses of the lithium aluminosilicate system.—73-00381
Oxysulfide glasses: a new kind of lithium ion conductors.—73-01005
Paramagnetic centers in lithium thioborate glasses.—73-03748
Phase behavior and conductivity of $Li_2SiS_3$.—73-02371
Phase changes in $Li_2Ti_3O_7$.—73-02372
Phase changes in $Li_2Ti_3O_7$.—73-12649
Phase matching retracing behavior for second harmonic generation in $LiB_3O_5$ crystal.—73-02662
Phase transitions and ionic conductivity of the lithium sulfate–lithium phosphate system.—73-02391
Physicochemical investigation of phase development in the system $LiFeO_2$-$Li_4TiO_4$.—73-12659
Point defects in lithium triborate ($LiB_3O_5$) crystals.—73-03107
Preparation of layered $LiNiO_2$ by alcoholate method and its behavior as a cathode in lithium secondary battery.—73-14724
Preparation of spherical $LiCoO_2$ powders by the ultrasonic spray decomposition and its application to cathode active material in lithium secondary battery.—73-16937
Preparation of spherical $LiCoO_2$ powders by the ultrasonic spray decomposition and its application to cathode active material in lithium secondary battery.—73-16938
Preparation of the LAS ceramics for heat resistance using metal alkoxide: I.—73-16940
Process for the preparation of LAS ceramic sintered bodies.—73-15955
Properties of proton-exchanged waveguides in lithium tantalate.—73-11606
Pump-power-induced cavity stability in lithium neodymium tetraphosphate (LNP) microchip lasers.—73-08961
Pure and lithium-doped $Bi_2Sr_2CaCu_2O_x$ silver-clad tapes.—73-11883
Quadrupole effects and magnetic anisotropy in the NMR spectra of Jahn-Teller $Mn^{3+}$ ions in lithium ferrite.—73-04644
Quasi-phase-matched second harmonic generation in an $LiTaO_3$ waveguide.—73-07914
Radio-frequency magnetron sputtering of pure and mixed targets of $Li_4SiO_4$, $Li_3PO_4$, and $Li_2O$.—73-06005
Raising transmission in optically transparent lithium aluminum.—73-00695
Raman scattering study of lithium borate glasses.—73-03755
Raman spectra of rapidly quenched lithium pyrophosphate glass at various temperatures.—73-06960
Raman spectroscopy study of the kinetics of transformations of titanium-containing phases in glass-ceramic-forming lithium aluminosilicate glasses activated by nickel oxide.—73-00392
Refinement of crystal structure of $LiSbO_3$.—73-16290
Refinement of structure of $(Na_xLi_x)V_2O_6$ at 293, 600, and 800 K.—73-16292
*S*≠1 impurity effect on phase transition in $LiVO_2$.—73-16298
Safe, economic lithium metal-free rechargeable batteries.—73-14729
Secondary Li cells: I, A comparison of the behavior of cathodes based on pure and lithiated manganese oxides.—73-04163
Secondary Li cells: II, Characteristics of lithiated manganese oxides synthesized from $LiNO_3$ and $MnO_2$.—73-04164
Shape of complex impedance arcs for alkali ion conducting glasses.—73-04165
Single-particle jumps and correlated ionic motions in glass-ceramics.—73-00544
Sol-gel processing and crystallization of lithium tetragermanate.—73-03020
Stabilization of Li acceptors in ZnSe by above-band-gap photoirradiation.—73-07809
Strophoidal Argand diagram and distribution of relaxation times in $K_{1-x}Li_xTaO_3$.—73-16601
Structural and dielectric properties of PLLZT ceramics.—73-16603
Structural and microstructural study of the formation of the solid solution $Li_xNi_{1-x}O$.—73-06286
Structural consequences of the chemical reaction of $YBa_2Cu_3O_{7-y}$ with *n*-butyl lithium.—73-01666
Structural transformations in a lithium aluminosilicate glass on thermal gradation crystallization.—73-00413
Structure and conductivity of zirconium-doped polycrystalline lithium yttrium oxide.—73-16329
Structure and electrochemistry of $Li_xWO_2$ [0<x<1].—73-02459
Structure and thermal expansion of $LiGe_2(PO_4)_3$.—73-02694
Structure of 1T-$Li_2NiO_2$ from powder neutron diffraction.—73-02462
Structure of lithium borate glasses according to data of X-ray scattering at small angles.—73-14111
Structure of the insertion compound $Li_{0.88}U_3O_8$ by powder neutron diffraction.—73-02465
Structure of the mixed-valence lithium cuprate $Li_3Cu_2O_4$ by powder neutron diffraction.—73-05504
Superionic conductors with mixed $[M_2P_3O_{12}]_\infty$ framework: crystal structure and physical properties: I, Lithium-conducting phosphates.—73-14737
Synthesis and characterization of $LiMeO_2$ (M=Ni, Ni/Co, and Co) for 4-V secondary nonaqueous lithium cells.—73-01030
Synthesis and conductivity of new lithium-containing Nasicon-type phases: $Li_x[M_x^{II}M_{2-x}^{III}](SO_4)_{3-x}(SeO_4)_x$ and $Li_x[Li_{x/2}M_{2-x/2}^{III}]-(SO_4)_{3-x}(SeO_4)_x$.—73-05647
Synthesis and structure of the double phosphate of lithium and titanium, $LiTiOPO_4$.—73-02494
Synthesis and X-ray diffraction study of lithium rare-earth nitrates $Li_3[Ln_2(NO_3)_9]\cdot 3H_2O$, *where Ln*=La, Nd.—73-02497
Synthesis of $LiMn_2O_4$ spinel via tartrates.—73-09359
Temperature-tuned phase-matching properties of $LiB_3O_5$ for Ti:sapphire laser frequency doubling.—73-16614
Thermal and elastic properties of $(Li_{1-x}Na_x)_2Ge_7O_{15}$ crystals [$x$=0, 0.08, 0.25].—73-16617
Thermal and electrical properties of new glasses in the binary system $Li_2S$-$As_2S_3$.—73-08983
Thermal expansion characteristics of Li-replaced type pollucite $(Cs_{1-x}Li_xAlSi_2O_6)$ powder.—73-02708
Thermal stability of radiation defects in lithium tetraborate from EPR and optical spectroscopy data.—73-16634
Thermochemistry of $LiCuO$, $Li_2CuO_2$, and $LiCu_2O_2$.—73-05514
Thermodynamic and structural considerations of insertion reactions in lithium vanadium bronze structures.—73-02524
THz phonon-polariton beats in $LiTaO_3$.—73-09000
Trapped-hole centers in irradiated $Li_3VO_4$.—73-03117
Type-I and type-II noncritical phase matching of $LiB_3O_5$ crystal.—73-08785
Use of acetates as precursors for the low-temperature synthesis of $LiMn_2O_4$ and $LiCoO_2$ intercalation compounds.—73-03069
X-ray diffractometry study of orthorhombic modification of $Li_3Cr_2(PO_4)_3$ at 293, 473, and 573 K.—73-02544

**lithography,**
Detection of residual photoresist with the atomic force microscope.—73-08388
Direct-current and radio-frequency characterization of submicron-striped channel field effect transistor structures using focused ion beam and electron-beam lithography.—73-14838
Engineering sub-50-nm quantum effect devices and single-electron transistors using electron-beam lithography.—73-14890
Fabrication of nonconventional distributed feedback lasers with variable grating periods and phase shifts by electron-beam lithography.—73-14910
Fabrication of ultrahigh quality vertical facets in GaAs using pattern corrected electron beam lithography.—73-04342
Ion projection lithography for vacuum microelectronics.—73-11285
Lithographic processes in microelectronics.—73-07638
Stepper focus characterization using diffraction from latent images.—73-12199
T-gate, Γ-gate, and air-bridge fabrication for monolithic microwave-integrated circuits by mixed ion-beam, high-voltage electron-beam, and optical lithography.—73-15197

**load,**
AE properties of repeated bending load in mortar and concrete.—73-09808
Choice of coefficients of service conditions of heavy concrete $\gamma_{B2}$ considering all loadings.—73-00038
Determination of defect distributions for use in failure theories of load-bearing ceramics.—73-17276
Forecasting working life for glass components under persistent fluctuating loads.—73-00483
Indentation flaw formation and strength response of silicon nitride ceramics at low indentation loads.—73-03313
Influence of regime of application of compressive load on long-term resistance of concrete.—73-00122
Lifetime prediction for ceramic materials under constant and cyclic load.—73-17371
Multiple crack propagation under thermal load.—73-06493
Partially stabilized $ZrO_2$ ceramic and its behavior under load.—73-00834
Prediction of durability of glass articles under the action of variable loading.—73-00531
Strength analysis of ceramics under mechanical and thermal loading.—73-06528
Sustained load behavior of off-axis SCS-6/TIMETAL 21S composites.—73-10282
Testing machine exerts longitudinal and transverse loads.—73-15853
Thermal shock and cyclic loading of ceramic parts in stationary gas turbines.—73-05662

**low temperature,**
EPR and magnetostatic studies of low-temperature annealing of ceramic.—73-07252
Opaque raw glazes for once low-temperature firing.—73-10875

**lubricants/lubrication,**
Advantages that synthetic fabrication lubricants provide the metal finisher.—73-13795
Corrosion protection and lubrication during forming of sheet steel.—73-10211
Friction and wear properties of partially stabilized zirconia with solid lubricant.—73-09605
Improvement in tribological properties of chromium oxide coating at high temperature by solid lubricants.—73-09616
Inelastic electron tunneling spectra of lubricant oil additives on native aluminum oxide surfaces.—73-09467
Lubrication of ceramics.—73-17153
Open gear lubrication—new technology for the '90's.—73-03509
Solid lubricant for alumina.—73-13900

**luminescence,**
Anisotropic luminescence centers of $T^{3+}$ ion luminescence in fluoroapatite crystals.—73-08808
Application of luminescence techniques to probe surface-adsorbate interactions on oxide single crystals.—73-05022
Blue upconversion luminescence of $Er^{3+}$ ions in vitroceramics doped with $Yb^{3+}$ under ir excitation.—73-05534
Blue-green upconversion luminescence of nanocrystalline $HoP_5O_{14}$.—73-12747
Characteristics and origin of the 1.681-eV luminescence center in chemical vapor deposited diamond films.—73-02556
Composition dependence of the radiation stability of the luminescence emitted by solid solutions of III-V compounds.—73-11117
Effect of hot electrons on the magnetic field enhancement of exciton luminescence in GaAs.—73-14849
Effect of nonstoichiometry on the luminescence properties of $\alpha$-$Al_2O_3$.—73-02585
Effect of phase transition on intrinsic luminescence parameters of $RbCaF_3$.—73-16122
Er luminescence in Si—a critical balance between optical activity and pumping efficiency.—73-04325
Factors responsible for the difference in the dose dependence of the intensities of different luminescence bands of III-V semiconductor compounds bombarded with fast particles.—73-14916
Kinetics of nonequilibrium carriers and luminescence in $SrTiO_3$ under three-photon laser radiation absorption.—73-16527

Luminescence and Raman light scattering in some I-III-$VI_2$ crystals and their solid solutions.—73-16204
Luminescence from $Al_{0.28}Ga_{0.72}As_{0.62}P_{0.38}$ layers grown on $GaAs_{0.61}P_{0.39}$ substrates by liquid-phase epitaxy.—73-11303
Luminescence of $Ag^+$ in crystalline and glassy $SnB_4O_7$.—73-12827
Luminescence of $Bi^{3+}$ and the energy transfer from $Bi^{3+}$ to $R^{3+}$ (R=Eu, Dy, Sm, Tb) in alkaline-earth borates.—73-05590
Luminescence of nanometer-sized amorphous silicon nitride solids.—73-02632
Luminescence of phosphate glass coactivated by $UO_2^{2+}$ and $Ln^{3+}$ ions.—73-00511
Luminescence of $SrZrSiO_2O_7$.—73-12829
Luminescence of stoichiometric lithium niobate crystals.—73-07897
Luminescence of $Tl^+$ ions in an NaF:Tl crystal under pulsed excitation.—73-08907
Luminescence of yttrium- and gadolinium-doped lanthanum cerium terbium phosphate.—73-08908
Luminescence spectra of porous silicate glass excited by laser radiation in the transparency range of $SiO_2$.—73-01234
Luminescence study of long-term kinetics of carriers in epitaxial GaAs.—73-15028
Luminescent determination of Tm in lanthanide oxides.—73-02634
Onsager effect in luminescence of $Al_2O_3$ crystals: II, Radiative annihilation of autolocalized excitons.—73-16551
Polariton luminescence near the surface of GaAs.—73-11397
Resonant magnetoluminescence of high-quality GaAs.—73-07772
Spectral luminescence and relaxation parameters of the $V^{3+}$ ion in glasses.—73-00546
Static and dynamic luminescence effects of $Cr^{3+}$-$Tm^{3+}$ pairs in YAG.—73-05641
Structure of luminescence centers in ZnSe crystals.—73-11462
Ultraviolet luminescence emitted by a single crystal of SiC-6H.—73-01361
Use of luminescence of $Mn^{2+}$ and $Cr^{3+}$ in probing the disordering process in $MgAl_2O_4$ spinels.—73-05683
Uv blue and green upconversion luminescence of $PbF_2$+$GeO_2$:$Er_2O_3$ pumped with 650 nm.—73-05684
Yttrium oxide chemiluminescence from the 308-nm excimer laser ablation of $YBa_2Cu_3O_{7-x}$, $Y_2O_3$, and $YCl_3$.—73-08281

**luminescent materials,**
Luminescence of $K_3[Re(CN)_4O_2]$ crystals.—73-12828

**lutetium,**
Magnetization and spin correlation of two-dimensional triangular antiferromagnet $LuFe_2O_4$.—73-07961
Model of atomic structure of $Na_7Lu_{11}F_{46}$.—73-16218
New modifications of tetrafluorolutetiate of sodium, $NaLuF_4$.—73-12640
Spectral and magnetic studies of nickelates $Lu_2BaNiO_5$ and $Yb_2BaNiO_5$.—73-08968
Thermal constants of fusion of lutetium iodide.—73-16370

**machinery,**
Choice of optimum methodology and procedure for the correct alignment of rotary kilns and parameters influencing such a choice.—73-00040
Comparative tests with classifiers: I.—73-12018
Conveying desulfogypsum with hose belt conveyors and shuttle-floor trough conveyors.—73-01770
Development and prospects of China's ceramic machinery.—73-12130
Drive systems for large twin roll presses.—73-12023
Experiences with the KCS Kiln Control System at a large rotary kiln plant in South Korea.—73-15874
Gear units for the cement industry—experience, developments, and trends.—73-12030
Heavy-duty bucket elevators with round steel chain as the traction element.—73-12033
Innovative strategies for the ceramic machinery industry.—73-17489
Instrumentation for the dynamic analysis of tube mills.—73-12038
Machine vision can keep quality high and production lines moving.—73-12159
Mechanics of conveying bulk materials with bucket elevators.—73-12045
New loading and transporting equipment at Heidelberger Zement AG's Nussloch quarry.—73-15737
Pneumatic conveying—a review: I.—73-15743
Problems of dedusting and cleaning of operation zones of working machines and conveying devices.—73-12057
Siam City Cement Co.'s fifth production unit with a clinker capacity of 10 000 Mt per day goes on stream.—73-13777
Spotlight on Acimac.—73-17503
Structure of the Italian ceramic machinery industry.—73-17504
Throughput measurements in the nonmetallic minerals industry.—73-12067
Wear control in a variable-pitch lead screw with cylindrical meshing elements.—73-13906
World's largest [cement] packing and loading plant at the Tabkwang plant of Siam City Cement Co.—layout and mechanical configuration.—73-13793

**machining,**
Application of advanced ceramics for industrial machines and its problem.—73-02002
Brush with success.—73-03414
Ceramic cutting tool with chip control.—73-15980
Ceramic machining.—73-04904
Cutting tools with wire EDM [electrical discharge machining].—73-04907
Cw laser machining of hard ceramics: I, Effects of three-dimensional conduction, variable properties, and various laser parameters.—73-09054
Cw laser machining of hard ceramics: II, Effects of multiple reflections.—73-09055
Damage determination and strength prediction of machined ceramics by X-ray diffraction techniques.—73-06366
Effects of ceramic microstructural character on machining direction–strength anisotropy.—73-05777
Excimer lasers and their treatment of advanced ceramic materials.—73-04918
Formation of macro- and microcracks during machining of ceramics.—73-05814
Fracture model of machinable ceramics.—73-17328
Grooving on SiC ceramic surface by reaction with solid metal: III, Reaction product layer between SiC ceramics and Ni foil.—73-03594
High-quality machining of ceramics.—73-16817
Integrated [computer numerical control] CNC—plasma spray workcell for machinery components.—73-08347
Laser machining of ceramics.—73-04927
Laser machining of silicon nitride ceramics.—73-05890
Laser-assisted hot machining of ceramics and composite materials.—73-05891
Machinability of different dental materials for CAD/CAM systems.—73-06471
Machinability of rate-controlled sintered alumina.—73-02888
Machinability of rate-controlled sintered alumina.—73-13125
Machine tools and combined machining technology for functional ceramics.—73-04928
Machining ceramic materials for dental restorations.—73-05903
Machining of ceramic components: process-technological potentials.—73-05904
Machining of cordierite ceramics by $CO_2$ laser.—73-05905
Machining of cordierite ceramics by $CO_2$ laser.—73-16856
Machining of silicon nitride: experimental determination of process/property relationships.—73-05906
Mechanical properties and microstructures of machinable silicon carbide.—73-03328
Metallurgy of cBN and its wear in high-speed machining of ferrous materials.—73-05268
Method of machining silicon nitride ceramics and silicon nitride ceramic products.—73-12493
Model for Hydro and Hydro-Abrasive Jet Machining of carbon fiber-reinforced plastic composites.—73-05928
Nanocomposite machinable glass-ceramics.—73-14434
Porosity effects on machining direction—strength anisotropy and failure mechanisms.—73-17409
Pressure machining in relation to problems in machining of ceramics.—73-05989
Properties of AE signal on machining with a surface grinder in glass and new ceramics.—73-13221
Role of indentation fracture in free abrasive machining of ceramics.—73-06514
Simple technique for observing subsurface damage in machining of ceramics.—73-08443
Single-point machining technology of a supersmooth surface using a flying tool.—73-15755
Stress compensation techniques in thin layers applied to silicon micromachining.—73-06070
Surface characterization of ultrasonic machined ceramics with diamond-impregnated sonotrode.—73-06075
Surface finishing by turning of coatings made from NiCrBSi-type self-fluxing alloys.—73-09346
Ultrasonic shaping: an economical procedure to machine complex ceramic components.—73-04952
Wire electrical discharge machining of $TiB_2$ composite.—73-06135
Wire electrical discharge machining of $TiB_2$ composites.—73-13336

**magnesia,**
Accelerators for refractory magnesia.—73-00885
Adsorption of $H_2$ on highly dispersed MgO.—73-12533
Alkali-free glass.—73-00725
Aluminum titanate ceramics: II, Influence of MgO and its method of introduction on stability and mechanical properties of $Al_2TiO_5$.—73-09542
Anisctropy of the properties of magnesia-graphite refractories.—73-07196
Application of $Cr_2O_3$-bearing–magnesia raw materials to magnesia-carbon bricks.—73-00776
Behavior of boric compounds added in MgO-C bricks.—73-00779
Break point in the pressure–density curve of magnesia prepared by the seawater magnesia process.—73-09025
Ceramic welding process.—73-02031
Change of spinel in magnesia chrome bricks used in vacuum-oxygen decarburization [VOD] refining furnaces.—73-07198
Changes in surface and catalytic properties of the CuO/$Al_2O_3$ system induced by doping with MgO.—73-05535
Chemical separation of MgO from dolomite ore.—73-01979
CO adsorption at 77 K on CoO/MgO and NiO/MgO solid solutions: an FTIR study.—73-02164
Comparative study of the solid solutions in the $ZrO_2$-$HfO_2$-MgO(CaO) systems.—73-02165
Compositions of alumina–magnesia spinel synthesized from natural raw materials.—73-10708
Compressibility and sintering of aggregated MgO-CaO powder and the influences of adhesion of fine particles to the surface of aggregate.—73-16683
Corrections to the phase diagram of the MgO-$Al_2O_3$-$SiO_2$ system.—73-08581
Crack wake effects on MgO fracture resistance.—73-06355
Creep of MgO-rich spinel single crystals.—73-06359
Critical concentration of MgO for the prevention of abnormal grain growth in alumina.—73-16692
Crystallization of an $Al_2O_3$-MgO-$SiO_2$ glassy grain-boundary phase.—73-12566
Dependence of mechanical properties of MgO-C bricks on graphite content.—73-17273
Development of silica–magnesia sagger using fine particle raw materials.—73-10721
Dislocation activity, stable crack motion, and the warm-prestressing effect in magnesium oxide.—73-13504
Dislocation-controlled stable crack growth in Mo and MgO.—73-09570
Dissolution of MgO in CaO-"FeO"-$CaF_2$-$SiO_2$ slags under static conditions.—73-09525
Effect of doping on the Raman modes in MgO-doped lithium niobate crystals.—73-02243
Effect of heat treatment below the glass nucleation temperature on the crystallization of $TiO_2$-containing MgO-$Al_2O_3$-$SiO_2$ glasses.—73-03834
Effect of hot extrusion, other constituents, and temperature on the strength and fracture of polycrystalline MgO.—73-03266
Effect of increased magnesium oxide contents and mixture basicity upon clinker phases.—73-09909
Effect of MgO addition on mullite.—73-09080
Effect of MgO on microstructural evolution of alumina prepared from hydrosol-gel process of boehmite in plaster mold.—73-17124
Effect of surface treatment and annealing on the surface crystallization of the MgO-$Al_2O_3$-$SiO_2$ glass.—73-14361
Effect of ultrafine powder on properties of rebonded fused magnesia chrome refractories.—73-07207
Effect of ultrasonic irradiation on hydration of MgO powder.—73-09100
Effects of $Al_2O_3$-$TiO_2$ contents on the structure and permeability of porous magnesia ceramic—fractal characteristics of pores.—73-05776
Effects of annealing on properties of MgO-$ZrO_2$ composite ceramics.—73-02804
Effects of fine SiC particles on the creep of MgO at high temperatures.—73-06395
Effects of powder processing on the characterization of magnesia derived from alkoxide precursors: I, Preparation and characterization of powders.—73-09105
Effects of powder processing on the characterization of magnesia derived from alkoxide precursors: II, Compaction and sintering behavior.—73-09106
Electrical properties of MgO-doped ß-alumina ceramics prepared from the metal alkoxides.—73-00958
Electrical properties of MgO-doped ß-alumina ceramics prepared from the metal alkoxides.—73-12790
Electrokinetic and rheological properties of magnesia suspensions.—73-02811
Enhancement effect of micropore filling for supercritical methane by MgO dispersion.—73-08529
Epitaxial growth of MgO thin films on silicon by dual ion beam sputtering [DIBS].—73-02815
Erosion-resistant stopper rod.—73-04030
Fabrication of YBaCuO Josephson junctions on MgO substrates damaged by a focused ion beam prior to film deposition.—73-15470
Fatigue damage in ceramic materials caused by repeated indentation.—73-03292
Formation mechanism of pores in massive $Si_3N_4$-$Al_2O_3$-MgO ceramics during sintering.—73-16786
Formation prccess of sinterable MgO powder prepared from $Mg(OH)_2$ containing magnesium chloride.—73-09143
Formation process of sinterable MgO powder prepared from $Mg(OH)_2$ containing magnesium chloride.—73-17137
Formaton, transformation, and sintering of $ZrO_2$-MgO compositions prepared from alkoxides.—73-16797
Fourier transform Raman spectroscopy of superconducting $YBa_2Cu_3O_{7-\delta}$ films on strontium titanate and magnesium oxide substrates.—73-15484
Further development of magnesia spinel bricks with their own specific properties for lining the transition and sintering zones of rotary cement kilns.—73-04005
Growth and microstructural study of radio frequency magnetron sputtered MgO films on silicon.—73-03150
Growth of MgO-doped $LiNbO_3$ single crystal fibers by a novel drawing down method.—73-02848
Growth of $MgTa_2O_6$ single crystals by floating zone method and their optical properties.—73-05574
HD and $D_2$ layers physiosorbed on MgO studied by NMR.—73-09459
High-index proton-exchanged MgO:$LiNbO_3$ optical waveguides using adipic acid.—73-01417
High-temperature creep of MgO single crystals with <100> axis at low stresses.—73-06450
High-temperature creep of MgO single crystals with <100> axis at low stresses.—73-17344
Improvement in the performance parameters of ZnO-based varistors with 10 mol% MgO.—73-01194
Improving properties of magnesia lime products.—73-06673
Impurity-phonon interaction effects on the phonon density of states in MgO:$V^{2+}$.—73-02291
In situ observation of Ba oxide layer at the interface between $Y_1Ba_2Cu_3O_{7-x}$ film and MgO substrate.—73-08101
In-plane orientations and grain boundaries of $YBa_2Cu_3O_{7-x}$ thin films on (001)MgO substrates grown by metallorganic chemical vapor deposition.—73-15511
Indentation hardness and fracture in single-crystal magnesia, zirconia, and silicon carbide.—73-03314
Influence of grain size and firing temperature on the structure of porous magnesia ceramic.—73-05867
Influence of grain size and firing temperature on the structure of porous magnesia ceramic.—73-13096
Influence of grain size and secondary phase on the fracture toughness of sintered MgO bodies: II, Addition of $Fe_2O_3$.—73-06460
Influence of grain size and secondary phase on the fracture toughness of sintered MgO bodies: III, Addition of CoO.—73-17358

Influence of heat-treatment conditions on the properties of MgO-C bricks containing aluminum.—73-17359
Interactions of wide band-gap single crystals with 248-nm excimer laser radiation: I, MgO.—73-09469
Interactions of wide-band-gap single crystals with 248-nm excimer laser radiation: III, The role of cleavage-induced defects in MgO.—73-09412
Interfacial reaction of MgO/$TiO_x$ superlattice thin films.—73-05424
Interlocked grain growth of YBCO film on magnesium oxide as observed by scanning tunneling microscopy.—73-01581
Investigating sintering of magnesia obtained by chemical beneficiation.—73-02881
Large-area epitaxial MgO buffer layers on sapphire substrates for Y-Ba-Cu-O film deposition.—73-15531
Magnesia chrome refractories—quality and performance.—73-10740
Magnesia-carbon refractory compositions for slide gate plates and method of manufacture.—73-04033
Magnesia/magnesite.—73-12287
Magnetic anisotropy of Co/Pt multilayers on MgO(100) substrates.—73-05592
Mechanical and thermal properties of pressureless-sintered MgO-$Mg_4Ta_2O_9$ composites.—73-03324
Mechanical and thermal properties of pressureless-sintered MgO-$Mg_4Ta_2O_9$ composites.—73-13561
Method for producing transparent polycrystalline body with high-ultraviolet transmittance.—73-02048
MgO-C brick containing a novel graphite.—73-04037
MgO-induced effects on the optical properties of Er-doped $LiNbO_3$.—73-16542
MgO-MgO·$Al_2O_3$-C brick.—73-10743
MgO-type delayed expansive cement.—73-00139
Microhardness anisotropy and the indentation load/size effect in MgO·x$Al_2O_3$ single crystals.—73-02644
Microstructural features of Y-Ba-Cu-O thin films grown on single-crystal MgO.—73-01607
Microstructure development during sintering in polycrystalline MgO·1.5$Al_2O_3$ spinel.—73-06256
Microstructure development during sintering polycrystalline MgO·1.5$Al_2O_3$ spinel.—73-17166
Microwave susceptor materials in the ($Mg_xNi_{1-x}$)O system for high-temperature use in air.—73-05174
Modified powder route for the preparation of sol-gel-process-synthesized magnesia and alumina.—73-09215
Nature of active sites in the oxidative coupling of methane to ethane over Li/MgO catalysts.—73-08675
Network structure of rf-sputtered amorphous $AlPO_4$-MgO and $AlPO_4$-CaO films.—73-05439
Nucleation and heteroepitactic growth of $YBa_2Cu_3O_{7-\delta}$ thin films on MgO.—73-01620
Optimal operating conditions of MgO thermo- and mechanochemical activation.—73-16887
Oxide matrix composite by directional oxidation of a commercial aluminum–magnesium alloy.—73-09535
Oxidizing prevention of MgO-C bricks for converter.—73-00833
Permeability of MgO-C bricks.—73-00837
Phase equilibria, microstructure, and properties of some MgO-$Al_2O_3$ refractories.—73-10755
Phase relations in the ternary system $ZrO_2$-MgO-$Gd_2O_3$ and its dependence on synthesis method.—73-16260
Preparation and characterization of thin films of MgO, $Al_2O_3$, and $MgAl_2O_4$ by atomic layer deposition [ALD].—73-05959
Present state and future outlook of electrofused magnesia.—73-00838
Problems involved in the reducibility of the NiO-MgO system as evidenced by XRD, EPR, and electron spectroscopy for chemical analysis and adsorption techniques.—73-12661
Processes of fusion, liquation, and crystallization of magnesia composition glass.—73-14480
Production of alumina-magnesia spinel powder using a high-frequency plasmatron.—73-16957
Production of magnesia from dolomitized waste products.—73-15912
Properties of magnesia powders prepared by vapor-phase oxidation technique.—73-16960
Properties of magnesia-stabilized zirconia powders prepared by a combustion route.—73-17184
Pulsed laser deposition of heteroepitaxial thin Pt films on MgO(100).—73-03637
Rapid setting magnesium phosphate cement [MPC] for quick repair of concrete pavements—characterization and durability aspects.—73-00181
Reaction between magnesia and carbon at high temperature.—73-00847
Reactivity of ionic oxides through water molecule adsorption process. MgO-$V_2O_5$ behavior.—73-02419
Recent findings in the development of magnesia-carbon brick.—73-10759
Refractories for casting process.—73-10786
Refractory beam for tundish purging.—73-10764
Refractory characteristics of spinels with various MgO contents.—73-00855
Relation between corrosion rate of magnesia refractories by molten slag and penetration rate of slag into refractories.—73-04018
Relation between corrosion rate of magnesia refractories by molten slag and penetration rate of slag into refractories.—73-14620
Rutherford backscattering and channeling studies of cleaved, polished, and annealed MgO(100) single crystals.—73-05475
Sectional structures and electrical properties of ultrathin NbN/MgO bilayers on Si(100).—73-02683
Self-diffusion along dislocations in single-crystal MgO.—73-09420
Sensitization of $Nd^{3+}$ luminescence by $Cr^{3+}$ in NdMgO:$LiNbO_3$ crystals.—73-05637
Sequential self-limiting growth of CuO on MgO(100) by chemical vapor deposition.—73-03001
Sinterability of sol-gel-derived magnesia powders.—73-09322
$SO_x$ control compositions.—73-12405
Solid-state reaction in the MgO excess region of the system MgO-$TiO_2$-$Al_2O_3$.—73-00866
Spatial variations in the oxygen content of $YBa_2Cu_3O_{7-\delta}$ epitaxially deposited on MgO as assessed using a transmission electron microscopy moire method.—73-08200
Sprayable refractory composition.—73-10788
Stability of metals, carbides, and oxides in carbon-magnesia refractories.—73-00868
Stable crack growth in polycrystalline magnesia under monotonic and cyclic loads.—73-09673
Sticking coefficient variation during condensation of silver and gold on MgO film.—73-13901
Structure and thermal evolution of glasses obtained from porphiric sands, MgO (15%) and $TiO_2$ (0–16%).—73-10408
Surface morphology of atomic layer deposited magnesia.—73-13455
Synthesis and mechanical properties of alumina–MgO-stabilized zirconia-zircon composite.—73-17021
Tensile fatigue crack growth of polycrystalline magnesia.—73-06536
Textured coatings from colloidal suspensions of faceted oxide microcrystals.—73-06112
Thermal decomposition of hydrotalcites. An ir and NMR spectroscopy study.—73-08775
Thermodynamics and kinetics of $H_2O(v)$ chemisorption and solubility in nanometric and single-crystal MgO particles during sintering.—73-08781
Toughening of magnesia partially stabilized zirconia, due to dilatational transformation.—73-17449
Transmission electron microscopy study of wear of magnesia partially stabilized zirconia.—73-06300
Unstable neck formation during initial-stage sintering.—73-17067
Wettability of MgO single crystals by liquid pure Pb, Sn, and Bi.—73-13907

**magnesite,**
Influence of micropowders on microstructure and properties of synthesized magnesite-chrome clinkers.—73-04007
Introducing separate beneficiation technology for magnesites at the Magnezit Combine.—73-01794
Magnesia/magnesite.—73-12287
Sintering of high-purity magnesite and influence of CaO.—73-13266

**magnesium oxide,**
$Al_2O_3$ coating on MgO particles.—73-05687
Bending strength and microstructure of $Al_2O_3$-$Y_2O_3$-MgO and $Al_2O_3$-$Y_2O_3$-$ZrO_2$-MgO composite ceramics.—73-13495
Charge states of anion vacancy in magnesium oxide.—73-03081
Crystallographic study by Rietveld's method of barium-magnesium-tantalum-oxide-based ceramics for use as dielectric resonator. X-ray dilatometry at low temperature.—73-08593
Effects of annealing on properties of MgO-$ZrO_2$ composite ceramics.—73-13027
Effects of fine SiC particles on the creep of MgO at high temperatures.—73-13517
Grain size effect on mechanical strength of MgO-$ZrO_2$ composite ceramics.—73-06448
Grain size effect on mechanical strength of MgO-$ZrO_2$ composite ceramics.—73-13543
Heteroepitaxial growth of MgO films by dual ion beam sputtering.—73-16813
Hydration and setting time of MgO-type expansive cement.—73-03477
Influence of grain size and secondary phase on the fracture toughness of sintered MgO bodies: I, Addition of $Al_2O_3$.—73-03317
Influence of grain size and secondary phase on the fracture toughness of sintered MgO bodies: I, Addition of $Al_2O_3$.—73-13551
Influence of grain size and secondary phase on the fracture toughness of sintered MgO bodies: II, Addition of $Fe_2O_3$.—73-17357
Magnetic specific heat and critical magnetic susceptibility of the diluted antiferromagnet $Co_pMg_{1-p}O$.—73-04625
Process for preparing superconducting junction of oxide superconductor.—73-11992
Raman spectra of ethane and ethylene adsorbed of surfaces of catalyst $Sm_2O_3$/MgO at high temperatures.—73-12670
Solid reaction in the MgO excess regions of the system MgO-$TiO_2$-$Al_2O_3$.—73-13368
Synthesis of $Pb(Mg_{1/3}Nb_{2/3})O_3$ powder by spray pyrolysis with ultrasonic atomizer.—73-03050
Time-resolved optical spectroscopy of MgO crystals deformed by uniaxial compression.—73-16384

**magnesium,**
Chemically induced grain-boundary migration of $MgAl_2O_4$ by ZnO.—73-13381
Corrosion of magnesium matrix composites.—73-03571
Creep of Mg-PSZ at room temperature.—73-06358
Crystallization in a barium-containing magnesium aluminosilicate glass-ceramic—correction.—73-07113
Crystallochemical nature of copper-magnesium catalysts.—73-02224
Dielectric spectroscopy of $MgTiO_3$-based ceramics in the $10^9$–$10^{14}$ Hz region.—73-14692
Effect of heat treatment on alumina short-fiber-reinforced magnesium composites.—73-16727
Effect of milled particle size on transverse rupture strength of sintered Mg-PSZ.—73-17291
Effect of oxygen partial pressure during sintering on the microstructure of Mg-PSZ with strontia and silica additions.—73-17125
Effect of stoichiometry of magnesium aluminum spinel on possibility of hole localization.—73-16123
Electrical, thermal, thermoelectric, and related properties of magnesium silicide semiconductor prepared from rice husk.—73-11184
Electron paramagnetic resonance study of paramagnetic centers in antiferroelectric $Pb_2MgWO_6$.—73-16486
Evaluation of thin $MgF_2$ films by spectroscopic ellipsometry.—73-17133
Framework topology of magnesium aluminophosphate structure type 36.—73-08631
Growth and characterization of ferroelectric $BaMgF_4$ films.—73-01416
Humidity-sensitive electrical response of sintered $MgFe_2O_4$.—73-16509
Influence of heating rate on the thermal strain induced fracture of Mg-PSZ samples.—73-05583
Interaction of components in Li-Mg, Al-Si systems.—73-16178
Internal friction in $MgAl_2O_4$ spinel doped with gallium oxide or alumina.—73-02305
Magnesium location in the barium-magnesium-iron Y-type hexagonal ferrite.—73-07947
Magnetic susceptibilities of $Mg_xU_{1-x}O_{2+x}$ solid solutions.—73-01751
Mechanical properties of Mg-based composites reinforced with B, $AlB_2$, and $MgB_2$.—73-13867
Methanolysis and hydrolysis of magnesium aluminum bimetallic alkoxides.—73-02893
Method for the manufacture of hydrotalcite.—73-05227
$Mg^{2+}$ uptake by synthetic tobermorite [T] and xonotlite [X].—73-00138
Mg-Si-Al-O-N glasses prepared by nitriding cordierite powders derived from polymer precursors.—73-03857
New structural interpretation of the "anomalous" binary magnesium phosphate glass system.—73-14052
Nonphotorefractive impurities in lithium niobate: magnesium and zinc.—73-02649
Optical properties of new diluted magnetic semiconductor $Cd_{1-x-y}Mn_xMg_yTe$.—73-15073
Oxide superconductor Bi-Sr-Ca-Mg-Ba-Cu-O.—73-01727
Phase and microstructure of $MgTiO_3$ ceramic fired in reducing atmosphere.—73-10980
Phase and microstructure of $MgTiO_3$ ceramics fired in reducing atmosphere.—73-01007
Phase diagram of magnesium nitride at high pressures and temperatures.—73-12653
Phase formation in the processes of synthesis of lead magnoniobate.—73-02383
Phase inversions in Al-Si-Mg gels. Influence of Ti, Ce, and Zr additions.—73-02385
Preparation of magnesium nitride powder by low-pressure chemical vapor deposition.—73-02953
Preparation of trimagnesium phosphate by mechanochemical reaction.—73-02975
Rapid thermal annealing of magnesium-implanted GaAs-GaAlAs heterostructures experimental and simulated distributions.—73-04462
Recent attempts to detect magnesium in a heavily doped sapphire bicrystal by spatially resolved electron energy loss spectroscopy.—73-17192
Redistribution of Mg in InAs during postimplantation annealing.—73-01300
Relationship between fracture toughness and phase assemblage in Mg-PSZ.—73-06510
Reverse-bias annealing kinetics of Mg-H complexes in InP.—73-11422
Role of outdiffusion in the activation of high-dose Mg implantations in InP.—73-15152
Scattering-loss mechanism in $CaF_2$-film-assisted diffusion bonding of $MgF_2$ ceramics.—73-08966
Sintering and properties of $MgTi_4(PO_4)_6$ [MTP] prepared by sol-gel process.—73-03007
Structures and crystal chemistry of magnesium chloride and cadmium chloride.—73-02469
Synthesis and properties of MgAPO-5.—73-13297
Synthesis of laminar silicates of magnesium and aluminum in molten salts.—73-12713
Thermoluminescence in $MgAl_2O_4$ X-ray irradiated at 90 K.—73-12723
Zeolite L.—73-02076

**magnetic field,**
Calculation of variations of magnetic peak fields of high-$T_c$ superconductors.—73-04677
Effect of a magnetic field on the deposition of $TiO_2$ films.—73-05749
Field-induced 3-D to 2-D crossover of shield current path in $Bi_2Sr_2CaCu_2O_8$.—73-15472
Influence of magnetic field from microwave surface resistance of two-layer $YBa_2Cu_3O_{7-x}$ films.—73-01577
Influence of magnetic field on the self-bias potential on a radio-frequency-powered electrode in radio-frequency plasma.—73-09174
Influence of the magnetic field on hole heating by microwave electric field in silica.—73-14987
Low magnetic field anomalies in the electrical dissipation of superconducting $YBa_2Cu_3O_7$:$YBaCuO_5$ composites.—73-04757
[Low frequency and] microwave absorption by high-$T_c$ ceramics in magnetic field.—73-01589
Magnetic flux-drag forces for high-$T_c$ superconductors.—73-01594
Magnetic lines of force [observed] by electron holography.—73-05063
Magnetic-field-induced photovoltaic effect in *p*-type GaAs.—73-07652
Magnetization currents in $YBa_2Cu_3O_{7-x}$ superconductors.—73-04765

Magnetocaloric effect in superparamagnets.—73-15347
Role of emitter states in magnetotunneling through double-barrier resonant-tunneling diodes at high magnetic fields.—73-07777
Spin split cyclotron resonance in a 2-D electron system at very high magnetic fields.—73-07806
Threshold magnetic field effect in $YBa_2Cu_3O_{7-x}$ single crystals.—73-08260

**magnetic materials,**
Bonding glass for assembling a magnetic head, and a magnetic head.—73-03906
Field-induced commensurate intermediate phases in helimagnet $(Ba_{1-x}Sr_x)_2Zn_2Fe_{12}O_{22}$ (x=0.748).—73-07937
Floating magnetic head slider [with ceramic film].—73-15379
Floating magnetic head.—73-04663
Glassy media (glass and glass-ceramics) for high-density magnetic recording.—73-15328
Improved superconducting magnetic rotary bearings.—73-11795
Laminated magnetic record/playback head with thin films of high permeability material spaced apart by very thin films of insulating magnetic material for high bit densities and data transfer rates.—73-01488
Magnetic carrier particles.—73-04664
Magnetic head with suppressed generation of pseudogap.—73-11676
Magnetic head.—73-04665
Magnetic iron oxide powder production by ferrous pentacarbonyl liquid phase oxidation with ozone.—73-15335
Magnetic thin films and nanostructures: anisotropy, microstructure, and their interrelationship.—73-06243
Method of forming coatings by plasma spraying magnetic cerment dielectric composite particles.—73-15380
Method of making a [ferrite] vertical recording head for contact and near contact magnetic recording.—73-15381
Method of preparing electrographic magnetic carrier particles.—73-11677
Moisture-resistant low-melting-point glass for magnetic head and magnetic head.—73-03954
Nanocomposites for magnetic refrigeration.—73-04631
New electromagnetic separators.—73-01802
Preparation and properties of bonding glass for amorphous magnetic head.—73-00533
Present status and future of optical and magnetic disks (including those of glass substrates).—73-15362
Science and technology in composite materials—grain-boundary microstructure and magnetic properties of hard magnetic materials.—73-07975
Science and technology in composite materials—nanostructure-controlled magnetic materials.—73-04647
Science and technology in composite materials—permanent magnetic materials based on interstitially modified rare-earth iron nitride alloys.—73-04648
Solid-phase reaction for preparing strong magnetic ferrites by pulsed loading.—73-04652
Superconducting magnetic levitation apparatus.—73-12001
Thin-film [ferrite] magnetic head.—73-15382
Unidirectional field generator.—73-11679

**magnetic properties,**
Crystallographic and magnetic properties of $5(Fe_2O_3)$-$3(Al_2O_3)$-$(Ga_2O_3)$-(SiO) by Mossbauer effect.—73-04599
Effect of an increase in the lower critical field in superfine-grained $YBa_2Cu_3O_{7-\delta}$.—73-08027
Enhanced critical magnetization currents of hot-pressed $YBa_2Cu_3O_{6+x}$ through partial-melting post-oxygenation.—73-04716
Magnetic excitations in superconducting $YBa_2Cu_3O_{6+x}$ crystals studied by neutron inelastic scattering.—73-01593
Magnetic excitations in the *t*-*J* model: application to neutron and NMR experiments in high-$T_c$ materials.—73-04758
Magnetic properties of $BaFe_{12-2x}Co_xSn_xO_{19}$ prepared by coprecipitation annealing.—73-04621
Magnetic properties of extended *t*-*J* model: I, Static properties.—73-02639
Magnetic properties of layered $Li_xTiS_2$ compounds.—73-01470
Magnetic properties of the two-dimensional antiferromagnets $RFe_2O_4$ (R=Y, Er) at high pressure.—73-07955
Magnetic properties of $Y_2Fe_{14}B$ and $Nd_2Fe_{14}B$ single crystals.—73-15343
Magnetic properties, NMR and ir spectroscopy of $A_2Mn_2O_7$ pyrochlores (A=Sc, In, Tl, rare-earth ion).—73-15344
Magnetic structure of $Y_2BaCuO_5$.—73-15547
Magnetic structure of $Y_2BaCuO_5$.—73-15548
Magnetism and high-$T_c$ superconductors.—73-01596
Novel magnetic applications of high-$T_c$ bulk superconductors: lenses for electron beams.—73-11848
Peculiar magnetic property of pyrolytic carbon prepared from adamantane.—73-16561
Polarized neutron determination of the magnetic excitation in $YBa_2Cu_3O_7$.—73-15582
Science and technology of composite materials—ferrite materials.—73-07976
Stress depcndence of magnetic properties of an Fe-Ni-B alloy.—73-04654
Structural change and magnetic properties of $Y_2BaNi_{1-x}Zn_xO_5$ oxides.—73-03197
X-ray magnetic dichroism of antiferromagnet $Fe_2O_3$: the orientation of magnetic moments observed by Fe 2*p* X-ray absorption spectroscopy.—73-15376

**magnetic susceptibility,**
Effect of longitudinal relaxation on dynamic [magnetic] susceptibility of antiferromagnets.—73-15318
Evaluation of the magnetic susceptibility of $YBa_2Cu_3O_7$.—73-08065
Magnetic studies on $(U,La)O_{2\pm x}$ solid solutions: II, Magnetic susceptibilities of solid solutions with high lanthanum and oxygen concentrations.—73-01750
Magnetic susceptibility of nonstoichiometric fluorides with fluorite structure.—73-16532
Nonlinear magnetic susceptibility in a Kramers ion-doped glass.—73-10978
Normal-state uniform magnetic susceptibility and superconductivity in $Bi_2Sr_2Ca_{3-z}Cu_2O_y$ [z=1–2].—73-08151

**magnetism,**
Magnetism in the insulating parents of the high-$T_c$ superconductors: well or ill understood.—73-04764

**magnetite,**
Adsorption of $CO_2$ on oxygen-deficient magnetite: adsorption enthalpy and adsorption isotherm.—73-16028
Biomimetic process for preparing magnetite fibers.—73-04591
Disorder and diffusional motion of cations in magnetite, $Fe_{3-\delta}O_4$, studied by Mossbauer spectroscopy at high temperatures.—73-12573
Distribution of electron density in magnetite $Fe_3O_4$ as a result of a precision X-ray diffraction investigation.—73-11651
Formation of iron oxide films from stabilized magnetite sols—magnetic liquids.—73-04614
Magnetic behavior of magnetite and cobalt ferrite particles in magnetic fluid and their local structure analysis using EXAFS.—73-15333
Magnetoelectric measurement of magnetite ($Fe_3O_4$) at low temperatures and direct evidence for nonexistence of ac mirror plane.—73-07965
Measurement of spontaneous electric polarization in magnetite ($Fe_3O_4$) at 4.2 K.—73-16536

**magnetization,**
Anisotropic magnetization and field-induced effects of CuO high-quality monocrystals.—73-05530
Anisotropy of the magnetization of isolated $Fe^{2+}$ ions in II-VI compounds.—73-01075
Automatically position-controlled system with high-$T_c$ oxide superconductor.—73-04675
Effect of an electric field on the magnetization processes in $Y_3Fe_5O_{12}$.—73-04604
High-field magnetization of MSTG [melt spun texture growth] processed $YBa_2Cu_3O_7$.—73-08095
Magnetization and microstructure of melt-textured growth (MTG) $YBa_2Cu_3O_{7-\delta}$ irradiated by fast neutrons.—73-11825
Magnetization of Si:P across the metal-insulator transition.—73-07654
Magnetization process and magnetoacoustic resonance lineshape of polydomain YIG crystal.—73-15346
Natural remanent magnetization [NRM] of portland cement concrete.—73-00149
Remanent magnetization in single crystals of $YBa_2Cu_3O_7$.—73-04800
Remanent magnetization of $Bi_2Sr_2CaCu_2O_8$ single crystals [studied] by means of a Hall probe.—73-08188
Scanning Hall microprobe measurements of magnetization profiles in $YBa_2Cu_3O_{7-y}$ single crystals.—73-01653
Vanishing magnetization relaxation in the high field quantum limit in $YBa_2Cu_3O_{7-\delta}$.—73-15664

**magnetoelectricity,**
Magnetoelectric measurement of magnetite ($Fe_3O_4$) at low temperatures and direct evidence for nonexistence of ac mirror plane.—73-07965
Temperature dependence of the linear magnetoelectric effect in orthorhombic boracites.—73-08977

**magnetooptical properties,**
Thin films for magnetooptical [MO] applications.—73-01482

**magnetooptics,**
Dependence of magnetooptical activity on exchange fields in crystals with $FeO_6^{9-}$ octacomplexes.—73-15312
Fluctuating potential and localization in semiinsulating GaAs.—73-01166
Magneto- and magnetooptical recording materials.—73-07963

**magnetoplumbite,**
Magnetic study of M-type doped barium ferrite nanocrystalline powders.—73-07958
Magnetoplumbite-corundum phase equilibria in the system Sr-Fe-Al-O at 1100°C.—73-05433

**magnetoresistance,**
Magnetoresistivity of $A^4B^6$-based microcontacts.—73-15035
Negative longitudinal magnetoresistance of δ-doped layers in GaAs.—73-01256

**magnetostriction,**
Giant magnetostriction in $Bi_2Sr_2CaCu_2O_8$ single crystal in the superconducting state and its mechanism.—73-15492

**magnetron sputtering,**
Bi-Sr-Ca-Cu-O superconducting films by plasma sputtering of nanocrystalline compound targets.—73-04676
Computer simulation of growth of thin films fabricated by the sputtering method: comparison with experiment.—73-05718
Cosputtering and serial cosputtering using cylindrical rotatable magnetrons.—73-09051
Dc sputtering deposition of *a*-axis on *c*-axis double-layer Y-Ba-Cu-O films.—73-11720
Deposition and properties of yttria-stabilized zirconia thin films using reactive direct current magnetron sputtering.—73-02767
Deposition of indium tin oxide films on acrylic substrates by radio-frequency magnetron sputtering.—73-10929
Discharge density increase for high-rate magnetron sputtering.—73-05744
Effects of target presputtering on stoichiometry of sputtered Bi-Sr-Ca-Cu-O thin films.—73-09110
High-rate aluminum oxide deposition by Meta Mode reactive sputtering.—73-13087
High-rate sputtering of metals and metal oxides with a moving plasma zone.—73-05842
Hydrogen in rf reactive magnetron-sputtered silicon nitride films.—73-05849
In situ growth of epitaxial $YBa_2Cu_3O_7$ thin films by on-axis unbalanced dc magnetron sputtering.—73-04739
Influence of sputtering conditions on the characteristics of superconducting Y-Ba-Cu-O films.—73-15515
Influence of the plasma on substrate heating during low-frequency reactive sputtering of AlN.—73-16843
Large-area sputtering of in situ superconducting $YBa_2Cu_3O_7$ films.—73-01584
Preparation of vanadium oxide thin films by radio-frequency magnetron sputtering.—73-02976
Properties of reactively dc magnetron-sputtered AlN thin films.—73-05622
Properties of zirconia films prepared by direct current reactive magnetron sputtering.—73-02676
Radio-frequency magnetron sputtering of pure and mixed targets of $Li_4SiO_4$, $Li_3PO_4$, and $Li_2O$.—73-06005
Reactive magnetron sputter deposition of niobium nitride films.—73-09295
Rf magnetron sputtered indium tin oxide film on a reactively ion-etched acrylic substrate.—73-09305
Teer Coatings Ltd.: setting the new standards.—73-17508
Titanium oxide films deposited by dc reactive magnetron sputtering in different sputtering pressures.—73-06124

**magnets,**
Application of high-$T_c$ oxide superconductor (HTSC) to high-field magnet at 4.2 K.—73-07990
Current status and future aspects of bonded rare-earth magnets.—73-04601
Densification behavior of compression-molded resin-bonded rare-earth magnets.—73-15311
Economics of ceramic magnets.—73-15315
Furnace technology for the manufacture of rare-earth permanent magnets.—73-01954
High-$T_c$ superconducting lead assembly in a cryostat dual penetration for refrigerated superconductive magnets.—73-04837
High-temperature superconductivity: magnets and applications of naval interest.—73-11789
Magnetocaloric effect in superparamagnets.—73-15347
Method for producing permanent magnet and sintered compact and production apparatus for making green compacts.—73-04666
$(Nb,Ti)_3Sn$ superconducting magnet operated at 11 K in vacuum using high-$T_c$ (Bi, $Pb)_2Sr_2Ca_2Cu_3O_{10}$ current leads.—73-15562
Open architecture iron core electromagnet for MRI using superconductive winding.—73-04859
Permanent magnets attract more power.—73-07970
Permanent magnets of high-$T_c$ superconductors.—73-04784
Permanent magnets—Nd-Fe-B and ceramic hard ferrites continue to grow.—73-15356
Science and technology of composite materials—resin-bonded magnet.—73-04649

**maintenance,**
Why a preventive/corrective furnace maintenance program is important.—73-15761

**management,**
Achieving quality satisfaction by utilizing full employee participation.—73-17459
Choice of statistical control cards and testing method sets for total quality management [TQM] of traditional ceramics.—73-08326
Manufacturing strategies in the ceramic sector.—73-04929
New ways of energy management to increase productivity of energy in the [cement] factory.—73-00151
Programming management control.—73-17500
Total quality management [TQM] at Saudi Ceramic Company.—73-08367
Total quality management and world-class quality.—73-15757

**manganates,**
Deodorant ceramic catalysts.—73-05165
Doped perovskite oxide, $PrMnO_3$, as a new cathode for solid-oxide fuel cells [SOFC's] that decreases the operating temperature.—73-10933
Electrical properties and cationic distribution in cubic nickel manganite spinels $Ni_xMn_{3-x}O_4$, $0.57<x<1$.—73-02600
Giant negative magnetoresistance in perovskite $La_{1/3}Ba_{1/3}MnO_3$ ferromagnetic films.—73-15327
In situ formation of metal-ceramic microstructures, including metal-ceramic composites, using reduction reactions.—73-03599
Magnetic properties, NMR and ir spectroscopy of $A_2Mn_2O_7$ pyrochlores (A=Sc, In, Tl, rare-earth ion).—73-15344
Oxide ion conduction in highly electronic conductors based on $SrMnO_{3-\delta}$.—73-01004
Preparation of $(La_{1-x}Sr_x)_2MnO_4$ [$0.35\leq x\leq 0.65$] with the $K_2NiF_4$ structure and its electrical properties.—73-05619
Preparation of $(La_{1-x}Sr_x)_2MnO_4$ with the $K_2NiF_4$ structure and its electrical properties.—73-11400
Seebeck coefficient in the system $(Gd_{1-x}Ca_x)MnO_{2.98}$ ($0.6\leq x\leq 0.95$).—73-02684
Structural, magnetic, and optical investigation of $Ni_xMnO_y$.—73-02691
Synthesis of $LaMnO_3$ using poly(acrylic acid) [PAA].—73-08768
Synthesis of $LiMn_2O_4$ spinel via tartrates.—73-09359

**manganese oxide,**
Correlation between magnetic and dielectric properties of $EuMn_2O_5$ single crystals.—73-16432
Development of a new composite material based on λ-$MnO_2$ and porous ceramics.—73-02770
Development of a new composite material based on λ-$MnO_2$ and porous ceramics.—73-12980
Dielectric properties in the $Pb(Fe_{1/2}Nb_{1/2})O_3$-$Pb(Fe_{2/3}W_{1/3})O_3$ system modified with $MnO_2$.—73-02571

Effect of manganese oxide base coats on the process parameters of direct-on porcelain enameling.—73-10221
Electrical properties in the system $(Nd_{0.1}Ca_{0.9-x}Sr_x)MnO_{2.97}$ ($0 \le x \le 0.4$).—73-02601
Ferromagnetic correlations in the highly frustrated, spin-glass-like, pyrochlore oxide, $Y_2Mn_2O_7$, a neutron scattering study.—73-05567
Hyperfine interaction of $^{111}$Cd impurities in $Mn_2O_3$, $Mn_3O_4$, and B-$Fe_2O_3$.—73-12599
Lithium extraction from orthorhombic lithium manganese oxide and the phase transformation to spinel.—73-16197
Metal-insulator transition and thermoelectric properties in the system $(R_{1-x}Ca_x)MnO_{3-\delta}$ (R=Tb, Ho, Y).—73-02643
New preparation method of $LaMnO_3$ perovskite using electrochemical oxidation.—73-02903
Nonstoichiometry and thermodynamics of the solid solution $(Fe,Mn)_{1-\delta}O$ at 1200°C.—73-12642
Polaronic conduction of electrons in $\alpha$-$Mn_3O_4$ slightly doped with Li.—73-12862
Possible mechanism of proximity effect coupled to spin fluctuation in $YBa_2Cu_3O_x$/magnetic manganese oxide/$YBa_2Cu_3O_x$ junctions.—73-11866
Preparation and electrical properties of bismuth strontium dimanganese hexoxide [$BiSrMn_2O_6$].—73-15110
Role of manganese on the kinetics of formation and hydration of $C_3S$ phase.—73-10142
Secondary Li cells: I, A comparison of the behavior of cathodes based on pure and lithiated manganese oxides.—73-04163
Secondary Li cells: II, Characteristics of lithiated manganese oxides synthesized from $LiNO_3$ and $MnO_2$.—73-04164
Stabilization of cubic zirconia with manganese oxide.—73-16314
Use of acetates as precursors for the low-temperature synthesis of $LiMn_2O_4$ and $LiCoO_2$ intercalation compounds.—73-03069
Waste materials from the production of electrolytic manganese dioxide in the glass container industry.—73-07188

**manganese,**
Acceptor-influenced transport behavior of *p*-$Hg_{0.953}Mn_{0.065}Te$.—73-06138
Anisotropy of thermal expansion of the Brannerite-type $MnV_2O_6$—effect of doping with $MoO_2$ and $Li_2O$: theoretical predictions, verification, new rules.—73-02552
Application of Mn-Zn ferrite with fine grain size to magnetic heads.—73-04590
Band tails and insulator-metal transition in the persistent photoconductor $Cd_{1-x}Mn_xTe$:In.—73-01083
CdTe and CdMnTe quasi-phase-matched optical parametric oscillator and amplifier—[analysis].—73-11092
Characteristic surface and maximum invariant components of $B_{\Delta M}$ tensor of spin Hamiltonian of $Mn^{2+}$ ions in crystals of calcite, magnesite, and dolomite.—73-02159
Characteristics of the photoconductivity and of the photomagnetic effect in $Mn_xHg_{1-x}Te$ crystals with anodically oxidized surfaces.—73-04263
Core losses of Mn-Zn ferrites with fine grain size.—73-04596
Crystal and magnetic structures of hardened CrSe and $Mn_{0.1}Cr_{0.9}Se$.—73-16074
Crystal growth and magnetic characterization of $Zn_{1-x}Mn_xCr_2O_4$ [x=0–1] single crystals.—73-07930
Crystal structure of new natural borate tusionite, $MnSn[BO_3]_2$.—73-16087
Crystal structure of new natural manganese silicate from epidote group.—73-02206
Development of black glazes based on Fe-Mn system.—73-07242
Effect of manganese addition on phase stability of hexagonal $BaTiO_3$.—73-16117
Effects of manganese(II) and iron(II) on the cathodoluminescence signal in synthetic apatite.—73-12779
Electrical characterization of atomic layer epitaxy ZnS:Mn alternating current thin-film electroluminescent devices subject to various wave forms.—73-11177
Electrical properties of epitaxial *p*-type manganese mercury telluride films.—73-01148
Electromagnetic properties of Mn-Zn ferrite single crystal with small variation of $Fe_2O_3$ concentration.—73-15321
Electron and hole spin lifetimes in $Zn_{1-x}Mn_xSe$- and $Zn_{1-x}Fe_xSe$-based heterostructures.—73-07491
Energy diagram of a $Pb_{1-x}Mn_xTe$/PbTe heterojunction.—73-11194
EPR investigations on manganese-doped glasses made by melting and by sol-gel processes.—73-13978
EPR study of $Mn^{2+}$ ions implanted in CdTe single crystals.—73-14892
Equilibrium and quenched states of the system Cu-Mn-O in air.—73-02271
ESR and electrophysical properties of single-crystal PbTe:Mn films grown by the method of laser epitaxy.—73-01159
ESR studies of $Mn^{2+}$ centers in $Sr_{1-x}Ba_xF_2$:Mn crystals.—73-05397
Evaluation of the coordination state of $Mn^{2+}$ ions in glasses of the system (Na, K)$_2$O-MnO-$SiO_2$ according to the absorption spectra in the region 2–5 micrometers.—73-00338
Evaluation of the coordination state of $Mn^{2+}$ ions in glasses of the system (Na, K)$_2$O-MnO-$SiO_2$ with the absorption spectra in the 2–5 μm region.—73-00966
Excited quantum states in CdTe-$Cd_{1-x}Mn_xTe$ multiple quantum wells and superlattices grown by pulsed laser evaporation and epitaxy.—73-07516
Exciton localization in $Cd_{1-x}Mn_xTe$ and its dependence on the strong magnetic field.—73-04339
Excitonic quantum beats in CdTe/$Cd_{1-x}Mn_xTe$ quantum wells.—73-14900
Features of magnetic ordering in highest manganese silicide single crystals [$MnSi_{1.71-1.75}$] with incommensurate structure.—73-16149
Femtosecond scattering dynamics in magnetic semiconductor spin superlattices.—73-14923
Giant exciton Faraday rotation in $Cd_{1-x}Mn_xTe$ mixed crystals.—73-14942
Growth behavior of manganese-metallized layer on silicon nitride ceramics.—73-03595
High-temperature EPR linewidth in $Hg_{1-x}Mn_xSe$.—73-01187
Hydrothermal synthesis and crystal structure of $Mn(SeO_3)_2$.—73-02286
In situ studies of the effect of various gaseous species and ultraviolet illumination on the dark currents of HgMnCdTe and HgCdTe short-wavelength infrared diodes.—73-07585
In situ use of gelation or an aminodextran in the preparation of uniform ferrite particles.—73-01487
Influence of oxygen partial pressure on the shape of the *B-H* curve for Mn-Zn ferrites.—73-15330
Influence of process parameters on power loss minimum versus temperature of Mn-Zn ferrites.—73-11657
Injection and thermostimulated currents in $MnIn_2S_4$ single crystals.—73-08890
Intrinsic carrier density and effective mass of electrons in $Mn_xHg_{1-x}Te$.—73-07622
Kinetics of the oxidation of manganosite ($Mn_{1-\delta}O$) to hausmanite (B-$Mn_{3-\delta}O_4$) at high temperatures.—73-02312
Low-temperature transport properties of $Cd_{0.91}Mn_{0.09}Te$:In and evidence for a magnetic hard gap in the density of states.—73-09416
Magnetic polaron effect in diluted magnetic semiconductor $Cd_{1-x}Mn_xTe$ [0.25<x<0.36] with high Mn concentrations.—73-07650
Magnetic properties and exchange interactions in disordered $Fe_xMn_{1-x}S$ system.—73-01469
Magnetic properties of diluted $(Zn_{1-x}Mn_x)_3As_2$ solutions.—73-02638
Magnetic susceptibility of $Pb_{1-x}Mn_xTe$ solid solutions.—73-15030
Magnetic-field-induced unbinding effects in CdTe-$Cd_{1-x}Mn_xTe$ quantum wells.—73-04396
Magnetism and electron transport properties of mixed valence $CeMn_{2-x}Si_{2+x}$ crystals [(0.1≤x≤0.25)].—73-16533
Magnetooptical properties of $Cd_{1-x}Mn_xSe$ microcrystallites in $SiO_2$ glass prepared by rf sputtering.—73-02641
Magnetothermoelectric power of $Mn_{0.18}Hg_{0.82}Te$.—73-01236
Magnetotransport properties of *p*-type (In,Mn)As diluted magnetic III-V semiconductors.—73-08912
Manganese nitride sorption in Joule–Thomson refrigerator.—73-12434
Manganese zinc ferrite single crystal growth by continuous crystal growing method.—73-01472
Metallizing of silicon carbide ceramics with manganese vapor.—73-13871
MnZn ferrite preparation by coprecipitation method.—73-11666
Molecular beam epitaxy investigation of interface disorder effects in magnetic II-VI quantum wells.—73-11335
Neutron diffraction and Hall effect measurements in Y-Ba-Cu(Mn)-O system.—73-11844
Nonlinear optical effects in rotationally twinned CdTe and CdMnTe crystals.—73-07696
Optical properties of new diluted magnetic semiconductor $Cd_{1-x-y}Mn_yMg_yTe$.—73-15073
Ordering of manganese ions in calcite structure.—73-08682
Oscillator strength study of the 2-D–3-D exciton transition in CdTe/(Cd,Mn)Te quantum wells and superlattices.—73-08942
Phosphor currents in ZnS:Mn ac thin-film electroluminescent display devices.—73-11374
Photoinduced thermal Faraday rotation in semimagnetic semiconductors.—73-01277
Photoluminescence of ZnSe/ZnMnSe superlattices under hydrostatic pressure.—73-07729
Photostimulated changes in the position of $Mn^{2+}$ ions in the crystal lattice of PbSe.—73-07732
Physicochemical properties of melts of the system PbTe-Mn.—73-02394
Resonance Raman scattering in Cd/Te/CdMnTe superlattice under magnetic field.—73-04470
Resonant electron spin-flip Raman scattering in $Zn_{1-x}Mn_xTe$.—73-07770
Sintering and infrared radiation property of $Mn^{2+}$-substituted cordierite solid solutions.—73-16991
Sintering of MnZn ferrites of large cross section.—73-11672
Spectrum of a shallow acceptor in a semimagnetic semiconductor subjected to a magnetic field.—73-07804
Spin-flip Raman scattering from electrons bound to donors in both wells and barriers of CdTe/$Cd_{0.3}Mn_{0.7}Te$ heterostructures.—73-05485
Stability of single free particles against spatial localization through magnetic polaron formation.—73-05489
Structural phase transition in $MnSiF_6{\cdot}6H_2O$ [crystal].—73-16326
Structure of an Mn impurity center in GaSb.—73-07817
Superposition model analysis of zero-field splitting of $Mn^{2+}$ in $LiNbO_3$.—73-02472
Synthesis and structure of $ZnMn_2As_2$.—73-02495
Thermal expansion of highest manganese silicide [$MnSi_{1.71-1.75}$].—73-16629
Time-resolved photoluminescence studies of perpendicular transport in CdTe/$Cd_{1-x}Mn_xTe$ short-period superlattices.—73-11484
Transport properties of manganese-doped ferrous oxide at high temperature.—73-02717
Two-dimensional exciton magnetic polaron in CdTe/$Cd_{1-x}Mn_xTe$ quantum-well structures.—73-07846
Valence band structure and Mn 3*d*-derived density of states in epitaxially grown zinc blende MnSe.—73-11503

**manganites,**
Aging study of nickel-copper-manganite negative temperature coefficient thermistors by thermopower measurements.—73-11062
$Ca_2AlMnO_5$: studies about its characterization and hydration.—73-13684
Chemical analysis of strontium lanthanum manganite.—73-05027
Electrical and magnetic properties of sodium solid solutions in lanthanum manganites.—73-01458
Electrical resistivity of lanthanum–manganite-based complex oxides.—73-16481
High-pressure production and properties of the $CuMnO_3$ ferrimagnet.—73-01465
Impedance of the Li electrode in Li/$Li_xMnO_2$ accumulators at open-circuit voltage.—73-06803
Magnetic properties of perovskite-structure rare-earth orthomanganites.—73-15341
Magnetoelectric effect of $GdMn_2O_5$ single crystal.—73-08910
Phase transitions in perovskite $La_{1-x}Ca_xMnO_3$.—73-08697
Preparation and characterization of thermistors with negative temperature coefficient $Ni_xMn_{3-x}O_4$ ($1 \ge x \ge 0.56$), from formate precursors.—73-04449
Thermal behavior and oxidation mechanism of tetragonal manganite spinels $Cu_xMn_{3-x}O_4$, 0<x<1.—73-02521
Thermal expansion and electrical conductivity of yttria-substituted lanthanum strontium manganites.—73-16626
Thermal stability, crystallographic, and electrical properties in undoped and Ba-doped Cu-Ni manganite spinels.—73-05676

**manufacturing,**
Aluminum nitride plant to be built by Dow Chemical.—73-03378
Applications of high-speed GSMAC-FEM to glass manufacture.—73-14323
Arc plasma spraying as a manufacturing process for ceramic components.—73-08319
Brief overview on glass industry and glass research in Spain.—73-07110
Building a brickworks from scratch.—73-10674
Carbon substance and its manufacturing method.—73-05288
Centorr/Vacuum Industries: high-temperature solutions.—73-03383
Ceramic fabricator quality revolution: a case study.—73-01766
Ceramic filter element and method of manufacture.—73-02029
Chemical reactions during the manufacture of electrically fused refractories: I.—73-00786
Comparison between Italy and Spain.—73-17467
Designing for manufacturing—an update.—73-04909
Desktop manufacturing: LOM [laminated object mfg.] vs pressing.—73-15713
Development of radiation-thermal technology of cement manufacture.—73-09891
Effect of low-grade fuels, combustible wastes, and nontraditional raw materials [on cement manufacture].—73-09910
Effect of production parameters on strength and manufacture of plate glass.—73-00615
Export successes for Australian brick plant manufacturer.—73-10680
F. v. Muller Dachziegelwerke: tilemaker of Eisenberg.—73-00769
Glass blocks.—73-03846
IBM Technology Products: offering total packaging solutions.—73-03395
Improvements in porcelain manufacturing.—73-04043
Influence of glass manufacturing process on glass structure.—73-00646
Intensive ceramic production and Classic period political economy in the Sierra de los Tuxtlas, Veracruz, Mexico.—73-09786
J. C. Steele & Sons: Preeminence through excellence.—73-03399
Laufen: a Swiss multinational.—73-17492
Manufacture and properties of glasses containing nitrogen.—73-00656
Manufacturing process of halogen lamps.—73-00657
Manufacturing strategies in the ceramic sector.—73-04929
Metallorganic decomposition method for preparing a metal borate.—73-12376
Method for cooling ceramics, especially ceramic tiles produced in roller kilns, and the relative plant.—73-12083
Method for manufacturing ceramic products.—73-04987
Method for manufacturing rings or disks having a blade or vane rim.—73-01865
Method of manufacturing a glass optical part.—73-10644
Method of manufacturing a superconducting oxide pattern by laser sublimation.—73-01719
Method of manufacturing aluminum nitride structure with anisotropic properties.—73-12496
Method of manufacturing composite material of carbon fibers in a carbon matrix.—73-02115
Microfine glass fibers, manufacture and applications.—73-00663
Modern spectrophotometers and data processing for glass manufacturing control and optimization.—73-14433
New binder program for spray-dried and pressed technical ceramics.—73-04931
New generation in ceramic manufacture.—73-10685
Optimizing the manufacture of ceramic facing tiles (exchange of experience).—73-07266
Potential of fly ash for cement manufacture.—73-00166
Present problems in cement manufacturing.—73-10093
Rapid process for manufacturing aluminum nitride powder.—73-06007

Recent advance in cement grinding and milling technology.—73-04946
Recent advancement in cement industry—manufacturing system and special cements.—73-03526
Refractories for the New World Economy UNITECR '93 highlights.—73-04016
Regional studies and ceramic production areas: an example from La Mixtequilla, Veracruz, Mexico.—73-09794
Shuang Ya Shan brick plant.—73-10691
Silicon carbide.—73-12299
Systems approach for grinding of ceramics.—73-08365
Technical advances in plate and sheet glasses.—73-03894
Technical innovations in dinnerware manufacturing.—73-04048
Trends in the development of control systems of glass manufacturing.—73-14523
Turnkey ceramic plants for developing countries.—73-04051
U.S. Cement: restructured and positioned for awaited upturn.—73-03549
Use of rock in ceramic production.—73-00926

**market statistics,**
American fair.—73-17461
Big name in ceramics: Villeroy & Boch.—73-17463
Ceramic world in Chicago.—73-17464
Confirmation for Cersaie.—73-17470
Consider a career in technical sales.—73-17472
Current U.S. markets for advanced ceramics and projection of future growth.—73-09708
Developments in sensors and sensitive ceramic elements.—73-11135
Dutch import/export trends.—73-17474
Economics of ceramic magnets.—73-15315
Fin Riwal: a world group.—73-17478
Four leading factors in the growth of the Asian construction market.—73-17479
France is an open market.—73-17480
Germany counts the cost of recession and reunification.—73-17481
Glass industry in Asia is full-speed ahead in all areas.—73-17482
How the industry fared in 1992.—73-09719
Indian glass industry review.—73-13626
Market prospects for special glasses.—73-09727
Market trends in electronic materials.—73-09728
Outlook of refractory development in China for 1990's.—73-04012
Overview of EC glass industry performance.—73-17496
Owens-Corning adjusts to a global economy.—73-13633
PEI Marketing Committee Report.—73-17497
Refractories in South Africa.—73-10762
Situation of the EC glass industry.—73-13646
Soda ash picture in the United States.—73-12301
Turkey: a rapidly expanding market.—73-17509
U.S. dinnerware industry: marching to a stronger beat.—73-14671
UK glass sector update.—73-17511
Worldwide advanced ceramics industry outlook for the '90s.—73-17514

**masks and masking,**
Characterization of near-field holography grating masks for optoelectronics fabricated by electron beam lithography.—73-07408
Diamond-membrane-based X-ray masks.—73-16712
Impact of different X-ray mask substrate materials on optical alignment.—73-16830
Metalless X-ray phase-shift masks for nanolithography.—73-16864
Method of making laser-generated ic pattern for masking.—73-04523
X-ray mask development based on SiC membrane and W absorber.—73-17071

**masonry,**
Masonry properties as influenced by mortars.—73-06684
Movement joints in facing masonry.—73-03982

**materials engineering,**
Ceramic foaming—the effect of material components and processing on properties.—73-09032
Concept and perspective of intelligent materials—consideration on the new materials of tomorrow.—73-06562
Innovative materials: an area of future competitiveness for Italy.—73-09722
Inorganic intelligent materials.—73-06574
Intelligent materials in electronics.—73-06575
Materials and development.—73-09729
Maximizing materials utilization—a panel session.—73-13865
Perspective on intelligent materials.—73-06586
Thermodynamic problems of ceramic powder engineering.—73-08780
U.S. Bureau of Mines—open industry briefing on engineered materials research.—73-17510

**materials,**
Ceramic Transactions, Volume 37: Cement-Based Materials: Present, Future, and Environmental Aspects.—73-13651
Databases in materials science and engineering: an international approach.—73-06566
Design of 21st-century electron devices with intelligent materials.—73-04544
Intelligent materials—keys to technology friendly to environment and people.—73-06576
Lessons from biology for materials scientists.—73-06242
NASP engine materials/structures update synopsis.—73-13631
Research on intelligent materials developed in relationship with the National Center for Scientific Research (CNRS), France.—73-06591

**matrix,**
Fracture and sliding in the fiber/matrix interface and failure processes in ceramic composites.—73-13534
Nanoparticle tin(IV) oxide entrapped in amorphous matrices.—73-03860

**measurement,**
Advances in measurement of surface area by gas adsorption.—73-01881
Analysis and measurements in ceramic laboratories.—73-12105
Apparatus for determining the thermal conductivity of ceramic materials.—73-15776
Automated surface profilometer.—73-12111
Comparison of some instruments for measuring mirrorlike surfaces.—73-05030
Comparison of surface areas calculated from nitrogen adsorption and mercury porosimetry.—73-08384
Cost of ownership drives flow meter evolution.—73-05033
Evidence of two-gap *s*-wave superconductivity in $YBa_2Cu_3O_{7-x}$ from microwave surface impedance measurements.—73-11752
Features of measurement of the crack resistance of ceramics by the indentation method.—73-13531
Granulometric online evaluation of loose particulate materials using the radiometric transmission principle of measurement: II, Laboratory investigations and operational experience.—73-09974
High-temperature dielectric property measurements of engineering ceramics.—73-05052
Improvement of tensile creep displacement measurements.—73-17352
Laboratory measurement extruder—experimental equipment for the design of ceramic extruders.—73-12156
Measuring moduli of elasticity at high temperatures.—73-15816
Method for determining thickness of chemical-vapor-deposited layers.—73-12208
Mortar workability apparatus: a new approach.—73-10059
Nanometric surface metrology at the National Physical Laboratory.—73-05069
New apparatus for measuring the ultimate strain of thin films.—73-05071
New self-oscillating, self-heating microwave active dielectrometer.—73-05074
Nondestructive measurement of localized density of sintered materials—especially grinding wheels.—73-01921
Oxygen activity measurements in different production glasses.—73-00676
Reliable hardness testing with a fast ultrasonic method (UCI).—73-12185
Technique for differential scanning calorimetry (DSC).—73-12201

**mechanical properties,**
Correlation between zeta potential and mechanical properties for cementitious materials.—73-00051
Corundum ceramics with improved mechanical strength.—73-16690
Developments in alumina for ceramic use.—73-05166
Effect of coarse quartz grains on mechanical strength of porcelain body.—73-03263
Effect of homogeneous mixing of sintering additives by coprecipitation method on mechanical properties of pressureless-sintered $Si_3N_4$.—73-09577
Effect of starting crystallographic phase on the mechanical properties of hot-pressed SiC ceramics.—73-06390
Effects of processing parameters on densification and mechanical properties of gas-pressure-sintered silicon nitride.—73-16754
Effects of temperature and oxidation on the mechanical behavior of uncoated SiC-SiC composite materials.—73-06400
Evaluating the mechanical properties of commercial DRA [discontinuously reinforced alumina].—73-06785
Evaluation of Weibull modulus by Weibull plane.—73-17312
Formation of La-ß-aluminate in α-alumina matrix and its influence on mechanical properties.—73-02833
Fracture behavior of microfiber-reinforced mortars.—73-03472
How can we improve the (mechanical) reliability of ceramic components.—73-12326
Improvement of mechanical strength of porcelain bodies by fine grinding of raw materials.—73-02859
Interfacial properties and high-temperature mechanical behavior of fiber-reinforced ceramics.—73-09627
Internal stresses, structural defects, and mechanical properties of glass-ceramics.—73-14211
Mechanical and electrical properties of hot-pressed TiN ceramics without additives.—73-06477
Mechanical anisotropy of $YBa_2Cu_3O_x$ single crystals.—73-01599
Mechanical Behavior of Materials: Engineering Methods for Deformation, Fracture, and Fatigue.—73-13655
Mechanical characterization of Si-C(O) fiber/SiC (CVI) matrix composites with a BN interphase.—73-06478
Mechanical energy dissipation phenomena in Y superconductors.—73-04770
Mechanical properties of a novel $Si_3N_4$–amorphous $Si_3N_4$ composite.—73-06479
Mechanical properties of barium-mica-containing glass-ceramics.—73-10453
Mechanical properties of carbon-carbon composites.—73-09635
Mechanical properties of chemically vapor infiltrated ceramic matrix composites.—73-17383
Mechanical properties of concrete materials reinforced with polypropylene or polyethylene fibers.—73-00134
Mechanical properties of fiber-reinforced glass and glass-ceramics.—73-07047
Mechanical properties of fine carbon filaments by microtensile test method.—73-13563
Mechanical properties of glass and polycrystalline ceramic with cordierite composition.—73-17384
Mechanical properties of high thermal conductive SiC ceramics.—73-03331
Mechanical properties of reaction-formed silicon carbide ceramics containing silicon and refractory disilicide phases.—73-09640
Mechanical properties of reaction-sintered materials based on boron carbide.—73-03336
Mechanical properties of $Si_3N_4$ ceramics prepared from carbon-coated powders.—73-09641
Mechanical properties of $Si_3N_4$ ceramics prepared from carbon-coated powders.—73-17391
Mechanical properties of very hard cement concrete.—73-00135
Mechanical properties of whisker-reinforced cordierite glass-ceramic composites.—73-03338
Mechanical strength and thermal resistance of porous glass.—73-00514
Microstructural study of mechanical properties in $Si_3N_4$ ceramics.—73-06251
Nanocomposite of PZT-PMN-$MnO_2$-NiO ceramics-alumina system.—73-02341
Physicochemical and mechanical properties of ceramic materials made from a Moroccan clay: I, Preparation, structural properties, and mechanical behavior.—73-10686
Predictability of the mechanical properties of inclusion-containing ceramics.—73-13578
Prediction of the mechanical high-temperature behavior of ceramic materials by measuring Young's modulus.—73-03344
Processing, microstructure, and mechanical properties of zirconium phosphate/mullite whisker composites.—73-16953
Properties investigation of ceramics based on $ZrO_2$.—73-06503
Properties of gas concretes containing high proportions of pfa (pulverized fly ash).—73-00174
Properties of porcelain bodies containing zirconia.—73-00923
Property modification of silica glass by ultrahigh pressure heating.—73-00538
Quantitative analysis of quality control factors related with compressive strength and cement fineness.—73-10120
Reaction-induced changes in interfacial and macroscopic mechanical properties of SiC-monofilament-reinforced titanium.—73-03348
Relationships between composition, structure, and mechanical properties of very low porosity cementitious systems.—73-00184
Shock-yielding properties of $Si_3N_4$ ceramics: correlation with the microstructure and static mechanical strength.—73-17425
Strong corundum-based ceramic "Sikor."—73-00871
Structure and mechanical properties of coatings produced by dynamic ion mixing.—73-17437
Thermal and electrical properties of alkoxy-derived cordierite ceramics.—73-12887
Use of thermal energy in shock-wave compaction of ceramics and intermetallics.—73-06130

**mechanism,**
Possible mechanism for high-$T_c$ superconductivity.—73-04787

**Meissner effect,**
Paramagnetic Meissner effect in Bi high-temperature superconductors.—73-08160
Superconductive device and method for demonstrating autorotation.—73-04883

**melilite,**
Aluminum-containing nitrogen melilite phases.—73-05354
Composition of melilites crystallized from CaO-$Al_2O_3$-$Fe_2O_3$-$SiO_2$ melts.—73-13695

**melter/melting,**
Advantages of oxy-fuel melting.—73-01943
Bubbler systems can abet melting operations.—73-10501
C-DC melter.—73-12210
Clinkerization through melting—a new approach.—73-09856
Correcting for nonlinearity in thermal aspects of electrical glass melting.—73-00604
Effect of Al/Fe ratio in belite on the microtexture induced by the remelting reaction.—73-16115
Effect of melting atmosphere on properties of a glass in the CaO-$P_2O_5$-$Fe_2O_3$ system.—73-03835
Effects of melting parameters on the roof stability in a high-load electric steel-melting furnace.—73-00811
French all-oxygen conversion trials.—73-12219
Glass melting in pot furnaces.—73-12221
Influence of batch moisture and atmosphere on the melting behavior of $As_2O_3$- and $Sb_2O_3$-containing glasses.—73-10553
Laboratory melting of glasses to commercial standards of homogeneity.—73-00651
Melter control systems.—73-01956
Melting different types of glass melts, frits, and glazes.—73-14425
Method and apparatus for the semicontinuous melting and discharging of ceramic material in an induction melting furnace with sintering crust crucible.—73-04984
Microstructural and electrical resistivity investigation of melter floor sludge.—73-08301
Noble metal behavior during melting of simulated high-level nuclear waste glass feeds.—73-08302
Quantum melting of the vortex lattice in high-$T_c$ superconductors.—73-15606
Rapid stirred melting of simulated West Valley high-level waste.—73-08483
Selecting the character of glass melt flow in tank melting zones.—73-08486
Service of refractory materials in shaft furnaces with melting of ferroalloys by the thermal reduction method.—73-00861
Thermoplastic low-melting glasses in the system Se-Te-I and their properties.—73-14520

Use of induction melting for synthesis of oxide ceramics in the $ZrO_2$-$Y_2O_3$-$Al_2O_3$ system.—73-04953
Vortex lattice melting in untwinned and twinned single crystals of $YBa_2Cu_3O_{7-\delta}$.—73-08275

**melting point,**
Lattice deformation by diffusive atomic displacement at melting temperature of elements.—73-17084

**melts,**
Anharmonism of the vibrations of the quasi-lattice and a model of fluctuation holes in glassy solids and melts.—73-00305
$Cr^{6+}/Ce^{3+}$ equilibrium in mixed alkali borate melts.—73-13949
Effects of melt composition on the growth behavior of 211 particles in the Y-Ba-Cu-O system.—73-15444
Frit melting in a moving charge along a ramp.—73-00633
Incorporation of nitrogen in $Si_3N_4$-capped silicon by cw $Ar^+$-laser melting.—73-13095
Model concept of vaporization from silicate melts.—73-00665
Modeling of the structure of melts of the system $Na_2O$-$B_2O_3$-NaCl by the molecular dynamics method.—73-14040
Products of interaction of glass oxide melts with aluminum-coated steel.—73-00689
Structure and phase transitions in aluminosilicate glasses and melts.—73-00415
Structure and properties of semiconductor melts.—73-15185
Surface tension of gallium garnet melts.—73-03033
Thermal expansion and glass transition of borate melts.—73-00556
Transition metal ions in silicate melts: III, Nickel in quenched oxide glasses.—73-10412

**membranes,**
Aging of thin polyimide-ceramic and polycarbonate-ceramic composite membranes.—73-16406
Bacteria removal by ceramic microfiltration.—73-02021
Boron nitride membrane in wafer structure.—73-05287
Ceramic membranes from sol-gel technology.—73-12936
Ceramic membranes produced by APS [air plasma spraying] technology.—73-09033
Characteristics of alumina-supported $TiO_2$ composite ultrafiltration membranes prepared by the sol-gel method.—73-05162
Development of ceramic composite membranes for gas separation: I, Coating characteristics of nanoparticulate $SiO_2$ sols.—73-02771
Development of ceramic composite membranes for gas separation: III, Examination of membrane characteristics by the gas permeation model.—73-12981
Development of ceramic composite membranes for gas separation: IV, Permeation characteristics of γ-alumina membranes.—73-12323
Development of ceramic composite membranes for gas separation: V, Synthesis of nanoparticulate silica membranes by the pressurized sol-gel coating technique.—73-08509
Dynamic adsorption on inorganic membranes.—73-16452
Filter membrane and method of manufacture.—73-02037
Formation of zeolite membranes from sols.—73-05214
Liquid permeability of porous glass membrane and its microstructure.—73-03797
Liquid permeability of porous glass membrane and its microstructure.—73-14215
Method of producing a carbon-coated ceramic membrane and associated product.—73-04998
Method of producing ceramic sintered body having dense ceramic membrane.—73-05233
Microporous aluminosilicate ceramic membranes.—73-05234
Nanoparticulate alumina, silica, and aluminosilicate membranes.—73-13145
Oriented microchannel membranes via oxidation of carbon fiber-reinforced glass composites.—73-07158
Permeabilities of unsupported ceramic membranes of alumina.—73-12854
Porous carbon-carbon composite filtering membrane support with a carbon fiber mat substrate.—73-02120
Porous inorganic membranes.—73-00292
Preparation and characterization of a composite palladium ceramic membrane.—73-13883
Preparation of alumina membranes for microfiltration.—73-02942
Preparation of alumina membranes: I.—73-13181
Preparation of heat-resistant microporous ceramic membranes for selective gas permeation.—73-05973
Preparation of microporous metal membranes by two-step replication of the microstructure of anodic alumina.—73-00258
Sol-gel coating process for the preparation of supported $TiO_2$ composite membranes.—73-03019
Sol-gel route to synthesis of microporous ceramic membranes: preparation and characterization of microporous $TiO_2$ and $ZrO_2$ xerogels.—73-13279
Supported microporous ceramic membranes.—73-05015
Synthesis and characterization of zeolite (MFI) membranes on porous ceramic supports.—73-08764
Synthesis and characterization of zeolite (MFI) membranes on porous ceramic supports.—73-16349
Synthesis and textural properties of unsupported and supported rutile ($TiO_2$) membranes.—73-09351
Textural evolution and phase transformation in titania membranes: I, Unsupported membranes.—73-16367
Textural evolution and phase transformation in titania membranes: II, Supported membranes.—73-16368
Textural stability of titania–alumina composite membranes.—73-09517
Vibrational technique for stress measurement in films: I, Ideal membrane behavior.—73-05097
Vibrational technique for stress measurement in films: II, Extensions and complicating effects.—73-05098
Zeolite-$Al_2O_3$ membrane configuration.—73-12335

**memory,**
Carrier transport and storage in $Si_3N_4$ for metal-nitride-oxide-semiconductor memory applications.—73-07399
Dc leakage currents in ferroelectric memories.—73-11558
Memory effect and invariance of *R*-curves of crack propagation resistance in ceramics.—73-09645
Optical study of time variation of memory effect in incommensurate phase of quartz.—73-08940
Semiconductor memory device.—73-01385
Three-dimensional model of a $VO_2$ memory element.—73-05680

**mercury selenide,**
Band structure parameters of surface layers of epitaxial films of narrow-gap solid solutions.—73-11082
Growth of HgSe and $Hg_{1-x}Cd_xSe$ thin films by molecular beam epitaxy.—73-11234
High-temperature EPR linewidth in $Hg_{1-x}Mn_xSe$.—73-01187
Optical absorption of $Co^{2+}$ ions in $HgGa_{2-x}In_xSe_4$ solid solution.—73-07702
Resonant states formed by Co and Ni impurities in HgSe.—73-07774

**mercury,**
1992 U.S. Workshop on the Physics and Chemistry of Mercury Cadmium Telluride and Other Ir Materials.—73-11351
Acceptor-influenced transport behavior of *p*-$Hg_{0.953}Mn_{0.065}Te$.—73-06138
Acoustic study *p*-*T* phase diagram of $Cs_2HgCl_4$ crystals.—73-16026
Annealing effect on the *p*-type carrier concentration in low-temperature-processed arsenic-doped HgCdTe [MCT].—73-11068
Assessment of electrical inhomogeneity of undoped and doped $Hg_{1-x}Cd_xTe$ MOVPE (IMP) [interdiffusion multilayer process] layers by variable magnetic field Hall profile measurements.—73-11074
Band gap uniformity and layer stability of HgTe-CdTe superlattices grown by photon-assisted molecular beam epitaxy.—73-11080
Bias-switched dual-band HgCdTe infrared photodetector.—73-07391
Bulk and surface transport properties of *n*-type $Hg_{1-x}Cd_xTe$ crystals in the temperature range $0.5<T<50$ K.—73-07395
$Cd_xHg_{1-x}Te$ phonon spectra research by means of magnetophonon resonance.—73-04261
CdTe and HgTe surface growth kinetics for molecular and metallorganic molecular beam epitaxy.—73-11093
Chaotic spontaneous oscillations in variable-gap semiconductor structures.—73-01094
Characteristic features of magnetic-field dependences of the transport coefficients of two-layer $Cd_xHg_{1-x}Te$ structures.—73-04262
Characteristic features of the temperature and spectral dependences of the photoconductivity and photomagnetic effect in *p*-type $Cd_xHg_{1-x}Te$ at low temperatures.—73-11096
Characteristics of the photoconductivity and of the photomagnetic effect in $Mn_xHg_{1-x}Te$ crystals with anodically oxidized surfaces.—73-04263
Characteristics of the tunneling across Schottky barriers made of narrow-gap semiconductor *p*-type $Hg_{1-x}Cd_xTe$.—73-01098
Characterization of $Hg_{1-x}Cd_xTe$ [MCT] heterostructures by thermoelectric measurements.—73-11102
Comparison of spatial compositional uniformity and dislocation density for organometallic vapor phase epitaxial $Hg_{1-x}Cd_xTe$ grown by the direct alloy and interdiffused growth processes.—73-11115
Compositional analysis of HgCdTe epitaxial layers using secondary ion mass spectrometry.—73-07419
Controlled *p*-type Sb doping in LPE-grown $Hg_{1-x}Cd_xTe$ epilayers.—73-11121
Covered electrode HgCdTe photoconductor under high illumination levels.—73-07424
Critical stress of $Hg_{1-x}Cd_xTe$ solid solutions.—73-07427
Current status of direct growth of CdTe and HgCdTe on silicon by molecular beam epitaxy.—73-07430
Dark current and noise factor of "staircase" avalanche photodiodes.—73-01118
Defect equilibrium in HgTe.—73-07436
Defect noise in reverse-biased *p*-$n^+$ junctions made of $Cd_xHg_{1-x}Te$.—73-07437
Determination of mercury in glass: a new analytical need in the evaluation of the packaging waste quality.—73-06903
Diffusion model for indium in $Hg_{1-x}CdTe$.—73-01127
Dislocation reduction in HgCdTe on GaAs and Si.—73-07449
Distribution of Hg in $Cd_xHg_{1-x}Te$ by pulsed laser annealing.—73-14840
Dopant diffusion in HgCdTe grown by photon-assisted molecular beam epitaxy.—73-07453
Effect of dislocations on the electrical and optical properties of long-wavelength infrared HgCdTe photovoltaic detectors.—73-07462
Effect of the layer composition on the band spectrum of $Cd_xHg_{1-x}Te$-$Cd_xHg_{1-x}Te$ superlattices.—73-14858
Effects of growth conditions on the composition of CVT and PVT [chemical and physical vapor transport] grown $Hg_{1-x}Cd_xTe$ epitaxial layers.—73-14862
Effects of growth rate and mercury partial pressure on twin formation in HgCdTe(111) layers grown by metallorganic chemical vapor deposition.—73-11172
Effects of mixed-valence mercury and indium on the electrical properties of $Hg_{1-x}Cd_xTe$.—73-07473
Electrical effects of dislocations and other crystallographic defects in $Hg_{0.78}Cd_{0.22}Te$ *n*-on-*p* photodiodes.—73-13350
Electrical properties of epitaxial *p*-type manganese mercury telluride films.—73-01148
Evidence for 1/*f* noise in diffusion current due to insulator trapping and surface recombination velocity fluctuations.—73-11200
Ex situ variable angle spectroscopic ellipsometry studies of electron cyclotron resonance etching of $Hg_{1-x}Cd_xTe$.—73-14896
Excess carrier lifetime in *p*-type HgCdTe [analyzed] using a three-level Shockley-Read model.—73-07514
Features of vibrational spectrum rearrangement in semiconductor-semimetal CdTe-HgTe alloys. Lattice modes of Cd-Te and Hg-Te vibrations.—73-14919
Features of vibrational spectrum rearrangement in semiconductor-semimetal CdTe-HgTe alloys. Two-mode approximation.—73-14920
Formation and electrical effects of process-induced dislocations in HgCdTe.—73-07533
Generation-recombination currents in HgCdTe midwavelength infrared photodiodes.—73-07546
Growth and characterization of CdTe, HgTe, and HgCdTe by atomic layer epitaxy.—73-04346
Growth and characterization of hot-wall epitaxial CdTe on (111)HgCdTe and CdZnTe substrates.—73-11224
Growth by CVT [chemical vapor transport] and characterization of $Hg_{1-x}Cd_xTe$ epitaxial layers.—73-14946
Growth method, composition, and defect structure dependence of mercury diffusion in $Cd_xHg_{1-x}Te$.—73-13351
Growth of (111)CdTe on GaAs/Si and Si substrates for HgCdTe epitaxy.—73-07552
Growth of uniform HgCdTe by metallorganic chemical vapor deposition system.—73-07555
Hall effect characterization of LPE HgCdTe *p*/*n* heterojunctions.—73-11238
Hall effect in ferromagnetic *n*-type semiconductor $HgCr_2Se_4$ in strong electric field.—73-14955
Heavily accumulated surfaces of mercury cadmium telluride detectors: theory and experiment.—73-11240
$Hg_{0.8}Cd_{0.2}Te$ native defects: densities and dopant properties.—73-13352
HgCdTe double heterostructure diode lasers grown by molecular beam epitaxy.—73-07557
HgTe contacts to *p*-HgCdTe.—73-07558
High-pressure synthesis of $HgBa_2Ca_2Cu_3O_{8-x}$ superconductor with $T_c$>130 K.—73-15502
High-spatial-resolution resistivity mapping applied to mercury cadmium telluride.—73-07565
In situ ellipsometric measurements of the MBE growth of CdTe/HgTe and CdTe/ZnTe superlattices.—73-11263
In situ studies of the effect of various gaseous species and ultraviolet illumination on the dark currents of HgMnCdTe and HgCdTe short-wavelength infrared diodes.—73-07585
Indium doping of HgCdTe grown by metallorganic chemical vapor deposition–direct alloy growth using triisopropylindium and diisopropyltellurium-triisopropylindium adduct.—73-11267
Indium-vacancy and indium-hydrogen interactions in $Hg_{1-x}Cd_xTe$ [MCT].—73-13353
Influence of annealing under anodic oxide on changes in the composition of the surface and conversion of the type of conduction of *p*-type $Cd_xHg_{1-x}Te$ ($x$≈0.2) single crystals.—73-07590
Influence of compensating annealing on the 1/*f* noise in $Cd_xHg_{1-x}Te$.—73-07592
Influence of growth dislocations on the electron lifetime in *n*-type $Cd_xHg_{1-x}Te$.—73-01204
Influence of Hg pressure on diffusion coefficient of As in HgCdTe [MCT].—73-13354
Influence of resonant defect states on subband structures in $Hg_{1-x}Cd_xTe$.—73-07600
Integrated heterostructure devices based on II-VI compound semiconductors.—73-11277
Intersubband absorption in (Hg,Cd)Te quantum wells.—73-07619
Intrinsic carrier density and effective mass of electrons in $Mn_xHg_{1-x}Te$.—73-07622
Inversion of the conduction of $Cd_xHg_{1-x}Te$ films subjected to a plasma treatment.—73-15000
Ion mill damage in *n*-HgCdTe.—73-07623
Key issues in HgCdTe-based focal plane arrays: an industry perspective.—73-07627
1/*f* noise in $Hg_{1-x}Cd_xTe$ converted from *n*- to *p*-type by narrative doping.—73-07631
Langmuir-Blodgett film as an insulator in an MIS transistor made from $Cd_xHg_{1-x}Te$.—73-07632
Large improvement in HgCdTe photovoltaic detector performances at LETI.—73-11290
Lattice reflection spectrum of $Cd_{1-x}Hg_xTe$ alloys [0≤$x$≤0.8].—73-15012
Low-temperature epitaxy of HgTe, CdTe, and HgCdTe using flow modulation techniques.—73-07646
Low-temperature magnetic properties of pure and In-doped $Cd_{0.2}Hg_{0.8}Te$ [CMT] single crystals.—73-11298
Low-threshold injection laser in HgCdTe.—73-11300
Magnetic generation of electrons and holes in semimetallic HgTe-CdTe superlattices.—73-07649
Magnetophotoluminescence of a narrow-gap semiconductor $Hg_{0.77}Cd_{0.23}Te$.—73-07656
Magnetothermoelectric power of $Mn_{0.18}Hg_{0.82}Te$.—73-01236
Masses of quantum-size hole subbands of semiconductor heterostructures with different orientations.—73-15037
MBE HgCdTe heterostructure *p*-on-*n* planar infrared photodiodes.—73-11306
Mercury cadmium telluride material requirements for infrared systems.—73-07666
Mercury interstitials in $Hg_{1-x}Cd_xTe$ alloys [investigated] using resonant impact-ionization spectroscopy.—73-07667

Metal-semiconductor work function differences with HgCdTe and their effect on radiation-induced flatband voltage shifts.—73-07669
Microhardness of Hg-containing II-VI alloys.—73-08917
Microinhomogeneities in midwave infrared mercury cadmium telluride grown by metallorganic chemical vapor deposition–interdiffused multilayer process onto GaAs and GaAs/Si substrates.—73-07671
MOCVD-grown CdZnTe/GaAs/Si substrates for large-area HgCdTe IRFPAs.—73-11317
Modeling of in situ monitored laser reflectance during MOCVD growth of HgCdTe.—73-11318
Nanometer fabrication in mercury cadmium telluride [MCT] by electron cyclotron resonance microwave plasma reactive ion etching.—73-11342
Neutron irradiation of $Cd_xHg_{1-x}Te$.—73-07691
New *n*-type doping precursor for MOCVD-IMP [interdiffusion multilayer process] growth of detector quality MCT [HgCdTe].—73-11347
Noise (1/*f*) and dark currents in midwavelength infrared PACE-I HgCdTe photodiodes.—73-07694
Occurrence of a miscibility gap in thin surface layers of $Hg_{1-x}Cd_xTe$.—73-07698
Ordered phase in (Hg, Cd)Te grown by liquid phase epitaxy on CdTe(111)B substrate.—73-08681
Orientation dependence of arsenic incorporation in metallorganic chemical vapor deposition grown HgCdTe.—73-07706
Para-type doping of metallorganic chemical vapor deposition grown HgCdTe by arsenic and antimony.—73-07708
Parameters of the energy band structure of surface layers of zero-gap semiconductors (CdHg)Te and HgTe by the field effect method in electrolytes.—73-01271
Photoemission spectroscopic techniques to assess physical and chemical properties of mercury cadmium telluride.—73-07720
Photoexcitation of shallow acceptors in $Cd_xHg_{1-x}Te$.—73-15094
Photoinduced excess low-frequency noise in HgCdTe photodiodes.—73-11379
Photoluminescence of epitaxial $Zn_xCd_yHg_{1-x-y}Te$ films.—73-01280
Photomagnetic effect and photoconductivity of thin epitaxial $Cd_xHg_{1-x}Te$/CdTe films.—73-11389
Photon-assisted growth of HgTe by metallorganic chemical vapor deposition.—73-07731
Point defects and defect-impurity interaction in $Cd_xHg_{1-x}Te$ and other II-VI semiconductors: facts and conjectures.—73-07739
Preparation and properties of immobilized mercuric reductase in porous glass carriers.—73-03866
Pressure dependence of the luminescence of $Cd_xHg_{1-x}Te$/CdTe heterostructures.—73-15116
Problem of the intrinsic carrier density in $Cd_xHg_{1-x}Te$ solid solutions.—73-01289
Problems of gaseous emissions of mercury from cement plants.—73-10097
Process modeling of point defect effects in $Hg_{1-x}Cd_xTe$.—73-13365
Properties of $n^+p$ junctions made of $Cd_xHg_{1-x}Te$ subjected to local deformation.—73-04454
Properties of (211)B HgCd-CdTe superlattices grown by photon-assisted molecular beam epitaxy.—73-07746
Quantum Hall effect and setback modulation doping in HgTe-CdTe heterostructures.—73-07754
Radiation swelling and sputtering of $Cd_xHg_{1-x}Te$ as a result of a large-dose ion implantation.—73-15134
Real-time control of the molecular beam epitaxial growth of CdHgTe and CdTe/HgTe superlattices using ellipsometry.—73-07764
Recombination mechanisms and transport phenomena in uniaxially compressed $Cd_xHg_{1-x}Te$.—73-11415
Reduced metal-insulator semiconductor tunneling in metallorganic chemical vapor deposition HgCdTe(111)Te films.—73-07766
Resistivity measurements of $HgBa_2Ca_2Cu_3O_{8+x}$ [1223] and $HgBa_2Ca_3Cu_4O_{10+x}$ [1234] superconductors under high pressure.—73-11893
Role of the insulator in determining 1/*f* noise in $Hg_{1-x}Cd_xTe$ integrating MIS devices.—73-11426
Solid-phase laser doping of $Cd_xHg_{1-x}Te$ single crystals.—73-04484
Spectral dependence of the photoconductivity and photomagnetic effect in epitaxial $Cd_xHg_{1-x}Te$/CdTe films with an anodically oxidized free surface.—73-01317
Stress confined in the barriers of type-III HgTe/CdTe superlattices.—73-11457
Structure of low-temperature (170 K) phase and piezoelectric properties of cesium tetrachloromercurate.—73-16336
Substrate issues for the growth of mercury cadmium telluride.—73-11464
Tails of the density of states in $Zn_xCd_yHg_{1-x-y}Te$ solid solutions.—73-15198
Temperature dependence of Auger lifetime in heavily doped $Hg_{1-x}Cd_xTe$.—73-11475
Temperature dependence of the relaxation time of the photoconductivity of *n*-type $Cd_xHg_{1-x}Te$ in a microwave field.—73-07830
Thermodynamic description of metal Hg(Cd)Te systems.—73-08778
Thermomigration of Te precipitates and improvement of (Cd, Zn)Te substrate characteristics for the fabrication of LWIR [long-wavelength infrared] (Hg, Cd)Te photodiodes.—73-11482
$TiN_xO_y$ transparent electrode material for HgCdTe infrared devices.—73-07370
Transformation of the crystal structure of $Cd_xHg_{1-x}Te$ due to ion implantation.—73-11485
Tunneling and 1/*f* noise currents in HgCdTe photodiodes.—73-07844
Use of ellipsometry to characterize the surface of HgCdTe.—73-11496
X-ray diffraction characterization of LPE HgCdTe heterojunction photodiode material.—73-11509
X-ray diffraction study of the interfaces between $Hg_{1-x}Cd_xTe$ crystals and anodic films.—73-15230
X-ray electronic investigation of $Hg_3Sb_2O_7$.—73-08792

**metal matrix,**
Method of making fiber-reinforced metal component.—73-10329
Micromechanics-based strength prediction methodology for notched metal-matrix composites.—73-03341

**metal oxide,**
Aerosol chemical vapor deposition of metal oxide films.—73-12336
Anisotropic metal oxide etch.—73-01839
Apparatus comprising a ceramic superconductive body and method for producing such a body.—73-04830
Autocatalytic effect in the processes of metal oxide reduction: I, Kinetic model of reduction.—73-02145
Cation dopant sites in metal oxides [studied] by EXAFS and computer simulation techniques.—73-12543
Ceramic [conductive] material and process for its production.—73-14742
Ceramic materials.—73-12347
Characterization of the metal oxide–polyacrylic acid [PAA] compounds by Fourier transform infrared spectroscopy.—73-08572
Connection between high-temperature superconductors and superconductor precursors.—73-15675
Dense high-temperature ceramic oxide superconductors.—73-04834
Effects of surface heterogeneity on ion adsorption by metal oxides and by soils.—73-16468
Electrochemically induced characteristic luminescence of metal ions at anodic valve metal oxides.—73-04091
FTIR spectra of ethylene molecularly adsorbed on metal oxides.—73-12590
High-$T_c$ superconducting oxides.—73-01708
Laser ablation method for forming oxide superconducting thin films using a homogenized laser beam.—73-04840
Mechanisms of wetting in reactive metal/oxide systems.—73-00249
Metal-metal oxide systems for nanocomposite formation by reaction milling.—73-09207
Method for forming an oxide superconducting material.—73-15683
Method for producing coprecipitated multicomponent oxide powder precursors using guanidine oxalate as precipitating agent.—73-05225
Method for the production of a structured composite with high-temperature superconductor material.—73-11969
Method of fabricating high-dielectric constant oxides on semiconductors using a GE buffer layer.—73-14751
Method of forming isolated regions of oxide.—73-05229
Method of forming water-repellent metal oxide film coated on glass substrate.—73-05230
Method of manufacturing an oxide superconductor/metal laminate.—73-01720
Method of manufacturing metal oxide ceramic composite powder.—73-05232
Method of manufacturing oxide superconducting materials.—73-04852
Method of producing oxide superconductor.—73-11977
Oxide superconducting device having uniform oxygen concentration.—73-01726
Oxide superconductor comprising $BaBO_3$ (where B is Zr, Sn, Ce, or Ti).—73-01728
Preparation of $SiO_2$-$M_xO_y$ [M=Ti, Sb, V, Zr, Sn] thin films and gels by sol-gel method using silicic acid and metal halides.—73-02970
Process for preparing crystalline mixed metal oxides.—73-02060
Process for producing an oxide superconductor from alkoxides.—73-11994
Superconducting device having an extremely thin superconducting channel formed of oxide superconductor material.—73-01740
Superconducting device with *c*-axis orientation perpendicular to current flow.—73-15695
Superconductive logic device.—73-12004
Superconductive tube for magnetic shielding and manufacturing method therefor.—73-04885
Thermochemical evaluation of electron transport in metal oxides.—73-17103
Water-repellent metal oxide film coated on glass substrate and method of forming [the] same.—73-03972

**metallization,**
Bonded type piezoelectric apparatus, method for manufacturing the same, and bonded type piezoelectric element.—73-15303
Ceramic coaxial resonator.—73-14744
Composition for metallizing ceramics.—73-03680
Copper or molybdenum metallization of ceramics by ion beam dynamic mixing.—73-03569
Copper or molybdenum metallization of ceramics by ion beam dynamic mixing.—73-10210
Indirect-bonded metallization of aluminum nitride.—73-00979
Metallizing of silicon carbide ceramics with manganese vapor.—73-03617
Process for obtaining side metallization and articles produced thereby.—73-10340

**metals,**
Classifying filters for refining metals.—73-00788
Comparison of U.S. and international glass/metal interactions after five years' burial in salt.—73-08288
Electric joining method of material including ceramics.—73-10310
Joining of metal films to carbon-carbon composite material by metal plasma immersion ion implantation.—73-00246
Measuring hot metals on the move.—73-12162
Metallic powders and thick film materials for electronic applications.—73-04136
Method of making ceramic composite articles.—73-03696

**metaphosphates,**
Magnetooptics of *4f-4f* transitions in rare-earth paramagnetic glasses.—73-14221

**methane,**
Methane dimerization through ion conductors ($\beta$-$Al_2O_3$).—73-04138

**mica,**
Ambient-temperature mechanical response of alumina-fluoromica laminates.—73-13492
Application of lithia–mica in lead-free low-temperature glaze.—73-10794
Changes in swelling characteristics and structure of Na fluorine micas with Ga and Al substitutions.—73-02157
Distance measurements by atomic force microscopy [AFM] on the angstrom scale: the effect of the specimen height.—73-08396
Effect of mica particles on the properties of composites with a matrix of gypsum-free portland cement: I.—73-09911
Mechanical properties of barium-mica-containing glass-ceramics.—73-00513
Mica.—73-12288
Preparation of high-strength calcium-mica-containing machinable glass-ceramics.—73-00684
Preparation of high-strength calcium-mica-containing machinable glass-ceramics.—73-10582
Surface forces between ZnS and mica in aqueous electrolytes.—73-07362
Surface roughness of plasma-treated mica.—73-17206
Vermiculite.—73-12305
Zirconia-pillared clays and micas.—73-02001

**microcracking,**
Ac impedance spectroscopy study of microcracking in cement-based composites during compressive loading.—73-03430
Critical stress of microcracking in alumina evaluated by acoustic emission.—73-06362
Effects of matrix microcracking on the oxidation behavior of carbon-fiber/glass-matrix composites.—73-07019
Influence of the network of microcracks upon the crack propagation behavior inside of transparent zirconia.—73-06463
Microcrack toughening mechanism in brittle matrix composites.—73-06489
Microcrack tunneling in brittle matrix composites driven by thermal expansion mismatch.—73-17397
Microstructural mechanics model of anisotropic-thermal-expansion-induced microcracking.—73-09480
Quantification of microcracking in brittle matrix composites.—73-05081
Stresses around a partly microcracked hole in certain ceramic materials under internal pressure.—73-03358
Subcritical crack growth [SCG] of macro- and microcracks in ceramics.—73-06535

**microcrystals,**
FTIR and HREM study of some morphological and adsorptive properties of monoclinic $ZrO_2$ microcrystals.—73-03145
New selective molecular beam epitaxial growth method for direct formation of GaAs quantum dots.—73-11349
Preparation and optical properties of CdS microcrystallites deposited in porous Vycor glass.—73-07064
TEM observation of submicrocrystals in borosilicate glass.—73-03769
Textured coatings from colloidal suspensions of faceted oxide microcrystals.—73-06112

**microelectronics,**
Applications of spectroscopic ellipsometry to microelectronics.—73-15778
Ceramics in microelectronics.—73-04061
Coatings for microelectronic devices and substrates.—73-12354
Increased microelectronics packaging capabilities through green tape technology.—73-10961
Ion projection lithography for vacuum microelectronics.—73-11285
Lithographic processes in microelectronics.—73-07638
Materials in microelectronics.—73-07339
Microelectronic devices: prospects for rare earths.—73-04405
Tunneling through intermediate (19–50 Å) oxide layer of silicon semiconductor–tunneling transparent insulator–semiconductor structure.—73-15218

**microhardness,**
Microhardness of Hg-containing II-VI alloys.—73-08917
Microhardness of $Zn_xCd_yHg_{1-x-y}Te$ solid solutions.—73-16543

**microscopy,**
Acoustic microscopic characterization of fiber/matrix interface of SiC fiber-reinforced reaction-bonded $Si_3N_4$ matrix composites.—73-12102
Advanced camera for photomicrography.—73-12103
Ceramic surface preparation—microscopy analysis.—73-05023
Distance measurements by atomic force microscopy [AFM] on the angstrom scale: the effect of the specimen height.—73-08396
FIM [field ion microscopy] investigation of high-temperature superconducting $Bi_2(Sr, Ca)_3Cu_2O_y$.—73-01552
Interpretation of force curves in force microscopy.—73-15809
Liquid immersion-polarized light microscopy as a powerful tool in the research of ceramic processing.—73-15812
Microanalytical investigation of bonded ceramic materials.—73-03162
New near-field microscope offers many potential uses.—73-05073

New test methods for engineering ceramics—in situ microscopy investigation.—73-01920
Nondestructive testing of ceramics by confocal laser scanning microscopy.—73-05076
Pick the right probe for your SPM (scanning probe microscopy) needs.—73-12176
SEM for nontraditional users.—73-08441
Semiconductor researchers probe for new SPM [scanning probe microscopy] uses.—73-08442
Structural examination of injection-molded ceramics by polarized transmission microscopy.—73-06289
Subnanometer microscopy the easy way: an under-utilized tool for reliability assurance.—73-05088
Substitute for the comparison microscope.—73-15852
Ultrasonic microscopy.—73-05095

**microspheres,**
Apparatus for production of hollow glass microspheres.—73-04957
Method of making ceramic microspheres.—73-02051
Process for the production of a microspheroidal powder of low dispersity.—73-05009
Very high-*Q* whispering-gallery mode resonances observed on fused silica microspheres.—73-07100
X-ray spectral analysis of sulfur in the technology of hollow glass microspheres.—73-06990

**microstructure,**
Ceramic materials: microstructural and interface analysis as a prerequisite for the optimization of microstructures: I, Introduction and microstructural systems.—73-06192
Ceramic materials: microstructural and interface analysis as the prerequisite for the optimization of microstructures: V, The microstructure of long-fiber-reinforced ceramics and glasses.—73-13374
Correlation of green microstructure of $Al_2O_3$ with colloid/interface variables.—73-17121
Damage resistance of in situ reinforced [ISR] silicon nitride.—73-06367
Deep three-dimensional microstructure fabrication for infrared binary optics.—73-07434
Development of microstructures in plain cement pastes hydrated at different temperatures.—73-00061
Direct observation of microstructure change during densification of silicon nitride ceramics with a novel characterization method.—73-06208
Effect of grain size on the microstructure and properties of ceramics.—73-03136
Effect of microstructural design on the electrical properties of $Y_2O_3$-stabilized $ZrO_2$.—73-12773
Effect of microstructure on the fracture toughness of a metal-matrix composite.—73-03269
Effect of structure on the properties of the superconducting ceramic Y-Ba-Cu-O.—73-01532
Effects of deposition temperature on the microstructure of MOCVD $YBa_2Cu_3O_{7-\delta}$ thin films.—73-08042
Effects of microstructure of ceramics on microfracture induced by round indenter.—73-06396
Fabrication of overpass microstructure in GaAs using isotropic reactive ion etching.—73-07524
Grain-boundary characteristics in PLZT, GBBLC [grain-boundary barrier layer capacitors], and high-$T_c$ superconducting ceramics and their relation to properties.—73-13400
Impedance analysis as a tool for designing ß´´-alumina microstructures.—73-00978
In situ formation of metal-ceramic microstructures by partial reduction reactions.—73-06805
Influence of microstructure on the mechanical behavior of silicon nitride ceramics.—73-06233
Interpretation of a $YBa_2Cu_3O_{7-\delta}$ canvas structure in terms of elasticity.—73-01582
Machinability of different dental materials for CAD/CAM systems.—73-06471
Micromechanical processing for ordered structure.—73-02896
Microstructural characterization of composites via electrical measurements.—73-17154
Microstructural compromise in the heavy clay industry.—73-03981
Microstructural control of carbon fiber/carbon composites using high carbon yield pitches as matrix precursor.—73-13136
Microstructural control of LAS ceramics: II, Influence of $Li_2O$-$4B_2O_3$ frit addition on the microstructure and thermal expansion of ß-spodumene.—73-03163
Microstructural design of C-C composite.—73-05269
Microstructural design of $Si_3N_4$-based ceramics.—73-05914
Microstructural implications by studying water vapor adsorption.—73-03164
Microstructure and anelastic properties of $Si_3N_4$ ceramics.—73-03166
Microstructure and composition analysis of high-$T_c$ $YBa_2Cu_3O_{7-x}$ oxides studied by analytical electron microscopy.—73-01608
Microstructure and cracking in pure and substituted $YBa_2Cu_3O_{7-\delta}$.—73-03167
Microstructure and electrical properties for $LiXSiO_4$ (X=Al, Y, La, Nd, Sm, Gd, Dy, Ho, Er, Yb).—73-13423
Microstructure and grain growth of polycrystalline silicon deposited using silane and disilane.—73-06253
Microstructure and microchemistry of highly pure mullite ceramics.—73-03168
Microstructure and properties of melt-processed Bi-2212 ($Bi_2Sr_2CaCu_2O_x$).—73-11835
Microstructure and properties of nanostructured oxides.—73-09484
Microstructure and properties of plasma ceramics.—73-09486
Microstructure characterization of gas-pressure-sintered ß-silicon nitride containing large ß-silicon nitride seeds.—73-09488
Microstructure control of porous silica glass with monodispersed spherical silica particles.—73-00664
Microstructure development and stacking fault annihilation in ß-SiC powder compact.—73-06255
Microstructure effects on humidity-sensitive electrical resistivity of carbon fibers.—73-05597
Microstructure evolution in sintered CoO under electric fields.—73-13429
Microstructure of (Nb,Ti)C-Ni composite.—73-06832
Microstructure of barium-deficient superconducting Y-Ba-Cu-O thin films: observations using transmission electron microscopy.—73-04772
Microstructure of boron carbide.—73-06257
Microstructure of hardened cement paste—a new interpretation.—73-00144
Microstructure of mullite ceramics used for substrate and packaging applications.—73-03172
Microstructure of pressureless-sintered hBN.—73-06259
Microstructure of silicon nitride ceramics and morphology of surface damage induced by round indenter.—73-17172
Microstructure of Yixing red stoneware and its permeability.—73-14663
Microstructure, *R*-curve behavior, and reliability of structural ceramics.—73-09651
Microstructure, microchemistry, and flexural strength of mullite ceramics.—73-13431
Microstructures and LPG sensing properties of maghemite ($\gamma$-$Fe_2O_3$).—73-03177
Microstructures of diamond films deposited on (100)silicon wafer by microwave plasma-enhanced chemical vapor deposition.—73-06261
Microstructures of metal oxide composites formed by solid-state displacement reaction.—73-17174
Particle agglomerate effect on intermediate/final microstructure.—73-13436
Permeability and microstructure of concrete: a review of modeling.—73-03515
Phonon bottleneck effects in the course of carrier heating in semiconductor microstructures.—73-07711
Possibilities and problems of semiconductor quantum microstructures.—73-15107
Processing, microstructure, and mechanical properties of zirconium phosphate/mullite whisker composites.—73-16953
Quantitative analysis of microstructure of self-reinforced silicon nitride ceramics.—73-17186
Relation between microstructure and color tone of skin layer and bulk area of silicon nitride ceramics.—73-06277
Relationship between gypsum content, porosity, and strength in cement: I, Effect of $SO_3$ on the physical microstructure of portland cement mortars.—73-00183
Relationship between microstructure and optical properties in high-$T_c$ superconductors.—73-11890
Relationship between microstructure and residual stress in $YBa_2Cu_3O_{7-x}$.—73-01648
Residual $\alpha$-$Si_3N_4$ in O´ crystals in $CeO_2$-doped O´+ß´-SiAlON ceramics.—73-17193
Scale of microstructure effects on the impact resistance of $Al_2O_3$.—73-09668
Small-angle neutron scattering study of the microstructure in container glass in correlation with workability problems.—73-00702
Split reflections from broken mirrors: symmetry breaking in the making of material microstructures.—73-06283
Structure of CdTe(111)B grown by MBE on misoriented Si(001).—73-11461
Submicrometer hydroxyapatite bioceramics.—73-05182
TEM study of microstructures of growth interface in ultrathin $YBa_2Cu_3O_7$ films.—73-01689
Universal fluctuations and impurity charge exchange in GaAs-based microstructures.—73-04505

**microwaves,**
Activities of microwave processing of ceramics in Germany.—73-05685
Analysis of the microwave sintering effect in NaCl using molecular dynamics simulations.—73-05691
Application of microwave heating to combustion synthesis and sintering of $Al_2O_3$-TiC ceramics.—73-05695
Application of the Boltzmann-Ehrenfest [B-E] principle to containerless microwave processing in microgravity.—73-05696
Applications of microwave radiation in environmental remediation technologies.—73-06556
Applicators for industrial microwave processing.—73-05100
Ceramic matrix composites by microwave-assisted CVI.—73-05700
Ceramic Transactions, Volume 36: Microwaves: Theory and Application in Materials Processing II.—73-17519
Chemical vapor infiltration using microwave energy.—73-04966
Crystallization of grain-boundary phases in silicon nitride with low additive contents by microwave annealing.—73-05724
Crystallization of sol-gel-derived barium aluminosilicate in a 2.45-GHz microwave field.—73-05725
Densification and grain growth of alumina heated by microwave.—73-05732
Development of inorganic microwave dissolution.—73-15789
Diamond chemical vapor deposition (CVD) via microwave-excited plasma from water-ethanol solutions.—73-05741
Dielectric ceramic composition and multilayer microwave device employing the same.—73-04200
Dielectric ceramic composition used for producing dielectric resonator or filter for microwave application.—73-11011
Dielectric ceramic compositions and microwave devices using the same.—73-04204
Dielectric resonator or filter for microwave application, and method of producing the dielectric resonator of filter.—73-14745
Effect of glass additions on BaO-$TiO_2$-$WO_3$ microwave ceramics.—73-10936
Effect of microwave heating on the mass transport in ceramics.—73-06156
Experimental validation of numerical simulations of the microwave sintering process.—73-05796
Field-dependent crossover in the vortex response at microwave frequencies in $YBa_2Cu_3O_{7-\delta}$ films.—73-08079
Formation of hot spots in microwave-heated ceramic rods.—73-05813
High-temperature dielectric property measurements of engineering ceramics.—73-05052
High-temperature microwave response of industrial ferrites.—73-05577
Influence of heat-treatment temperature on microwave absorbing properties of Ni-Zn ferrite.—73-04616
Joining ceramics using microwave energy.—73-02882
Key issues in microwave process technology.—73-05885
Key issues in microwave processing, research, and commercialization—an open forum.—73-05886
Materials processing using a variable-frequency microwave furnace.—73-05120
Measuring microwave conductivities of superconducting films.—73-11828
Method of sintering [ceramic] materials with microwave radiation.—73-15772
Microstructural characterization of microwave-sintered silicon nitride ceramics.—73-05913
Microwave absorbing [glass] article.—73-14554
Microwave application in precision investment casting operations.—73-05915
Microwave applications to process nuclear and hazardous waste.—73-04893
Microwave characteristics of fire-damaged high-strength concrete.—73-10052
Microwave characterization of a ceramic green body for an industrial drying process.—73-13137
Microwave densification of porous silica gel.—73-05916
Microwave destruction/vitrification of electronic components.—73-06579
Microwave dielectric ceramic composition.—73-01061
Microwave dielectric ceramic composition.—73-14754
Microwave dielectric ceramics—an overview.—73-10974
Microwave energy-assisted chemical vapor infiltration.—73-01869
Microwave field effects on ionic transport in ionic crystalline solids.—73-06168
Microwave heating of ceramics in a single-mode mitered bend cavity.—73-05917
Microwave hybrid heating of alumina filaments.—73-05918
Microwave joining of Bi-based 2223 superconductor and its microstructure features.—73-04774
Microwave joining of ceramics, silicon nitride and silicon carbide.—73-16869
Microwave joining of dissimilar SiC ceramics.—73-05920
Microwave material interactions and process design modeling.—73-04139
Microwave preparation of zeolite Y and ZSM-5.—73-09210
Microwave processing of Ni-$Al_2O_3$ composites.—73-03622
Microwave processing of rare-earth-oxide-doped ZnO varistors.—73-04406
Microwave processing of simulated nuclear waste glass: II.—73-04894
Microwave radiation of refractory bricks: II, Experiments and results.—73-01958
Microwave radiation of refractory bricks: III, Conclusions for practical application.—73-01959
Microwave sintering of calcium strontium zirconium phosphate [CSZP] ceramics.—73-05922
Microwave sintering of hydroxyapatite-based composites.—73-05923
Microwave sintering of large alumina bodies.—73-05924
Microwave sintering of Ni-Zn ferrites.—73-04627
Microwave sintering of silicon nitride.—73-05925
Microwave sintering of $ZrO_2$-12 mol% $CeO_2$.—73-05926
Microwave sintering.—73-05927
Microwave studies in high-temperature superconductors.—73-11836
Microwave susceptor materials in the $(Mg_xNi_{1-x})O$ system for high-temperature use in air.—73-05174
Model of the microwave response in granular Bi-Sr-Ca-Cu-O thin films.—73-11839
Modeling the microwave process—challenges and new directions.—73-05931
New trends of microwave processing of ceramic materials.—73-02906
Nonlinear electrodynamics of $YBa_2Cu_3O_7$ thin films in the microwave region.—73-08148
Nonresonant microwave absorption in granulated superconductors.—73-01617
Numerical model for the modes of a lossy, coaxially loaded cylindrical cavity.—73-05599
Optimum bias conditions for *K*-band microwave mixing using YBaCuO step-edge microbridge Josephson junction.—73-11853
Permittivity adjustment and impedance matching of ferrite composite microwave absorber.—73-04634
Problems and opportunities in microwave joining of ceramics.—73-05993
Processing of complex sintered reaction-bonded silicon nitride parts by microwave heating.—73-06000
Rapid thermal annealing of semiconductors by microwave energy.—73-09291
Rapid-rate sintering of anatase-type $TiO_2$ by microwave heating.—73-09292
Rapid-rate sintering of ZnO by microwave heating.—73-06010
Reaction-rate-controlled microwave processing of ceramic materials.—73-06013
Removal of polymethyl methacrylate binder from alumina using conventional and/or microwave heating.—73-06019

Repair of glass by sol-gel coating using either conventional or microwave heating.—73-03884
Results of the Workshop on Microwave-Absorbing Materials for Accelerators [MAMA]: a personal view.—73-05629
Scaling up the microwave firing of ceramics.—73-06028
System of dielectric ceramic compositions suitable for microwave applications.—73-11054
Temperature gradients in microwave processing: boon and bane.—73-06110
Temperature measurement in a 2.45-GHz microwave furnace.—73-05089
Thermal acceleration of portland cement mortars with microwave energy.—73-00198
Thermal analysis of microwave processing of ceramics.—73-06115
Transient temperature behavior of a sphere heated by microwaves.—73-06125
Use of a variable-frequency microwave furnace [VFMF] for large-area, uniform processing.—73-05135
Via hole process for GaAs monolithic microwave-integrated circuit using two-step dry etching.—73-11506

**migration,**
Coherency strain energy and the direction of chemically induced grain-boundary migration in $Al_2O_3$-$Cr_2O_3$ and $Al_2O_3$-$Fe_2O_3$.—73-09439
Defect cluster model for ion migration in solid electrolytes.—73-03083
Effect of TiW as adhesion layer and underlying metal on electromigration characteristics of tungsten via plugs.—73-03584
Electromigration process in glasses for optoelectronic applications.—73-14371
Migration of ions in concrete due to cathodic protection current.—73-03502

**mills/milling,**
Advantages of external material recirculation in vertical roller mills.—73-12013
Bevel-gear planetary gear units for roller mills.—73-04902
Ceramic oxides prepared by mechanical processing.—73-16665
Choice of casting alloys for machine elements for equipment in milling and crushing installations.—73-01767
Colloid mills: theory and experiment.—73-04906
Energy transfer in the mechanical alloying process in the collision regime.—73-16762
Fine and ultrafine milling.—73-04921
Focused ion-beam-induced deposition and ion milling as a function of angle of ion incidence.—73-09135
Grinding bodies from silicon nitride for fine milling of ceramic materials.—73-09152
Increasing the roller mill capacity in line 8 of Cementa AB's Slite plant.—73-03483
Instrumentation for the dynamic analysis of tube mills.—73-12038
Jet mills in the silicate industries.—73-12039
Mechanochemical effect for some $Al_2O_3$ powders by attrition milling.—73-09203
Mechanochemical effects of high-energy attrition milling on the $Bi_2Sr_2CaCu_2O_x$ superconductor.—73-04771
Metal-metal oxide systems for nanocomposite formation by reaction milling.—73-09207
Method of optimally operating a computer numerical control milling machine to mill optimal high density interconnect substrates.—73-04997
Nanocomposite formation and combustion induced by reaction milling.—73-05932
New pearl mills.—73-04934
Operating results of OK roller mills in Japanese and Korean cement plants.—73-03511
Opportunities for optimizing roller grinding mills.—73-12051
Optimum rotating speed of wet ball mills.—73-12053
Raising the throughput of the roller grinding mill at the Slite [Sweden] cement works.—73-10124
Roller mill technology.—73-04948
Utilization of dust from Raymond mill.—73-10905

**mineral fibers,**
Brittleness of mineral wool fibers.—73-02731
Contribution to comparability of in vitro and in vivo manmade mineral fiber (MMMF) durability experiments.—73-10424
Cupola furnace complex for mineral wool production.—73-01946
Potential application of natural minerals in ceramic and metal matrix composites.—73-13169
Reoriented insulation assembly and method.—73-00762

**mineralizers,**
Action mechanism of mineralizers in synthesis of $ZrO_2$-$SiO_2$ ceramic pigments.—73-09009
Effect of fluorite-gypsum composite mineralizer on the microstructure and properties of portland cement clinker phase.—73-09905
Effect of the composite mineralizers of $CaF_2$, $CaSO_4$, and ZnO on the formation of the portland cement clinker in a rapid heating-up burning.—73-09922
Effects of mineralizer on sintering of alumina.—73-13033
Effects of mineralizers on $PbTiO_3$ films prepared by hydrothermal method.—73-09104
Effects of mineralizers on $PbTiO_3$ films prepared by hydrothermal method.—73-13829
Research and application of composite mineralizer in rotary kiln.—73-10139
Role of mineralizers in alite formation in a rice husk ash–$CaCO_3$ raw mix.—73-10143

**mineralogy,**
Mineralogy and micromorphology of Chalcolithic and Early Bronze Age Ikiztepe ceramics.—73-09789

**minerals,**
Crystal structure features of natural hydroxyl-containing cancrinite.—73-02184
Crystal structure of natural Na,Ca scapolite—intermediate member of the marialite-meyonite family.—73-02202
Crystal structure of new natural sulfatocarbonate, $Na_{25}BaTR_2(CO_3)_{11}(HCO_3)_4(SO_4)_2F_2Cl$.—73-16088
Crystal structure of olympite, $LiNa_5(PO_4)_2$.—73-16091
Crystal structure of rare-earth analog of ilerite.—73-16092
Crystal structure of rinkite from Khibiny mountains.—73-02210
Crystal structure of Sr-containing britholite.—73-02214
Crystal structure of volkovskite, $KCa_4B_{22}O_{32}(OH)_{10}Cl4H_2O$, from Nepsky deposit in Eastern Siberia.—73-16097
Dehydration and rehydration of magadiite and kenyaite.—73-02229
Determination and refinement of structure of kuznetsovite mineral from X-ray powder pattern.—73-02232
Dispersion of magadiite particles.—73-02240
Efficient algorithm for mineral processing data adjustment.—73-01779
Ir investigation of mixed-layer minerals from Seilitz.—73-01983
Lead minerals and compounds.—73-12282
Lithium minerals review.—73-12285
Lithium minerals.—73-12286
Microstructural and analytical characterization of some commercial and experimental mineral glass fibers.—73-10457
Mineral ionic conductor—saponite.—73-04140
Modulated structure of lazurite from Southwestern Pamirs deposits.—73-16220
Mulcoa: quality minerals for industry.—73-01988
Nonmetallic mineral industries in Europe, with particular reference to the lime industry.—73-15910
Pyrophyllite.—73-12293
Refinement of modulated crystals. Structure of kimrite.—73-02423
Relationship between properties of clays and additives for their slurries.—73-10894
Strontium.—73-12302
Synthesis, crystal structure, and magnetic properties of $CO_3(HPO_4)_2(OH)_2$ related to the mineral lazulite.—73-02503
Talc.—73-12303
Testing abrasive wear in mineral comminution.—73-01833

**mines and mining,**
Operational raw material control during clay mining.—73-12291

**mirrors,**
Analysis of irregular fluctuations in a self-pumped $BaTiO_3$ phase-conjugate mirror.—73-01073
Bulk GaAlAs mirror as a saturable absorber for subpicosecond pulse generation around 835 nm.—73-01086
Improvement of response speed of a $BaTiO_3$ self-pumped phase-conjugate mirror by crystal heating and beam focusing.—73-02618
Monolithic, fully dense silicon carbide mirror and method of manufacturing.—73-12502

**miscibility,**
Isomorphic miscibility of the metavanadates of calcium, copper, and zinc.—73-16190

**mixed alkali effect,**
Activation energy of ionic transport in mixed alkali glasses.—73-14677
Decay function Kohlrausch exponent for the electrical modulus of mixed alkali glasses.—73-00445
Electrical conductivity and mixed alkali effect in $K^+$/$Rb^+$ $\beta''$-$Al_2O_3$ ceramics.—73-00956
Infrared reflectance investigation of the structure of mixed alkali glasses.—73-14010
Internal friction of mixed alkali aluminogermanate glasses—complexity of mixed alkali peak.—73-00358

**mixers/mixing,**
Automatic plaster mixing for molds for ceramics—an update.—73-08320
Effect of rheological properties on power consumption with helical ribbon agitators.—73-15721
Fluidized mixing—the efficient way to combine bulk powders.—73-04922
Large scale mixing—according to the mixing bed technique.—73-12040
Mixing in the ceramic industry—an introduction into theory+practice.—73-12046
Nanosecond four-wave mixing in semiinsulating GaAs.—73-00998
Nearly degenerate multiwave mixing in quasi-equilibrium semiconductors.—73-11345
New mixing plant for cementitious materials at Rohrbach Zement [Dotternhausen, Germany].—73-00150
Rational use of propeller mixers.—73-01827
Rational use of propellor mixers.—73-01828
Three-chamber grinding mixer with improved rotor.—73-01834
Titanium oxide formation by dynamic ion beam mixing.—73-03064

**mixtures,**
Controlling the composition of the heat-insulating mixtures used for teeming steels.—73-00792
Effect of mixture proportion on zero-slump concrete for artifical fish reef.—73-09913
Zeolite phi: a physical mixture of chabazite and offretite.—73-16401

**mobility,**
Determination of the mobility and transport properties of photocarriers in $Bi_{12}GeO_{20}$ by the time-of-flight technique.—73-09399
Electron mobility in single- and polycrystalline $Ga_2O_3$.—73-07493
Hall and drift mobilities in molecular beam epitaxial grown GaAs.—73-14954
Microscopic model of the mixed mobile ion effect.—73-14226
Mobility control of ceramic grain boundaries and interfaces.—73-09212
Temperature-dependent mobility in single-crystal and chemical-vapor-deposited diamond.—73-03115

**modeling/models,**
30 years of scale modeling in SVUS—Glass Institute Hradec Kralove.—73-00715
Analysis and modeling of glass melting.—73-14318
Analysis of furnace performance through 3-D physically based modeling.—73-14319
Analysis of the working of a high-productivity flat-glass furnace using a physical modeling method.—73-08462
Analytical modeling of the propagation of a thermal reaction front in condensed systems.—73-05692
Analytical modeling of the propagation of thermal reaction front in condensed systems—correction.—73-12918
Antiferromagnetic transition temperature and spin correlations in quasi-two-dimensional spin-fermion model.—73-07989
Atomistic models for silicate glasses.—73-05156
Brown tetraxial.—73-07237
Computational model of reactive sputtering.—73-09046
Computer modeling of the forming process.—73-03827
Computer-aided modeling tools for composite materials.—73-17469
Description of molecular distortions: VI, Spectra-structure correlations in orthophosphate compounds.—73-10360
Development by simulation.—73-05108
Development of computer simulation method for slip casting process.—73-16703
Dynamic modeling of the heating field development on spatial models.—73-14355
Equation which relates the real three-dimensional aspect ratio to the apparent cross-sectional aspect ratio.—73-03281
Evaluation of glass quality via 3-D mathematical modeling of glass-melting furnaces.—73-00624
Flux quantization and pairing in 1-D CuO models.—73-16155
Formulation of a statistical thermodynamic model for the electron concentration in heavily doped metal oxide semiconductors applied to the tin-doped indium oxide system.—73-01169
Fusibility diagrams of the multicomponent systems with neutral solvent (on the pattern of the system Pb-In-Ga-As-Sb).—73-12594
Glass tank geometries [investigated] by means of a mathematical model.—73-12222
Hartree-Fock periodic study of bulk ceria.—73-05413
Interlayer tunneling model for the *c*-axis resistivity in high-temperature superconductors.—73-15522
Mathematical and physical modeling of glass conditioning.—73-00658
Mathematical model of cationic order in structures of band and layered silicates.—73-02325
Mathematical model of one-dimensional heating and cooling of flat ceramic bodies inside the tunnel kiln.—73-02890
Mathematical modeling in thermal plasma spraying.—73-09198
Mathematical modeling of the dynamics of the concrete mix.—73-00132
Mathematical modeling of the effect of air ventilation on solids recycle rate and ball mill performance.—73-04930
Mathematical simulation in glass melting.—73-00659
Microscopic model for a very stable incommensurate modulated mineral: mullite.—73-08667
Microwave material interactions and process design modeling.—73-04139
Model for Hydro and Hydro-Abrasive Jet Machining of carbon fiber-reinforced plastic composites.—73-05928
Model for the atomic layer epitaxy of GaAs.—73-01246
Model for the oxygenation of the $YBa_2Cu_3O_{7-x}$ 90-K superconductor.—73-11838
Model of the Nernst-Ettinghausen effect in chalcogenide glasses.—73-01247
Modeling of the structure and compressibility of quartz with a molecular potential and its transferability to cristobalite and coesite.—73-08669
Modeling of the structure of melts of the system $Na_2O$-$B_2O_3$-NaCl by the molecular dynamics method.—73-14040
Modeling the microwave process—challenges and new directions.—73-05931
Numerical model for the modes of a lossy, coaxially loaded cylindrical cavity.—73-05599
Optimization of robotic trajectories in the atmosphere- and temperature-controlled plasma spray process on ceramic substrate using heat flow modeling.—73-09227
Paradigm or paradox: Kuczynski's model of sintering.—73-03403
Physical modeling.—73-14458
Prediction model to assist plasma and HVOF spraying.—73-16904
Proposed phenomenological PTCR model and accompanying phenomenological PTCR chart.—73-04457
Rationalized ac impedance model for microstructural characterization of hydrating cement systems.—73-00182
Reactive sputtering model applied to AlN.—73-02993
Recent developments in the modeling of crack growth in ceramics with transformation behavior.—73-09661
Regression models of the glass physical properties dependence on temperature and composition and their application to the glass composition optimization.—73-14270
Simple model for the formation of compressive stress in thin films by ion bombardment.—73-06046
Simple model of refining in glass-melting furnace with vertical flow and covered level.—73-07172
Simulation and control of glass-melting furnaces.—73-10597

Spin excitations of the extended *t-J* model: neutron scattering.—73-08735
Structural analysis of new glass—computer-aided modeling of glass structure.—73-03812
Structural transitions in one-dimensional model of glass.—73-14504
Structure, non-Newtonian flow, and relaxation in glass-forming melts.—73-14506
Temkin-type model for the description of induced heterogeneity: CO adsorption on group IV transition metal dioxides.—73-08770
Thermodynamic model for blended cements.—73-03547
Tunnel kiln simulation model Q-KILN.—73-05133
Universal tight-binding model for II-VI semiconducting compounds.—73-04506

**modification,**
Carbons and fullerenes—chemical modifications of fullerenes.—73-12416
Development of modified partition board of silicon-aluminum-magnesia.—73-10720
Effect of rare-earth additives on electromechanical properties of modified lead titanate ceramics.—73-00952
Efficient modifier for concretes.—73-03462
Manganese- and tantalum-modified titanium alumina alloys.—73-03688
Modification of design of dog house in end port glass tank furnace.—73-03859
Modified fly ash.—73-06691
NMR study of organically modified silicates.—73-03746
Relation between $T_g$ of PEG [polyethylene glycol] protective acrylic polymer and physical properties, crack inhibition property.—73-10134
Sol-gel-derived ORMOSIL's [organically modified $SiO_2$ materials]—spectroscopic monitoring of hydration level with atmosphere.—73-03890
Structural modification in phillipsite-rich tuff induced by thermal treatment.—73-12700
Surface modification of materials produced by dynamic ion mixing.—73-10281

**modulators,**
0–1 GHz waveguide 10.6 μm GaAs electrooptic modulator.—73-01368
Design of InGaAs-InAlAs multiple-quantum-well optical modulators.—73-01124

**modulus of elasticity,**
Effective elastic moduli of porous ceramic materials.—73-03273
Measuring moduli of elasticity at high temperatures.—73-15816
Porosity dependence of material elastic moduli.—73-12864
Temperature dependence of the modulus of elasticity of industrial glasses.—73-07084

**moisture,**
Determination of moisture content in fine ceramic powders using the Karl Fischer (aquametry) method.—73-08389
Effect of moisture content of granules on the properties of green and sintered bodies of alumina ceramics.—73-16733
Moisture diffusion in soil–cement mixtures and compacted lean concrete.—73-00145
Moisture expansion in the lobes of isostatically pressed high voltage insulators.—73-01800

**molds/molding,**
Adiabatic molding of ceramics.—73-15705
Advantages of mold passivation.—73-00586
Aspects of forming ceramic bodies by the molding process.—73-01762
Automatic swabbing system is working well for Wheaton.—73-10498
Ceramic die for molding glass member.—73-12450
Ceramic log molding process.—73-04963
Clay-mineralogical investigation of tertiary natural sands from Grefrath and Suchteln [Germany] for use as molding sands.—73-01980
Development and application of porous plastic molds for the casting of sanitary ware and dinnerware.—73-08331
Factors affecting quality of gypsum molds for sanitary porcelain.—73-07253
Features of molds for quasi-isostatic pressing.—73-07128
Following numbers to productivity benefits.—73-15726
Glass molding process and molding apparatus for the same.—73-03921
Hydrodynamic parameters of porous structure of molds for slip casting.—73-06228
Hydrodynamic parameters of the porous structure of molds in slip casting.—73-08343
Method for producing ceramic sintered article and molding method and molding apparatus to be used therefor.—73-01866
Method of forming molded body.—73-12086
Method of making curved insulating glazing panes.—73-10643
Method of molding [glass] products with heating a parison with microwaves.—73-15771
Mold clamping mechanism for glass container forming machine.—73-12088
Mold for casting components.—73-01871
Mold reader evolution.—73-15734
Mold release agent for ceramic molds used in ceramic slip-casting processes.—73-12089
Molding composition for the production of inorganic sintered products.—73-05001
Molding for automobile windows.—73-10649
Molding technique for ceramic parts for closure of integrated circuits.—73-01801
Monobloc mold for engraving pressed glass containers.—73-01872
Physical nature of the slip casting process in porous molds.—73-01809
Pouring of ceramic suspensions into porous molds.—73-12055
Quality control in mold manufacture.—73-15746
Refined blow mold cooling.—73-15752
Responding to the challenge.—73-15754
Self-supporting ceramic articles having shape-replicated surfaces.—73-05011
Slip casting method.—73-05014

**molecular beam epitaxy,**
Atomic layer control of the growth of oxide superconductors using laser molecular beam epitaxy.—73-04674
Comparison of optical pyrometry and infrared transmission measurements on indium-free mounted substrates during molecular beam epitaxial growth.—73-11114
DLTS detection of hole traps in MBE-grown *p*-GaAs using Schottky barrier diodes.—73-11145
Elimination of surface site blockage due to ethyl species in MOMBE of ZnSe.—73-04317
Enhancement of Hall mobility in coupled delta-doped layers grown by molecular beam epitaxy.—73-11196
Fabrication of high-$T_c$ superconductors using ozone-assisted molecular beam epitaxy.—73-08074
Gas source iodine doping and characterization of molecular beam epitaxially grown CdTe.—73-07544
Growth of III-V materials by metallorganic molecular beam epitaxy.—73-04352
Hopping conduction and its photoquenching in molecular beam epitaxial GaAs grown at low temperatures [LT].—73-14966
Improved thickness uniformity in molecular beam epitaxial growth of GaAs using a tilted conical insert crucible.—73-07575
In situ laser light scattering for monitoring III-V semiconductor film growth by molecular beam epitaxy.—73-11265
Ion-assisted molecular beam epitaxy of GaAs on Si(100).—73-11286
MBE or MO-MBE process for forming Bi-Sr-Ca-Cu-O superconducting thin films.—73-11961
Measurement of reflection high-energy electron diffraction oscillations during molecular beam epitaxial growth of GaAs on a rotating substrate.—73-07663
Molecular beam epitaxial GaAs grown at low temperatures.—73-15044
Molecular beam epitaxial growth as a self-organized critical phenomenon.—73-09216
Molecular beam epitaxy flux transient monitoring and correction using in situ reflection mass spectrometry [REMS].—73-11332
Molecular beam epitaxy for high-electron-mobility modulation-doped two-dimensional electron gases.—73-16874
Molecular beam epitaxy on exact and vicinal GaAs($\overline{111}$).—73-11337
Photoassisted growth of gallium nitride by gas source molecular beam epitaxy.—73-05945
Progress and prospects for GaN and the III-V nitride semiconductors.—73-15121
Structures with Sb δ-layers obtained by Si-MBE.—73-06294
Subpicosecond carrier response of unannealed low-temperature-grown GaAs vs temperature.—73-15189
Surfactant-mediated [SM] molecular beam epitaxy of strained layer semiconductor heterostructures.—73-15195
Synchrotron white beam X-ray topography [SWBXT] analysis of MBE-grown CdTe/CdTe(111)B.—73-11471
Techniques for the growth of crystalline films by molecular beam deposition.—73-06108
Wafer-scale temperature mapping for molecular beam epitaxy and chemical beam epitaxy.—73-11508

**molecular dynamics,**
Combinatorial optimization approach to molecular design.—73-05711
Computational nanotechnology.—73-05717
Consistent molecular mechanics force field for aluminophosphates.—73-16426
Development of molecular patterning and immobilization techniques for scanning tunneling microscopy and atomic force microscopy.—73-05038
Low-frequency floppy modes in β-cristobalite.—73-16200
Molecular directions in nanotechnology.—73-05068
Molecular dynamics modeling of microstructure and stresses in sputter-deposited thin films.—73-17175

**molecular sieves,**
Adsorptive properties and stability of VPI-5, a large-pore molecular sieve.—73-08806
Aluminum zoning in ZSM-5 as revealed by selective silica removal.—73-12914
Anionic coordination involvement in solid-state ion-exchanged CuH-SAPO-*n* (*n*=5, 11, and 34) molecular sieves.—73-12535
Correlation between the fundamental properties of templates and the kinetics of ZSM-5 crystallization.—73-08582
Crystallization kinetics of SAPO-37.—73-05722
EPR evidence of the unusual coordinational environment for $Mo^{5+}$ in SAPO-5 molecular sieves.—73-12580
Further studies on aluminophosphate molecular sieves: I, $AlPO_4$-$H_2$: a hydrated aluminophosphate molecular sieve.—73-12593
Modeling of structure and vibrational spectra of $AlPO_4$-5 and its silica analog SSZ-24.—73-12631
Molecular sieve surface-layer adsorbents for gas chromatography—review.—73-12166
Nitrogen incorporation in $AlPO_4$-5 molecular sieves by thermal ammonolysis.—73-08519
Possibility of incorporating Mn(II) and Cr(III) in SAPO-34 in the presence of isopropylamine as template.—73-08706
Preparation of carbon molecular sieves by propylene pyrolysis over microporous carbons.—73-08537
Reversible thermal transformation in the molecular sieve $AlPO_4$-5.—73-08726
Reversible thermal transformation in the molecular sieve $AlPO_4$-5.—73-16297
Solid-state NMR and XRD study of the thermal stability of VPI-5: assignment of $^{31}P$ and $^{27}Al$ MAS NMR spectra.—73-05479
Solid-state transformation of SAPO-37 molecular sieve above 1100 K.—73-12686
Structural characterization of a dehydrated magnesium/sodium beryllophosphate faujasite phase.—73-12697
Structure and chemistry of Co in CoAPO-5 molecular sieves.—73-08757
Structure and chemistry of Co in CoAPO-5 molecular sieves.—73-16328
Substituted aluminosilicate compositions and process for preparing.—73-05245
Synthesis and characterization of cloverite: a novel gallophosphate molecular sieve with three-dimensional 20-membered ring channels.—73-05506
Synthesis and properties of SAPO-5 molecular sieves. Silicon incorporation into the framework.—73-12712
Synthesis and structure of $Li_8(HPO_4)(BePO_4)_6 \cdot H_2O$: a new zeolite LOS-type beryllophosphate molecular sieve.—73-08765

**molecules,**
Nanophase molecular antiferromagnets.—73-04632

**molybdates,**
Ac complex impedance, dc resistivity, $^7Li$ and $^{23}Na$ NMR studies of the layered $Li(Na)_2Mo_2O_8$ system.—73-05350
Anisotropy of low-temperature vibrational characteristics illustrated by example of thermal conductivity of ferroelastic $CsDy(MoO_4)_2$.—73-16032
Chemical and tribological characterization of PbO-$MoS_2$ films grown by pulsed laser deposition.—73-16670
Crystal growth, structure, and magnetic properties of $H_{0.23}Li_{1.68}Mo_{1.09}O_3$.—73-02178
Crystal structure of $Cs_3Nd(MoO_4)_3$.—73-02193
Effect of impurities on thermoelectric power in thallium blue bronze $Tl_{0.3}MoO_3$.—73-16458
Eu site symmetry in $AEu(MoO_4)_2$ (A=Cs or Rb) generating saturated red luminescence.—73-02272
Glass formation and ion conduction in the CuCl-$Cu_2MoO_4$-$Cu_3PO_4$ system.—73-07031
High-temperature phase transitions in $CsDy(MoO_4)_2$.—73-02283
Hopping conduction in $NaBi(MoO_4)_2$ crystals.—73-02617
Ionic conductivity in layered $Na_3Mo_2P_2O_{11}(OH)\cdot 2H_2O$.—*73-04123*
Ionic mobility in sodium-doped $PbMoO_4$ crystals.—73-17083
Lattice dynamics and specific heat of layered $CsDy(MoO_4)_2$ crystals.—73-16193
Luminescence and nonlinear optical properties of barium fluoromolybdate ($Ba_2MoO_3F_4$).—73-05589
Luminescence of the cadmium oxyfluoromolybdate, $CdMoO_3F_2$.—73-08906
Manifestations of periodic superstructure in $CsDy(MoO_4)_2$.—73-16209
Polarization kinetics of the CDW state of $K_{0.3}MoO_3$.—73-16570
Pressure dependence of the Peierls transition in the quasi-2-D purple bronze $KMo_6O_{17}$.—73-16278
Pressure-induced amorphization of $Tb_2(MoO_4)_3$: a high-pressure Raman and X-ray diffraction study.—73-16279
Properties and structure of boron molybdate glasses.—73-14258
Spectroscopic analysis of $Tm^{3+}$:$NaLa(MoO_4)_2$.—73-12689
Spin freezing in the geometrically frustrated pyrochlore antiferromagnet $Tb_2Mo_2O_7$.—73-08736
STM-STS studies of molybdenum oxide conductors.—73-14733
Synthesis and crystal structure of a new antimony(III) molybdate: $LiSbMo_2O_8$.—73-02479
Synthesis and roentgenographic investigation of the ternary molybdates of $K_{1-x}A_{1-x}R_{1+x}(MoO_4)_3$ [A=Mg, Mn, Co, Ni; R=Yb, L, Sc].—73-02489
Systems $M_2MoO_4$-$Bi_2(MoO_4)_3$ (M=Ag, Tl).—73-12716
Vibrational spectra of double molybdates and tungstates of the type $Na_5Ln(XO_4)_4$.—73-12730
Vibrational spectra of $PbMoO_4$ crystals.—73-02539
X-ray and optical study of $KSc(MoO_4)_2$ ferroelastic.—73-02542

**molybdenum disilicide,**
Adaptive numerical techniques for reactive vapor infiltration.—73-16652
Combustion gas corrosion resistance of heat-exchange materials and refractories for glass furnaces at high temperatures: I, Silicon carbide and molybdenum silicide.—73-07199
Development of a three-layer laminated composite based on molybdenum disilicide reinforced with alumina platelets.—73-06767
Effect of carbon addition on elevated-temperature crack growth resistance in $(Mo,W)Si_2$-$SiC_p$ composite.—73-17280
First-principles study of interfacial adhesion: the Mo/$MoSi_2$ interface with and without impurities.—73-00233
High-strength $MoSi_2$ matrix composites.—73-10236
In situ and rapid consolidation of fully dense $MoSi_2$.—73-09169
In situ fracture monitoring of plasma-sprayed $MoSi_2$-Ta composites.—73-06806
Mechanistic study of the synergism between $Sb_2O_3$ and $MoS_2$ lubricant systems using Raman spectroscopy.—73-06938
Method for improving ceramic fiber-reinforced molybdenum disilicide composites.—73-12484
Microstructure and mechanical properties of 2.5 yttria partially stabilized zirconia-reinforced molybdenum disilicide composites.—73-09650
Molybdenum disilicide interaction with barium borate glass in air.—73-00377
Molybdenum disilicide matrix composites reinforced with continuous ceramic fibers.—73-12499

Molybdenum disilicide matrix composites reinforced with refractory metal fibers.—73-12500
$MoSi_2$ infrared light source.—73-05270
$MoSi_2$ infrared light source.—73-15966
Preparation of molybdenum silicide powders by solid-state reactions.—73-16925
Processing and characterization of monolithic molybdenum disilicide and silicon carbide fiber-reinforced $MoSi_2$ matrix composites.—73-16947
Properties of silicon nitride–molybdenum disilicide particulate ceramic composites.—73-03345
Reactive vapor infiltration of molybdenum disilicide: kinetics and composite processibility.—73-09297
Silicidation using electron cyclotron resonance plasma.—73-09320
Sintering of silicon carbide/molybdenum disilicide composites using boron oxide as an additive.—73-16997
Stability of molybdenum disilicide in combustion gas environments.—73-09538
Structure, mechanical properties, and oxidation behavior of nanolayered $MoSi_2$/SiC coatings.—73-06534

**molybdenum oxide,**
Anomalous behavior of the photoacoustic signal near the phase transition in the Tl blue bronze $Tl_{0.3}MoO_3$.—73-08550
Anomalous optical and electrical properties of the M/$MoO_3$/M sandwich structure.—73-16411
Autocatalytic effect in the processes of metal oxide reduction: II, Kinetics of molybdenum oxide reduction.—73-02730
Composition for metallizing ceramics.—73-03680
Films of molybdenum trioxide obtained from $MoTe_2$-oriented films.—73-13061
Glass formation in $V_2O_5$-$MoO_3$-$Fe_2O_3$.—73-10380
Growth and single-crystal structure of a high-pressure phase of molybdenum trioxide: $MoO_3$-II.—73-02280
High-magnetic-field transport properties of η-$Mo_4O_{11}$ crystals.—73-09410
Longitudinal-transverse splitting effects in ir absorption spectra of $MoO_3$.—73-02322
Reactive sputtering of molybdenum oxide gradient index filters.—73-02994
Second threshold, switching, and sharp *I-V* characteristics of $Rb_{0.3}MoO_3$ at 77 K.—73-05635
Sliding motion of CDW in quasi-2-D ν-$Mo_4O_{11}$ crystal.—73-05638
Structure and dispersion of molybdenum oxide supported on alumina and titania.—73-08758
Surface structure and reactivity of molybdena-titania catalysts prepared by different methods.—73-12708
Thermopower properties of thallium blue molybdenum bronze $Tl_{0.3}MoO_3$.—73-08996
Unsupported molybdena catalysts: precipitation, characterization, and catalytic activity.—73-13332

**molybdenum,**
Comparison of Mo-N and W-N synergism during passivation of stainless steel through X-ray photoelectron spectroscopy and electrochemical analysis.—73-06759
Copper or molybdenum metallization of ceramics by ion beam dynamic mixing.—73-03569
Copper or molybdenum metallization of ceramics by ion beam dynamic mixing.—73-10210
Dislocation-controlled stable crack growth in Mo and MgO.—73-09570
Electrochemical behavior of molybdenum in molten glass.—73-15872
Electrochemical reduction and oxidation of 2H-$MoS_2$ and 3R-$MoS_2$ in propylene carbonate.—73-14703
Electrophoretic deposition of pure $MoS_2$ dry film lubricant coatings.—73-09115
Enrichment in molybdenum carbides and nitrides during $Ar^+$ bombardment.—73-09118
ESR studies of $Mo^{5+}$ ions in potassium borate and soda phosphate glasses.—73-03729
Field-emitter-array development for high-frequency operation.—73-11214
First-principles study of interfacial adhesion: the Mo/$MoSi_2$ interface with and without impurities.—73-00233
Group VIB metal carbides from metal salicylate precursors.—73-02097
High-pressure synthesis of Mo-containing 1212 and 1222 compounds, (Cu, Mo)$Sr_2YCu_2O_z$ and (Cu, Mo)$Sr_2$(Y, Ce)$_2Cu_2O_z$.—73-11785
Hydrothermal synthesis of $Na_2(MoOPO_4)_2(HPO_4)$·$2H_2O$, *a layered molybdenum(V) phosphate structure and its relationship to* $2VOSO_4$·$H_2SO_4$.—*73-02287*
Hydrothermal synthesis, structure, and sorption properties of $Cs(H_3O)[Mo_2O_2(PO_4)_2(HPO)_4]$.—73-02289
Industrial experience with a cathodic electrochemical method to reduce the molybdenum electrode corrosion.—73-08474
Joint of silicon nitride and molybdenum with vanadium foil and its high-temperature strength.—73-10246
Kinetics of reaction between $Si_3N_4$ and Mo.—73-13858
Lattice dynamics of lithium-intercalated $MoS_2$.—73-02315
Micromechanics of $MoS_2$ lubrication.—73-06490
Microstructure and tribology of $MoS_x$ films modified by ion beam bombardment.—73-09487
Modeling of the intrinsic stress in PVD coatings.—73-05930
Molybdenophosphate with a mixed valence of molybdenum, Mo(VI)-Mo(V): $NaMo_3P_3O_{16}$.—73-02332
Molybdenum palladium fiber matrix interlayers for ceramic composites.—73-13875
Near-surface structure of molybdenum nitride catalysts as deduced by Fourier analysis of high-resolution transmission electron micrographs.—73-06263
Optimum loading of molybdenum electrodes in corrosive glass melts.—73-12236
Photochromic absorption in molybdenum-doped silenites $Bi_{12}GeO_{20}$.—73-12857
Plasma-sprayed Mo-$Mo_2C$ composites: microstructure and properties.—73-06840
Preparation and characterization of semiconducting α-$MoTe_2$ single crystals.—73-07743
Reaction kinetics and mechanism in Si-C and Si-C-Mo systems.—73-09293
Reactions during preparation and sliding of sintered Fe-Mo-S wear-resistant materials.—73-05470
Refinement of structural type of $Mo_2B_5$.—73-16291
Refractive index of metal/ceramic composites and their components [determined] by spectroscopic ellipsometry [SE] and effective medium theories.—73-10271
Stacking faults in hexagonal and rhombohedral $MoS_2$ crystals produced by mechanical operation in relation to lubrication.—73-08741
Structural evaluation of Mo/Si multilayers based on diffraction theory.—73-05492
Structural properties of the molybdenum-ruthenium telluride of composition $Mo_{4.5}Ru_{1.5}Te_8$.—73-02451
Structural relations between monoclinic and orthorhombic fluorite-related superstructures $Mo_{0.5-x}Ln_{0.5+x}F_{2+2x}$ single and twinned phases.—73-02453
Surface properties of Mo-impregnated ZSM-5 catalysts.—73-08762
Synchronizer ring.—73-03703
Synthesis and structural characterization of $K(MoO_2)(PO_4)$·$H_2O$, and its topotactic reaction to form $KMoO_2PO_4$.—73-02490
Synthesis of $MoS_2$ thin film by chemical vapor deposition method and discharge characteristics as a cathode of the lithium secondary battery.—73-01032
Thermal stability of Mo-Al Schottky metallizations on *n*-GaAs.—73-10286
*T*(I)-*O*-*T*(II) structural transition and superconductivity in the Sr-based 123 compounds $YSr_2Cu_{2.8}Mo_{0.1}W_{0.1}O_y$.—73-11930
Toughening of Ni-bonded $Cr_3C_2$ by Mo particulates.—73-10291
Vacuum ($10^{-9}$ torr) friction apparatus for determining friction and endurance life of $MoS_x$ films.—73-08457

**monitors,**
Diagnostics and monitoring for vitreous enameling.—73-10217
Method for monitoring the performance of a glass container forming machine.—73-15770
Monitoring continuous heat-treatment processes.—73-10568
Portable instrumentation for on-site monitoring of toxic gases.—73-05079
Surveillance of conveyor belts with visual sensors.—73-04949

**monoliths,**
Bonding and recent progress of monolithic refractories.—73-10703
Designing ceramic components for durability.—73-06567
Dry refractory composition.—73-10780
Evolution of gel silica monoliths during convective drying.—73-07126
High-temperature properties of monolithic ceramics.—73-09612
New technologies widen usage of monolithic refractories for tundishes.—73-10748
Time-dependent reliability analysis of monolithic ceramic components using the CARES/LIFE integrated design program.—73-17446

**montmorillonite,**
Controlled architecture of solids with micro- and mesoporosity obtained by pillaring of montmorillonite with an $LaNiO_x$ binary oxide.—73-09049
Dehydration of vermiculites and montmorillonites: a time-resolved neutron diffraction study.—73-16103
Intercalation complex of montmorillonite as model system: II.—73-08642
Relationship between isomorphic substitutions and swelling in montmorillonites.—73-16586
Structural characterization and optimization of acid-treated montmorillonite and high-porosity silica supports for $ZnCl_2$ alkylation catalysts.—73-08748
Structure reorganization in montmorillonite gels during drying.—73-13453
Thermally stable porous crystals from montmorillonite: I, Preparation and properties of Al and Zr pillared montmorillonites.—73-13324

**mordenite,**
$^{129}Xe$ NMR study of dealuminated mordenites.—73-12732
1-D rare gases in the pores of mordenite.—73-08931
1-D rare gases in the pores of mordenite.—73-16237
Isopropylation of dibenzofuran over solid acid catalysts.—73-02625
Mechanochemistry of zeolites: I, Amorphization of zeolites A and X and synthetic mordenite by ball milling.—73-09204
Structural study on the composite: mordenite with inorganic salt.—73-02455
Synthesis of mordenite with different $SiO_2/Al_2O_3$ ratios.—73-09361

**morphology,**
GaAs island morphology and defect structure [observed] on the Berkeley atomic resolution microscope [ARM].—73-06219
Indian fly ash with high percentage of cenospheres.—73-05143
Morphology and ir transmission of β-SiC synthesized by chemical vapor deposition.—73-06262
Morphology and transport of $YBa_2Cu_3O_{7-x}$ sputtered in argon, oxygen, and hydrogen: dependence on deposition temperature.—73-11842
Temperature effects on rodlike zirconia particles: morphology, degree of crystallinity, and texture.—73-06296

**mortars,**
Acoustic emission characteristics of mortar under compression.—73-09803
Analytical method to determine the bridging stress transferred within the fracture process zone: II, Application to mortar.—73-09815
Application of the NBRI accelerated mortar bar tests to siliceous carbonate aggregates produced in the St. Lawrence Lowlands (Quebec, Canada): II, Proposed limits, rates of expansion, and microstructure of reaction products.—73-00024
Behavior of lightweight mortar including powder of scrap FRP [fiber-reinforced plastic].—73-09828
Chloride ion permeability and pore solution compositions of mortars containing silica fume.—73-09854
Circuit models for cement-based materials obtained from impedance spectroscopy.—73-00041
Combined effects of alkali-silica reaction [ASR] and secondary ettringite deposition [SED] in steam-cured mortars.—73-09858
Comparison of two methods for resistivity measurements on repair mortar for cathodic protection systems.—73-13694
Complex additive-retarder of cement setting mortars.—73-00047
Corrosion behavior of steel in high-alumina cement mortar samples: effect of chloride.—73-00052
Deterioration of mortar by chemical and physical action.—73-13702
Development of a mortar consisting of slag, gypsum, and portland cement for injection into multiple-leaf masonry: I, Optimizing the cementitious binder.—73-13704
Dimensional variations, capillary absorption, and freeze-thaw resistance of repair mortars admixed with polymers.—73-00065
Durability of building mortar mixed with fly ash.—73-09895
Effect of sealers on the freeze-thaw resistance of mortar.—73-09915
Effect of the action of make-up water subjected to the treatment of magnetic field on cement mortars and their chemistry of binding processes.—73-00079
Effect of various factors on the compressive strength and frost resistance of mortar using blast-furnace slag.—73-09925
Fractal characterization of fracture surfaces in mortar.—73-03471
Fracture behavior of microfiber-reinforced mortars.—73-03472
Improved control of alkali-silica reaction by combined use of admixtures.—73-06672
Influence of autogenous healing of cement mortar on chloride corrosion of embedded steel bars in mortar.—73-10003
Influence of binder type on sulfate resistance.—73-10004
Influence of carbonation on the mechanical properties and texture of hardened mortar.—73-10006
Influence of physical properties of impregnating paints on permeability into mortar.—73-10010
Influence of temperature on the service life of rebars.—73-13740
Latex-modified cement mortar reinforced by short carbon fibers.—73-10027
Mechanical behavior of silica fume mortar slabs reinforced by AFRP and CFRP rods.—73-10035
Microstructural investigation of renaissance mortar from Montreal, Quebec, Canada.—73-10048
Microstructure and properties of expansive cement mortar with silica fume.—73-10051
Migration of alkali ions in mortar due to several mechanisms.—73-06690
Mortar workability apparatus: a new approach.—73-10059
Note on the formation of $Ca(OH)_2$ crystals in polymer-modified mortars.—73-03507
Prediction of compressive strengths of mortars made with portland cement–blast-furnace slag–fly ash blends.—73-00168
Preparation of building mortar using calcium-added fly ash.—73-06699
Properties of polymer-modified mortars made with blended cements.—73-06705
Relationship between hardened and pore structure of hardened blended cement mortar and its drying shrinkage.—73-10135
Relationship between strength and water/cement content of mortar with classified fly ash.—73-10136
Resistance of polymer-modified cement mortar to oil attack.—73-10140
Round up of recent European lime and dry mortar projects.—73-03533
Strength development of high-strength mortar using ground granulated blast-furnace slag of different finenesses.—73-10166
Strength development of lime mortar and cement mortar including pozzolana with different finenesses.—73-10167

**mosaics,**
Mechanism of color difference generation during production of mosaic.—73-10867
Model of mosaic crystal with dynamically scattering blocks.—73-02331
Opaque glazed mosaic tiles.—73-10874
Reduction of pigment content in color slime for mosaic tiles.—73-10891

**Mossbauer effect,**
Comparative study of the ferrite phase in high-iron cements with pure $C_2A_xF_{1-x}$ by Mossbauer spectrometry.—73-00045
Magnetic relaxation enhancement effects of Mossbauer line shapes in Ni-Zn-Co ferrite system.—73-04624

**motor,**
Ceramic substrate blower motor resistor array.—73-11006
One small step: an SC [superconductor] motor is tested successfully.—73-15571

**mullite,**
Aspects of mullite synthesis in relation to the grain size of $Al_2O_3$ and $SiO_2$.—73-00778
Aspects of mullite synthesis in relation to the grain size of $Al_2O_3$ and $SiO_2$.—73-02728
Catalytic process for mullite whiskers.—73-09030
Changes of microstructure and high-temperature strength of ceramic composite in the mullite-$ZrO_2$-$Al_2O_3$ system using an in situ reaction between synthetic zircon and $Al_2O_3$.—73-17244
Chemistry–crystallization relations in molecular mullite gels.—73-10358
Cordierite and mullite-containing kiln furniture with low thermal expansivity.—73-10711
Corrosion behavior of mullite ceramics in water at 300°C.—73-03213
Corrosion behavior of mullite ceramics in water at 300°C.—73-13468
Corrosion of sintered high-purity mullite in molten KF salt.—73-03218
Corrosion of sintered high-purity mullite in molten KF salt.—73-13472
Densification and microstructure of sodium-doped colloidal mullite.—73-09442
Determination of minor elements in high-purity mullite by acid decomposition associated with a microwave oven/ICP-AES.—73-15787
Development of mullite fibers using the sol-gel process.—73-09067
Development of thermal shock resistant mullite coatings on silicon carbide.—73-08528
Difference in the properties of mullite slurries and cast bodies with dispersant given during or after grinding.—73-16713
Effect of chemical composition of matrix on oxidation behavior of mullite/20 vol% SiC whisker composites.—73-03223
Effect of defects and grain size on strength of mullite ceramics.—73-06376
Effect of grain size on creep in mullite ceramics.—73-06378
Effect of MgO addition on mullite.—73-09080
Effect of processing and fiber coating on fiber-matrix interaction in mullite fiber–mullite matrix composites.—73-05768
Effect of processing and fiber coating on fiber-matrix interaction in mullite fiber–mullite matrix composites.—73-09090
Effect of rigid inclusions on the sintering of mullite synthesized by sol-gel processing.—73-09095
Effect of SiC/BN double coating on fiber pullout in mullite fiber/mullite matrix composites.—73-02795
Effect of ultrastructure on crystallization of mullite.—73-05775
Effects of $Al_2O_3$ and glass on formation of needlelike mullite from kaolin.—73-02803
Effects of $Al_2O_3$ and glass on formation of needlelike mullite from kaolin.—73-13025
Effects of $Y_2O_3$ addition on the sinterability and microstructure of mullite: I, Phase transformation and sinterability.—73-02808
Effects of $Y_2O_3$ addition on the sinterability and microstructure of mullite: I, Phase transformation and sinterability.—73-13038
Effects of $Y_2O_3$ addition on the sinterability and microstructure of mullite: II, Crystallization of liquid phase and grain growth.—73-05784
Effects of $Y_2O_3$ addition on the sinterability and microstructure of mullite: II, Crystallization of liquid phase and grain growth.—73-16756
Electromelting mullite ceramics with added $Ca_2SiO_4$.—73-16759
Electromotive force measurement of mullite ceramics as oxygen solid electrolyte.—73-04095
Electromotive force measurement of mullite ceramics as oxygen solid electrolyte.—73-14704
Energetics of interaction between oxygen vacancies in sillimanite: a model for the mullite structure.—73-02263
EXAFS and XANES study of (Si, Ge) mullite gels and glasses prepared by slow hydrolysis of alkoxides.—73-10374
Experimental study using sillimanite to fabricate mullite ceramics.—73-16768
Fabrication and characterization of short alumina fiber-reinforced mullite composites.—73-02820
Fabrication of electrofusion-cast zircon mullite brick.—73-10728
Fabrication of oriented SiC-whisker-reinforced mullite matrix composites by tape casting.—73-16775
Formation and growth of mullite crystals in porcelain.—73-00908
Formation of mullite from hydrothermally processed sols: an X-ray powder diffraction and magic angle spinning NMR investigation.—73-08627
Fracture toughness evaluation of mullite ($3Al_2O_3{\cdot}2SiO_2$) having three different microstructures.—73-13538
Graded compositions and microstructures by infiltration processing.—73-09149
Grain-size composition of mullite silica fibers.—73-03149
Granulometric composition of mullite-silica fibers.—73-01786
High-temperature stability of $SiC_w$/ZTM composite.—73-06309
High-temperature-stabilized mullite-aluminum titanate.—73-12371
Improved densification and mullitization by seeding of reaction-sintered mullite with a sol-gel-derived precursor.—73-16832
Improvement of mechanical properties of ZTM ceramics by heat treatment and deep-cool treatment.—73-05853
Improving thermal shock fracture resistance of the mullite tube closing one end.—73-14596
Indentation fracture resistance of self-reinforced mullites.—73-06457
Influence of gel formation conditions on phase changes in polymer aluminosilicate gels of mullite composition.—73-02293
Influence of powder characteristics on sinterability and mechanical properties of silica-alumina ceramics (74 wt% $Al_2O_3$).—73-02871
Influence of preparation procedure in the mullite preparation by solution method to the mixing of Al and Si and the crystallization behavior.—73-16840
Intermediate Si-Al spinel phase formation in phase transformation of diphasic mullite gel.—73-08643
Long-term durability of mullite-coated silicon-based ceramics.—73-17227
Mechanical properties of alumina-mullite whisker composites.—73-17382
Mechanism of $ZrO_2$ strengthening and toughening in mullite-zirconia composites.—73-06488
Method of producing fiber-reinforced and particle-dispersion-reinforced mullite composite material.—73-12386
Microscopic model for a very stable incommensurate modulated mineral: mullite.—73-08667
Microstructural changes and mechanical properties of mullite-$ZrO_2$ and mullite-$ZrO_2$-$Al_2O_3$ composites prepared using in situ reaction between synthetic zircon and alumina.—73-17399
Microstructure and mechanical properties of mullite-zirconia reaction sintered composites.—73-06492
Microstructure and mechanical properties of platelet-reinforced mullite–zirconia composites.—73-13573
Microstructure and microchemistry of highly pure mullite ceramics.—73-03168
Microstructure of mullite ceramics used for substrate and packaging applications.—73-03172
Microstructure, microchemistry, and flexural strength of mullite ceramics.—73-13431
Mulcoa: quality minerals for industry.—73-01988
Mullite and alumina–silica matrices for composites by modified sol-gel processing.—73-09218
Mullite and Mullite Ceramics.—73-17533
Mullite ceramic compound.—73-12388
Mullite corundum ceramic material with broadening sintering temperature range.—73-13143
Mullite grain mixes for steel plant refractories.—73-10745
Mullite whisker-reinforced aluminum: novel metal matrix composites.—73-03625
Mullite-based kiln furniture materials.—73-07219
Mullite-corundum ceramics with eutectic additions from the BaO-CaO-$SiO_2$ system.—73-07344
Mullite-$ZrO_2$ ceramic with bentonite, soapstone, and MnO+$TiO_2$ additives.—73-02337
Optically translucent mullite ceramics.—73-02659
Ordering in silicon and germanium mullites.—73-03181
Oxygen vacancy ordering and the incommensurate structure of mullite.—73-16243
Performance of a carbon fiber-reinforced mullite [C/mullite] matrix composite.—73-06499
Preparation and evaluation of mullite ceramic carrier for immobilization of enzyme.—73-05617
Preparation and evaluation of mullite ceramic carrier for immobilization of enzyme.—73-13173
Preparation and fracture characteristic of laminated alumina/mullite composite.—73-17414
Preparation and properties of sol-gel nanostructured thin ceramic layers.—73-13177
Preparation and some properties of porous mullite ceramics using needlelike crystals.—73-02938
Preparation of mullite by transient viscous sintering of alumina with sol-gel-derived silica.—73-05976
Preparation of mullite ceramics from kaolin and aluminous materials: I, Effects of grain size and grinding of raw materials.—73-16926
Preparation of mullite fiber by sol-gel method.—73-02958
Preparation of transparent mullite-silica film by heat treatment of imogolite.—73-02974
Processing of high-purity mullite after reaction sintering with kaolin–alumina mixture.—73-06271
Processing of ultrafine mullite powder through alkoxide route.—73-03404
Processing, microstructure, and mechanical properties of zirconium phosphate/mullite whisker composites.—73-16953
Reaction bonding and mechanical properties of mullite/silicon carbide composites.—73-17419
Reaction sintering of Zr-containing mullite materials.—73-10757
Refractories based on fused materials of mullite composition.—73-04015
Refractory products for production of amorphous metals and alloys.—73-04017
Role of mechanochemical activation in the evolution of the structure and properties of reaction-bonded mullite-zirconia refractories.—73-14623
Sintering and crystallization of mullite powder prepared by sol-gel processing.—73-13258
Sintering and mullite formation from kyanite-glass system.—73-16992
Sintering of alumina and mullites prepared by slow hydrolysis of alkoxides: the role of the protonic species and pore topology.—73-13265
Sintering of pre-mullite powder obtained by chemical processing.—73-03010
Sintering of $ZrO_2$-toughened mullite ceramic and its microstructure.—73-03012
Sliding wear properties of sintered mullite ceramics.—73-13590
Sliding wear properties of sintering mullite ceramics.—73-03352
Slow crack growth of mullite ceramics.—73-06524
Sol-gel processing of continuous mullite fibers.—73-17005
Starting powder characteristics/fired compact properties relationships in reaction-sintered mullite/$ZrO_2$ composites.—73-06068
Stoichiometry of fluorotopaz and of mullite made from fluorotopaz.—73-08744
Structural characterization and phase developed of sol-gel-derived mullite and its precursors.—73-10403
Synthesis and properties of novel mullite–zirconia-toughened alumina composites.—73-17023
Synthesis and sintering of MgO-doped mullite/$ZrO_2$ composite powders using the sol-gel method.—73-06083
Synthesis and sintering of MgO-doped mullite/$ZrO_2$ composite powders using the sol-gel method.—73-13300
Synthesis of mullite from fly ash and alumina powder mixture.—73-03049
Synthesis of whisker-reinforced mullite matrix composites using colloidal processing.—73-06098
Synthesis of whisker-reinforced mullite matrix composites using colloidal processing.—73-13314
Temporary melt phases—importance for applications of cordierite-mullite kiln furniture.—73-04022
Thermal and hydrothermal properties and microstructure of zirconia-alumina-mullite.—73-17445
Thermal and mechanical properties of aluminum titanate–mullite composites: III, Effects of aluminum titanate particle size.—73-06116
Thermal and mechanical properties of aluminum titanate–mullite composites: III, Effects of aluminum titanate particle size.—73-13322
Thermal determinations of mullite crystallization of 65% $Al_2O_3$-35% $SiO_2$ glass fibers.—73-05512
Thermal expansion discontinuities of mullite.—73-02709
Thermal shock and fatigue of mullite and alumina: refined analyses.—73-05663
Thermal shock resistance of zirconia corundum mullite–silicon carbide (ZCM-SiC) composites.—73-07226
Thermal, mechanical properties of LAS with the addition of mullite.—73-13604
Thermal-shock- and creep-resistant porous mullite articles prepared from topaz and process for manufacture.—73-05247
Thermomechanical properties and thermal shock resistance of reaction-sintered zirconia-corundum-mullite materials.—73-04025
Ultrafine pure mullite powder prepared by the sol-gel method.—73-13330
Wetting and joining of mullite ceramics by active-metal braze alloy.—73-03665
**multilayer capacitor,**
Ceramic capacitors, actual situation, and tendencies.—73-00936
Multilayer ceramic chip capacitor [with ceramic coatings].—73-14755
Physics of the main soldering methods and analysis of their influence on the bond quality of the realized multilayer capacitors.—73-01010
Terminal electrodes for multilayer ceramic capacitor and method of manufacture thereof.—73-04236
Termination sintering in multilayer ceramic capacitors: microstructural interpretation.—73-01036
**multilayer,**
Auger electron spectroscopy studies of interfacial reactions in metal/semiconductor multilayers activated during differential scanning calorimetry measurements.—73-11077
Characterization of silicon-on-insulator multilayers using ex situ spectroscopic ellipsometry and in situ monochromatic ellipsometry during plasma etching.—73-14804
Composition for making multilayer ceramic substrates and dielectric materials with low firing temperature.—73-01048
Digital etching of III-V multilayered structures combined with laser ionization mass spectroscopy [LIMS]: photon-assisted depth profiling.—73-11141
Finite element studies of tensile testing on thin-film multilayers.—73-13532
Flexural properties of brittle multilayer materials: I, Modeling.—73-06424
Friction and wear mechanisms of multilayered plasma-sprayed ceramic coatings.—73-09604
Influence of shrinkage mismatch between copper and ceramics on dimensional control of the multilayer ceramic circuit board.—73-10238
Integrated circuit package.—73-11023
Kinetics of the formation of C49 $TiSi_2$ from Ti-Si multilayer as observed by in situ stress measurements.—73-07630
Laminated multilayer insulating glass and a spacer for the laminated multilayer insulating glass.—73-03935
Low-dielectric inorganic composition for multilayer ceramic package.—73-04214
Low-temperature-sintered ferrite for multilayer chip components.—73-11658
Magnetic anisotropy of Co/Pt multilayers on MgO(100) substrates.—73-05592
Materials for multilayer interconnection substrates.—73-00993
Method for fabricating a ceramic multilayer substrate.—73-04216
Method for forming a metallurgical interconnection layer package for a multilayer ceramic substrate.—73-11028
Method for manufacturing electrodes for multilayer ceramic capacitors.—73-11029
Method for producing multilayer ceramic body with convex side faces.—73-11032
Method of fabricating a transistor having a cubic boron nitride layer.—73-01376
Method of manufacturing a multilayered ceramic circuit board containing layers of reduced dielectric constant.—73-14753

Method of manufacturing ceramic multilayer electronic component.—73-11034
Microstructural investigation of κ-modification layers in CVD α-$Al_2O_3$/κ-$Al_2O_3$ multilayer coatings.—73-03165
Mixed wirebond, TAB, and flipchip interconnections on multilayer ceramic [MLC] MCM's [multichip modules].—73-04141
Multilayer ceramic substrate with capped vias.—73-11038
Multilayer ceramic substrate with graded vias.—73-04223
Multilayer wiring board.—73-11039
Multilayered, cofired, ceramic-on-metal circuit board for microelectronic packaging.—73-04225
Optical properties of sol-gel-based multilayer antireflective films on glass.—73-14246
Process for fabricating a multilayer ceramic circuit board.—73-11043
Process for manufacturing ceramic multilayer substrate.—73-11045
Process of producing multiple-layer glass-ceramic circuit board.—73-11047
Review of multicomponent and multilayer coatings for tribological applications.—73-08540
Science and technology in composite materials—multilayer (ceramic) substrate.—73-04162
Structural evaluation of Mo/Si multilayers based on diffraction theory.—73-05492
Surface anisotropy in amorphous Tb-Fe/$Al_2O_3$ multilayers.—73-15371
TEM characterization of high-$T_c$ superconductive multilayered thin films.—73-01688
XRD characterization of multilayered systems.—73-12735
Y-Ba-Cu-O-based multilayers for optoelectronic devices.—73-01705

**multiple quantum wells,**
Absorption modulation induced by electron beam excitation of strained $In_{0.2}Ga_{0.8}As$/GaAs multiple quantum wells.—73-11060
Characterization of GaAs/GaAsP strained multiple quantum wells grown by gas source molecular beam epitaxy.—73-11101
Characterization of undoped multiple quantum well structures.—73-11105
Critical layer thickness of strained-layer InGaAs/GaAs multiple quantum wells determined by double-crystal X-ray diffraction.—73-14818
Modulated ellipsometry for characterization of multiple quantum wells [MQW's] and superlattices.—73-15821
Photoluminescence [PL] properties of strained molecular beam epitaxy $Si_{1-x}Ge_x$/Si multiquantum wells [MQW's].—73-11381
Pure effects of strain in strained-layer multiple quantum well lasers.—73-15128
Resonant one-acoustic-phonon Raman scattering in multiple quantum wells.—73-11421
Scanning tunneling microscopy of GaInAs/InP multiquantum well (110) surfaces observed under an ultrahigh vacuum.—73-11433

**nanocomposites,**
Clay-organic nanocomposite: preparation of a kaolinite-poly(vinylpyrrolidone) intercalation compound.—73-05709
Correlation between interface structure and mechanical properties for silicon-nitride-based nanocomposites.—73-03248
Design and synthesis of functional layered nanocomposites by intercalation reactions.—73-16699
Effects of size, shape, and environment on the phase diagrams of small structures.—73-16127
Elaboration and thermal stability of (alumina, aluminosilicate/iron, cobalt, nickel) magnetic nanocomposites prepared through a sol-gel route.—73-11653
Electrochromic materials: metal oxide nanocomposites with variable optical properties.—73-12793
Fabrication and characterization of polymer-derived $Si_3N_4$-$ZrO_2$ nanocomposite ceramics.—73-16769
Fabrication of $Al_2O_3$/W nanocomposites.—73-10228
Fabrication, microstructure, and some properties of $Si_3N_4$-based nanocomposites.—73-02828
Inorganic-organic sol-gel processing for glasses and nanocomposites.—73-03852
Jet vapor deposition of nanostructure composite materials.—73-05883
Layered inorganic-organic nanocomposites: application to photofunctional materials and conversion to inorganic microporous materials.—73-05895
Magnetic properties of copper-magnetite nanocomposites prepared by ball milling.—73-04623
Magnetic properties of glass-metal nanocomposites prepared by the sol-gel route and hot-pressing.—73-11662
Mechanical and electrical properties of $Al_2O_3$/SiC nanocomposites.—73-05594
Microstructure and fracture behaviors at high temperatures for $Al_2O_3$-SiC nanocomposites.—73-06491
Nanocomposite ceramic powder production by laser-induced gas-phase reactions.—73-13144
Nanocomposite dielectric material: Au/$SiO_2$ gel.—73-04143
Nanocomposite formation and combustion induced by reaction milling.—73-05932
Nanocomposite of PZT-PMN-$MnO_2$-NiO ceramics-alumina system.—73-02341
Nanocomposites for magnetic refrigeration.—73-04631
Nanocomposites: retrospect and prospect.—73-06582
New design concept of structural ceramics—ceramic nanocomposites.—73-02900
New nanocomposite structural ceramics.—73-05933
New strategy for synthesizing polymer-ceramic nanocomposites.—73-13151
Oxide- and metal-intercalated clay nanocomposites.—73-05941
Preparation of $Al_2O_3$-$TiO_2$ nanocomposite powders.—73-09254
Raman and X-ray scattering from dense semiconductor-dielectric nanocomposites.—73-05463
Sintering behavior and consolidation process for $Al_2O_3$/SiC nanocomposites.—73-06051
Six-axis-controlled nanometer-order positioning stage for microfabrication.—73-15848
Sol-gel synthesis of metal nanocomposites.—73-14496
Superhard nanocomposite of nitride superlattices by opposed-cathode unbalanced magnetron sputtering.—73-06071
Synthesis and properties of nanophase materials.—73-13298
Synthesis of $Fe_xN$/BN [x=3 or 4] magnetic nanocomposite via chemical processing.—73-07979

**nanocrystalline,**
Bulk modulus and Young's modulus of nanocrystalline γ-alumina.—73-17242
Characterization of chemically and physically derived nanophase titanium dioxide.—73-06194
Controlling crystallinity during processing of nanocrystalline titania.—73-12957
Current issues in nanoelectronic modeling.—73-16435
Effect of porosity on properties of nanocrystalline materials.—73-06211
Epitaxial electrodeposition of CdSe nanocrystals on gold.—73-14891
Evaluation of the densification characteristics of nanocrystalline materials.—73-05795
Hall-Petch relation in nanocrystalline Fe-Mo-Si-B alloys.—73-15496
Implications of void growth in submicrometer and nanocrystalline structures.—73-13549
Magnetic and optical properties of γ-$Fe_2O_3$ nanocrystals.—73-02635
Magnetic study of M-type doped barium ferrite nanocrystalline powders.—73-07958
Mechanosynthesis of nanophase materials.—73-09205
Nanocrystalline materials.—73-12389
Phase characterization and stabilization due to grain size effects of nanostructured $Y_2O_3$.—73-12650
Photoluminescence excitation spectroscopy study of CdS nanocrystals in ormosils.—73-15096
Processing nanocrystalline ceramics for applications in superplasticity.—73-09279
Sinter forging of nanocrystalline $TiO_2$.—73-06048
Structural evolution of nanocrystalline $Fe_{73.5}Cu_1Nb_3Si_{13.5}B_9$.—73-15366
Synthesis of nanosized ceramic oxide powders by microwave plasma reactions.—73-13307
Thiophenol-capped ZnS quantum dots.—73-01354

**Nasicon,**
Application of glass-ceramic Nasicon-based composite electrolytes in galvanic cells for detection of sulfur oxides in gases.—73-14680
Characterization of protonically exchanged Nasicon.—73-02161
Crystallization of $Na_{1+x}Zr_{2-x}Nb_x(PO_4)_3$ (0<x<1) series under hydrothermal conditions.—73-08591
Doppler broadened and ionic conductivity studies on Nasicon analog.—73-00950
Effects of $Al_2O_3$ addition on the sinterability and ionic conductivity of Nasicon.—73-07308
Hydrogen sensor based on bonded hydronium Nasicon.—73-00976
Hydronium and ammonium Nasicons: investigations of conductivity and conduction mechanism.—73-00977
Hydrothermal synthesis and characterization of $CsZr_2(AsO_4)_3$.—73-16827
Ion conductivity of Nasicon ceramics: effects of texture and doping with $B_2O_3$ and $Al_2O_3$.—73-07329
Mixed conductivity of the Nasicon phase $Na_{2+x+y}Zr_{1-y}Fe_y^{II}Fe_{1-x+y}^{III}(PO_4)_3$ [y=0 at 0≤x≤1 or x+y=1 at 0≤y<0.5].—73-00997
Phase transition in stoichiometric Nasicon.—73-16265
Protonic conductivity of Hyceram, a bonded hydronium Nasicon.—73-04158
Synthesis and conductivity of new lithium-containing Nasicon-type phases: $Li_x[M_y^{II}M_{2-y}^{III}](SO_4)_{3-y}(SeO_4)_y$ and $Li_x[Li_{y/2}M_{2-y/2}^{III}]$-$(SO_4)_{3-y}(SeO_4)_y$.—73-05647

**neodymium oxide,**
Barium neodymium titanates: stoichiometry and phase equilibria.—73-02150

**neodymium,**
15-W single-frequency operation of a cw diode laser-pumped Nd:YAG ring laser.—73-08870
Additive-pulse mode locking of non-cw Nd lasers.—73-08802
Antiferromagnetic resonance in $Nd_2CuO_4$.—73-08553
Atomic ordering in an infinite-layer compound $Sr_{0.85}Nd_{0.15}CuO_2$ studied by transmission electron microscopy.—73-15394
Bose-glass–vortex-glass phase transition and dynamic scaling for high-$T_c$ $Nd_{2-x}Ce_xCuO_4$ thin films.—73-08815
Comparison of band structures of $La_2CuO_4$ and $Nd_2CuO_4$.—73-08578
Conduction electron spin resonance in the $Nd_{1.85}Ce_{0.15}CuO_{4-y}$ superconductor.—73-04685
Correlation between radiative transition probabilities of $Nd^{3+}$ and composition in silicate, borate, and phosphate glasses—correction.—73-06895
Correlation between radiative transition probabilities of $Nd^{3+}$ and composition in silicate, borate, and phosphate glasses.—73-00313
Crystal chemistry and phase equilibrium studies of the $BaO(BaCO_3)$>0.5$R_2O_3$-$CuO_x$ systems in air: VI, R=neodymium.—73-16076
Crystal field in $Nd_2CuO_4$.—73-08584
Crystal field Raman scattering in $Nd_2CuO_4$.—73-16078
Crystal structure of $Ca_{1-x}Nd_xF_{2+x}$ (x=0.1, 0.2) from precision X-ray diffraction data.—73-02191
Crystal structure of $Cs_3Nd(MoO_4)_3$.—73-02193
Crystal-field phonon interaction and in-plane charge transfer in $NdBa_2Cu_3O_{7-\delta}$.—73-04691
Determination of the fundamental laser parameters of an acoustooptical device.—73-16441
Determination of two-electron crystal field parameters in some neodymium compounds.—73-08600
Diffusion coefficients of oxygen in $Nd_2CuO_{4-\delta}$.—73-03091
Diffusion profiles of neodymium in lithium niobate [determined] by means of spatially resolved fluorescence measurements.—73-13347
Dipole-active phonon spectrum in $Nd_2CuO_4$ single crystals.—73-02238
Effect of rare-earth elements on the entropy of radiation defect ionization in *n*-type Ge.—73-04291
Effects of heat-treatment condition and Gd substitution on $Nd_{1.85}Ce_{0.15}CuO_{4-y}$ superconductivity.—73-08045
Efficient amplification of the stable ps pulses radiated from an Nd:glass oscillator with negative feedback.—73-08842
Efficient, scalable, internally folded Nd:YAG laser end pumped by laser diodes.—73-14864
Electric-field gradient of Cu sites and distribution of the conductivity electrons in $Nd_{1.85}Ce_{0.15}CuO_4$ superconductor.—73-16128
Electrochemical investigation of oxides of high-temperature superconductors with different types of conductivity.—73-04712
Electronic structure and the Fermi surfaces of antiferromagnetic $NdB_6$.—73-02259
Electrooptically fast tunable miniature diode-pumped Nd:YAG ring laser.—73-12797
Excited-state absorption in the infrared emission domain of $Nd^{3+}$-doped $Y_3Al_5O_{12}$, YLiF$_4$, and $LaMgAl_{11}O_{19}$.—73-08867
Experimental investigation of magnetic resonance in $Nd_2CuO_4$.—73-08624
Extra-Drude absorption and $T_c$ in superconducting cuprates.—73-08071
Fermi surface [FS] and electronic structure of $Nd_{2-x}Ce_xCuO_{4-\delta}$.—73-16152
Fluorescence and laser operation in single-mode Ti-diffused Nd:MgO:$LiNbO_3$ waveguide structures.—73-01167
Formation and properties of neodymium aluminoborate glasses.—73-00484
Gain-switching dynamics of laser diode array (LDA) end-pumped Nd:YAG lasers.—73-11218
Heat capacity data of doped $NdBa_2Cu_3O_x$.—73-04731
Heat generation in Nd:YAG and Yb:YAG.—73-14957
Heavy-fermion-like excitations in metallic $Nd_{2-x}Ce_xCuO_4$.—73-16503
High-efficiency ir generation by difference-frequency mixing using tangential phase matching.—73-08878
High-power, subpicosecond, 750–1770-nm tunable pulses from travelling wave parametric generator.—73-00499
Influence on dielectric properties and evaporation of PbO according to substituting $Nd^{3+}$ for $Pb^{2+}$ in $Pb(Mg_{1/3}Nb_{2/3})O_3$ system.—73-08889
Infrared fluorescence spectra of $Nd^{3+}$ sites in gadolinium gallium garnet:Nd and gadolinium gallium garnet:Nd,Cr.—73-12603
Laser-cladding cross-section modeling obtained by metallic powder spraying into an Nd:YAG laser beam.—73-15007
Lattice instabilities in cuprate superconductors: a possible limiting mechanism for $T_c$.—73-08122
Low-field microwave absorption of $Nd_{1.85}Ce_{0.15}CuO_{4-y}$ superconducting system.—73-08124
Low-temperature X-ray diffraction study of potassium-neodymium nitrates, $K_3[Nd_2(NO_3)_9]$ and $K_2[Nd(NO_3)_5(H_2O)_2]$.—73-16203
Lower level relaxation of Nd:YAG.—73-07647
Luminescence properties of Yb- and Nd-implanted CdS.—73-04392
Luminescence thermal quenching of $Nd^{3+}$-doped fluoride BIGaZYTZr glass.—73-07046
Luttinger Fermi surface of metallic gap spectral weight in $Nd_{1.85}Ce_{0.15}CuO_{4-\delta}$.—73-15543
Magnetic resonance in the vicinity of spin reorientation in $NdFeO_3$.—73-01471
Magnetic structure and resonance properties of $Nd_{22}CuO_4$.—73-08662
Multiple mode-locking of the *Q*-switched Nd:YAG laser with a coupled resonant cavity.—73-07684
N-type oxide superconductor represented by the formula $Nd_4(Ce_yL_{1-y})_7CuO_{4-\delta}$ (L=La, Mg, or a mixture of alkaline earth elements).—73-01725
$NdGaO_3$ substrates with defined grain boundaries prepared by welding or soldering.—73-13148
Optical and structural properties of $CaF_2$:Nd films on Si-based substrates.—73-04426
Optical functioning glass and apparatus using the same.—73-00752
Optical functioning glass and fiber amplifier.—73-03956
Optical smoothing of the high-power PHEBUS Nd-glass laser using the multimode optical fiber technique.—73-07061
Origin of the anomalous temperature dependence of the Nd sublattice magnetization in $Nd_2Fe_{14}B$.—73-01478
Origins of the anomalous doping effects of the Hall constants of $La_{2-x}Sr_xCuO_4$ and $Nd_{2-x}Ce_xCuO_{4-\delta}$.—73-08155
Oxygen dependence of the magnetic order of Nd in $NdBa_2Cu_3O_{6+x}$.—73-04782
Passive and self-*Q*-switching of phase-conjugation Nd:YAG laser oscillators.—73-08945
Polarized *K*-Cu XANES of epitaxial $Nd_{1.85}Ce_{0.15}CuO_4$ thin films irradiated by $He^+$ ions.—73-01629
Projection of the liquidus surface of the ternary system Nd-As-Se.—73-12662
Pump-power-induced cavity stability in lithium neodymium tetraphosphate (LNP) microchip lasers.—73-08961
Radiative energy transfer from $Cr^{3+}$ to $Nd^{3+}$ in $LiNbO_3$:Nd,Cr.—73-11610

Rod-imaging super-Gaussian unstable resonator for high-power solid-state lasers.—73-08964
Sensitivity of spectroscopic parameters of neodymium in phosphate glasses to change in their structures on transition from ultra- to pyrophosphates.—73-00398
Side-pumped Nd:YAG epitaxial waveguide laser.—73-01314
Site resolution spectroscopy of $Nd^{3+}$ in YSZ.—73-16304
$Sr_6Nd_3Cu_8O_{17}$: an intergrowth of the 123-phase and rock-salt-type structure.—73-02441
Stable output of laser diode (LD) array pumped continuous wave (cw) and quasi-cw Nd:YAG laser.—73-11452
Structural neutron diffraction study of an $Nd_2CuO_{4-\delta}$ single crystal.—73-05494
Structural peculiarities of two layered cuprates, $NdSrCuO_{3.5}$ and $Nd_{1.8}Sr_{1.2}Cu_2O_{6-\delta}$.—73-02450
Structure characteristics of neodymium alkali nitrates.—73-16333
Superconducting $Sr_{0.875}Nd_{0.125}CuO_{2-\delta}$ thin films.—73-08223
Supramagnetic behavior in $Nd_{2-x}Ce_xCu(^{57}Co)O_4$.—73-15370
Temperature dependence of penetration depth and surface resistance of $Nd_{1.85}Ce_{0.15}CuO_4$.—73-16610
Temperature dependence of point-contact spectra for $Ag:Nd_{1.85}Ce_{0.15}CuO_{4-\delta}$.—73-08246
Upconversion in neodymium-doped fluoride glasses.—73-07096
Visible and uv upconversion from diode-pumped neodymium-doped fluoride glasses.—73-03818
Weak ferrimagnetism in neodymium ferrite chromites.—73-01484

**nepheline,**
Effect of alkali and alkaline-earth metal ions on the thermal expansion of nepheline.—73-05751
Effect of alkali and alkaline-earth metal ions on the thermal expansion of nepheline.—73-16722

**neutron diffraction,**
Neutron diffraction studies on real-time scale.—73-02345
Neutron diffraction study of high-$T_c$ superconducting ceramics $YBa_2Cu_3O_{6.9}$.—73-01611

**Nicalon,**
Characterization and modeling of microcracking and elastic moduli changes in Nicalon/CAS composites.—73-03243
Damage mechanisms of cross-ply Nicalon/CAS-II laminates under cyclic tension.—73-17271
Effects of microstructural instability on the creep behavior of Si-C-O (Nicalon) fibers in argon.—73-03276
Effects of weave geometry on properties of Nicalon-reinforced ceramic matrix composites.—73-13037
Flexural creep and creep-rupture behavior of SiC/BN dual-coated Nicalon fiber-reinforced glass-ceramic matrix composites.—73-17320
In situ fracture and Auger analysis of Nicalon fibers.—73-15804
Layered BN-coated/as-received unidirectional fiber CFCC's [continuous fiber ceramic composites] with enhanced mechanical performance.—73-17370
Mechanism of oxidation of Si-C-O fibers.—73-03225
Microstructural study comparing CFCMC's [continuous fiber ceramic matrix composites] with differing mechanical properties.—73-17156
Microstructure of a Nicalon/SiC composite and fiber deformation in the composites.—73-03170
Nicalon fiber-reinforced silicon carbide composites via polymer solution infiltration and chemical vapor infiltration.—73-09223
Nicalon-fiber-reinforced SiC composites via infiltration.—73-16881
Oxidation of Nicalon SiC fibers.—73-09533
Pyrolysis of Si-C-O fiber in alumina powder.—73-16965
Pyrolysis of Si-C-O fibers (Nicalon) at temperature from 1473 to 1673 K.—73-02985
Pyrolysis of Si-C-O fibers (Nicalon) at temperatures from 1473 K to 1673 K.—73-13222
Stability of interfaces in calcium aluminosilicate matrix/Nicalon SiC fiber composites.—73-09510
Suppression of pyrolysis of Si-C-O fiber [Nicalon] with oxide film.—73-17203
Suppression of pyrolysis of Si-C-O fiber with oxide film.—73-06074
Ultrasonic characterization of oxidation mechanisms in Nicalon/C/SiC composites.—73-17236

**nickel oxide,**
Activity of NiO in (Ni,Mg)O solid solutions.—73-16027
Annealing-induced defect clustering at $Ni_{1-x}O$-Y partially stabilized $ZrO_2$ interfaces.—73-09388
Annealing-induced defect clustering at $Ni_{1-x}O$-Y-partially stabilized $ZrO_2$ interfaces.—73-03077
Catalyst comprising amorphous NiO on silica/alumina support and process for butene dimerization.—73-05193
Characterization of dispersions and surface states of NiO/γ-alumina and $NiO/La_2O_3$-γ-alumina catalysts.—73-06141
Charge modulations in $La_{2-x}Sr_xNiO_{4+y}$: ordering of polarons.—73-16050
CO adsorption at 77 K on CoO/MgO and NiO/MgO solid solutions: an FTIR study.—73-02164
Cobalt and magnesium impurity diffusion in $Ni_{1-\delta}O$ single crystals.—73-13340
Cohesive energy of NiO: a quantum Monte Carlo approach.—73-08823
Compound $Y_2BaNiO_5$: a new example of a Haldane gap in an $S=1$ magnetic chain.—73-07929
Controlled architecture of solids with micro- and mesoporosity obtained by pillaring of montmorillonite with an $LaNiO_x$ binary oxide.—73-09049
Conventional and high-resolution synchrotron X-ray diffraction study of phase separations in $Pr_2NiO_{4+\delta}$.—73-02172
CoO-NiO superlattices: interlayer interactions and exchange anisotropy with $Ni_{81}Fe_{19}$.—73-04595
Dielectric relaxations and electrical transport due to nonadiabatic small polarons in *p*-type NiO doped with Li.—73-12767
Effect of deposition pressure on the microstructure and electrochromic properties of electron-beam-evaporated nickel oxide film.—73-13003
Effect of NiO dissolution on the microstructural development of $t'$-$ZrO_2$ with 5 mol% $Y_2O_3$.—73-09447
Effect of thermal treatment on the structural incorporation of NiO in silicate materials prepared by sol-gel method.—73-14363
Electrical resistivity of α-SiC ceramics added with NiO.—73-14702
Electrode of nickel oxide intercalated with lithium ions and electrochromic devices which incorporate such an electrode.—73-11016
Electrolytic composite layers based on nickel with nickel oxide addition.—73-10944
Electronic structure in NiO(100) with adsorbed Na.—73-05391
Estimates of Anderson's electron-phonon coupling constants of small polarons localized at oxygen ions in $Ni_{1-x}Li_xO$ using a polarizable point-ion shell model.—73-08865
Fabrication of YSZ/NiO-YSZ two-layer ceramics for tubular SOFC by multilayer slurry casting process.—73-05807
Fabrication of YSZ/NiO-YSZ two-layer ceramics for tubular SOFC by multilayer slurry casting process.—73-16778
Ferromagnetic resonance and spin anisotropy in iron oxide thin films and iron oxide/nickel oxide superlattices.—73-04612
Growth kinetics of sintered $NiO/ZrO_2$ (5 mol% $Y_2O_3$) composites.—73-02281
Incommensurate magnetic correlations in $La_{1.8}Sr_{0.2}NiO_4$.—73-07939
Infrared anomaly in $(La_{1-x}Sr_x)_2NiO_{4+\delta}$.—73-08110
Ir reflectivity of $PrNiO_4$ single crystals.—73-16189
Lattice dynamics of $La_2NiO_4$ in the charge fluctuation model.—73-16194
Magnetic exchange coupling for bilayered $Ni_{81}Fe_{19}$/NiO and trilayered $Ni_{81}Fe_{19}$/NiFeNb/NiO films.—73-11659
Magnetic structure of $Ho_2BaNiO_5$.—73-07957
Microwave susceptor materials in the $(Mg,Ni_{1-x})O$ system for high-temperature use in air.—73-05174
Morphology of $NiFe_2O_4$ precipitation in NiO.—73-17177
Novel $R_2Ba_{1.25}NiO_{5.25}$ (R=Tm, Yb, Lu) structure type.—73-02363
Phase separation, CDW's, and magnetism in $LaNiO_{4+\delta}$ ($\delta$=0.105).—73-15357
Phase transition and electrical conductivity of La-Ni-O system.—73-02389
Polaron contribution to the ir optical response of $La_{2-x}Sr_xCuO_{4+\delta}$ and $La_{2-x}Sr_xNiO_{4+\delta}$.—73-15583
Preparation of high-density perovskite $LaNiO_3$ by using HIP.—73-13190
Preparation of layered $LiNiO_2$ by alcoholate method and its behavior as a cathode in lithium secondary battery.—73-14724
Preparation of nickel oxide films by sol-gel process.—73-05978
Preparation of nickel oxide films by sol-gel process.—73-16927
Problems involved in the reducibility of the NiO-MgO system as evidenced by XRD, EPR, and electron spectroscopy for chemical analysis and adsorption techniques.—73-12661
Propagation of antiferromagnetic order across paramagnetic layers in CoO/NiO superlattices.—73-04641
Self-absorption effect in the fluorescence yield of NiO at the oxygen *K*-edge.—73-05636
Sintering behavior of $NiO-Fe_2O_3$ composites.—73-16993
Sintering behavior of YSZ/NiO-YSZ two-layer ceramics for tubular SOFC fabrication by multilayer slurry casting process.—73-16994
Solid defect structure and catalytic activity of perovskite-type catalysts $La_{1-x}Sr_xNiO_{3-\lambda}$ and $La_{1-1.333x}Th_xNiO_{3-\lambda}$.—73-08732
Solution growth technique for deposition of nickel oxide thin films.—73-13284
Spatially modulated antiferromagnetic order in CoO/NiO superlattices.—73-15364
Specific features of copper and nickel oxides obtained under extreme conditions by $CO_2$ laser irradiation of inorganic salts.—73-13448
Spectral and magnetic studies of nickelates $Lu_2BaNiO_5$ and $Yb_2BaNiO_5$.—73-08968
Structural and magnetic ordering in iron oxide/nickel oxide multilayers by X-ray and neutron diffraction.—73-04655
Structural and microstructural study of the formation of the solid solution $Li_xNi_{1-x}O$.—73-06286
Structure of 1T-$Li_2NiO_2$ from powder neutron diffraction.—73-02462
Structure of aggregated NiO particles in $NiO/SiO_2$ particles prepared by CVD method.—73-17201
Surface NiO species in $NiO/SiO_2$ catalysts [studied] using temperature-programmed reduction and X-ray diffraction.—73-02473
Synthesis, crystal structure, and properties of metallic $PrNiO_3$: comparison with metallic $NdNiO_3$ and semiconducting $SmNiO_3$.—73-02700
Thermal stability and defect structure of the solid solution $Li_xNi_{1-x}O$.—73-06178
Transparent-conducting *p*-type NiO thin films prepared by magnetron sputtering.—73-10998
Vibrational study of $R_2BaNiO_5$ (R=Y, Ho, Er, or Tm), $NiO_6$ 1-D chains, and $Tm_2BaNiO_5$ pyramids.—73-08790

**nickel,**
Characteristics of $TiB_2$ ceramics.—73-02742
Characterization of interfaces in nickel-matrix composites.—73-06745
Comparative study of FMR [ferromagnetic resonance] and Brillouin light scattering on FeNiB alloys.—73-11649
Conducting changes in Ni films on Si(111) following compound formation during annealing.—73-07421
Crystal chemical studies of inhomogeneous linear structures: IX, Series of $M_{2m+2n}X_{2m+2n}$ inhomogeneous linear structures and its new member $Ni_5Si_2P_3$.—73-16075
Crystal structure of new $HoNi_2B_2$ boride.—73-02204
Damage-tolerant laminated composites in thermal shock.—73-13817
Dielectric properties of Ni-doped (Ba, Sr)$TiO_3$ ceramics at very low frequencies.—73-04078
Effect of Cr on interfacial interaction and wetting mechanisms in Ni alloy/alumina systems.—73-13825
Effects of reinforcement size and distribution on fracture toughness of composite nickel aluminide intermetallics.—73-00225
Electrical properties and cationic distribution in cubic nickel manganite spinels $Ni_xMn_{3-x}O_4$, $0.57<x<1$.—73-02600
Fabrication and characterization of $NiCr_2O_4$ spinel.—73-07322
Fibrous monolithic ceramics: IV, Mechanical properties and oxidation behavior of the alumina/nickel system.—73-09598
Friction and wear behavior of electroless Ni-P coating.—73-09603
Grooving on SiC ceramic surface by reaction with solid metal: II, Reaction between SiC ceramics and Ni foil.—73-02842
Grooving on SiC ceramic surface by reaction with solid metal: II, Reaction between SiC ceramics and Ni foil.—73-10235
High-temperature strength of ion-implanted SiAlON and nickel joints.—73-03596
Influence of preparation method on the characteristics of Ni/sepiolite catalysts.—73-13098
Influence on electronic structure and superconductivity due to the partial substitution of Ni for Cu in $YBa_2(Cu_{1-x}Ni_x)_3O_{7-y}$.—73-11805
Intake or exhaust valve actuator.—73-00284
Interaction of nickel with silicon and phosphorus.—73-12605
Interactions of nickel metavanadate with metavanadates of rubidium, cesium, and silver.—73-02300
Interphases in $Si_3N_4$/Ni-Cr alloy joints.—73-03611
Joining of $Si_3N_4$ ceramics with nickel and Ni-Cr alloy laminated interlayers.—73-06811
Kinetics of reaction of $Si_3N_4$ with Ni.—73-00247
Kinetics of reaction of $Si_3N_4$ with Ni.—73-10247
Magnetic ordering in granular $Ni-Al_2O_3$.—73-04619
Mesoporous materials produced from novel trioctahedral Ni smectite.—73-13133
Method of wet coating a ceramic substrate with a liquid suspension of metallic particles and binder applying similar dry metallic particles onto the wet surface, then drying and heat treating the article.—73-13920
Microstructural study of tungsten-carbide-reinforced Ni-based superficial composite obtained by laser melt–particle injection processing.—73-13872
Microstructure and properties of $BaTiO_3$-Ni composite dielectrics.—73-07342
Microwave processing of $Ni-Al_2O_3$ composites.—73-03622
Mossbauer and magnetization studies of nickel ferrites.—73-04628
Neutron scattering investigation of the high-temperature phase transition in $NiTiO_3$.—73-12636
New nickel-related optical absorption in high-pressure synthetic diamond.—73-08925
New phosphide $CeNi_{5-x}P_3$ (x=0, 1) and its crystal structure.—73-16227
New type of $Ho_2Ni_{10}B_5$ boride structure.—73-02355
$Ni-Al_2O_3$ gradient materials by powder metallurgy.—73-03629
Nickel cermet, and process for preparing it.—73-03698
Nonmagnetic nickel tungsten cemented carbide compositions and articles made from the same.—73-05321
Phonon softening in the far-infrared spectra of $YBa_2(Cu_{1-x}Ni_x)_3O_7$.—73-01628
Powder processing technique for development of zirconia-nickel functionally gradient materials.—73-05953
Powder processing technique for development of zirconia-nickel functionally gradient materials.—73-10263
Preparation and processing of metal-ceramic composite materials.—73-10264
Preparation of Ni-Zn ferrite thin films by ICP flash evaporation method.—73-15360
Properties of $Al_2O_3$- and $Y_2O_3$-dispersion-strengthened Ni powders prepared by the application of mechanical alloying process.—73-13886
Reaction bonding of $ZrO_2$ and NiTi: reaction products' analyses on $ZrO_2$/NiTi bonding interface with AEM.—73-13890
Real structure and thermodynamic properties of olivine solid solutions of $(Fe_{1-x}Ni_x)_2SiO_4$.—73-05471
Resonant photoemission vs Coster-Kronig Auger decay at the $L_{III}$ thresholds of Ni metal and CuO.—73-08724
Resonant states formed by Co and Ni impurities in HgSe.—73-07774
Schottky barrier height [SBH] control at epitaxial NiAl/GaAs(001) interfaces by means of variable band gap interlayers.—73-04473
Shear bond strength of nickel-alumina interfaces diffusion bonded by HIP.—73-13897
Short-range order in dilute Ni-P, Ni-B alloys.—73-16300
Sintering and dielectric properties of $BaTiO_3$-Ni composite ceramics.—73-04168
Sintering and dielectric properties of $BaTiO_3$-Ni composite ceramics.—73-10988
Solid-state bonding of single crystals of $Ni_{(111)}/Al_2O_{3(0001)}$.—73-10277
Structural and electrical properties of Ni films grown on Si(100) and $SiO_2$ by dc bias sputtering.—73-08970

Structural and transport properties of biaxially aligned $YBa_2Cu_3O_{7-\delta}$ films on polycrystalline Ni-based alloy with ion-beam-modified buffer layers.—73-08210
Structural relaxations in irradiated Ni-P metallic glasses.—73-03763
Structural, magnetic, and optical investigation of $Ni_6MnO_8$.—73-02691
Synthesis and crystal structure of a new nickel selenite hydrate $Ni_3(SeO_3)_3{\cdot}H_2O$.—73-02480
Synthesis, structural characterization, and two-dimensional antiferromagnetic ordering for the oxides $Ti_{3(1-x)}Ni_xSb_2O_6$ [1≥x≥0.6].—73-02504
Time-resolved spectroscopy of Ni-doped fluorozirconate glasses.—73-07093
Toughening of alumina matrices by the inclusion of nickel particles.—73-00272
Virtual interface method for in situ ellipsometry of films grown on unknown substrates.—73-09385
ZnO precipitation during sintering of Ni-Zn ferrite used for the substrate of thin-film heads.—73-01485

**niobates,**
Anisotropic grating recording in photorefractive $KNbO_3$:Fe.—73-08807
Anisotropic light-induced scattering and "position-dispersion" in $KNbO_3$:Fe crystal.—73-05529
Anomalous behavior of the transverse acoustic phonons in $KTa_{1-x}Nb_xO_3$.—73-08551
Calculated electric field gradients in ferroelectric $KNbO_3$.—73-15250
Cluster intergrowth of perovskite and defect sodium-chloride-type structures in the K-Nb-O system: approximate structure of $KNb_4O_6$.—73-02163
Cooperative behavior during ferroelectric transitions in $KNO_3$ powder.—73-07873
Correlation between optical and electrical properties in reduced lithium niobate crystals.—73-01396
Determination of niobium–oxygen bond distances and bond orders by Raman spectroscopy.—73-02233
Domain formation by impurity dipoles in $KNbO_3$ single crystals.—73-03132
Elastic properties of orthorhombic $KNbO_3$ single crystals by Brillouin scattering.—73-11568
Fabrication of transparent tellurite glasses containing potassium niobate crystals by an incorporation method.—73-00625
Features of thermal dissociation of oxyfluoroniobates.—73-16150
Improper ferroelectric phase transition in cadmium pyroniobate.—73-15268
Influence of $La_2O_3$ additions on the dielectric properties of the ceramic $Sr_{0.3}Ba_{0.7}Nb_2O_6$.—73-16518
Lithium insertion into the layered perovskites $LiCa_2Nb_3O_{10}$ and $LiLaNb_2O_7$.—73-05430
Magnetic properties of $PrBa_2Cu_2MO_{8-y}$ (M=Ta, Nb).—73-07954
Materials constants of $KNbO_3$ relevant for electro- and acoustooptics.—73-07898
Microstructure and properties of lead ferroniobate [PFN] ceramics $(Pb(Fe_{0.5}Nb_{0.5})O_3)$.—73-13426
Microstructure/process relations in sol-gel-prepared $KNbO_3$ thin films on (100)MgO.—73-04560
Modeling of refractive index profiles of $He^+$ ion-implanted $KNbO_3$ waveguides based on the irradiation parameters.—73-11590
Phase formation in the processes of synthesis of lead magnoniobate.—73-02383
Phase-matched second harmonic blue light generation in ion-implanted $KNbO_3$ planar waveguides with 29% conversion efficiency.—73-07904
Precursor effects and ferroelectric macroregions in $KTa_{1-x}Nb_xO_3$ and $K_{1-x}Li_{1-y}TaO_3$.—73-07910
Preparation of uniform submicrometer particles of calcium titanate and lead niobate by replacement reactions.—73-13210
Process for the production of lead metal niobates.—73-12399
PZN-based relaxors for MLCC's [multilayer ceramic capacitors].—73-14726
Raman scattering study of $Ba_2NaNb_{5(1-x)}Ta_{5x}O_{15}$.—73-07917
Self-pumped phase conjugation in Cu-doped potassium-sodium-strontium-barium niobate (KNSBN).—73-11613
Solubility limit in the tetragonal series of the $Fe(Ta_xNb_{1-x})_2O_6$ system.—73-08734
Stable three-frequency quasi-periodicity in conductivity oscillations of BSN crystals.—73-16600
Synthesis, single-crystal structure, and magnetic properties of orthorhombic $CuNb_2O_6$.—73-07980
Toward a quantum theory of polarization in ferroelectrics: the case of $KNbO_3$.—73-15296
Twin texture of tetragonal lead-metaniobate-based ferroelectric solid solutions.—73-15298
Two-wave mixer properties of Fe:$KTa_{1-x}Nb_xO_3$ (KTN) crystal.—73-11627
X-ray diffraction study of $NaNbO_3$ single crystals in electric field.—73-16393

**niobium oxide,**
Ac impedance spectroscopy of $Nb_2O_5$ thin films: evidence for a distributed resistance network.—73-03706
Comparison of the degradation modes in sandwich structures including amorphous oxides of niobium and tantalum.—73-09440
Complex admittance of surface oxide on metastable niobium superfine particles.—73-05538
Deposition of niobium, NbN, and $Nb_2O_5$ films by filtered arc evaporation.—73-02768
Effect of $Nb_2O_5$ addition on the phase change in $Li_2Ti_3O_7$.—73-16119
Effect of $Nb_2O_5$ alloying on thermal expansion anisotropy of 2 mol% $Y_2O_3$-stabilized tetragonal $ZrO_2$.—73-02584
Effect of $Nb_2O_5$ on crystallite growth during sintering of $SnO_2$ ceramics.—73-09081
Formation of $Nb_2O_5$ thin films by sol-gel technique and analysis of their crystalline phases and dielectric characteristics.—73-08872
Grain-boundary conductivity of the system $Y_2O_3$-$Nb_2O_5$ composites.—73-00973
Grain-boundary conductivity of the system $Y_2O_3$-$Nb_2O_5$ composites.—73-12806
Influence of the calcining temperature on the sintering and properties of PZT ceramics.—73-09180
$Pb_2KNb_2O_{15}$ ferroelectric ceramics: elaboration, control of stoichiometry, and dielectric properties.—73-11595
Phase maps for sputter-deposited refractory metal oxide ceramic coatings: review of niobium oxide, yttrium oxide, and zirconium oxide growth.—73-16254
Phase relations in the system titanium dioxide-diniobium-zinc hexoxide.—73-02387
Preparation of $Y_3NbO_7$ powders with excess oxygen vacancies and conductivity of the sintered bodies.—73-16942
Pure $Nb_2O_5$ and $Ta_2O_5$.—73-05623
$SiO_2$-$Nb_2O_5$ thin films using sol-gel technology.—73-13272
Structural and magnetic studies on $PrBa_2Cu_2NbO_{8-y}$.—73-08745
Synthesis of $Pb(Mg_{1/3}Nb_{2/3})O_3$ powder by spray pyrolysis with ultrasonic atomizer.—73-03050

**niobium,**
$BaNb_{10}SiO_{19}$: a complex oxide with a variety of different niobium-niobium interactions.—73-02148
CDW phase slip and current conversion in $NbSe_3$.—73-08564
Ceramic materials for producing high-purity compounds of niobium and tantalum.—73-08492
Charge transfer between monolayer graphite and NbC single-crystal substrates.—73-02559
Crystal structure of new niobium oxide, $Nb_4O_5$.—73-16089
Dc electrical resistivity of Nb-doped $BaTiO_3$ and EPR measurements.—73-12762
Depth-sensitive visualization of irradiation-induced columnar defects in the layered superconductor 2H-$NbSe_2$ via scanning probe microscopy.—73-08017
Determination of optical constants of crystalline quartz and ultrathin niobium films from surface electromagnetic wave propagation study.—73-16440
Development of (Ti,Al)N and (Ti,Nb)N ceramic coatings produced by steered arc ion plating.—73-10215
Development of PLZTN for shear type accelerometer.—73-01398
Disorder and thermal motion of Ag in $Ag_{0.6}NbS_2$.—73-00949
Effect of sintering atmosphere on interface migration of niobium-doped strontium titanate during infiltration of oxide melts.—73-10938
Electrical characterization of zirconia-niobium and zirconia-titanium composites.—73-08852
Fabrication of NbN thin films by reactive sputtering.—73-05803
First-principles calculations for niobium atoms on a sapphire [(0001)] surface.—73-05401
Interaction of niobium(IV) oxide with the rare-earth oxides.—73-12606
Local structures in $Na_4Nb(PO_4)_3$ glass and crystal: $^{31}P$ MAS NMR studies.—73-03159
Magnetic-field effects in $NbSe_3$.—73-08909
Method for the preparation of niobium nitride.—73-12489
Microstructure and microwave characteristics of $Ba[(Mg,Co)_{1/3}Nb_{2/3}]O_3$-based dielectrics.—73-00995
Microstructure and properties of niobium diboride particulate-reinforced silicon carbide composites.—73-09485
$Na_{2+x}Nb_6P_4O_{26}$: a novel niobium phosphate bronze isotopic of the $m$=3 member of the $MPTB_p$ family.—73-02340
Narrow-band "noise" in $NbSe_3$ as a function of magnetic field and temperature: a reassessment.—73-04415
Niobium phosphate bronze closely related to the $Ba_3Nb_6Si_4O_{26}$ structure: $Na_6Nb_8P_5O_{35}$.—73-02359
Niobium phosphate with a tunnel structure: $Ca_{0.5+x}Cs_2Nb_8P_5O_{24}$.—73-02360
Optical constants of reactively sputtered NbN films.—73-16555
Optical reflectivity spectra of incommensurate layer compounds, $(CeS)_{1.2}NbS_2$ and $(CeS)_{0.6}NbS_2$.—73-08936
Phase transitions and phase composition in cathode reduction of 2H niobium diselenide.—73-02392
Physical properties of a new barium niobium sulfide, $BaNb_2S_5$.—73-02668
Reactions between the components of the powders in the Nb-$Y_2O_3$ system.—73-12671
Reactive magnetron sputter deposition of niobium nitride films.—73-09295
STM study of distortion and instability of inclined flux-line-lattice structures in the anisotropic superconductor 2H-$NbSe_2$.—73-08743
Stress in $NbC_xN_{1-x}$ films prepared by reactive rf magnetron sputtering.—73-14734
Superconductivity and magnetism in niobium-doped $YBa_2Cu_3O_7$-related high-$T_c$ ceramics.—73-11918
Superconductivity of $NbSr_2Nd_{2-x}Ce_xCu_2O_{10-\delta}$ [0.3≤x≤0.7].—73-04815
Surface impedance measurements of superconducting (NbTi)N films by a ring microstrip resonator technique.—73-01682
Test of a binary mixture model for the thermoelectric power of ion-bombarded NbN films.—73-16615
Transition of compensating defect mode in niobium-doped barium titanate.—73-06179
Tribological properties of niobium ion-implanted alumina.—73-17455
Tunneling into BiSrCuO superconductor up to the critical magnetic field.—73-08265

**nitrates,**
Corrosive effect of nitrate solutions on portland cement mortars.—73-00053
Low-temperature X-ray diffraction study of potassium-neodymium nitrates, $K_3[Nd_2(NO_3)_9]$ and $K_2[Nd(NO_3)_5(H_2O)_2]$.—73-16203
Measurements on temperature and frequency variation of ac conductivity in a metastable state of europium nitrate crystal.—73-08914
Real structure and phase transitions [PT's] in nitrates of divalent elements.—73-02420
Structural changes in isostoichiometric family of $Cs_2[Ln(NO_3)_5(H_2O)_2]$ [Ln=La, Ce, Nd].—73-02447
Structure characteristics of neodymium alkali nitrates.—73-16333
Synthesis and X-ray diffraction study of lithium rare-earth nitrates $Li_3[Ln_2(NO_3)_9]{\cdot}3H_2O$, *where Ln*=La, Nd.—73-02497
Synthesis and X-ray diffractometry study of rubidium rare-earth nitrates, $Rb_2[Ln(NO_3)_5(H_2O)_2]{\cdot}2H_2O$, *where Ln*=La, Ce.—73-16354
Synthesis of $YBa_2Cu_3O_{7-\delta}$ using barium nitrate.—73-01686

**nitridation,**
Combined plasma nitridation/PVD processes.—73-10205
Comparative study of plasma nitriding behavior of a type 316 stainless steel and a microalloyed steel.—73-06757
Comparative study of plasma nitriding behavior of a type 316 stainless steel and a microalloyed steel.—73-13810
Dimensional change characteristics of ceramics produced by simultaneous nitriding of Si and Ti powders and its application to adiabatic engine parts.—73-05743
Effect of additives on the thermal nitridation of sol-gel-derived silica gel.—73-07122
Effect of temperature on nitridization of silicon.—73-16745
Effects of hydrogen and temperature on the kinetics of the fluidized-bed nitridation of silicon.—73-05780
Effects of thermal nitridation on the radiation hardness of the $SiO_2$/Si interface.—73-08841
Electron-induced nitridation of GaAs(100) with ammonia.—73-11188
Hardening of a titanium alloy by laser nitriding.—73-06799
Influence of surface preparation prior to thermal nitridation on the electrical characteristics of silicon nitride films deposited on polycrystalline silicon films.—73-05876
Ir study of plasma-nitrided thermal $SiO_2$ and pure silicon.—73-05427
Kinetics of growth of plasma nitrided layers on a titanium-modified stainless steel.—73-13856
Laser-assisted nitridation of GaAs: mechanisms.—73-05892
Low-temperature nitridation of silicon by direct ammonia nitridation in a molecular beam epitaxy reactor.—73-11299
Microwave nitridation of silicon compacts utilizing a temperature gradient.—73-05921
Nitridation behavior of kaolin with reduced alumina content obtained by acid treatment.—73-02907
Nitridation of GaAs(110) using energetic $N^+$ and $N_2^+$ ion beams.—73-04417
Nitridation of silicate and borosilicate glasses prepared by sol-gel process.—73-06943
Nitriding of silicon.—73-09224
Nitriding of zirconia.—73-02908
Quantitative kinetic analysis of silicon nitridation.—73-09287
Simplified closed-form trap-assisted tunneling model applied to nitrided oxide dielectric capacitors.—73-10987
Spectroscopic characterization of the nitridation process of polymeric precursors to Si-M-N-O systems (M=Ti, Zr, Al).—73-05484
Spectroscopic investigations into plasma used for nitriding processes of steel and titanium.—73-06856

**nitrides,**
ALON and its composite ceramics.—73-05258
Apparatus and methods for producing ceramic products.—73-01842
Calculated electronic structure of $SnFe_3N$.—73-05363
Carbothermal synthesis of binary (MX) and ternary ($M^1$, $M^2X$) carbides, nitrides, and borides from polymeric precursors.—73-12934
Ceramic innovations—disappeared and rediscovered.—73-03384
Compound layer formation during plasma nitriding and plasma nitrocarburizing.—73-16682
Conductive material and process for preparing the same.—73-04195
Crystal growth method for gallium-nitride-based compound semiconductor.—73-11516
Decomposition of crystalline binary nitride films of tin, copper, and nickel by reactive sputtering.—73-05728
Deposition of niobium, NbN, and $Nb_2O_5$ films by filtered arc evaporation.—73-02768
Deposition, characterization, and device development in diamond, silicon carbide, and gallium nitride thin films.—73-05740
Dry and wet etching characteristics of InN, AlN, and GaN deposited by electron cyclotron resonance metallorganic molecular beam epitaxy.—73-09074
Dynamic conductivity and the coherence peak in the submillimeter spectra of superconducting YbN films.—73-15422
Effect of Hf, Nb, Ta, and Zr nitrides on $T_c$ of some high-temperature superconducting systems.—73-01529
Effort on preparing sintered bodies of $Fe_4N$.—73-05785
Electrical and optical properties of InN-$In_2O_3$ thin films.—73-16472
Electrical properties of nitrided phosphate glasses.—73-14176
Electrical properties of oxide-nitride-oxide, ONO, heterostructures fabricated by low-temperature [300°C] remote PECVD.—73-04086
Electronic structure of $Ca_3AuN$.—73-16133
Electronic Structure of Refractory Carbides and Nitrides.—73-09763

Enrichment in molybdenum carbides and nitrides during $Ar^+$ bombardment.—73-09118
Fabrication of NbN thin films by reactive sputtering.—73-05803
Fixed and trapped charges at oxide-nitride-oxide [ONO] heterostructure interfaces formed by remote plasma-enhanced chemical vapor deposition.—73-10949
Formation of device-quality metal-insulator-semiconductor structures with oxide-nitride-oxide [ONO] dielectrics by low-temperature plasma-assisted processing, combined with high-temperature rapid thermal annealing.—73-04104
Gallium nitride base semiconductor device.—73-01373
Gallium nitride group compound semiconductor laser diode.—73-01374
GaN, AlN, and TiN: a review.—73-08875
Growth and characterization of GaN on *c*-plane (0001)sapphire substrates by plasma-enhanced molecular beam epitaxy.—73-13078
Growth and characterization of GaN on sapphire and silicon.—73-14945
Growth of InN for ohmic contact formation by electron cyclotron resonance metallorganic molecular beam epitaxy.—73-13082
Growth of zinc blende-GaN and ß-SiC-coated (001)Si by molecular beam epitaxy using a radio-frequency plasma discharge, nitrogen-free radical source.—73-13084
Heteroepitaxy, polymorphism, and faulting in GaN thin films on silicon and sapphire substrates.—73-13086
High-pressure structural phase transformation in GaN.—73-02282
High-responsivity ultraviolet gallium nitride detector.—73-11524
High-temperature stability of CrSi(W)-N films.—73-12810
$In_xGa_{1-x}N/In_yGa_{1-y}N$ superlattices grown on GaN films.—73-07588
Influence of buffer layers on the deposition of high-quality single-crystal GaN over sapphire substrates.—73-02866
Influence of composition and oxidation temperature on thermal conductivity of Si-Ti-O-N porous ceramics.—73-05582
Insulating member and electric parts using the same.—73-11022
Interface and bulk traps in oxide-nitride stacked films.—73-05058
Iron nitride magnetic fluids prepared by vapor-liquid reaction and their magnetic properties.—73-07945
Kinetics of growth of plasma-nitrided layers on a titanium-modified stainless steel.—73-06813
Laser-assisted chemical vapor deposition of InN on Si(100).—73-17152
Layer-by-layer epitaxial growth of GaN at low temperatures.—73-05893
Li deintercalation in lithium transition metal nitride, $Li_3FeN_2$.—73-10966
Light-emitting semiconductor device using gallium nitride group compond with double layer structures for the *n*-layer and/or the *i*-layer.—73-11525
Light-emitting semiconductor device using gallium nitride group compound.—73-11526
Low-temperature (300°C) stacked oxide-nitride-oxide gate dielectrics with remote plasma-enhanced chemical vapor deposition.—73-00991
Making carbides and nitrides.—73-12477
Manganese nitride sorption in Joule–Thomson refrigerator.—73-12434
Method for producing iron-nitride powders.—73-16002
Method for the preparation of niobium nitride.—73-12489
Method of manufacturing gallium nitride semiconductor light-emitting device.—73-04525
Method of nitriding refractory metal articles.—73-10331
Method of producing integral, hard nitride layer on titanium/titanium alloy.—73-13919
Microstructure of iron nitride-titanium nitride films prepared by CVD.—73-17170
Near-surface structure of molybdenum nitride catalysts as deduced by Fourier analysis of high-resolution transmission electron micrographs.—73-06263
New precursor for growing nitride films.—73-13149
Novel elastic anomalies in Zr-N films.—73-08929
Optical constants of indium nitride.—73-05601
Optical constants of reactively sputtered NbN films.—73-16555
Optimization of the composition of nitridic ceramic tool material by tribotechnical tests.—73-02084
Oxidation of $CrN_x$ hard coatings reactively sputtered at low temperature.—73-00255
Oxides and nitrides of metastable group IV alloys and nitrides of group IV elements and semiconductor devices formed thereof.—73-01381
Phase diagram of magnesium nitride at high pressures and temperatures.—73-12653
Phonon-free superconductivity of cubic monocarbides and mononitrides.—73-16272
Photoassisted growth of gallium nitride by gas source molecular beam epitaxy.—73-05945
Photoluminescence characterization of AlGaN-GaN pseudomorphic quantum wells and calculation of strain-induced band gap shifts.—73-15095
Powertrain component with adherent film having a graded composition.—73-03700
Preparation of HfN fine powders using thermite method by reduction of Mg.—73-05974
Preparation of HfN fine powders using thermite method by reduction with Mg.—73-13189
Preparation of magnesium nitride powder by low-pressure chemical vapor deposition.—73-02953
Process for applying nitride layers to titanium.—73-10339
Process for producing crack-free nitride-hardened surface on titanium by laser beams.—73-10342
Progress and prospects for GaN and the III-V nitride semiconductors.—73-15121
Properties of oxide-nitride-oxide [ONO] stacked films for gate insulation in active matrix displays.—73-04152
Properties of TiN, ZrN, and ZrTiN coatings prepared by cathodic arc evaporation.—73-09503
Rapid omnidirectional compaction process for producing metal nitride, carbide, or carbonitride coating on ceramic substrate.—73-01879
Reaction synthesis of SiC-reinforced Ti(C,N) composites from TiC and $Si_3N_4$.—73-09294
Reactions of copper and copper oxides with nitride ceramics (AlN, SiAlON, $Si_3N_4$) and their oxide additive ($Al_2O_3$, $Y_2O_3$, $SiO_2$, MgO).—73-13232
Reactive magnetron sputter deposition of niobium nitride films.—73-09295
Sectional structures and electrical properties of ultrathin NbN/MgO bilayers on Si(100).—73-02683
Semiconductor memory device.—73-01385
Single-phase deposition of α-gallium nitride by a laser-induced transport process.—73-06047
$Sm_2Fe_{17}N_x$ powder with high coercivity prepared by high-energy ball milling.—73-17003
Superhard nanocomposite of nitride superlattices by opposed-cathode unbalanced magnetron sputtering.—73-06071
Surface-coated hard material for cutting tools or wear-resistance tools.—73-03702
Synthesis of high moment and high coercivity iron nitride particles.—73-04658
Synthesis of thin films of semiconductor and refractory metal nitrides by laser irradiation of solid samples in ambient gases.—73-13311
Ternary silicon–rare-earth nitrides and process for their preparation.—73-12529
Test of a binary mixture model for the thermoelectric power of ion-bombarded NbN films.—73-16615
Thermal stability of indium nitride single-crystal films.—73-05675
Transparent and conductive GaN thin films prepared by an electron cyclotron resonance plasma metallorganic chemical vapor deposition method.—73-09380
Zirconium oxide and nitride coated cardiovascular implants.—73-03705

**nitrites,**
Electroplastic effect in polarized ferroelectric $NaNO_2$ crystals.—73-01408
Twinning-induced emission phenomena in $NaNO_2$ crystals.—73-16388

**nitrogen oxides,**
Cascade heating system reduces $NO_x$.—73-15868
Ceramic DENOX catalysts for selective catalytic reduction of industrial emissions of nitrogen oxides.—73-15922
Chemical technologies for global environment.—73-03386
Clean Air Act Amendments $NO_x$ compliance requirements—glass industry.—73-09704
Fast growth of thin gate dielectrics by thermal oxidation of Si in $N_2O$ gas ambient with low concentration of $NF_3$ addition.—73-07324
Interaction of $NO_2$ with copper phthalocyanine thin films: I, Characterization of the copper phthalocyanine films.—73-13405
Interaction of $NO_2$ with copper phthalocyanine thin films: II, Application to gas sensing.—73-12821
Low-$NO_x$ staged air-recirculating burner undergoing field trials after excellent test performance.—73-08479
Minimization of $NO_x$ emissions with improved fuel combustion: controlled pulsated combustion.—73-08480
New CF/FCB low-$NO_x$ precalciner.—73-05124
Nitrogen dioxide adsorption of deuteroxylated titania (anatase).—73-08927
Nitrogen dioxide adsorption of deuteroxylated titania (anatase).—73-16228
$NO_x$ emissions from oxy-fuel-fired glass-melting furnaces.—73-01960
$NO_x$ reduction by injecting ammonia into cement kiln systems.—73-03506
$NO_x$ reduction using new firing technology.—73-12233
Operating results and $NO_x$ emissions with the ROTAFLAM burner at the Retznei cement factory.—73-03510
Oxidizing gas sensing by SiC/ZnO heterocontact—$NO_x$ sensing.—73-01269
Process modification for $NO_x$ control.—73-03877
Reducing $NO_x$ and energy usage via the firing system.—73-15890
Reducing $NO_x$ emissions.—73-03882
Selective catalytic reduction of nitric oxide with ammonia on vanadium oxide catalysts supported on titania–alumina.—73-02685
Technical question—emission reduction of $NO_x$ formation in gas-fired furnaces.—73-14515
Will a natural gas "cracker" technique reduce $NO_x$ emissions.—73-12246

**nitrogen,**
Aluminum-containing nitrogen melilite phases.—73-05354
Atomic layer epitaxy of nitrogen-doped ZnSe.—73-04248
Comparison of Mo-N and W-N synergism during passivation of stainless steel through X-ray photoelectron spectroscopy and electrochemical analysis.—73-06759
Fine structure of the A line of bound excitons in $GaAs_xP_{1-x}$:N solid solutions.—73-01165
Hall effect and infrared absorption measurements on nitrogen donors in 6H-silicon carbide.—73-12808
Incorporation of nitrogen into oxynitride dielectric through thermal nitridation of silicon.—73-04114
Nanocomposite Si/C/N powder production by laser-aerosol interaction.—73-09219
Nature of the instability of the luminescence emitted by GaP:N structures.—73-07688
Nitrogen donors in 4H silicon carbide.—73-02647
Process for producing furnace atmospheres using noncryogenically generated nitrogen.—73-15894
Structural properties of nitrogen-doped ZnSe epitaxial layers grown by MBE.—73-04490

**noise,**
Disorder-induced flicker noise in high-$T_c$ rf superconducting quantum magnetometers.—73-01524
Effect of thermal noise on the characteristics of a high-$T_c$ superconducting quantum interference device.—73-04546
Enhancement of the noise spectral densities near the resistive transition of YBCO microbridges.—73-01544
Influence of compensating annealing on the 1/*f* noise in $Cd_xHg_{1-x}Te$.—73-07592
Keeping noise under control.—73-12155
1/*f* noise in $Bi_2Sr_2Ca_2Cu_3$-O and its impact on bolometer performance.—73-08153
1/*f* noise in $YBa_2Cu_3O_{7-\delta}$ superconducting bicrystal grain-boundary junctions.—73-11813
Making the most noise.—73-10561
Noise of the 1/f type and electrical and photoelectric properties of GaAs bombarded with high-energy ions.—73-04418
Noise reduction in image amplification in photorefractive $BaTiO_3$.—73-08928
Noise reduction in photorefractive image amplifiers and applications.—73-07902
Nonmonotonic dependence of 1/*f* noise on the intensity of additional illumination of GaAs.—73-01260
Temperature dependence of the low-frequency noise in structurally perfect GaAs and after destructive compression.—73-01345

**nondestructive testing,**
Fine ceramics and nondestructive testing.—73-01900
NDE of structural and functional carbon-carbon composites after first carbonization.—73-17405
New theory of nondestructive inspection based on fracture mechanics and fracture statistics.—73-06495
Nondestructive evaluation of the density of silicon nitride powder compacts and sintered bodies.—73-02909
Nondestructive TAB bond testing for multichip modules.—73-05075
Nondestructive testing of refractories in the glass industry.—73-01922
Screening diagram for nondestructive inspection.—73-06516

**nonmetallic materials,**
Application of wear-resistant nonmetal lining to extruder barrel.—73-12109

**nonoxides,**
Coating of nonoxide ceramics by interaction with metal powders.—73-02749
Defects in nonoxide glasses.—73-13957
Effect of dispersed particle size on mechanical properties of alumina/nonoxide composites.—73-09574
Effect of dispersed particle size on mechanical properties of alumina/nonoxide composites.—73-17283
Fracture behavior of nonoxide ceramics under biaxial stresses.—73-06433
Grain-boundary structure and high-temperature strength of nonoxide ceramics.—73-03306
Nonoxide additives as sintering aids for $Si_3N_4$-based ceramics.—73-05934
Oxide–nonoxide glasses.—73-15968
Production of nonoxide monolithic ceramic shaped articles.—73-12512
Special equilibria, clustering, and chemical-exchange kinetics in nonoxide glasses and melts. High-temperature $^{31}P$ NMR study of the system phosphorus-selenium.—73-14085

**nonstoichiometry,**
Calculation of nonstoichiometry of ternary solid solutions of $Ga_{1-x}Al_xAs$ and $GaAs_{1-x}P_x$.—73-01089
Determination of zinc, cadmium, and lead during investigation of nonstoichiometry of chalcogenides of metals.—73-12129

**nozzles,**
Alumina buildup in submerged entry nozzle.—73-00773
Effect of pitch and phenolic resin on the mechanical properties of $Al_2O_3$-C nozzle.—73-00804
Explanation of clogging phenomena of CC [continuous casting] submerged nozzle.—73-00814
Flame-retaining ceramic burner nozzle.—73-12366
Immersion nozzle for prevention of alumina clogging.—73-00822
Long-term casting with zirconia nozzles.—73-14600
Molten steel pouring nozzle.—73-00888
Nozzle with nonsymmetrical feed for the formation of a coating layer on a ribbon of glass, by pyrolysis of a gas mixture.—73-12090
Prevention of alumina deposition in submerged nozzles.—73-00840
Prevention of continuous casting submerged nozzle clogging.—73-00841
Quasi-one-dimensional analysis of the two-phase flow in a de Laval spray coating nozzle and exit plume.—73-09288
Use of de Laval nozzles in spray forming.—73-08369
Water model simulation on tundish sliding nozzle—fluid flow in submerged entry nozzle.—73-00883

**nuclear magnetic resonance (NMR),**
$^{129}Xe$ NMR study of dealuminated mordenites.—73-12732
$^{17}O$ and $^{29}Si$ MAS NMR study of ß-$C_2S$ [dicalcium silicate] hydration and the structure of calcium-silicate hydrates.—73-13758
$^{23}Na$ NMR chemical shifts and local Na coordination environments in silicate crystals, melts, and glasses.—73-16224
$^{29}Si$ and $^{27}Al$ MAS-NMR of NaOH-activated blast-furnace slag.—73-16301
$^{29}Si$, $^{27}Al$, and $^{15}N$ magic angle spinning nuclear magnetic resonance study of O´-SiAlON's and some related phases.—73-12680
$^{89}Y$ NMR observation of Knight shift anisotropy and motional line narrowing in $YBa_2Cu_3O_{7-\delta}$.—73-11942

2-D exchange NMR in deuteron glasses.—73-06984
Advances in basic science of traditional glasses.—73-04898
Analysis of NMR data in the superconducting state of $YBa_2Cu_3O_7$.—73-11685
Application of NMR spectroscopy in the study of glass structures: II.—73-01884
Characterization by ir and NMR spectroscopies of calcined beta zeolite.—73-12548
Characterization of hydrogenated amorphous carbon films by nuclear magnetic resonance techniques.—73-08569
Limitations of resolution in the $^1H$ MAS-NMR spectroscopy of zeolites—further results.—73-12621
MAS NMR and ir studies of pillared clays.—73-05434
NMR studies of the synthesis of silicalite by the fluoride method.—73-12641
Pore characterization of $SiO_2$ chromatographic gels using nuclear magnetic resonance.—73-08433
Sol-gel process study by multinuclear NMR spectroscopy.—73-03757

**nuclear materials,**
Applications of advanced materials for the manufacturing of components of experimental devices for controlled nuclear fusion research.—73-08283
Chemical characterization of materials for pyrochemical applications.—73-08287
Effect of the addition of aluminum distearate [ADS] on manufacturing $UO_2$ nuclear fuel.—73-04890
Nuclear fuel pellets having an aluminosilicate deposition phase.—73-04897
Zone sintering of ceramic fuels.—73-15704

**nuclear quadrupole resonance (NQR),**
Effect of oxygen subsystem ordering on copper NQR spectrum in $YBa_2Cu_3O_x$ high-$T_c$ superconductors.—73-15432

**nuclear waste,**
Cement use for radioactive waste embedding and disposal purposes.—73-04888
Crystallization in simulated glasses from Hanford high-level nuclear waste composition range.—73-08291
Details of in situ sample retrievals and test completion for the Materials Interface Interactions Test (MITT).—73-08292
Effect of composition and temperature on viscosity and electrical conductivity of borosilicate glasses for Hanford nuclear waste immobilization.—73-08294
Effect of humic acids on the dissolution of nuclear waste glasses.—73-08295
Effects of temperature and radiation on the results of the nuclear waste glass product consistency leach test.—73-08296
Epoxy-modified cements [EMC's] cured with catalytic curing agents for fixation of radioactive waste.—73-08297
Immobilization of radioactive wastewater residues in a cement matrix.—73-09994
Immobilization of simulated high level nuclear wastes with tholeiite-type basalt.—73-04891
Immobilization of simulated high-level nuclear wastes [HLNW's] with tholeiite-type basalt.—73-15701
International in situ testing of waste forms and package components: an overview of the MIIT [Materials Interface Interactions Test] program.—73-08298
Mathematical modeling of radioactive waste leaching.—73-04892
Microstructural and electrical resistivity investigation of melter floor sludge.—73-08301
Microwave applications to process nuclear and hazardous waste.—73-04893
Microwave processing of simulated nuclear waste glass: II.—73-04894
Noble metal behavior during melting of simulated high-level nuclear waste glass feeds.—73-08302
Overview of surface analysis on U.S. and international waste glasses.—73-08303
Performance of SRS [Savannah River Site] waste glass buried in salt at WIPP-MITT program.—73-08304
Preliminary assessment of disposal limits for vitrified low-level mixed wastes in RCRA (Resource Conservation and Recovery Act) landfills.—73-08305
Product composition control system at Savannah River: statistical process control algorithm.—73-08306
Radioactive demonstration of DWPF [Defense Waste Processing Facility] product control strategy.—73-08307
Radiometric emanation method for monitoring morphology and porosity changes during radwaste cementation.—73-04895
Status of vitrification for DOE low-level mixed waste forms.—73-08310
Vitrification of simulated intermediate-level waste from nuclear power plants: I, Melting behavior and properties of selected glasses.—73-08313
Waste-glass-melting stages.—73-08316

**nucleation,**
$\alpha/\beta$ phase transformation of silicon nitride: homogeneous and heterogeneous nucleation.—73-16029
Activity of substrates in the catalyzed nucleation of glass-forming melts: I, Theory.—73-07104
Activity of substrates in the catalyzed nucleation of glass-forming melts: II, Experimental evidence.—73-07105
Ceramic Transactions, Volume 30: Nucleation and Crystallization in Liquids and Glasses.—73-17517
Classical nucleation theory with a size-dependent interfacial tension: $Li_2O{\cdot}2SiO_2$ crystal nucleation.—73-00308
Comments on the autocatalytic nucleation of (Na,TPA)-ZSM-5.—73-12950
Diffuse interface theory of nucleation.—73-06904
Effect of graphite carbon films on diamond nucleation by microwave-plasma-enhanced chemical vapor deposition.—73-09079
Effect of reaction pressure on the nucleation behavior of diamond synthesized by hot-filament chemical vapor deposition.—73-16739
Freezing gels.—73-00631
Further investigations of nucleation by initial breeding in the Al-free $NH_4$-ZSM-5 system.—73-05821
Kinetics of nucleation of X zeolites.—73-08655
Lifetime of silicon nitride limited by cavity nucleation in the intergranular glassy phase.—73-03322
Lower-dimensional quantum structures by selective growth and gas-phase nucleation.—73-11302
Modification of the classical theory of crystal nucleation as applied to glasses of nonstoichiometric and stoichiometric compositions.—73-00373
Nucleation and growth of diamond in detonation products.—73-09225
Nucleation of beta-wollastonite crystal by noble metal particles.—73-14446
Nucleation of diamond during hot-filament chemical vapor deposition.—73-02911
Nucleation of diamond on silicon, SiAlON, and graphite substrates coated with an a-C:H layer.—73-02912
Role of a nucleation layer in suppressing interfacial pitting in InAs films grown on (100)InP substrates.—73-04471

**oil well cement,**
$^{29}Si$ solid-state NMR study of tricalcium silicate and cement hydration at high temperature.—73-13776
API Class A and Class B oil well cements.—73-03435
Cement cake properties in static filtration—influence of polymeric additives on cement filter cake permeability.—73-00031
Comparative study of the efficiency of various borate compounds as set-retarders of Class G oilwell cement.—73-00044
Experimental investigation of rheology and thickening time of Class G oil well cement slurries containing glycerin.—73-00087
Instrumental investigations of hydration of Class J oil well cement.—73-06679
Interstitial material in oil well cements: evidence from X-ray microanalysis.—73-10020
Oscillating rheometer measurements on oilfield cement slurries.—73-00157
Simple retarder response test for oil well cements at high temperatures.—73-13778
Special oil well cements.—73-03538
TEM study of the composition of the interstitial phase in an oil well cement clinker.—73-06725
Use of ferrophosphorus [FP] as a heavyweight additive for API oil well cements.—73-06731
Use of polymeric additives as admixtures in oil well cements.—73-03552

**oils,**
Degradation mechanism of hardened cement by oil.—73-09881
Physical modeling of an oil-fired glass tank furnace.—73-05128
Used lubricating oil as a fuel for cement kilns.—73-05136

**olefins,**
Interaction of 1-olefins with silica surface.—73-17150

**olivines,**
Olivine.—73-12290
Products of low-temperature oxidation of olivine, $Mg_{1.78}Fe_{0.22}SiO_4$.—73-05461

**opacity,**
Preparation of phosphorus-magnesium opal glaze.—73-14664

**opal,**
Alkali-silica reaction in a monolithic opal.—73-13676
Diopside opal.—73-10826
Preparation of low-cost opal glaze for colored tile.—73-10884

**optical devices,**
Application of PLZT for photoprinter.—73-07869
Correlation between optical backgating and photogeneration mechanism in GaAs MESFET's.—73-11122
Neural computers and networks based on nonlinear optical devices.—73-06583
Pyrometry without spurious reflections.—73-15833
Single-wavelength pulsed optical logic based on dichroism in CdS.—73-01315
Submillimeter optical properties of hexagonal boron nitride.—73-02696

**optical fibers,**
Characteristics of carbon-coated optical fibers.—73-03823
Characterization of sol-gel-derived coatings on optical fibers.—73-12940
Characterization of the optical fiber drawing process.—73-10507
Coated optical fibers and method.—73-03912
Coating additives for improved mechanical reliability of optical fiber.—73-03778
Coatings for $SiO_2$ optical fibers.—73-03914
Degradation of stressed optical fibers in water: new worst-case lifetime estimation model.—73-10428
Distributed Er-doped optical fibers.—73-07013
Efficiency method of excitation of a semiconductor waveguide with a single-mode optical fiber.—73-04297
Fabrication and optical properties of lead germanate glasses and a new class of optical fibers doped with $Tm^{3+}$.—73-07127
Fluoride glasses and methods for making optical fibers from the glasses.—73-10627
Frequency upconversion in $Er^{3+}$-doped silica fibers.—73-10443
Gain saturation characteristics of Raman amplification in silica and fluoride glass optical fibers.—73-06920
Glass production by gas-phase reaction.—73-10543
Heavy metal oxide glass optical fibers for use in laser medical surgery.—73-03929
Heavy metal oxide glass optical fibers for use in laser medical surgery.—73-10636
Infrared chalcogenide optical fibers.—73-00505
Integrally molded ceramic alignment sleeve for optical fiber connector and method of producing the same.—73-02046
Laser-generated ultrasonic characterization of irradiated glass optical fibers.—73-06934
Machine tests optical fibers in flexure.—73-08410
Mechanical strength of optical fibers coated by thin oxide layers prepared by sol-gel method.—73-03800
Method for coating optical fibers.—73-03942
Method for making porous glass optical fiber sensor.—73-03819
Method for manufacturing an optical waveguide fiber with a very thin titania-silica outer cladding layer.—73-14428
Method for producing an optical fiber of halide glass, particularly an infrared permeable fiber of heavy metal fluoride glass.—73-03943
Method for producing glass preform for optical fiber.—73-00287
Method for producing porous glass preform for optical fiber.—73-00660
Microstructure of carbon layers deposited on optical fibers and hydrogen diffusion in the layers.—73-06311
Microstructure of carbon layers deposited on optical fibers and hydrogen diffusion in the layers.—73-17169
Nonlinear optics, fiber lasers, and microoptics: novel approach of new glasses for optoelectronic applications.—73-14236
Optical fiber promises wiring system and private network applications.—73-09734
Optical fibers with suppressed stimulated Brillouin scattering.—73-02651
Optical quartz fibers with nontraditional doping agents[—literature review].—73-12329
Optical waveguide fiber with very thin titania–silica outer cladding layer.—73-00753
Optimum beam launching conditions for graded index optical fibers: theory and practice.—73-15078
Orifice method of forming the optical fibers of complex topology.—73-14450
Performance of a fiber optic magnetic field sensor utilizing a magnetooptical garnet.—73-15355
Photoinduced nonlinear optical phenomena in glasses and optical fibers.—73-00527
Possibility of synthesis of photochromic glasses for the core of an optical fiber.—73-00390
Possibility of synthesizing photochromic glasses for the core of an optical fiber.—73-00680
Preparation of preforms and optical fibers containing aluminum by solution-doping method.—73-00686
Process for fabricating an optical fiber preform.—73-10657
Process of drawing optical fiber.—73-14557
Production of a hermetically coated optical fiber.—73-00759
Production of preforms for single-mode optical fibers.—73-00687
Reduction of strength of optical quartz fibers upon removal of polymer coatings.—73-14267
Science and technology of composite materials: optical fibers made by fluoride glasses.—73-00699
Several nonlinear phenomena in $Er^{3+}$-doped silica optical fibers.—73-14276
Tellurite glass and fiber amplifier.—73-03970
Transmission characteristics of single-mode fibers.—73-10491
Wave-guiding structure with lasing properties.—73-10671

**optical materials,**
Carbon-carbon mounts for lightweight optical systems.—73-12415
Conformal method of fabricating an optical waveguide on a semiconductor substrate.—73-01441
Deposition of optical coatings by laser-assisted evaporation and by photoassisted chemical vapor deposition.—73-12977
Dynamics of thermal stresses in certain optical materials during contact heating on one side.—73-05542
High-dispersion optical glass.—73-14544
Highly refractive ophthalmic and optical glass.—73-03934
History of optical glass production in Bohemia and Moravia.—73-06572
Improving the system of calculating the refractive index, the mean dispersion, and the density of silicate optical glasses on the basis of their composition.—73-00501
Lightweight optical glass of fluorophosphate.—73-00737
Low refractive optical glass of a flint glass type.—73-14547
Method of fabricating integrated optical guides of glass.—73-03945
Method of manufacturing a glass optical part.—73-10644
Method of manufacturing glass optical element.—73-10645
New glasses for optical applications.—73-09733
New materials for optoelectronic devices.—73-07692
New possibilities for optical glass-ceramics for integral optics.—73-00521
New possibilities of glasses for integrated optics.—73-14235
Nonlinear optical materials based on $MBe_2BO_3F_2$ (M=Na,K).—73-12841
Optical glass.—73-10653
Optical glass.—73-14555
Optical glasses [investigated] by small-angle X-ray scattering (SAXS).—73-14060
Optical glasses with distributed parameters.—73-14241
Optical parts and equipment using infrared athermal glasses.—73-10654
Photochemical hole burning in optical materials.—73-02919
Sol-gel glasses and composites for optics and optoelectronics.—73-03886
Sol-gel optics.—73-13277
Synthesis of optical thin films: fundamentals and applications.—73-06093
Temperature and strain distortion of the shape of optical elements during processing.—73-07183
Thermoelastic deformation of optical elements caused by light absorption in glass.—73-07089

**optical properties,**
$^1$H atomic motion in proton-exchanged $LiNbO_3$.—73-11582
Ab initio calculations of nonlinear optical properties of silicon compounds.—73-16403
Advanced glazings: practical problems relevant to their optical characterization.—73-06994
Anisotropic optical spectra of $\alpha$-$Al_2O_3$ single crystals in the vacuum ultraviolet region: II, Spectra of optical constants.—73-08809
Coherent optical polarization of bulk GaAs studied by fs photon-echo spectroscopy.—73-14810
Contribution of sodium and potassium oxides to the optical constants and density of silicate glasses.—73-00444
Determination of angular optical properties of glazing.—73-14152
Determination of the optical dielectric functions of thin absorbing films from ir reflectivity measurements.—73-08833
Effect of surface roughness on thin-film optical properties.—73-02589
Engineering of glass for optimized optical and physical properties.—73-14373
Evaluation of optical properties of decorative coatings by spectroscopic ellipsometry.—73-12800
Experimental measurement of the optical absorption coefficient of the multicrystalline *p*-type solar-grade silicon.—73-07522
Fidelity of optical phase conjugation by photorefractive degenerate four-wave mixing in barium titanate.—73-12802
Full microscopic treatment of the optical response of the Si(100) 2×1 surface.—73-14932
Influence of morphology on the optical properties of nanocermets and granular inhomogeneous media.—73-13847
Influence of reduction in the substrate thickness on the optical properties of epitaxial GaAs films (long-range effect).—73-07599
Infrared observation of longitudinal optical modes in MBE-grown polar semiconductor films.—73-14989
Intraband optical Stark effect in CdTe.—73-07621
Modification of optical properties by ion implantation.—73-03803
Natural and photoinduced optical activity of chalcogenide glasses.—73-00518
Optical basicity and glass chemistry.—73-00380
Optical conductivity of *c*-axis-oriented $YBa_2Cu_3O_{6.7}$: evidence for a pseudogap.—73-15572
Optical properties and structure of defects in silica glass.—73-00522
Optical properties of a chemically durable phosphate glass.—73-00523
Optical properties of $Al_2O_3$ thin films prepared by reactive evaporation.—73-02652
Optical properties of Bi- and Ga-substituted Tm-Fe garnet films.—73-12850
Optical properties of CdTe: experiment and modeling.—73-08932
Optical properties of ceramic scintillator for X-ray CT equipment: I, Analysis about quality response characteristic.—73-16557
Optical properties of ceramic scintillator for X-ray CT equipment: II, Analysis about distribution of light output.—73-16559
Optical properties of cubic boron nitride films made by a reactive ion plating method.—73-05604
Optical properties of cubic-stabilized zirconia.—73-05605
Optical properties of $Pr^{3+}$-doped silica gel and glass monoliths.—73-00524
Optical properties of superconducting copper oxides and related compounds.—73-05606
Optical resistance of sapphire.—73-08937
Optical spectra of $Y_2O_3$ single crystals in the vacuum ultraviolet region: II.—73-08938
Optical spectra of $Y_3Al_5O_{12}$ (YAG) single crystals in the vacuum ultraviolet region: II.—73-08939
Optical transition probabilities for $Er^{3+}$ in $KY(WO_4)_2$ crystals.—73-02657
Optically translucent mullite ceramics.—73-02659
Photoelectric method for determination of the optical absorption coefficient and its application to semiinsulating GaAs.—73-01273
Photoinduced nonlinear optical phenomena in glasses and optical fibers.—73-00527
Photothermal characterization of optical thin films.—73-12175
Picosecond nonlinear optical characterization of GaAs at 1.064 μm.—73-04443
Piezooptical response of semiconductors.—73-15103
Preparation and optical properties of CuCl-doped $Na_2O$-$B_2O_3$-$SiO_2$ glasses.—73-00681
Pressure dependence of optical absorption in $PbTiO_3$ to 35 GPa: observation of the tetragonal-to-cubic phase transition.—73-12866
Properties of volume phase holograms on polychromatic glasses.—73-00536
Resonant nonlinear optical properties of GaAs-GaAlAs single quantum-well waveguide and an integrated asymmetric Mach-Zehnder interferometer.—73-01305
Simple method for optical parameter determination of inhomogeneous thin films.—73-15845
Spectrophotometric technique of determination of optical parameters of hyrotropic crystals.—73-01930
Subsecond measurements of optical properties in the spectral range 0.4–1.1 μm near high-temperature phase transitions in refractory oxides.—73-16604
Third-order nonlinear optical susceptibility of $\alpha$-$Fe_2O_3$ thin film prepared by the sol-gel method.—73-05679
Threshold of self-enhancement in lithium niobate.—73-01439
Variation of optical properties of leucosapphire after high temperature plastic deformation [HTPD].—73-02721
Window glasses for amenity life.—73-00582
**optics,**
Sol-gel optics.—73-06061
**ordering,**
Double-layer Hubbard model: off-diagonal long-range order in the nodeless *d*-wave channel.—73-04697
From local chemical order to long-range site percolation in glasses.—73-13990
Low-temperature oxygen ordering in $YBa_2Cu_3O_{6+\delta}$.—73-15542
Magnetic ordering in disordered spinels $Zn_xMg_{1-x}FeCrO_4$.—73-07951
Mathematical model of cationic order in structures of band and layered silicates.—73-02325
Micromechanical processing for ordered structure.—73-02896
Middle-range order of glasses.—73-14037
Mobility and short-range ordering of oxygen in $RBa_2Cu_3O_{6+x}$ by anelastic relaxation and possible correlation with the 90-K and 60-K superconducting phases.—73-08138
Model of oxygen ordering for $Y_2Ba_4Cu_7O_{14+x}$ compound.—73-15558
Model of the medium-range order formation in glasses and their melts.—73-14039
Ordering of manganese ions in calcite structure.—73-08682
Ordering principles for tetrahedral chains in Ga- and Co-substituted YBCO intergrowth.—73-05443
Oxygen ordering in $YBa_2Cu_3O_{6+x}$: low-temperature expansions.—73-08158
Oxygen ordering in $YBa_2Cu_3O_x$ ($7\geq x\geq 6$) superconductors with equilibrium defect structure at room temperature.—73-04783
Secondary and tertiary ordering in nonstoichiometric $YBa_2Cu_3O_{6+\delta}$.—73-01656
Structural regions of ordering in single-component glasses.—73-14097
Structure of the superconducting ortho-II phase of $YBa_2Cu_3O_{6.53}$.—73-11909
Superconducting order parameter on $Bi_2Sr_2CaCu_2O_8$ single crystals.—73-11916
Symmetry of the superconducting order parameter in $Bi_2Sr_2CaCu_2O_x$.—73-11921
**ores,**
Method of operative control by drying asbestos ore in shaft furnaces.—73-01798
Producing portland cement with tailings of molybdenum-iron ore.—73-10100
Reaction between chrome ore and slag.—73-00846
Testing the beneficiation capacity of Vietnam sillimanite-kyanite ores.—73-01998
**organic compounds,**
Effect of added organics on mechanical properties of alumina green sheets prepared by doctor blade method.—73-05750
Fabrication of organic-inorganic pseudo-superlattice and its electrical behavior.—73-16774
Feasibility study of thermal plasma destruction of toxic wastes in a counterflow liquid injection plasma reactor.—73-13058
Layered inorganic-organic nanocomposites: application to photofunctional materials and conversion to inorganic microporous materials.—73-05895
Organic gels in the preparation of ceramic oxide powders.—73-13158
Process for the preparation of a dental prosthesis and the prosthesis produced by said process.—73-03962
Process-integrated abatement method for organic pollutants.—73-10687
Properties of ORMOSIL with adding organic silanol in TEOS system(II).—73-09285
Waste burning and thermal destruction of organic compounds in a cement kiln.—73-13649
Waste burning and thermal destruction of organic compounds in kilns.—73-03557
**organometallic,**
Processing of functional ceramics by metallorganic route.—73-02979
**orientation,**
*c-t*-axis orientation on ground surface of tetragonal zirconia polycrystals.—73-02153
Control of the preferred orientation of $Y_1Ba_2Cu_3O_{7-x}$ films by the plasma flash evaporation method.—73-11706
Correlation between gas-sensing properties and preferential orientations of sputtered tin oxide films.—73-01111
Effect of substrate texture on orientations of rf sputtered $Ba_2Si_3TiO_8$ [BST] thin films.—73-01405
Effect of the grain-boundary orientation on the current-carrying capacity of $YBa_2Cu_3O_{7-\delta}$ ceramics.—73-04706
Measurement of electrical conduction in *c*-axis-oriented ZnO.—73-12831
Nature of preferred orientation of $YBa_2Cu_3O_x$ thin films.—73-11843
Oriented microchannel membranes via oxidation of carbon fiber-reinforced glass composites.—73-07158
Origin of orientation in sol-gel-derived lead titanate films[—correction].—73-15274
Phonon focusing and incomplete electric breakdown orientation in lithium niobate.—73-15276
Structural and superconducting properties of high-quality YBCO films with different orientation.—73-08209
Theoretical analysis for fiber orientation observed in one visual field.—73-06538
**orthophosphates,**
Compressive strength and diametral tensile strength of some calcium-orthophosphate cements: a pilot study.—73-17254
Crystal structure of $K_2Mn_3[P_2O_7]F_2$. Crystal chemistry of diorthophosphates of Fe and Mn.—73-02196
Description of molecular distortions: VI, Spectra-structure correlations in orthophosphate compounds.—73-10360
Features of gallium orthophosphate growth under hydrothermal conditions.—73-16148
Features of twinning in berlinite crystals.—73-16151
Formulation and setting times of some calcium orthophosphate cements: a pilot study.—73-15925
Spectroscopy of gallium and aluminum orthophosphate single crystals.—73-16310
**orthosilicates,**
Crystal structure of rinkite from Khibiny mountains.—73-02210
Olivine.—73-12290
Orthosilicate compositions in CaO-SrO-BaO-$SiO_2$ system and their water reactivity.—73-10075
**oscillators/oscillations,**
Angular dependence of auto-oscillation in YIG.—73-04589
Chaotic spontaneous oscillations in variable-gap semiconductor structures.—73-01094
Coupled oscillations of iron, rare-earth, and elastic subsystems in orthoferrites with Kramers rare-earth ions.—73-04597
Efficient amplification of the stable ps pulses radiated from an Nd:glass oscillator with negative feedback.—73-08842
Lithium triborate picosecond optical parametric oscillator.—73-05588
Reflection high-energy electron diffraction oscillations modulated by laser-pulse deposited $YBa_2Cu_3O_{7-x}$.—73-08186
**ovens,**
Change in properties of dinas parts in service in the lining of large coke ovens.—73-00785
Different forms of refractories for the service conditions in coke ovens.—73-00801
Rising currents in convection in a basin oven.—73-08485
**oxalates,**
Guanidine oxalate: a new reagent for coprecipitation in the synthesis of multicomponent ceramics.—73-05837
Optical basicity study of metal carboxylate glasses at ambient and elevated temperatures.—73-10462
Preparation of high-purity zinc oxalate powder by the precipitation stripping method.—73-13191
Preparation of $YBa_2Cu_3O_{7-x}$ superconductor by oxalate coprecipitation.—73-01640
Thermodynamic properties of cerium oxalate and cerium oxide—comment.—73-16377
**oxidation resistance,**
Moisture- and oxidation-resistant carbon/carbon composites.—73-12498
Oxidation behavior of hard and binder phase-modified WC-*10Co cemented carbides.—73-00254*
Oxidation behavior of oxide/SiC whisker composites.—73-06313
Oxidation resistance of the hot-pressed silicon-nitride-based materials at high temperatures.—73-13487
Oxidation-resistant carbon and method for making [the] same.—73-05323
Process for antioxidation protection of a material of which at least a surface is made of a ceramic formed from a silicon compound, and a material obtained by said process.—73-16010
**oxidation,**
Active-to-passive transition and bubble formation for high-temperature oxidation of chemically vapor deposited silicon carbide in CO-$CO_2$ atmosphere.—73-09523
Carbon removal and oxidation of SiC powder synthesized by carbothermic reduction of silica.—73-02733
Ceramic materials, method of preparing the same, and hydrogenation and oxidation processes using the same.—73-05202
Ceramic materials.—73-12347
Composites made by directed oxidation of Al alloy with aluminosilicate fibers.—73-10208
Directed oxidation of Al alloy into sintered $Al_2O_3$.—73-06771
Effect of different additives on the oxidation behavior of gas-pressure-sintered silicon nitride.—73-06307
Effect of oxidation on fracture toughness of nuclear graphite.—73-13512
Effect of process-related oxidation on microstructure and mechanical properties of β′-*o*′-SiAlON ceramics.—73-02793
Effect of the matrix on the oxidation of nanostructured Ge granular films.—73-05386
Effect of water vapor on high-temperature oxidation of SiC.—73-03224
Effect of water vapor on high-temperature oxidation of SiC.—73-13473
Effects of oxidation on intergranular phases in silicon nitride ceramics.—73-17220
Effects of ozone oxygenation of $YBa_2Cu_3O_{7-\delta}$ thin crystals.—73-01536
Formation of high-temperature structural ceramics and ceramic matrix composites by the oxidation of solid metal-bearing precursors.—73-16789
GaAs surface oxidation and deoxidation using electron cyclotron resonance oxygen and hydrogen plasmas.—73-01171
Gas-phase oxidation chemistry during pulsed laser deposition of $YBa_2Cu_3O_{7-\delta}$ films.—73-04730
High-temperature active oxidation and active-to-passive transition of chemically vapor deposited silicon nitride in $N_2$-$O_2$ and Ar-$O_2$ atmospheres.—73-17221
High-temperature oxidation of $Si_3N_4$ in wet Ar.—73-13475
In situ investigation of temperature- and bias-dependent effects on the oxide growth of Si and Ge in electron cyclotron resonance.—73-05856
Ion beam oxidation of GaAs: the role of ion energy.—73-01223
Kinetic aspects of oxidation of variable valency element compounds in glasses.—73-14022
Kinetics of oxidation of $YBa_2Cu_3O_{6+y}$.—73-15528

Kinetics of Si oxidation and structure of oxide films of thickness <50 Å.—73-07629
Mechanism of oxidation and nonstoichiometry of cBN.—73-06310
Mechanism of oxidation of ß-BN.—73-13478
Mechanism of oxidation of Si-C-O fibers.—73-03225
Method for in situ tailoring the component of ceramic articles.—73-04985
Method for producing composite ceramic structures using dross.—73-03690
Method for producing composite ceramic structures.—73-04990
Method for producing self-supporting ceramic bodies with graded properties.—73-03691
Method for surface bonding of ceramic bodies.—73-01867
Method of controlling metal oxidation during waveguide formation.—73-00742
Method of making ceramic composite articles.—73-03696
Method of making ceramic composites.—73-00289
Methods of producing ceramic and ceramic composite bodies.—73-05000
Novel reaction path to $BaTiO_3$ by the oxidation of a solid metallic precursor.—73-04146
Oxidation behavior and flexural strength of aluminum nitride exposed to air at elevated temperatures [≤100 h].—73-09531
Oxidation behavior of graphite/$B_4C$/SiC/$ZrB_2$ composite in dry and moist atmospheres.—73-06312
Oxidation behavior of graphite/$B_4C$/SiC/$ZrB_2$ composite in dry and moist atmospheres.—73-13481
Oxidation kinetics of chemically vapor-deposited silicon carbide in wet oxygen.—73-06315
Oxidation kinetics of hexagonal boron nitride powder.—73-17231
Oxidation kinetics of $Si_2N_2O$ ceramics.—73-06316
Oxidation kinetics of thin copper films studied by ellipsometry.—73-03631
Oxidation mechanisms and kinetics of 1D-SiC/C/SiC composite materials: I, An experimental approach.—73-06317
Oxidation mechanisms and kinetics of 1D-SiC/C/SiC composite materials: II, Modeling.—73-06318
Oxidation of black core during the firing of ceramic ware: II, Process kinetics.—73-14565
Oxidation of black core during the firing of ceramic ware: III, Influence of the thickness of the piece and the composition of the black core.—73-15742
Oxidation of carbon in continuous fiber-reinforced ceramic matrix composites.—73-09532
Oxidation of Nicalon SiC fibers.—73-09533
Oxidation of silicon in an oxygen plasma generated by a multipolar electron cyclotron resonance source.—73-05939
Oxidation of silicon in plasma afterglows: new model of oxide growth including recombination of diffusing O atoms.—73-03227
Oxidation of silicon in rf plasma measured by rapid in situ during process ellipsometry.—73-06319
Oxidation of silicon using [TCA] trichloroethane-$O_2$ and HCl-$O_2$ mixtures.—73-02915
Oxidation of silicon with a hot oxygen beam.—73-05940
Oxidation of sintered aluminum nitride by oxygen and water vapor.—73-03228
Oxidation of sintered aluminum nitride by oxygen and water vapor.—73-13485
Oxidation of sintered silicon nitride: I, Phase composition and microstructure.—73-03229
Oxidation of sintered silicon nitride: II, Mechanical properties.—73-13577
Oxidation state of Cu ions in H-charged $YBa_2Cu_3O_{7-\delta}$ films.—73-11855
Products of low-temperature oxidation of olivine, $Mg_{1.78}Fe_{0.22}SiO_4$.—73-05461
Promoted oxidation of aluminum thin films using an alkali metal catalyst.—73-06845
Role of oxidation in the time-dependent failure behavior of hot isostatically pressed silicon nitride at 1370°C.—73-03349
Role of oxidation in the wear of plasma-nitrided and PVD TiN-coated steel.—73-06852
Selective plasma oxidation of oxygen-deficient $YBa_2Cu_3O_{7-x}$.—73-08195
Shaped ceramic composites with a barrier.—73-02068
Silane oxidation in a low pressure chemical vapor deposition system in the temperature range 100–450°C.—73-06042
Stress-enhanced oxidation of silicon nitride ceramics.—73-03231
Thermal oxidation of AlGaAs.—73-01351
Thermal oxidation of TiN studied by means of soft X-ray absorption spectroscopy.—73-05513
Titanium nitride oxidation chemistry: an X-ray photoelectron spectroscopy study.—73-13490

**oxides,**
Ablated flux characteristics during pulsed laser ablation deposition of multicomponent oxides.—73-12907
Absorption characteristics of Pr(III) and Tm(III) in germanium-based oxide glass.—73-03773
Alkali content dependence of the ionic conductivity of oxide glasses.—73-10417
All-solid-state electrochromic device: II, Characterization of transition metal oxide thin films for counterelectrodes.—73-00933
ALON and its composite ceramics.—73-05258
Alterations in optical properties of materials covered with oxide films during laser heating in gases.—73-16407
Ambient-temperature sputtering of composite oxide films.—73-12915
Aminoalkoxide sol-gel coating of transition metal oxide films.—73-12916
Application of a quantitative polyhedral analysis to the design of ceramic oxides.—73-12537
Application of metal alkoxides in the synthesis of oxides.—73-11554
Atomic layer growth of oxide thin films with perovskite-type structure by reactive evaporation.—73-12924
$Ba_2Fe_{10}Sn_2CoO_{22}$: growth, crystal structure (120 K), and magnetic properties.—73-02146
$BaNdCe_{0.9}Fe_{1+x}Cu_{1-x}O_{7-\delta}$: an intergrowth of the $BaYFeCuO_5$-type and $CeO_2$-fluorite-type structures.—73-02149
Bending strength and microstructure of $Al_2O_3$-$Y_2O_3$-MgO and $Al_2O_3$-$Y_2O_3$-$ZrO_2$-MgO composite ceramics.—73-06331
Boron diffusion through thin gate oxides: influence of nitridation and effect on the Si/$SiO_2$ interface electrical characteristics.—73-07394
Calorimetric studies of the surface aggregation of adsorbed molecules in ionic surfactant adsorption onto the heterogeneous oxide surfaces.—73-16418
Carbon-containing black glass.—73-03907
Catalyst for destruction of organohalogen compounds.—73-12342
Cation distribution and magnetization of $BaFe_{12-2x}Co_xSn_xO_{19}$ ($x$=0.9, 1.28) single crystals.—73-11646
Ceramic materials in the system MgO-$SiO_2$-$Al_2O_3$-$ZrO_2$.—73-03777
Ceramic oxides prepared by mechanical processing.—73-16665
Ceramic Transactions, Volume 38: Advances in Ceramic-Matrix Composites.—73-13652
Changes in the valence and structural state of the iron ion upon melting of $Ba_2FeSi_2O_7$.—73-08566
Character of interatomic exchange interactions in solid solutions of $Mg(Mn_xAl_{1-x})_2O_4$.—73-12547
Characteristics of thin nitrided oxides prepared by an in situ process.—73-16667
Characterization and significance of the sequence of stages of oxide film formation at platinum generated by strong anodic polarization.—73-13805
Characterization of $Na_2O$-$MnO_x$-$CuO_x$ catalysts for the oxidative dimerization of methane.—73-09437
Characterization of oxides and thin films.—73-05024
Characterization of TEOS oxides used in the isolation module of high-speed bipolar and BiCMOS circuits.—73-12752
Chemically induced interface migration in oxides.—73-13339
$CO_2$ decomposition by oxide ceramics intercalated in layered compound.—73-05371
Coloring inorganic oxides in MgO-CaO-$Al_2O_3$-$SiO_2$ glass-ceramic systems.—73-03715
Combustion gas corrosion resistance of heat-exchange materials and refractories for glass furnaces at high temperatures: II, Oxides and composites.—73-07200
Comparative study of the oxide growth mode on GaAs(111) and (111) surfaces: implications for direct oxide electron beam writing.—73-01106
Composite ceramic material and method to manufacture the material.—73-12355
Composition and cation–vacancy distribution of cation-deficient Mn/Fe spinel oxides.—73-02169
Compositional ordering and phase transitions in $Pb(Yb_{0.5}Nb_{0.5})O_3$.—73-07871
Content of oxygen and bismuth(V) in the double oxides of barium and bismuth.—73-01511
Contribution of sodium and potassium oxides to the optical constants and density of silicate glasses.—73-00443
Control of particle size and orientation during in situ precipitation of oxides in polymers.—73-05720
Copper/zinc oxide/aluminum oxide-containing catalysts.—73-12357
Crystal and magnetic structures of $Ca_2NdRuO_6$, $Ca_2HoRuO_6$, and $Sr_2ErRuO_6$.—73-02175
Crystal field in heterodesmic compounds.—73-16077
Crystal structure of α-$TlSbOGeO_4$—high-temperature modification of $KTiOPO_4$.—73-12560
Crystal structure of new niobium oxide, $Nb_4O_5$.—73-16089
Crystallographic and magnetic properties of $5(Fe_2O_3)$-$3(Al_2O_3)$-$(Ga_2O_3)$-(SiO) by Mossbauer effect.—73-04599
Cyclic fatigue and fracture toughness of silicon nitride ceramics sintered with rare-earth oxides.—73-06363
Deposition and characterization of multicomponent oxide films and multilayers from aqueous solution.—73-12973
Determination of oxygen in oxide ceramics by inert gas fusion analysis—effect of bath metals.—73-16108
Development of oxide coatings for matching oxide fiber–oxide matrix composites.—73-16706
Dielectric and piezoelectric properties of $x$Pb$(Al_{2/3}W_{1/3})O_3$-$(1-x)$- $Pb(Zr_{0.52}Ti_{0.48})O_3$ ceramic system.—73-08834
Dielectric ceramic composition for high-frequency use and dielectric material.—73-04202
Dielectric ceramic composition.—73-04203
Dielectric ceramic compositions.—73-04206
Dielectric properties and leakage current characteristics of $Ta_2O_5$ thin films prepared by sol-gel process.—73-02569
Dielectric relaxation in glasses: $x$Eu$_2O_3$-PbO-2$B_2O_3$.—73-14154
Diffusion of isotopes in surface layers of some oxides.—73-13345
Digital chemical vapor deposition of silicon oxide/nitride and its surface reaction study.—73-03832
Dissolution mechanism of oxide precipitates in Czochralski silicon degenerately doped with boron during high-temperature annealing [800° and 1050°C].—73-06153
Effect of CaO addition on crystallization processes of $Li_2O$-$Al_2O_3$-$SiO_2$-$TiO_2$ glasses.—73-03721
Effect of CuO on the sintering and dielectric characteristics of $(Ba_{1-x}Sr_x)(Ti_{0.9}Zr_{0.1})O_3$.—73-05757
Effect of curing in air on synthesis of Si-Ti-C-O fiber.—73-13002
Effect of grain size on friction and sliding wear of oxide ceramics.—73-06379
Effect of inclusions/oxides on the castability and tensile properties of four SiC particulate Al-Si-Mg composites.—73-06774
Effect of melting atmosphere on properties of a glass in the $CaO$-$P_2O_5$-$Fe_2O_3$ system.—73-03835
Effect of network modifier on spontaneous emission probabilities of $Er^{3+}$ in oxide glasses.—73-14162
Effect of oxygen content on pyrolysis-suppression of Si-Ti-C-O fibers coated with surface oxide layers.—73-16734
Effect of sintering and polarizing conditions on electrical properties of $Pb(Zr_{0.53}Ti_{0.47})O_3$- $BiFeO_3$-$Ba(Cu_{1/3}Nb_{2/3})O_3$ (PZT-BF-BCN).—73-11564
Effect of some factors on centrifugal casting of oxide ceramics.—73-12026
Effect of the chemical composition of ramsdellite-like phases, crystallized in the $LiFeO_3$-$SnO_2$-$TiO_2$ system, on their structure, electrical properties, and phase transformation under heating.—73-16124
Effects of $Li_2O$ and $Na_2O$ addition on growth and electrical properties of $PbTiO_3$ single crystals.—73-00954
Electrical and thermodynamic properties of Li-$V_2O_5$-$P_2O_5$-$Bi_2O_3$ glasses.—73-14700
Electrical conduction of $La_2Cu_{1-x}Zn_xO_{4+\delta}$ at high temperature.—73-05556
Electrical properties of $Bi_2O_3$-SrO-$V_2O_5$ glasses and glass-ceramics.—73-14175
Electrical properties of oxide-nitride-oxide, ONO, heterostructures fabricated by low-temperature [300°C] remote PECVD.—73-04086
Electrical properties of $Sb_2O_3$-SrO-$V_2O_5$ glasses and crystallized ones.—73-10436
Electrical properties of tantalum-based composite oxide films.—73-04088
Electrical properties of $V_2O_5$-ZnO-$TeO_2$ glasses.—73-14177
Electrical resistivity of oxide film coatings on glass.—73-07316
Electrochemical and surface properties of a metal carbonitride-oxide composite electrode.—73-00960
Electrochemical characterization of BIMEVOX oxide ion conductors.—73-00961
Electron and X-ray diffraction study of L-$Ta_2O_5$-type phases in L-$Ta_2O_5$ and some L-$Ta_2O_5$-$M_xO_y$ systems: (M=Al, Ti, Zr, Hf, W).—73-02252
Electron cyclotron resonance microwave discharge for oxide deposition using tetramethylcyclotetrasiloxane.—73-02812
Electron microscopy and energy loss study of low-temperature plasma-deposited oxide on a CZ-grown Si substrate.—73-06212
Electron trapping in thin oxide on $n$-InP.—73-11187
Electronic structure of crystalline InP oxides.—73-07500
Ellipsometry of hydrous platinum oxide layers [HPtOL's] and electrodispersed platinum surfaces resulting from their electroreduction.—73-17131
Epitaxial growth of oxides on semiconductors using fluorides as a buffer layer.—73-07507
Epitaxial growth of $PrO_x$ thin films on sapphire by pulsed laser deposition.—73-13049
ESR study of short-range ordering in oxide glasses: the role of next nearest neighbors.—73-13982
Experimental study of the precrystallization process in the amorphous fast ionic conductor 0.6AgI-0.25$Ag_2O$-0.15$P_2O_5$.—73-00967
Failure statistics of an oxide-oxide ceramic composite.—73-17317
Features of plasma-grown native oxides on indium phosphide.—73-04102
Fixed and trapped charges at oxide-nitride-oxide [ONO] heterostructure interfaces formed by remote plasma-enhanced chemical vapor deposition.—73-10949
Floating magnetic head.—73-04663
Formation of device-quality metal-insulator-semiconductor structures with oxide-nitride-oxide [ONO] dielectrics by low-temperature plasma-assisted processing, combined with high-temperature rapid thermal annealing.—73-04104
Formation of monodispersed oxide particles by the hydrolysis of metal alkoxide in octanol/acetonitrile solutions.—73-05815
Formation of very thin oxide films on polycrystalline rhodium electrodes: applications of the Mott-Cabrera theory.—73-07325
Functional interfaces for oxide/oxide composites.—73-15926
Gate oxide damage [studied] in an electron cyclotron resonance argon plasma.—73-08876
Gd-Ba-Cu-O system: phase relationships at ≈*950*°C in air.—73-02278
Glass formation in the systems: $SiO_2$-$ZrO_2$-CaO-MgO and $SiO_2$-$ZrO_2$-$Al_2O_3$-CaO. Structure and alkali resistance.—73-13997
Glasses with monolayer oxide film coatings and their physical properties.—73-14199
Grain-boundary segregation in semiconducting oxides.—73-11221
Growth and characterization of thin films of $Y_2O_3$, $La_2O_3$, and $La_2CuO_4$.—73-02279
Growth of oxide crystals for optical applications.—73-05832
Growth of oxide crystals for optical applications.—73-13083
Growth of oxide layers on CrSi-O films.—73-05833
Homogeneity of ceramics prepared by crystallizing $Al_2O_3$-$ZrO_2$-$Y_2O_3$ melts with near-stoichiometric composition.—73-05845
Humidity-sensing effects of the layered oxides SrO$(LaScO_3)_n$ ($n$=1, 2, ∞).—73-07572
Importance of the oxygen fugacity for the reactivity of oxidic glass melts.—73-14407
In situ formation of metal-ceramic oxide microstructures.—73-00283

Incommensurabilities in high-$T_c$ superconducting oxides.—73-04741
Industrial oxide raw materials.—73-01789
Influence of hydrogen plasma treatment upon native oxides plasma grown on InP.—73-04117
Influence of oxygen ion conduction on nitric oxide decomposition.—73-16519
Influence of oxygen partial pressure on the quasi-ternary system Cr-Mn-Ti oxide.—73-02294
Interaction of niobium(IV) oxide with the rare-earth oxides.—73-12606
Interactions and properties of glasses of the system PbO-$TeO_2$-$WO_3$.—73-16180
Interactions of a mixture of tin and antimony oxides with chlorine.—73-16183
Interdiffusion in alkali ion sorption by hydrous stannic oxide: mechanism and effect of co-ion.—73-06164
Interface and bulk traps in oxide-nitride stacked films.—73-05058
Interface reactions of Fe-Al-Si and Fe-Ga-Si magnetic alloys with oxide glasses.—73-14209
Intermediate- and short-range structures of oxide glasses and melts.—73-14017
Internal reduction of (Mg, Cu)O.—73-08645
Ion-beam-based characterization of multicomponent oxide thin films and thin-film-layered structures.—73-05882
Ionic transport in alkali-rich glassy oxide structures without nonbridging oxygen.—73-14715
Kinetic demixing profile calculation in oxide solid solutions under a chemical potential gradient.—73-02311
Kinetics of the oxidation of manganosite ($Mn_{1-x}O$) to hausmanite ($\delta$-$Mn_{3-\delta}O_4$) at high temperatures.—73-02312
Lattice vibration spectra: LIX, Single-crystal infrared and Raman studies of spinel-type oxides.—73-02317
Local environment of iron in heavy ion-irradiated amorphous magnetic oxides by Mossbauer and X-ray absorption spectroscopy.—73-01467
Low-pressure CVD of $Ta_2O_5$ films for ULSI devices using tantalum pentaethoxide as precursor.—73-09193
Low-temperature (300°C) stacked oxide-nitride-oxide gate dielectrics with remote plasma-enhanced chemical vapor deposition.—73-00991
Luminescent determination of Tm in lanthanide oxides.—73-02634
Madelung constant of the tetragonal $K_2NiF_4$-type oxides.—73-08660
Magnetic circular X-ray dichroism at high magnetic field and low temperature in ferrimagnetic $HoCo_2$ and paramagnetic $Ho_2O_3$.—73-07949
Magnetic ordering in amorphous $Bi_2O_3$-ZnO-$Fe_2O_3$ films sputtered at high temperatures.—73-04618
Magnetic studies on (U,La)$O_{2\pm x}$ solid solutions: II, Magnetic susceptibilities of solid solutions with high lanthanum and oxygen concentrations.—73-01750
Magnetic susceptibilities of $Y_yU_{1-y}O_{2\pm x}$ solid solutions.—73-01752
Magnetoplumbite compounds as a fiber coating in oxide/oxide composites.—73-16858
Material for nonmagnetic oxide substrate and magnetic head.—73-12374
Mechanical strength of optical fibers coated by thin oxide layers prepared by sol-gel method.—73-03800
Mechanism of electrical breakdown in anodic tantalum oxide.—73-16539
Mechanisms of oxide whisker growth.—73-16862
Method for manufacturing superconducting ceramic elongated body.—73-01714
Microstructure and properties of nanostructured oxides.—73-09484
Microwave dielectric properties of CaO-added (Ba, Pb)O-$Nd_2O_3$-$TiO_2$ ceramics.—73-07343
Microwave sintering of $ZrO_2$-12 mol% $CeO_2$.—73-05926
Mixing behavior in the ceramic oxide thermoplastic resin system near CPVC [critical powder volume concentration].—73-16871
MNDO calculation of two- and three-body energies in glass-forming oxides.—73-14038
Model hydrous oxide colloids for particle electrophoresis.—73-08420
Monte Carlo investigation of the role of coulomb interactions on thermodynamic properties and defect structure of $Mi_{1-\delta}$ cubic oxides.—73-05438
Nanophase oxide formation by intraparticle reaction.—73-13146
Nature of the linear frequency-dependent alternating current conductivity interpolating between conductivity relaxational and vibrational responses in alkali oxide glasses.—73-03804
New glasses in the As-V-O system, LAXS and EXAFS studies.—73-14051
Nonreducible dielectric ceramic composition.—73-14757
Nucleation of ultrafine particles during irreversible solid-solid phase transformation in oxides.—73-16235
O1s X-ray absorption of transition-metal oxides $TiO_2$, $ZrO_2$, $HfO_2$, and $V_2O_5$, $Nb_2O_5$, and $Ta_2O_5$.—73-16236
Organic gels in the preparation of ceramic oxide powders.—73-13158
Origin of inhomogeneous linewidth of $Eu^{3+}$ fluorescence in several oxide glasses.—73-10468
Oxidation behavior of oxide/SiC whisker composites.—73-06313
Oxide glass structure components by molecular spectroscopy data.—73-14063
Oxide–nonoxide glasses.—73-15968
Oxide- and metal-intercalated clay nanocomposites.—73-05941
Oxides and nitrides of metastable group IV alloys and nitrides of group IV elements and semiconductor devices formed thereof.—73-01381
Oxides as sintering aids in aluminum nitride ceramics.—73-02916
Oxides of the type $TlSr_2Cu_{1-x}M_xO_5$ (M=Fe, Co) having the 121 structure.—73-02367
Parametric excitation of magnetoelastic waves in single crystals of $CoCO_3$ and $FeBO_3$.—73-05608
Passivating oxide and surface contaminants on GaAs(100) [analyzed] temperature-dependent and angle-resolved X-ray photoelectron spectroscopy and time-of-flight secondary ion mass spectrometry.—73-07710
Phase formation in sputter-deposited metal (V, Nb, Zr, Y,) oxides: relationship to metal, metal-oxygen, and oxygen flux.—73-09235
Phase relations in the system CaO-$Al_2O_3$-$SiO_2$-$H_2O$ relevant to metakaolin–calcium hydroxide hydration.—73-03516
Phase relations in the system $Ln_2O_3$-$B_2O_3$-$Ta_2O_5$, where Ln stands for Ce, Pr, Nd, in the subsolidus region.—73-12655
Phase relationships in the Sm-Ba-Cu-O system at ≈950°C.—73-02388
Phase transitions and dielectric properties in some compounds with bismuth oxide layer structure.—73-04563
Physical properties of GaSe($MeNO_2$) (Me=Na, K) and of biintercalates based on them.—73-11393
Physical vapor deposition of multicomponent oxide thin films: techniques, basic deposition processes, and film processing–microstructure–property relationships.—73-05947
Physicochemical bases for predicting the synthesis of oxides with a spinel structure with prescribed properties.—73-02393
Physicochemical study of ternary oxides formed in the system $In_2O_3$-CaO-CuO.—73-16274
Piezoelectric properties of PZT ceramics sintered at low temperature with complex oxide additives.—73-15280
Polymorphism of the dioxides of zirconium and hafnium.—73-02396
Positive hole-type charge carriers on oxide materials.—73-13363
Preparation and characterization of rf-sputtered thin films of $Li_2O$-$P_2O_5$-$Nb_2O_5$ glasses.—73-01013
Preparation and properties of perovskite-type oxides from three-dimensional heteremetal assemblies, $\{Ln[Cr(ox)_3]\cdot 10H_2O\}_x$ (Ln=La, Pr, or Nd).—73-02402
Preparation of fine single-crystalline particles of ferroxplana, $Ba_3Zn_2Fe_{12}O_{22}$, from crystallization of glass.—73-10394
Preparation of oxide film by the oxidation plating method.—73-02961
Preparation of tazheranite powders by solid-phase reaction and conductivity of sintered bodies.—73-13207
Preparation, characterization, and ionic conductivity of $(LiCl)_x$-$B_2O_3$-$SiO_2$ xerogels.—73-05459
Products of interaction of glass oxide melts with aluminized steels.—73-00259
Products of interaction of glass oxide melts with aluminum-coated steel.—73-00689
Properties and uses of $In_{0.5}(Al_xGa_{1-x})_{0.5}P$ and $Al_xGa_{1-x}As$ native oxides in heterostructure lasers.—73-11406
Properties of BaO-$R_2O_3$-$Ga_2O_3$-$GeO_2$ (R=Y, Al, La, and Gd) glasses.—73-03809
Properties of oxide-nitride-oxide [ONO] stacked films for gate insulation in active matrix displays.—73-04152
Properties of structural oxide ceramics made from mechanically ground powders.—73-16961
Raman scattering study of $BaCeO_3$ and $SrCeO_3$.—73-05465
Raman spectrometric determination of the oxygen self-diffusion coefficients in oxides.—73-17097
Rare-earth oxide powder.—73-12401
Reactions of copper and copper oxides with nitride ceramics (AlN, SiAlON, $Si_3N_4$) and their oxide additive ($Al_2O_3$, $Y_2O_3$, $SiO_2$, MgO).—73-13232
Rectification effect by a *p-n* junctioned oxide film.—73-16584
Regularities of the oxidation-reduction reactions in mixtures of carbides and oxides of metals of the IVA and VA groups.—73-12675
Relation between the $\Omega_6$ intensity parameter of $Er^{3+}$ ions and the $^{151}Eu$ isomer shift in oxide glasses.—73-06963
Relationship between crystallization and surface characteristics in MgO-BaO-$SiO_2$-$B_2O_3$ glass.—73-10479
Reoxidation of silicon substrates during the sputter deposition of oxide thin films.—73-06020
Role of the native oxide on indium antimonide surface properties.—73-07779
Semiconductor memory device.—73-01385
Silicon carboxide fibers.—73-03966
Simple and perovskite oxides of transition metals: why some are metallic, while most are insulating.—73-02687
Sol-gel synthesis of amorphous five-component oxide systems using crown ether complexation: ZBLAN gels.—73-14495
Stabilized tetragonal phase of $La_2O_3$ in the La-Pd-O system.—73-02443
Stress-induced increased low-level leakage in thin oxides.—73-05644
Stress-optical coefficient and its dispersion in oxide glasses.—73-14282
Structural and morphological analysis of reactively sputtered tellurium suboxide thin films.—73-03196
Structural change and magnetic properties of $Y_2BaNi_{1-x}Zn_xO_5$ oxides.—73-03197
Structural investigation of infrared-transmitting PbO-$Bi_2O_3$-$Ga_2O_3$ glasses by X-ray photoelectron spectroscopy.—73-14093
Structural investigation of sol-gel-derived hybrid siloxane-oxide materials using $^{29}Si$ MAS-NMR spectroscopy.—73-05493
Structure and forming processes of coatings based on the oxides of iridium, titanium, and tin.—73-16330
Structure and magnetic properties of $Ge_xFe_{3-x}O_4$ oxides [x=0, 0.2, 0.4, 0.6, 0.8, 1].—73-15367
Structure and magnetic properties of $Sr_2FeO_4$ and $Sr_3Fe_2O_7$ studied by powder neutron diffraction and Mossbauer spectroscopy.—73-15368
Structure determination [by powder XRD] of two new ternary oxides: $Ti_3PdO$ and $Ti_4Pd_2O$.—73-02460
Surface etching and roughening in integrated processing of thermal oxides.—73-01334
Surface reflector with oxide undercoat.—73-10352
Synthesis and characterization of $V_2O_5$-$SiO_2$-$ZrO_2$ pigments by sol-gel method.—73-13293
Synthesis and properties of infrared transmitting oxide glasses.—73-14509
Synthesis and study of diamond-oxide systems on the basis of ultradispersed diamonds.—73-16353
Synthesis of $(Cr_{1-x}Ti_x)O_3$ solid solution by laser-ignited vapor-phase reaction.—73-06085
Synthesis of and research on $Nd_2O_3$-$Fe_2O_3$-$Al_2O_3$ ceramic pigments.—73-10901
Synthesis of ceramic oxide powders by microwave plasma pyrolysis.—73-17035
Synthesis of $La_{1-x}Sr_xMnO_3$ powder and its power generation property.—73-17039
Synthesis of metal hydrous oxide particles by multiphase electrodispersion.—73-13306
Synthesis of nanosized ceramic oxide powders by microwave plasma reactions.—73-13307
TEM studies of oxide thin films in transverse section intended for device applications.—73-03206
Temperature dependence of Hall coefficient in high-$T_c$ oxides.—73-11932
Temperature dependence of the electrical conductivity of monocrystalline oxide semiconductors [studied] through the dependence on temperature of the electronic bands on collective excitations.—73-11477
Ten Years of Superconductivity: 1980-1990—73-17539
Thermal aging effects in oxide/oxide ceramic matrix composites.—73-13602
Thermal and electrical properties of $Ag_2O$-$xB_2O_3$ ($Al_2O_3$, $Ga_2O_3$)(1.5–x)$P_2O_5$ glasses.—73-00554
Thermal annealing of radiation-induced trapped charge in SIMOX and thermal oxide thin films.—73-04177
Thermal decomposition of formiates of some *d*- and *f*-elements.—73-16371
Thermal desorption of uv/ozone oxide onto InP.—73-07837
Thermal stability of amorphous SiC fiber coated with oxide film.—73-05674
Thermodynamic calculation of phase equilibria in the $CaF_2$-$SiO_2$-CaO system.—73-05515
Thermodynamic stability of perovskites and related compounds in some alkaline earth–transition metal–oxygen systems.—73-02525
Thermoelectric power studies of bismuth oxides and mixed oxides based on bismuth oxides.—73-12898
Thickness dependence of charge-trapping properties in ultrathin thermal oxides prepared by rapid thermal annealing.—73-07366
Third harmonic generation in PbO-$SiO_2$ and PbO-$B_2O_3$ glasses.—73-10490
Transient flat-band voltage shifts following high-voltage stressing of thin oxides.—73-04181
Transition metal oxide–platinum alloy phase equilibria and their consequences for nonstoichiometry measurements.—73-02530
Transmission electron microscopy of oxide thin films.—73-06299
Understanding surface activity of oxides from oxide-metal interface formation.—73-10294
Use of induction melting for synthesis of oxide ceramics in the $ZrO_2$-$Y_2O_3$-$Al_2O_3$ system.—73-04953
Velocity measurements for surface acoustic waves on $Bi_{12}SiO_{20}$ substrates.—73-04577
X-ray fluorescent analysis of oxide compounds with the langasite structure.—73-08460

**oxycarbides,**
Characterization of the pyrolytic conversion of polysilsesquioxanes to silicon oxycarbides.—73-16049
Nanostructural characterization of silicon oxycarbide glasses and glass-ceramics.—73-14047
Silicon oxycarbides via sol-gel route: characterization of the pyrolysis process.—73-10596
Synthesis of silicon oxycarbide through the sol-gel process.—73-09362

**oxychloride,**
Phase evolution in $Al_2O_3$ fiber prepared from an oxychloride precursor.—73-02918
Problems of magnesium oxychloride cements.—73-10098
Structure of the intercalate $NaWO_2Cl_2$.—73-02466
Synthesis, structure, and properties of a new T* structure copper oxychloride of MLnCuO$_3$Cl (M=Ca, Sr, and Ln=Nd, Sm, Eu, Gd).—73-02507

**oxyfluorides,**
Incommensurately modulated $ZrO_{2-x}F_{2x}$: $0.698\leq x\leq 0.714$.—73-02292
Optical properties of new borolanthanum oxyfluoride glasses.—73-14245
Preparation and properties of new zirconium oxyfluoride glass by plasma-enhanced chemical vapor deposition.—73-14470

**oxygen deficiency,**
Determination of oxygen deficiency in oxide superconductors.—73-11725
Effect of oxygen deficiency on the structure and conduction behavior of $BaPb_{0.75}Bi_{0.25}O_{3-\delta}$.—73-16120
Formation mechanism of oxygen-deficient region in electrochemically reduced Y-PSZ crystal.—73-05403
Oxygen-deficient fluorite with a tunnel structure: $Bi_8La_{10}O_{27}$.—73-02368
Oxygen-deficient $SrTiO_{3-x}$, x=0.28, 0.17, and 0.08: crystal growth, crystal structure, and magnetic and transport properties.—73-02369

**oxygen partial pressure,**
Effects of oxygen partial pressure on lead content of PLZT thin films produced by excimer laser deposition.—73-11566
Formation of the high-$T_c$ phase in Bi-2223 system in various atmospheres—effect of $O_2$ partial pressure.—73-15482
Influence of oxygen partial pressure on the physical behavior of CdO films prepared by activated reactive evaporation.—73-05584
Influence of oxygen partial pressure on the quasi-ternary system Cr-Mn-Ti oxide.—73-02294
Monte Carlo calculation for nonequilibrium oxygen content of $YBa_2Cu_3O_x$.—73-01609

**oxygen,**
Activity and diffusivity of oxygen in liquid Ag-$Yb_1Ba_2Cu_3$ and $Tl_1Ba_2Ca_2Cu_3$ alloys.—73-11683
Anisotropic oxygen diffusion in hexaaluminate.—73-03075
Axial oxygen position in Y-Ba-Cu-O superconductors.—73-07993
Characteristics of oxygen-implanted indium phosphide.—73-07404
Combustion with pure oxygen at the Arques Glass and Crystal plants.—73-10510
Considerations and results in applying oxygen firing to industrial melters.—73-08467
Conversion of a fiberglass furnace from 100% electric firing to oxy-fuel combustion.—73-08468
Determination of oxygen concentration in heavily doped silicon.—73-12128
Determination of the oxygen content in superconducting and related cuprates using temperature-programmed reduction.—73-01521
Dielectric properties of Ge-Pb-O thin films obtained by rf sputtering.—73-00948
Effect of oxygen disordering in $YBa_2Cu_3O_{6+\delta}$ on the electrical conductivity and $T_c$ at $0.21\leq\delta\leq0.73$.—73-15431
Effect of oxygen ions on filling $SiO_2$ into holes using biased electron cyclotron resonance plasma deposition.—73-13010
Effect of oxygen on filament activity in diamond chemical vapor deposition.—73-02789
Effect of oxygen on the strength of reaction-bonded silicon nitride.—73-03271
Effects of oxygen on electroluminescent characteristics of ZnS:TbOF and ZnS:TmOF devices.—73-11173
Electrical and thermal conductivity of AlN ceramics doped with beryllium and oxygen.—73-08851
Electrochemical oxygen sensors.—73-14875
Equilibrium and quenched states of the system Cu-Mn-O in air.—73-02271
Features of thermal dissociation of oxyfluoroniobates.—73-16150
Formation of ultrathin SIMOX structures by low-energy implantation.—73-04106
Frozen-in photoconductivity in PbTe:O films.—73-05570
How 100% oxygen firing impacts regenerative melters.—73-12224
Lattice parameters and electrical resistivity dependences of $YBa_2Cu_3O_x$ ceramics on oxygen content.—73-01585
Localization and electric-field-modulated electron spin resonance of a shallow donor in SIMOX.—73-04127
Manville plant gets a boost from oxygen-gas firing.—73-12229
Measurement of surface oxygen content in silicon nitride powders.—73-16210
Mechanism of oxidation of Si-C-O fibers.—73-13479
Modulation of the reflectivity in amorphous semiconductors.—73-04410
Oxygen activity measurements in different production glasses.—73-00676
Oxygen dope in bismuth- and lead-substituted lanthanum copper oxides by electrochemical and oxygen-HIP methods.—73-08157
Oxygen enrichment in zirconium oxide films.—73-06267
Oxygen potentials corresponding to the $YBa_2Cu_3O_{6+x}$ phase in the [CuO-rich part of the] Y-Ba-Cu-O system.—73-01625
Oxygen supplying.—73-05127
Oxygen transport in aluminum nitride substrates.—73-17091
Partial conversion of a gas-air-fired television furnace to oxy-fuel combustion.—73-08482
Physical properties of radio-frequency magnetron-sputtered Pb(Zr, $Ti)O_3$ thin films: direct determination of oxygen composition by Rutherford backscattering spectroscopy and nuclear reaction analysis.—73-15279
Polaron origin for anharmonicity of the axial oxygen in $YBa_2Cu_3O_7$.—73-08168
Possible role of neutral oxygen in the formation of electron spectrum in high-$T_c$ superconductors.—73-08169
Radiation hardening of SIMOX buried oxide by nitridation.—73-04160
Relative effect on the oxygen concentration in $YBa_2Cu_3O_{7-\delta}$ of atomic and ionic oxygen fluxes, produced by a small compact electron cyclotron resonance source.—73-01649
Rugged $O_2$ microsensor.—73-11541
Self-diffusion of oxygen in PLZT ceramics.—73-04570
Si-C-O system: II, Isobaric evolution of the system.—73-16302
Synthesis of Si-O-C fibers from rice husk carbide—explanation of formation condition.—73-13310
Temperature dependence of the absorptive edge in CdTe:O amorphous thin films.—73-02701
Theory of oxygen tracer diffusion along grain boundaries and in the bulk in two-stage oxidation experiments: I, Formulation of the model and analysis of type A and C regimes.—73-06177
Theory of oxygen tracer diffusion along grain boundaries and in the bulk in two-stage oxidation experiments: II, Analysis of type-B regime.—73-09423
Thermodynamics and phase equilibria in the Ca-Cu-O system.—73-05517
Thermoelectric properties and microstructure of Fe-Si-O thin films prepared by ICB method.—73-12899
Thin buried oxide in oxygen-implanted silicon.—73-07840
Thinner, more efficient oxygen separation cells.—73-07369
Transient photocurrents in CdTe and CdTe:O sputtered films.—73-15214
Treatment of $YBa_2Cu_3O_{6+x}$ powder with a high-frequency oxygen discharge.—73-01700
Use of oxygen in regenerative furnaces.—73-12244
X-ray photoemission spectroscopy studies of cesium and oxygen on GaAs(100).—73-07865

**oxynitride,**
$^{29}$Si MAS NMR of Na-Si-O-N oxynitride glasses.—73-03756
$^{29}$Si MAS NMR of Na-Si-O-N oxynitride glasses.—73-10399
ALON and its composite ceramics.—73-12912
Chemically induced defects in oxynitride glasses.—73-03714
Effect of nitrogen on the diffusion coefficients of sodium and iron in yttrium oxynitride glasses.—73-13967
Ellipsometric characterization of hydrogen-rich oxynitride films.—73-16490
Formation and chemical durability of Na-Si-O-N and Na-Al-Si-O-N oxynitride glasses.—73-00629
Formation and chemical durability of Na-Si-O-N and Na-Al-Si-O-N oxynitride glasses.—73-10534
Grain growth studies of silicon nitride dispersed in an oxynitride glass.—73-00349
High-strength silicon nitride sinterec body and process for producing [the] same.—73-02098
Incorporation of nitrogen into oxynitride dielectric through thermal nitridation of silicon.—73-04114
Manufacture and properties of glasses containing nitrogen.—73-00656
Mechanical properties of γ-aluminum oxynitride.—73-17381
Neutron diffraction of γ-aluminum oxynitride.—73-12635
New grain-boundary phases for nitrogen ceramics.—73-06264
Optimization of heat-treatment schedules for oxynitride glass-ceramics.—73-00675
Oxynitride glass fiber for composite products, and glass fiber-reinforced products.—73-03958
Oxynitride glasses and glass-ceramics.—73-03862
Oxynitride glasses—the material for prospective glass fibers.—73-14452
Plasma-deposited oxynitride films: structural and electrical characterization.—73-04149
Preparation and characterization of titanium oxynitrides with high specific surface areas.—73-02934
Preparation and properties of Na-Ca-Si-O-N system oxynitride glasses.—73-07162
Preparation and properties of zirconium oxynitrides by the reaction of zirconia with layer-structured zirconium nitrochloride.—73-04451
Preparation of oxynitride silicon glasses. Nitridation of functional silica xerogels.—73-10583
Properties of oxynitride glasses in the Ln-Si-Al-O-N systems (Ln=rare earth).—73-14261
Pyrolytic route for the preparation of oxynitride glasses.—73-14483
Structural investigation of YAM-type yttrium silicon oxynitride by $^{15}$N magic angle spinning nuclear magnetic resonance.—73-12699
Subsolidus phase relationships in the systems Re-Al-O-N (where RE=rare-earth elements [Ce, Pr, Nd, and Sm]).—73-02471
Synthesis of titanium oxynitride by mechanical milling.—73-13312
Tunneling in Al–silicon oxynitride–Si structures.—73-07372
Y-TZP sliding reciprocatively against various AlON ceramics.—73-13611

**oxysulfides,**
$Eu^{2+}$ in $Y_2O_2S$:$Eu^{3+}$ and $Y_2O_2S$:$Eu^{3+}$, $Tb^{3+}$.—73-08618
Fabrication and properties of oxysulfide glassy lithium ion conductors.—73-04100
Features of electrical and magnetic properties of MeS-$Fe_2O_3$ oxysulfides [Me=V, Fe, Mn].—73-16496
Optical $Nd^{3+}$ centers in lanthanum oxysulfide crystals.—73-16556
Oxysulfide glasses: a new kind of lithium ion conductors.—73-01005

**packaging,**
Alumina package for hermetically containing an electronic device therein.—73-11000
Consumer looks at the broader aspects of quality (from a packaging technologist's point of view).—73-06565
Fiber partitions meet new packaging demands.—73-14379
Heat-resistant hermetic packages for electronic components.—73-01053
IBM Technology Products: offering total packaging solutions.—73-03395
Increased microelectronics packaging capabilities through green tape technology.—73-10961
Method for producing multilayer ceramic body with convex side faces.—73-11032
Multichip packaging in IBM—past, present, and future.—73-06580
Multilevel thin-film packaging technology at IBM.—73-04142
New packaging challenges posed by high-power CMOS.—73-04145
Overview of U.S. government advanced packaging programs.—73-06585
Process for obtaining side metallization and articles produced thereby.—73-10340
Prognosis for MCM-L.—73-06587
Regional competitive analysis of the global MCM industry infrastructure.—73-06588

**packing,**
Computer simulations of interfacial packing in concrete.—73-06642
Dispatch logistics of products using packaging and palletizing installations.—73-12022
Packing of particles: I, Packing behavior of monosized spheres in cylinders.—73-16892
Packing of particles: II, Effect of extra pore volume on packing density of mixtures of monosized spheres.—73-16894
Packing of particles: III, Effect of particle size distribution shape on composite packing density of bimodal mixtures.—73-16895
Particle packing: I, Fundamentals of particle packing monodisperse spheres.—73-10876
Particle packing: II[A], Review of packing of polydisperse particle systems.—73-10878
Particle packing: II[B]: Review of packing of polydisperse particle systems.—73-10877
Particle packing: III, Discrete versus continuous particle sizes.—73-10879
Particle packing: IV, Computer modeling of particle packing phenomena.—73-16896
Processing of optimized cements and concretes via particle packing.—73-06700
State of the art of fully automatic valve-bag filling technology.—73-12065

**paint,**
Application of bentonite to building paint.—73-12256
Glass sheets having painted exterior surfaces.—73-14542

**pairing,**
Locus of pairing interaction in $YBa_2Cu_3O_7$ by site-selective oxygen isotope shift: $^{18}$O in the $CuO_2$ plane layers.—73-15536

**palladium,**
Catalyst for purifyng automotive exhaust gas.—73-03673
Characteristics of a rechargeable cell constructed by coupling $Na_{x-y}WO_3$ and $Na_{1-y}Pd_yO_4$.—73-04063
Epitaxial bilayer growth of $CaF_2$(111)/Pd(111) on $CaF_2$(111) substrates.—73-08530
Hydrogen gas sensing characteristics of the Pd-doped $SnO_2$ thin films prepared by sputtering.—73-11254
Molybdenum palladium fiber matrix interlayers for ceramic composites.—73-13875
New metastable phases in a Pd/amorphous Si bilayer after annealing.—73-08678
Novel palladium thin-film hydrogen detector.—73-13877
Palladium thick-film resistor containing boron nitride.—73-04227
Palladium-zirconia diffusion bonds: mechanical properties and interface reactions.—73-13878
Photoemission study of the annealed Pd/GaAs(110) interface.—73-01275
Preparation and characterization of a composite palladium ceramic membrane.—73-13883
Reactions between Pd thin films and InP.—73-15140
Real-time spectroellipsometry investigation of the interaction of silane with a Pd thin film: formation of palladium silicides.—73-08720
Stabilized tetragonal phase of $La_2O_3$ in the La-Pd-O system.—73-02443
Structure determination [by powder XRD] of two new ternary oxides: $Ti_3PdO$ and $Ti_4Pd_2O$.—73-02460
Topological relation between the LaIrSi-type and the EuNiGe-type structures in ternary phases MPdSi (M=Ca, Eu, Sr, Ba).—73-02529
Viscous flow and glass formation tendency of platinum- and palladium-based metallic glasses.—73-00578

**pallets/palletizing,**
Dispatch logistics of products using packaging and palletizing installations.—73-12022
Fully automated palletizer for Belgian glassworks.—73-10536
Modular approach to palletizing.—73-10567

**panels,**
Development of modified partition board of silicon-aluminum-magnesia.—73-10720
Developments and applications of fly ash wall panels in China.—73-09892
Perforated partition wall board using expanded perlite.—73-10078

**particle size distribution,**
Current technologies of particle size analysis.—73-12124
Effect of particle size distribution of coal gangue on properties of fired products.—73-09082
Effect of particle size distribution of raw powder on the uniformity of alumina body formed by centrifugal casting.—73-02790
Effect of particle size distribution of raw powder on the uniformity of alumina body formed by centrifugal casting.—73-13013
Estimation of the specific surface of cement industry materials according to their particle size distribution.—73-09947
Improved casting slip properties with extended particle size distribution and change in deflocculation.—73-08344
Kaolinite particle sizes in the <2 μm range using laser scattering.—73-12154
Particle size control for high-solids castable refractories.—73-14608
Particle size distribution errors by sedimentation technique for mixtures of powders.—73-09233
Production of concrete piles using cements with adjusted particle size distribution.—73-10103
Properties of special cement [with] adjusted particle size distribution.—73-06706
Statistical analysis of parameters affecting the measurement of particle size distribution of silicon nitride powders by sedigraph.—73-15850
Subcluster model of cement particle size distribution.—73-06723
True resolution in laser diffraction particle sizing: I.—73-05092

True resolution in laser diffraction particle sizing: II.—73-05093

**particle size,**
Application of automated electron microscopy (AEM) to individual particle analysis.—73-05021
Comparison of particle size of cracking catalyst determined by laser light scattering and dry sieve methods.—73-08383
Effect of fine particles on the kinetics and energetics of grinding coarse particles.—73-01777
Effect of particle size on binary reactions common to the Y-Ba-Cu-O system.—73-15433
Effects of erodent recycling in solid particle erosion testing.—73-05042
Improved casting slip properties.—73-15730
Multiclient study project comparison of the particle size analyzers and establishment of its techniques.—73-01918
Particle size analysis by laser diffraction.—73-05077
Particle size analysis.—73-08429
Particle size effect on the room temperature structure of barium titanate.—73-12646
Particle size measurement of ceramic raw materials.—73-08430
Particle size of quartz sand and its effects on the erosive wear of ceramics.—73-12853
Preparation of SiC ultrafine particles from $SiH_2Cl_2$ and $C_2H_4$ gas mixtures by a $CO_2$ laser.—73-02967
Sintering behavior of ultrafine ceramic particles.—73-06054
Ultrafine particle films [UFP] by gas deposition method.—73-06129

**particles,**
Calculation of phase separation kinetics in metastable systems for two models of particle nucleation.—73-13931
Calculation of the movement and heating of gunite particles in a gas-oxygen jet.—73-00781
Characteristics of yttrium iron garnet ultrafine particles prepared by the alkoxide method.—73-11647
Confluence and movement of particles upon liquid phase decomposition.—73-13948
Damage caused by an oblique particle impact to ceramics.—73-17270
Dispersion of magadiite particles.—73-13389
Dynamic light scattering studies of the stability and growth of silica particles.—73-09075
Electrical field-flow fractionation [EFFF] in particle separation: I, Monodisperse standards.—73-08397
Extrusion, collection, and drying of ceramic precursor gel to form dried gel particles.—73-01854
Far-ir study of metal particle formation in alkali-metal cation-exchanged X zeolites exposed to Na vapor.—73-09405
Fluid particle separation equipment.—73-08338
Formation of allophane and beidellite during hydrothermal alteration of volcanic glass below 200°C.—73-10376
Formation of monodispersed oxide particles by hydrolysis of metal alkoxide in octanol/acetonitrile solutions.—73-16791
Formation of monodispersed oxide particles by the hydrolysis of metal alkoxide in octanol/acetonitrile solutions.—73-05815
Growth of plasma-generated particles and behavior of particle clouds during sputtering of silicon and silicon dioxide.—73-09156
Immediate direct EM examination of process of particle growth in glasses under phase separation.—73-14004
Influence of the velocity of plasma-sprayed particles on the splat formation.—73-09181
Intelligent structural metallic materials.—73-03604
Interface conditions and interparticle forces.—73-09186
Light scattering: a basis of effective particle characterization techniques.—73-15811
Magnetic properties of ferrite microparticles in borate glasses.—73-15339
Measuring the surface conductance of kaolinite particles.—73-08915
Mechanism of formation of titanium dioxide ultrafine particles in reverse micelles by hydrolysis of titanium tetrabutoxide.—73-16861
Method for detecting small vibrations of particles by LDV [Laser Doppler Velocimeter] for particle size and electrostatic charge measurements.—73-12164
Microencapsulation: the creation of synthetic fine particles with specified properties.—73-13135
Multifaceted analysis of 0.01- to 100-μm particles by sedimentation field flow fractionation (FFF).—73-12170
Nucleation of diamond particles by hot filament chemical vapor deposition.—73-16886
Packing of particles: I, Packing behavior of monosized spheres in cylinders.—73-16892
Packing of particles: II, Effect of extra pore volume on packing density of mixtures of monosized spheres.—73-16894
Packing of particles: III, Effect of particle size distribution shape on composite packing density of bimodal mixtures.—73-16895
Parametric resonance in suspension of superconducting particles.—73-15354
Particle attraction effects on the centrifugal casting and extrusion of alumina.—73-09231
Particle packing: I, Fundamentals of particle packing monodisperse spheres.—73-10876
Particle packing: II[A], Review of packing of polydisperse particle systems.—73-10878
Particle packing: II[B]: Review of packing of polydisperse particle systems.—73-10877
Particle packing: III, Discrete versus continuous particle sizes.—73-10879
Particle packing: IV, Computer modeling of particle packing phenomena.—73-16896
Porosity calculation of binary mixtures of nonspherical particles.—73-02928
Practical zeta potential determination using electrophoretic light scattering.—73-15832
Preparation of composite particles by pulsed Nd-YAG laser decomposition of $[(CH_3)_2N]_4Ti$ to TiN-coat $TiO_2$, $Al_2O_3$, or $Si_3N_4$ powders.—73-02950
Preparation of shaped zirconia particles.—73-05239
Production of functionally fine particles by $CO_2$ laser evaporation and condensation.—73-16958
Quantum chemical computations of interparticle interactions in the structural groupings of boron oxide.—73-02408
Role of particle contamination in the corrosion of electronic materials and devices.—73-09537
Secondary particles grown on crystal surfaces of silicon carbide.—73-17197
Shape changes by {100} lithium fluoride ridge-channel arrays and of lithium fluoride particles at sintering temperatures.—73-17198
Simulation of the viscous sintering of coated particles.—73-16988
Steady-state matrix cracking of ceramics reinforced by aligned fibers and transforming particles.—73-03356
Superaluminous ceramics in the wood industry—possibilities and outlooks.—73-12331
Suspension of high-$T_c$ superconducting particles: properties in alternating magnetic field.—73-08236
Synthesis of nanocrystalline Fe-based particles by $CO_2$ laser pyrolysis.—73-06090
Thermal stability of pure and doped $SnO_2$ ultrafine particles.—73-12720
Thermodynamics and kinetics of surface area changes of faceted particles.—73-16379
Ultrafine-grained dense monoclinic and tetragonal zirconia.—73-13331
Unstable neck formation during initial-stage sintering.—73-17067
$Y_2BaCuO_5$ [211] particle coarsening during melt processing of $YBa_2Cu_3O_{7-x}$ [123].—73-11943

**particulate materials,**
Cost-effective and environmentally sound chemical process for coating fine particulates.—73-16691
Diesel particulate trap of perforated tubes having laterally offset cross-wound wraps of inorganic yarn.—73-02033
Granulometric online evaluation of loose particulate materials using the radiometric transmission principle of measurement: II, Laboratory investigations and operational experience.—73-09974
New developments in high-efficiency particulate air filtration.—73-04932
New developments in monitoring particulate emissions.—73-15736
Predictive Process Control of Crowded Particulate Suspensions Applied to Ceramic Manufacturing.—73-17535

**passivation,**
Advanced dielectrics for passivation of InSb.—73-04056
Advantages of mold passivation.—73-00586
Crystallization of passivation glass for electronic devices.—73-07291
Do we need a new methodology for GaAs passivation.—73-07452
Mechanical stability of passivation films deposited on aluminum substrates.—73-03614
Passivation of thin-film oxide superconductors.—73-04863
Plasma passivation of gallium arsenide.—73-07737
Process for fabricating sealed semiconductor chip using silicon nitride passivation film.—73-11540
Scanning tunneling microscopy of passivated gallium arsenide under ambient conditions.—73-07783
Scanning tunneling microscopy study of the ambient oxidation of passivated GaAs(100) surfaces.—73-07784
Sodium passivation dependence on phosphorus concentration in tetraorthosilicate plasma-enhanced chemical vapor deposited phosphosilicate glasses.—73-00399
Sulfide passivation of $A^3B^5$ semiconductors: model description and experiment.—73-15191
Sulfide passivation of III-V semiconductors: kinetics of the photoelectrochemical reaction.—73-11465
Sulfide passivation of InAs surface.—73-07820
Sulfurized passivation of GaAs(100) surfaces.—73-04175

**pastes,**
Application of ac impedance techniques in studies of porous cementitious materials: I, Influence of solid phase and pore solution on high-frequency resistance.—73-06624
Black glass pastes for glazing and their production.—73-03904
Cement pastes of low water-to-solid ratio: an investigation of the polymerization of silicate anions in the presence of a superplasticizer and silica fume.—73-00032
Effect of paste composition and particle size on the metallizing of alumina ceramics.—73-10222
Effects of sulfate and expansive clinker contents on expansion time of expansive cement paste.—73-00081
Hydration kinetics of calcium aluminate phases in the presence of various ratios of $Ca^{2+}$ and $SO_4^{2-}$ ions in the liquid phase.—73-00102
Microstructure and microanalysis of hardened cement pastes involving ground granulated blast-furnace slag.—73-00143
Paste Flow and Extrusion (Oxford Series on Advanced Manufacturing, Vol. 10).—73-17534
Penetration of cement paste into lightweight aggregate.—73-03514
Resistor paste and ceramic substrate.—73-04230
Simultaneous rheological and kinetic measurements on cement pastes.—73-00188
Sintering of electrically conductive silver–glass paste for thick-film devices.—73-10989
Use of oscillatory shear to study flow behavior of fresh cement paste.—73-00202

**patents,**
Trend of Japanese patents on fine ceramics: III.—73-03409

**pattern,**
Development of molecular patterning and immobilization techniques for scanning tunneling microscopy and atomic force microscopy.—73-05038
Fabrication of deep submicron patterns with high aspect ratio using magnetron reactive ion etching and sidewall process.—73-08337
Method of forming oxide superconductor patterns.—73-01715
Method of forming recessed patterns in insulating substrates.—73-01059
Micropatterned diamond substrates.—73-13416
Patterning method for high-$T_c$ superconducting YBaCuO thin films.—73-08161
Patterning of GaAs by in situ electron-beam lithography toward nanometer-scale structures.—73-15084
Photopatterning of tantalum oxide films by a sol-gel method using a KrF excimer laser.—73-09239
Practical fabrication process of pregrooves on glass disks by the sol-gel method.—73-14465

**pellets/pelletization,**
Cleaning by blasting with pellets of dry ice.—73-12117
Dynamic effects of vaporization with exothermic reaction in a porous catalytic pellet.—73-08602
Toluene disproportionation over ZSM-5 zeolite: effects of crystal size, silicon-to-aluminum ratio, activation method, and pelletization.—73-03065

**peptization,**
Effect of peptization on densification and phase-transformation behavior of sol-gel-derived nanostructured titania.—73-09083

**percolation,**
Percolation model of high-$T_c$ superconductors.—73-15577

**periclase,**
Development of a combined antioxidant for a periclase-graphite ramming body.—73-00799
Mechanical activation of periclase cements.—73-14603
Periclase-carbon refractories bonded with lignosulfonates and complex additives.—73-00835
Periclase-carbon tubes for protection of a stream of metal from secondary oxidation.—73-00836
Periclase-spinel products containing fused spinel made from bauxite and periclase.—73-10752
Phase formation during heating of brucite.—73-16253
Refractories based on hollow periclase-containing granules.—73-00851
Refractories based on sintered and fused periclase chromite.—73-00852
Taimyrsk graphites for producing periclase-carbon ladle refractories.—73-00875
Thermal expansivity of periclase at high temperature and high pressure.—73-05657
Wear mechanism of periclase spinel brick for crown of open hearth furnace.—73-07230

**perlite,**
Application of thermal insulation core plate of expanded perlite to energy-saving buildings.—73-09820
Developing glazed tiles from perlite tailings.—73-10812
Forms of water in perlites and genesis of volcanic glasses.—73-13989
Perforated partition wall board using expanded perlite.—73-10078
Perlite.—73-12292

**permeability,**
Calculation of the thermal conductivity and gas permeability in a uniaxial bundle of fibers.—73-16661
Cement cake properties in static filtration—influence of polymeric additives on cement filter cake permeability.—73-00031
Complex permeability of a high-purity yttrium iron garnet (YIG) sputtered thin film.—73-04593
Dielectric permeability of dehydrated kaolin of various chemical compositions.—73-02568
Gas-permeable forsterite refractories.—73-00817
Influence of physical properties of impregnating paints on permeability into mortar.—73-10010
Initial permeability of polycrystalline MnZn ferrites: the influence of domain and microstructure.—73-07943
Liquid permeability of porous glass membrane and its microstructure.—73-03797
Momentum transfer across fluid-fluid interfaces in porous media: a network model.—73-08920
Permeability and microstructure of concrete: a review of modeling.—73-03515
Quantitative relationship between permeability and pore size distribution of hardened cement paste.—73-10122
Structure of fully hydrated portland cement and tricalcium silicate pastes: III, Specific surface area and permeability.—73-00195
Temperature dependence of the variation in the complex permeability of yttrium iron garnet (YIG) with applied magnetic field.—73-04660

**permittivity,**
Conflicting values of the third-order nonlinear permittivity of α-quartz.—73-11705
Permittivity in tetragonal and rhombohedral phase PZT ceramics after poling.—73-05445
Preparation process of high-permittivity material.—73-01063

**perovskites,**
Advances in processing and properties of perovskite thin films for FRAM's, DRAM's, and decoupling capacitors.—73-11553
Bridging the Ruddlesden-Popper and the Dion-Jacobson series of layered perovskites: synthesis of layered oxides, $A_{2-x}La_2Ti_{3-x}Nb_xO_{10}$ (A=K, Rb), exhibiting ion exchange.—73-08557
Crystal structure and Mossbauer spectroscopy of $Y_2SrFeCuO_{6.5}$, a double-layer perovskite intergrowth phase.—73-02182

Defect chemistry of perovskite compound $Sr(Fe_{0.5}Nb_{0.5})O_3$.—73-06148
Dielectric ceramics.—73-01049
Diffuse phase transition in $Pb(Fe_{0.5}Nb_{0.5})O_3$-based solid solution.—73-05382
Domain structure in excess-$WO_3$ lead complex perovskite.—73-07301
Effect of microstructure on the interface resistance between a perovskite-type oxide electrode and yttria-stabilized zirconia.—73-07305
Effects of the columbite precursors on phase formation characteristics, microchemistry, and dielectric properties of $Pb(Zn, Mg)_{1/3}Nb_{2/3}O_3$ ceramics.—73-10941
Elaboration and characterization of lead perovskites from colloidal solution.—73-13039
Electrical conductivities of $YBa_2M_3O_x$ (M: Fe, Co) system.—73-02598
Electrical conductivity, defect equilibrium, and oxygen vacancy diffusion coefficient of $La_{1-x}Ca_xAlO_{3-\delta}$ single crystals.—73-09402
Electron magnetic resonance in a series of antiferromagnetic molecular perovskites.—73-05557
Electronic structure, insulators, metal transition, and superconductivity in high-$T_c$ and related systems.—73-11747
Growth of *a*,*b*-axis oriented perovskite thin films over a buffer/template layer.—73-15678
High dielectric constant ceramics in the $PbSc_{0.5}Ta_{0.5}O_3$-$PbZrO_3$ and $PbSc_{0.5}Ta_{0.5}$-$PbTiO_3$ systems.—73-00975
High-temperature electrical conductivity of perovskite $La_{0.98}Sr_{0.02}MnO_3$.—73-12809
High-temperature heat capacity and phase transitions of $CaTiO_3$ perovskite.—73-08637
High-temperature phase transition in perovskite.—73-16168
Ionic and electronic conductivities of $LaCoO_3$- and $LaMnO_3$-based perovskite-type oxides measured by the ac impedance method with electron-blocking electrodes.—73-07330
Joining of 8 mol% YSZ solid electrolyte and perovskite $LaMnO_3$.—73-00989
Kinetics and deformation during the reaction of yttrium-aluminum perovskite and alumina to yttrium-aluminum garnet.—73-13413
Lattice distortion of $Ba(Zn_{1/3}Ta_{2/3})O_3$ with ordering of B-site cations.—73-03099
Low-temperature synthesis of $Ba(Mg_{1/3}Ta_{2/3})O_3$ perovskite by the metal alkoxide method.—73-16855
Mossbauer spectrometry study of a compound of perovskite structure containing tetravalent iron by means of a dimagnetic $^{119}Sn^{4+}$ probe.—73-16222
New perovskite-related compounds in the BaO-$Tl_2O_3$ system.—73-02352
New quadruple perovskite $Gd_2Ba_2Ti_2Cu_2O_{11}$: a potential superconducting parent phase.—73-08144
New quadruple perovskites $La_2Ba_2Ti_xSn_{2-x}Cu_2O_{11}$ ($0 \le x \le 2$): controlling copper-oxygen distances in potential superconducting parent phases.—73-08145
Order-disorder and magnetic clusters in some mixed-metal perovskites.—73-04633
Oxygen evolution on $BaSn_{1-x}Sb_xO_3$ ($0 \le x \le 0.15$) perovskite electrode.—73-14722
Perovskite glass-ceramics.—73-14453
Perovskite-type rare-earth complex oxide combustion catalysts.—73-02054
Plasma-sprayed perovskite of the composition $La_{1-x}Sr_xMnO_{3-\delta}$: phase analysis and electrical conductivity.—73-07351
Preparation and properties of perovskite-type oxides from three-dimensional heterometal assemblies, $\{Ln[Cr(ox)_3]\cdot 10H_2O\}_x$ (Ln=La, Pr, or Nd).—73-11668
Preparation and properties of perovskite-type oxides from three-dimensional heterometal assemblies, $\{Ln[Cr(ox)_3]\cdot 10H_2O\}_x$ (Ln=La, Pr, or Nd).—73-02402
Preparation of BaHfO using a spray-drying method.—73-05968
Preparation of high-density perovskite $LaNiO_3$ by using HIP.—73-02952
Preparation of lead-based perovskite-type thin films by an alternate evaporation method.—73-09265
Preparation of lead-based perovskite-type thin films by an alternate evaporation method.—73-16924
Simple and perovskite oxides of transition metals: why some are metallic, while most are insulating.—73-02687
Solid-state reaction for the formation of $Pb(Zn_{1/3}Nb_{2/3})O_3$.—73-05480
Spin-glass $Sr_3FeNbO_6$ [investigated] by extended X-ray absorption fine structure and Mossbauer spectroscopy.—73-05487
Stabilization of perovskite phase and enhanced DPT [diffuse phase transition] characteristics of Pb(Zn, $Mg)_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ ceramics by the addition of excess constituent oxides.—73-16315
Structural and dielectric properties of $(1-x)Pb(Fe_{1/2}Nb_{1/2})O3-xPbTiO_3$ prepared by precalcination method.—73-16602
Structural characterization and ion conductivity of $MCa_2NaNb_4O_{13}$ (M=Rb, Na) with four units of perovskite layer.—73-16321
Structure of new perovskite-related compounds, $LiCuM_3O_9$ (M=Nb, Ta).—73-05503
Structure order-disorder and dielectric response in perovskite-related SrO-$Fe_2O_3$-$Nb_2O_5$ system: the oxygen-deficient composition $Sr(Fe_{1-x}Nb_x)O_{2.5+y}$ ($x$=0.17, 0.25, 0.5).—73-08760
Sudden appearance of an unusual spin density wave at the metal-insulator transition in the perovskite $RNiO_3$ (R=Pr, Nd).—73-16605
Syntheses of the perovskite $La_2CuTiO_6$ by the ceramic oxide precursors and sol-gel methods and study of the structure and Cu-Ti distribution by X-ray and neutron diffraction.—73-17017
Synthesis of $La_{1-x}Sr_xMnO_3$ at different sintering temperatures.—73-09358
Systematic selection of perovskite solid electrolytes for intermediate temperature fuel cells.—73-01034
TEM investigations in the PFN-PFW-PZN perovskite system.—73-09516
Thermodynamic model for reducing $ABO_3$ perovskites by converted methane.—73-08779
Thermodynamic stability of perovskites and related compounds in some alkaline earth–transition metal–oxygen systems.—73-02525
Three methods of describing the structure of superconducting and nonsuperconducting phases with perovskite-like structure.—73-02526
Twin structure of perovskite- and tetragonal-tungsten-bronze-type crystals.—73-16387

**pH,**
pH dependence on the formation process of tungsten oxide gel.—73-02917
Stability and processing of aqueous $BaTiO_3$ suspension with polyacrylic acid [PAA]: effect of pH.—73-03026

**phase boundary,**
Phase boundary of an LMN-PZ-PT three-component system.—73-11596

**phase diagrams,**
Cation ordering and the stability of fluorite-related phases in $ZrO_2$-$Ln_{1.5}$ systems: a phase diagram simulation study using Monte Carlo methods.—73-08562
Coherent epitaxy, surface effects, and semiconductor alloy phase diagrams.—73-08577
Dynamic magnetic phase diagrams of a magnetic material with strong anisotropy.—73-07932
Effects of size, shape, and environment on the phase diagrams of small structures.—73-16127
Electron-hole asymmetry in the phase diagram of $Ln_{2-x}^{3+}M_xCuO_4$ compounds.—73-02256
Electron-hole asymmetry in the phase diagram of $Zn_{2-x}M_xCuO_4$ compounds.—73-02257
Experimental evidence for a multicritical point in the magnetic phase diagram for the mixed state of clean, untwinned $YBa_2Cu_3O_7$.—73-15324
Intermediate phase in the formation of superconductive phase in the Bi-Sr-Ca-Cu-O system.—73-04749
Multimedia tutorial on phase equilibria diagrams.—73-06581
Parametric study of the phase formation of in situ BiSrCaCuO thin films by laser ablation.—73-11859
Phase diagram of $Al_2(WO_4)_3$-related systems and the kinetics of flux volatilization.—73-05447
Phase diagram of the system $ZrO_2$-$HfO_2$.—73-05448
Phase diagram of the vortex-solid phase in Y-Ba-Cu-O crystals: a crossover from single-vortex (1-D) to collective (3-D) pinning regimes.—73-08162
Phase diagrams of ordered nonstoichiometric HfC and TiN.—73-05449
Phase equilibria and properties of glasses in the $Al_2O_3$-$Yb_2O_3$-$SiO_2$ system.—73-14066
Phase equilibria in the CaO-$Me_2O_3$-$CaCl_2$-$H_2O$ system.—73-02378
Phase relations between α′- and B′-SiAlON's in $Si_3N_4$ (-$SiO_2$)-AlN-$Y_2O_3$ system.—73-08694
Phase relations between α′- and B′-SiAlON's in $Si_3N_4$ (-$SiO_2$)-AlN-$Y_2O_3$ system.—73-16255
Phase relations of $Al_{2-x}Y_xO_3$-$SiO_2$-$Si_3N_4$ system ($x$=0.75 and 1.06) and properties of oxynitride glasses.—73-00385
Phase relations of $Al_{2-x}Y_xO_3$-$SiO_2$-$Si_3N_4$ system ($x$=0.75 and 1.06) and properties of oxynitride glasses.—73-12656
Phase relationship studies of silicon nitride system—a key to materials design.—73-05451
Projections of the liquidus surface in the ternary reciprocal system InSe-$Sb_2Se_3$-$Sb_2Te_3$.—73-12663
System CaO-SrO-CuO.—73-16358
Systems $M_2MoO_4$-$Bi_2(MoO_4)_3$ (M=Ag, Tl).—73-12716
$p_{total}$-$T$-$x$ phase diagram of the system Si-Te.—73-02370
$T(z)$ diagram and optical energy gap values of $Cd_{1-x}Mn_xGa_2Se_4$ alloys.—73-07827

**phase equilibria,**
Magnetoplumbite-corundum phase equilibria in the system Sr-Fe-Al-O at 1100°C.—73-05433
Phase equilibria in $RuO_2$-$TiO_2$-$Al_2O_3$ and $RuO_2$-$TiO_2$-$Bi_2O_3$ systems.—73-16249
Phase equilibria in the $RuO_2$-PbO-$Al_2O_3$ and $RuO_2$-PbO-CuO systems.—73-16250
Phase equilibrium in the $SnO_2$-$V_2O_5$ system.—73-08693
Phase equilibrium melt-solid in the system Pb-InSb-GaSb and Pb-InAs-GaAs.—73-11373
Thermodynamic calculation of phase equilibria in the $CaF_2$-$SiO_2$-CaO system.—73-05515

**phase separation,**
Calculation of phase separation kinetics in metastable systems for two models of particle nucleation.—73-13931
Effect of antimony oxide on phase separation in sodium borosilicate glass.—73-00330
Interpretation of electrical data of phase-separated glasses.—73-00506
Phase separation and crystallization in glasses [investigated] by means of small-angle scattering with varying contrast.—73-14068
Phase separation in sodium borosilicate glass with additions of the oxides $ZrO_2$ and CaO.—73-00386
Phase separation in sodium borosilicate glass with $ZrO_2$ and CaO additives.—73-00387
Phase separation of halogen-containing sodium borosilicate glasses.—73-00388

**phase transformations,**
Acoustic emission in symmetric-incommensurate-commensurate phase transformations [PT].—73-01069
Analysis of the α-to-β phase transformation in Y-Si-Al-O-N ceramics.—73-08549
Effect of the chemical composition of ramsdellite-like phases, crystallized in the $LiFeO_2$-$SnO_2$-$TiO_2$ system, on their structure, electrical properties, and phase transformation under heating.—73-16124
Effects of transient nucleation and size-dependent growth rate on phase transformation kinetics.—73-06909
Electron microscopy studies of phase transformations in nanostructured yttrium oxide.—73-06213
Formation of a new superconducting phase, YBCO-T* ($T_c$=87 K) in $YBa_2Cu_3O_{7-\delta}$.—73-08086
High-pressure structural phase transformation in GaN.—73-02282
Mechanics of stress-induced phase transformation in zirconia.—73-08665
Microstructural features of the $\alpha \rightarrow \beta$ transformation in silicon nitride at high pressures and temperatures.—73-13420
Phase change of new products of $CaSO_4$-$SrSO_4$-$H_2O$ system.—73-00162
Phase charge of spodumene and its function to reduce sintering shrinkage.—73-12652
Phase transformations in monoclinic zirconia caused by milling and subsequent annealing.—73-12657
Phase transformations occurring during the firing process of ceramic tiles based on beneficiation tailings.—73-07267
Phase transformations of alumina derived from ammonium aluminum carbonate hydroxide (AACH).—73-05454
Phase transformations of amorphous binary semiconductors under pulsed laser irradiation.—73-01272
Phase transformations when synthesizing clinkers produced of technogeneous raw materials.—73-10081
Quantitative determination of the cubic-to-monoclinic phase transformation in fully stabilized zirconias by Raman spectroscopy.—73-16283
Shock-induced mechanisms of phase transformation from rhombohedral BN to cubic BN.—73-08730
Stress-induced phase transformations in the systems $(Ho_{1-x}La_x)_4Al_2O_9$ and $(Y_{1-x}La_x)_4Al_2O_9$.—73-16316
Structural mechanisms of phase transformations of Si(Ge) I-III: I, Silicon.—73-16324
Structural studies of phase transformations in ultrafine zirconia powders.—73-06290
Transformation shear of precipitated zirconia particles.—73-05521
X-ray diffraction study of the *t*-to-*m* phase transformation in 12 mol% ceria-doped zirconia at low temperatures.—73-16394

**phase transitions,**
Absence of finite-temperature vortex-glass phase transition in 2-D $YBa_2Cu_3O_{7-\delta}$ films.—73-07983
Critical behavior of specific heat in ferroelectric $K_2ZnCl_4$ and $(NH_4)_2BeF_4$ at normal-incommensurate phase transition.—73-07875
Critical behavior of $SrTiO_3$ near the 105-K phase transition.—73-16072
Diffuse phase transition in $Pb(Fe_{0.5}Nb_{0.5})O_3$-based solid solution.—73-05382
Diffuse phase transitions and random-field-induced domain states of the "relaxor" ferroelectric $PbMg_{1/3}Nb_{2/3}O_3$.—73-07880
Effect of hydrostatic pressure on phase transitions in perovskite-like crystals of RbCl/$CdCl_2$ system.—73-16116
Effect of local coulomb fields on semiconductor-metal phase transition in $VO_2$ films.—73-01135
Effects of isovalent and nonisovalent impurities on the ferroelectric phase transition in barium titanate.—73-07883
Evidence in the elastic properties for a stress-related phase transition in the high-$T_c$ material: $Bi_2Sr_2CaCu_2O_x$.—73-08068
*Fm3m*→*I*4/*m*→*P*2$_1$/*n* successive phase transitions in $Rb_2KInF_6$ and $Rb_2KLuF_6$ elpasolites.—73-16145
High-temperature heat capacity and phase transitions of $CaTiO_3$ perovskite.—73-08637
High-temperature phase transition in perovskite.—73-16168
Hydrostatic pressure effects on superconductive phase transitions in $Y_{1-x}Ca_xBa_2Cu_3O_{7-\delta}$ [$0 \le x \le 0.2$] and $Y(Ba_{1-x}La_x)_2Cu_3O_{7-\delta}$ [$0 \le y \le 0.15$].—73-10957
Low-temperature phase transition in layered $TlInSe_2$ and $TlGaSe_2$ ferroelectric semiconductors.—73-15023
Low-temperature phase transitions in $TlGaS_2$ layer crystals.—73-15024
New model for the shock-induced α-quartz→stishovite phase transition in silica.—73-12639
Orientation of coherent interphase boundaries formed by the α-to-α′$_H$ phase transition in belite crystals.—73-08683
Paraphase symmetry and phase transition of dynamics in $Na_{1/2}Bi_{1/2}TiO_3$.—73-01421
Percolation processes and anomalous light scattering in ferroelectrics with diffuse phase transition.—73-15275
Phase transition and oxygen deficiency in electrochemically reduced Y-, Ca-PSZ crystals.—73-16262
Phase transition in $PbTiO_3$ ultrafine particles of different sizes.—73-01423
Phase transition in stoichiometric Nasicon.—73-16265
Phase transitions in elpasolite, $Rb_2KScF_6$.—73-16266
Phase transitions in new ferroelectric of $KTiOPO_4$ family.—73-01424
Phase transitions in $TlGaS_2$ layered crystal.—73-16267
Phenomena observed under gradual diffusion of ferroelectric phase transition.—73-16271
Raman scattering spectra of and phase transitions in $AgAsS_2$ under pressure.—73-01296
Raman scattering study of $BaCeO_3$ and $SrCeO_3$.—73-05465
Specificity of phase transitions of lead monoxide.—73-12687
Spring-defect model of structural phase transition in $YBa_2Cu_3O_{7-\delta}$.—*73-15629*
Structural phase transitions of the quasi-two-dimensional metal $(K_{1-x}Rb_x)_5Cu_8S_6$: X-ray scattering studies.—73-08753

Temperature and composition dependence of the ferroelastic phase transition in $(Cu_xZn_{1-x})WO_4$.—73-05509
Tetragonal↔monoclinic phase transition temperature of rare-earth-doped zirconia prepared by arc melting.—73-08774
Three-dimensional/one-dimensional transition in the $Cs^+$ sublattice of the mixed valence $CsTi_8O_{16}$ hollandite: structures at 297 K and 673 K.—73-02527
Transmission electron microscopy investigation in the $R3m \rightarrow R3c$ phase transition in $Pb(Zr,Ti)O_3$ ceramics.—73-06298
Ultrahigh magnetic field effect on the structural phase transition in (Pb, Ge)Te.—73-07850
X-ray and neutron diffraction studies of the diffuse phase transition in $PbMg_{1/3}Nb_{2/3}O_3$ ceramics.—73-02541

**phases,**
Analysis of submicrocrystals of the photochromic phase in glass using a differential scanning calorimeter.—73-13925
Calculation of interphase mass exchange coefficient in a hydrosuspended layer of a dispersed phase.—73-16041
Crystallization process of $Fe_{73.5}Cu_1Nb_3Si_{13.5}B_9$.—73-04598
Determination of the quantitative phase composition of a ceramic by X-ray phase analysis.—73-08599
Effect of crystal phases on the properties of sintered glass-ceramics for CaO-MgO-$Al_2O_3$-$SiO_2$ system.—73-00452
Effect of synthesis method and departure from stoichiometry on the phase composition of sodium zircosilicophosphate.—73-13021
Effects of silver and lead on the phase stability of $Bi_2Sr_2Ca_1Cu_2O_{8+\delta}$ [Bi-2212] and $Bi_2Sr_2Ca_2Cu_3O_{10+\delta}$ [Bi-2223] above and below the solidus temperature.—73-15445
Formation and characteristics of medium-range order in single-phase glasses and their melts.—73-14384
Freudenbergite: a possible Synroc phase for sodium-bearing high-level waste.—73-12009
Glass phases based on the Se-S-X (X=Cu, Zn) system.—73-00347
Impurity phase recognition in YBCO high-$T_c$ superconductors by cathodoluminescence [CL] spectroscopy.—73-15507
Induced self-pumping phase conjugation in $BaTiO_3$.—73-08886
MINDO molecular orbit description of three phases of BN.—73-08668
New metastable phases in a Pd/amorphous Si bilayer after annealing.—73-08678
New perspective on the cement hydration characteristics of cement phases.—73-10067
Origin of the incommensurate phase of quartz: I, Inelastic neutron scattering study of the high-temperature ß-phase of quartz.—73-08684
Origin of the incommensurate phase of quartz: II, Interpretation of inelastic neutron scattering data.—73-08685
Peculiarities in the kinetics of isothermal growth of particle size of the dispersed phase in liquifying sodium borosilicate glass.—73-00384
Phase formation and properties of electrical porcelain in the presence of diopside additive.—73-01008
Phase relations in the system CaO-$Al_2O_3$-$SiO_2$-$H_2O$ relevant to metakaolin–calcium hydroxide hydration.—73-03516
Phase relations in the system $Ln_2O_3$-$B_2O_3$-$Ta_2O_5$, where Ln stands for Ce, Pr, Nd, in the subsolidus region.—73-12655
Phase relationships in the Sm-Ba-Cu-O system at ≈950°C.—73-02388
Phases and their relation in $BiO_{1.5}$-SrO($SrCO_3$)-CuO system at 720°C.—73-16270
Preparation of Bi-Sr-Ca-Cu-O high-$T_c$ superconducting ceramics with fine monophase.—73-11871
Quantitative analysis of *o´*-phase in *B´-o´* SiAlON ceramics by image analysis technique.—73-03187
Quantitative estimation of intergranular glassy phase of silicon nitride ceramics.—73-06274
Quantitative powder X-ray diffractometry phase analysis of silicon nitride materials by a multiline, mean-normalized-intensity [MNI] method.—73-16284
Relation between microstructure and color tone of skin layer and bulk area of silicon nitride ceramics.—73-13444
Structural features of lattices formed during the crystallization of a dispersed phase.—73-08749
TEM study of the composition of the interstitial phase in an oil well cement clinker.—73-06725
Thin-film compound phase formation sequence: an effective heat of formation model.—73-16381
Three methods of describing the structure of superconducting and nonsuperconducting phases with perovskite-like structure.—73-02526
Transient nonlinear optical response from excitation-induced dephasing in GaAs.—73-15213
Why the chain fragments in ortho-II and ortho-III phases of YBCO might be confined.—73-15668
X-ray diffraction study of high-temperature modification of $Rb_2ZnBr_4$, $T$=368 K.—73-02543

**phenols,**
Carbon from phenolic resins: carbon yield and volatile components—recent studies.—73-10707
Effect of carbonization atmospheres on yields and tensile strength of phenolic resin-based carbon fibers.—73-12999
Phenol removal from kaolinite by electrokinetics.—73-15911
XRD analysis and leachability of solidified phenol-cement mixtures.—73-06733

**phlogopite,**
Production of foam glass brick with phlogopite.—73-10586

**phonons,**
Ab initio calculation of the surface phonons in GaAs(110).—73-11059
Anomaly of phonon state of superconducting $YBa_2Cu_3O_7$ studied by inelastic neutron scattering.—73-07987
Coherent control of LO-phonon dynamics in opaque semiconductors by femtosecond laser pulses.—73-07416
Effects of Landau damping on the Raman-active phonons of $YBa_2Cu_3O_{7-\delta}$.—73-07472
Exciton-La and -Ta phonon couplings in spherical semiconductor microcrystallite.—73-07520
Frequency shifts and linewidth changes of ir-active phonons in double-layered high-temperature superconductors.—73-11771
Interaction between dislocations and phonons in LiF crystals.—73-16177
Interface chemistry and band bending induced by Pt deposition onto GaP(110).—73-01218
Phonon Raman scattering in GaAs-based quantum dots.—73-15088
Phonon spectrum of copper oxide.—73-05458
Phonons and superconductivity in $Bi_2Sr_2CaCu_2O_8$.—73-08164
Propagation of nonequilibrium phonons in ceramic materials.—73-09419
Quasi-2-D nature of the phonon subsystem of Bi superconductors.—73-08182
Self-energy effects of the $B_{1g}$ phonon in $Bi_2Sr_2CaCu_2O_8$.—73-15617
Superconductivity-induced phonon softening in $YBa_2Cu_3O_7$ observed by inelastic neutron scattering.—73-15638
Surface dielectric response function of optical phonons in an ionic-crystal film.—73-07361
Time-resolved X-ray diffraction study of hot phonons in quartz.—73-02528
$V_2O_5$ surface phonon spectrum.—73-08789

**phosphates,**
ΔE effect in rare-earth phosphates $RPO_4$.—73-16438
Absorption of coloring impurities in FIK-14 glass.—73-06991
Adsorption of phosphate on vaterite.—73-05352
Alkali metal, copper phosphate glasses.—73-10620
Alkali zinc pyrophosphate glasses for polymer blends.—73-14317
Alkali-lead-iron phosphate glass and associated method.—73-10621
All-solid-state electrochromic device: I, Electrophoretic deposition film of proton conductive solid electrolyte.—73-00932
Bioabsorbable chlorophosphate glasses and bioabsorbable glass-polymer blends made therefrom.—73-03903
Blue-green upconversion luminescence of nanocrystalline $HoP_5O_{14}$.—73-12747
Bonding in simple phosphate glass.—73-13930
Cation exchange properties of $LiTi_2(PO_4)_3$ and synthesis of its microporous materials via glass.—73-04060
Characterization of intermediate-range order in superionic $AgPO_3$-AgX (X=I, Br, Cl) glasses by neutron diffraction.—73-00938
Chemical vapor deposition of borophosphosilicate glass initiated by high-frequency discharge plasma.—73-00594
Coating of components with final impregnation with chromia or phosphate forming compound.—73-12353
Cold nuclear fusion induced in $KD_2PO_4$ single crystals by a ferroelectric phase transition.—73-15699
Comparison between the elastic and nonlinear acoustic properties of neodymium and samarium phosphate glasses.—73-03780
Completion of the alkali metal titanium(III) pyrophosphate series: synthesis and structure of $A'TiP_2O_7$ (A'=K, Rb, Cs).—73-02167
Composition dependence of the elasticity, reaction rate, and porosity of orthophosphate bonded ceramics using an ultrasonic double-probe method.—73-02752
Compound upconversion luminescence mechanism in crystalline $TmP_5O_{14}$.—73-16423
Compounds containing layers of composition $[(Sb^{III}F)PO_4]$, $[(Sb^{III}F)As_4]$—crystal structures of $Na(SbF)PO_4{\cdot}1.5H_2O$, $Na(SbF)AsO_4$, $NH_4(SbF)PO_4{\cdot}H_2O$, and $NH_4(SbF)AsO_4{\cdot}3H_2O$.—73-02171
Conductivity variations in composites of α-zirconium phosphate and alumina.—73-00943
Controlled pore size phosphate-alumina material and method for producing [the] same.—73-05210
Corrosion resistance of ceramic refractories and platinum to lead phosphate glasses.—73-07203
Crystal chemistry and electrical study of $Na_xNbTi(PO_4)_3$ [0≤x≤2].—73-02176
Crystal structure and phase transitions in $NaTb_2(PO_4)_3$.—73-16081
Crystal structure of $Na^{[7]2}Zn^{[6]2}[P_2^{[4]}O_6(OH)]^{xH}$.—*73-02200*
Crystal structure of olympite, $LiNa_3(PO_4)_2$.—73-16091
Crystal structure of the sodium ion conductor α-$Na_7Fe_3(P_2O_7)_4$: evidence for a long-range ordering of the $Na^+$ ions.—73-02216
Crystallization of $AgTi_2(PO_4)_3$ and related compounds close to ambient conditions.—73-05723
Dental refractory model materials.—73-12362
Determination of the content of hydrogen in neodymium ultraphosphate glass.—73-13959
Dissolution of dental zinc phosphate cement in organic acid solutions.—73-16451
Distinguishing features of crystallization during preparation of transparent glass-ceramics in $Al_2O_3$-$B_2O_3$-$P_2O_5$ system.—73-13962
Effect of microstructure on thermal expansion of $MZr_2P_3O_{12}$ (M=Na, K, Rb).—73-05547
Effect of rubidium and cesium fluorides on the structure and properties of phosphate glasses.—73-00462
Effect of synthesis method and departure from stoichiometry on the phase composition of sodium zircosilicophosphate.—73-13021
Effect of temperature on the radiation-induced optical absorption of lithium lanthanum phosphate glass.—73-00465
Effect of the bias field on the thermal conductivity of $KH_2PO_4$ near $T_c$.—73-16462
Effect of the nature of the cation on the P–O bond in vitreous alkali and alkaline-earth polyphosphates.—73-13968
Effects of $SiO_2$ substitution on the structure and properties of low-melting phosphate glass.—73-13972
Elastic and piezoelectric properties of $KTiOPO_4$ crystals.—73-15258
Elastic modulus, refractive index, and its change during ion exchange in melts of salts for alkali phosphate glasses.—73-14167
Electrical behavior of the interface in lithium phosphate glasses.—73-14701
Electrical conductivity of polyphosphates—$Li_3Ba_2(PO_3)_7$, $LiPb_2(PO_3)_5$, $LiCs(PO_3)_2$, and α-$LiK(PO_3)_2$.—73-02599
Electrical properties of nitrided phosphate glasses.—73-14176
Electrical property and sinterability of $LiTi_2(PO_4)_3$ mixed with lithium salt ($Li_3PO_4$ or $Li_3BO_3$).—73-04089
Electrical relaxation in sodium-calcium-aluminum phosphate glass.—73-14178
Electromechanical properties of gallium phosphate at temperatures from –196 to 723°C.—73-02606
Electronic conductivity in copper- and iron-based phosphate glasses exhibiting clustering and spinodal decomposition.—73-14180
Electrostriction, dielectric and piezoelectric nonlinearities of $KH_2PO_4$ crystals.—73-15795
Environmental stability of phosphate-bonded silicon nitride ceramics.—73-12799
EXAFS study of lithium-intercalated iron thiophosphate.—73-02273
Features of the crystal structure of $KTiOPO_4$ and $KFeFPO_4$ at 110 K.—73-05399
Fibersizable zinc-phosphate glass compositions.—73-14536
First observation of the increase in atomic mean square displacements upon glass formation: inelastic neutron scattering study of $K_{1-x}(NH_4)_xH_2PO_4$ mixed crystals.—73-00342
Fluorescence properties of $Cu^+$ ion in phosphate glasses of the $BaLiPO_4$-$P_2O_5$ system.—73-00482
Fracture toughness of multicomponent phosphate glasses.—73-00487
Fusibility diagram of the system $CsPO_3$-$Ga(PO_3)_3$ and the properties of the compound $CsGa(PO_3)_4$.—73-16160
Glass formation and ion conduction in the CuCl-$Cu_2MoO_4$-$Cu_3PO_4$ system.—73-07031
Glass formation and ion conduction in the CuCl-$Cu_2MoO_4$-$Cu_3PO_4$ system.—73-14194
Grain growth in $(Ca_{1-x}Mg_x)Zr_4(PO_4)_6$ ceramics.—73-17139
Hardening process for several phosphate glass-containing cements.—73-03476
Hydrogen and $PO_4$ modes of $RbH_2PO_4$.—73-08638
Hydrothermal synthesis and characterization of vanadyl(IV) hydrogen phosphate, $K_2(VO)_3(HPO_4)_4$.—73-02285
Hydrothermal synthesis of $Na_2(MoOPO_4)_2(HPO_4){\cdot}2H_2O$, a layered molybdenum(V) phosphate structure and its relationship to $2VOSO_4{\cdot}H_2SO_4$.—73-02287
Hydrothermal synthesis, structure, and magnetic properties of a new polymorph of lithium vanadyl(IV) orthophosphate: ß-$LiVOPO_4$.—73-02288
Hydrothermal synthesis, structure, and sorption properties of $Cs(H_3O)[Mo_2O_2(PO_4)_2(HPO)_4]$.—73-02289
Improving the quality of the charges of colored phosphate glasses.—73-07143
Influence of impurities on the luminescence quantum efficiency of (La, Ce, Tb)$PO_4$.—73-04118
Influence of pyrite candle-end phase composition on iron phosphate astringent compound properties.—73-16841
Infrared study of $OH^-$ defects in $KTiOPO_4$ crystals.—73-13355
Intense bandwidth- and diffraction-limited ps pulses with large tuning range.—73-08891
Interaction of sodium cyclotriphosphate with aluminum.—73-12607
Interactions of components in the system $BaO$-$B_2O_3$-$P_2O_5$ according to Raman spectra data.—73-14014
Intermediate and metastable phases on synthesis of some lanthanide phosphates.—73-02303
Intermediate-range order study of phosphate glasses by using small-angle X-ray scattering (SAXS) techniques.—73-14018
Ion transport in alumina-pillared zirconium phosphate.—73-06166
Ionic conduction associated with polaronic hopping in $KTiOPO_4$ single crystals.—73-13358
Ionic conductivity in layered $Na_3Mo_2P_2O_{11}(OH)$·$2H_2O$.—73-04123
Ionic conductivity of quasi-one-dimensional superionic conductor $KTiOPO_4$ (KTP) single crystal.—73-00987
Ir spectra of iron-containing borophosphate glasses.—73-00359
Iron phosphate coatings on cold-rolled steel: morphology formation and intrinsic adhesion mechanisms.—73-13853
Kinetics and mechanism of the destruction of $PO_4^{2-}$ centers in phosphate glasses activated by silver.—73-00362
$L^I(M^{VI})_{2-x}(N^{IV})_x(PO_4)_3$ (L=Li, Na; M, N=Ge, Sn, Ti, Zr, Hf): new solid solutions synthesis, X-ray difraction analysis, and ionic conductivity.—73-02313
Lanthanum phosphate-bonded composite nickel-rhodium electrodes for alkaline water electrolysis.—73-00990
Laser damage formation in $KTiOPO_4$ and $KTiOAsO_4$ crystals: grey tracks.—73-12825
Lateral straggling of Xe ions in potassium titanyl phosphate.—73-08898
$Li_{3-x}Ti_2(PO_4)_3$ (0≤x≤1): a new mixed valent titanium(III/IV) phosphate with a Nasicon-type structure.—73-02318
Local environment around tungsten in mixed valence barium tungsten phosphate glasses [studied] by X-ray absorption spectroscopy.—73-14027

Local structures in $Na_4Nb(PO_4)_3$ glass and crystal: $^{31}P$ MAS NMR studies.—73-03159
Low-melting, durable phosphate glasses.—73-03940
Luminescence of phosphate glass coactivated by $UO_2^{2+}$ and $Ln^{3+}$ ions.—73-00511
Luminescence of yttrium- and gadolinium-doped lanthanum cerium terbium phosphate.—73-08908
Magnetic and electronic transport properties of the monophosphate tungsten bronze $(PO_2)_4(WO_3)_{2m}$, $m$=2.—73-03101
Mechanical properties of magnesium ammonium phosphate cements and their zeolite composites.—73-03496
Mechanical properties of phosphate glass-ceramic–316L stainless steel composites.—73-13868
Memory effect in pressure-induced amorphous $AlPO_4$.—73-12628
Method of making a gas turbine blade having a duplex coating.—73-03695
MgO-ammonium polyphosphate systems.—73-14604
Mixed valence vanadium phosphate with a tunnel structure: $Rb_6V_6P_6O_{31}$.—73-02330
Modifying of metaphosphate glass surface with ammoniac gaseous medium.—73-14042
Molybdenophosphate with a mixed valence of molybdenum, Mo(VI)-Mo(V): $NaMo_3P_3O_{16}$.—73-02332
$Na_{2+x}Nb_xP_4O_{26}$: a novel niobium phosphate bronze isotopic of the $m$=3 member of the $MPTB_p$ family.—73-02340
Neutron diffraction refinement of atomic structure of α- and γ-phases of $Li_3Sc_2(PO_4)_3$ crystals at 293 and 573 K.—73-02344
New barium titanium(III) pyrophosphate: $BaTi_2(P_2O_7)_2$.—73-02349
New high-pressure phase and local distortion of $PO_4$ in $RbH_2PO_4$.—73-16225
New structural interpretation of the "anomalous" binary magnesium phosphate glass system.—73-14052
New tungsten pyrophosphate with cubic zirconium pyrophosphate-type structure.—73-02354
New vanadium(III) potassium phosphate with a cage structure: $K_4V_2P_4O_{16}$.—73-02356
Niobium phosphate bronze ß-$K_2Na_{2-x}Nb_8P_8O_{34}$, second form of the first member of the series $(K_1Nb_8P_4O_{26})_nKNb_2PO_8$.—73-02358
Niobium phosphate bronze closely related to the $Ba_3Nb_6Si_4O_{26}$ structure: $Na_6Nb_8P_8O_{35}$.—73-02359
Niobium phosphate with a tunnel structure: $Ca_{0.5+x}Cs_2Nb_8P_8O_{34}$.—73-02360
Optical characterization of $KTiOPO_4$ periodically segmented waveguides for second-harmonic generation of blue light.—73-12845
Optical properties of a chemically durable phosphate glass.—73-00523
Optical properties of fluoride phosphate glasses.—73-14244
Optical properties of KDP crystals obtained at high growth rate.—73-02654
Phase equilibria in the system $CePO_4$-$Na_3PO_4$.—73-02381
Phase formation and crystallization behavior of phosphatic glass-ceramics.—73-14456
Phase transitions and ionic conductivity of the lithium sulfate–lithium phosphate system.—73-02391
Phonon scattering from ferroelectric domain walls: phonon imaging from KDP.—73-15277
Phosphate coating composition and method of applying a zinc-nickel-manganese phosphate coating.—73-00290
Phosphate coatings for metal surfaces.—73-00291
Phosphate glass cement.—73-12392
Phosphate-bonded calcium aluminate cements.—73-00207
Phosphate-bonded dental cements.—73-15929
Photoactive catalyst of barium phosphate or calcium phosphate supported on anatase titanium dioxide.—73-02055
Photostimulated formation of paramagnetic centers in phosphate glasses, both pure and activated by iron ions.—73-14071
Picosecond optical parametric generation in flux grown by KTP.—73-02669
Plasma diagnostic studies of the influence of process variables upon the atomic and molecular species ejected from $(1-x)Li_4SiO_4$:$xLi_3PO_4$ targets during radio frequency magnetron sputtering.—73-02924
Polarized vuv spectra of $KTiOPO_4$ crystals.—73-02672
Polynuclear hydroxy metal cations pillared zirconium phosphates and their proton conductivity.—73-12863
Pore structure of uniform spherical cobalt phosphate particles.—73-08705
Porous inorganic membranes.—73-00292
Possible nature of the forms of Fe(II) in iron-containing vitreous sodium polyphosphates.—73-14073
Preparation and crystal structure of $Na_3SbO(PO_4)_2$.—73-02399
Preparation and crystallographic characterization of the polyphosphate $TlPO_3$.—73-02401
Preparation and phosphate ion exchange properties of a hydrotalcite-like [HTAL] compound.—73-08710
Preparation and properties of phosphate glasses and glass-ceramics containing large amounts of titanium: IV.—73-14472
Preparation of $KTiOPO_4$ crystal planar waveguides and measurement of their effective refractive indices.—73-08957
Preparation of porous glass-ceramics in $Na_2O$-$CaO$-$TiO_2$-$P_2O_5$ system.—73-03875
Preparation of some intercalation compounds of layered γ-zirconium phosphate and zirconium phosphate-phosphite.—73-02405
Preparation of trimagnesium phosphate by mechanochemical reaction.—73-02975
Process for forming protective base coatings on metals.—73-00295
Processing, microstructure, and mechanical properties of zirconium phosphate/mullite whisker composites.—73-16953
Production and nature of crystal hydrates of double hydrophosphates of manganese and cobalt.—73-16281
Proton- and ammonium-exchanged optical waveguides in $KTiOPO_4$.—73-02677
Proton-metal ion conduction in monoalkali salt forms of α-zirconium phosphate.—73-04155
Proton-metal ion conduction in polyhydrated α-$ZrHMg_{0.5}(PO_4)_2$ and α-$ZrH_{0.5}Cr_{0.5}(PO_4)_2$ studied by ac/dc conductivity and emf measurements.—73-01018
Protonic conduction of vanadyl phosphate intercalation compounds.—73-01019
Pump-power-induced cavity stability in lithium neodymium tetraphosphate (LNP) microchip lasers.—73-08961
*Q*-switched Nd-doped phosphate glass fiber lasers.—73-14264
Raman scattering in superionic conductors $Li_3Sc_{2-x}Fe_x(PO_4)_3$ ($0 \le x \le 2$).—73-16288
Raman spectra of rapidly quenched lithium pyrophosphate glass at various temperatures.—73-06960
Rapid setting magnesium phosphate cement [MPC] for quick repair of concrete pavements—characterization and durability aspects.—73-00181
Reaction bonding mechanisms in regular and retarded magnesium ammonium phosphate cement systems.—73-10130
Refinement of structure of natural sodium phosphate.—73-16293
Refractive index changes in $Ti^{3+}$-doped glass.—73-14268
Residual stress and the stress-optic effect in mixed crystals of $K(D_xH_{1-x})_2PO_4$.—73-05627
Role of lattice system on ferroelectric phase transition in $PbHPO_4$.—73-07918
Role of $PO_3^{2-}$ radicals in charge accumulation in irradiation of phosphate glasses with electrons.—73-01022
Role of the radicals $PO_3^{2-}$ in accumulation of charge upon irradiation of phosphate glasses by electrons.—73-00397
Scintillation and thermoluminescence properties of beryllium phosphate glasses containing cerium.—73-00543
Second harmonic generation and sum frequency mixing of dual wavelength Nd:$YAlO_3$ laser in flux-grown $KTiOPO_4$ crystal.—73-07789
Sensitivity of spectroscopic parameters of neodymium in phosphate glasses to change in their structures on transition from ultra- to pyrophosphates.—73-00398
Sintering and properties of $MgTi_4(PO_4)_6$ [MTP] prepared by sol-gel process.—73-03007
Sintering and properties of $MgTi_4(PO_4)_6$ prepared by sol-gel process.—73-13260
Soft mode, "relaxor," and glassy-type dynamics in the solid solution $Rb_{1-x}(ND_4)_xD_2PO_4$.—73-16305
Sol-gel preparation and lithium dynamics in the $Li_4SiO_4$-$Li_3PO_4$ solid solution.—73-04170
Solvent–solute interaction in KTP crystal growth solution.—73-06066
Specific features of structure and properties of $Na_3Cr_2(PO_4)_3$ crystals.—73-02437
Spectral luminescence and relaxation parameters of the $V^{3+}$ ion in glasses.—73-00546
Spectroscopic investigations of the $Er^{3+}$ fluorescence transitions at 540 nm and 1.5 μm in fluoride phosphate and phosphate glasses.—73-10482
Structural acentricity in $PbHPO_4$ near the ferroelectric transition investigated by Raman spectroscopy.—73-07920
Structural features of the superionic phase transition in $Na_3Fe_2(PO_4)_3$.—73-08750
Structural refinement using high-resolution powder X-ray diffraction data of $Ca_{0.5}Ti_2P_3O_{12}$, a low thermal expansion material.—73-05495
Structural role of $GeO_2$ in sodium germanium phosphate glasses.—73-00411
Structure and thermal expansion of $LiGe_2(PO_4)_3$.—73-02694
Superionic conduction in rapidly quenched $Li_2S$-$SiS_2$-$Li_3PO_4$ glasses.—73-14736
Superionic conductors with mixed $[M_2P_3O_{12}]_{3\infty}$ framework: crystal structure and physical properties: I, Lithium-conducting phosphates.—73-14737
Synchrotron X-ray topography study of Er-doped $LaP_5O_{14}$ crystal.—73-11624
Synthesis and characterization of cloverite: a novel gallophosphate molecular sieve with three-dimensional 20-membered ring channels.—73-05506
Synthesis and characterization of $KV_3P_4O_{16}$: a new mixed-valence vanadium (III,IV,IV) diphosphate.—73-02476
Synthesis and crystal structure of ammonium analog of leucophosphite, $NH_4\{Fe_2[PO_4]_2(OH)(H_2O)\}\cdot H_2O$.—*73-16350*
Synthesis and crystal structure of $Zn_2VO(PO_4)_2$, a vanadyl(IV) orthophosphate containing a dimer of edge-sharing $ZnO_5$ square pyramids.—73-02484
Synthesis and crystal structures of two thallium vanadium phosphates: $TlVO_2(HPO_4)$ and $Tl_2V_2O_3(VO)(PO_4)_2(HPO_4)$.—73-02485
Synthesis and property of copper(II) hydrogen phosphate.—73-10175
Synthesis and structural characterization of $K(MoO_2)(PO_4)\cdot H_2O$, and its topotactic reaction to form $KMoO_2PO_4$.—73-02490
Synthesis and structure of the double phosphate of lithium and titanium, $LiTiOPO_4$.—73-02494
Synthesis, crystal structure, and properties of new iron phosphate, $Fe_2^{3+}Fe_5^{2+}[P_2O_7]_4$.—73-16356
System $LaPO_4$-$K_3PO_4$.—73-02510
Temperature-insensitive SHG at 0.5321 μm in KTP.—73-08773
Tensile behavior of phosphate-coated aluminum.—73-10283
Thermal degradation behavior of $WOP_2O_7$/phenanthroline complex.—73-16624
Thermal expansion of $K_{1-x}Nb_xZr_{2-x}(PO_4)_3$.—73-08986
Thermal shock resistance of $KZrO_2(PO_4)_3$ [KZP] ceramic.—73-16633
Thermally stimulated depolarization current and Mossbauer spectroscopy of iron-doped niobophosphate glasses.—73-06979
Thermally stimulated polarization and dc conduction in iron phosphate glasses.—73-07088
Thermoluminescence and defect annealing in γ-irradiated $KTiOPO_4$.—73-16639
Ultraviolet luminescence from hafnium pyrophosphate ($HfP_2O_7$).—73-02719
Ultraviolet optical absorptions of semiconducting copper phosphate glasses.—73-07853
Use of boron phosphate in the solid-state preparation of crystalline iron(III) phosphate and manganese(II) diphosphate.—73-08788
Vibrational and vibronic spectra of fluoride- and nitride-activated phosphate glasses.—73-00423
Viscosity of glasses of the $BaO$-$P_2O_5$-$Al_2O_3$ system at glass-transition and annealing temperatures.—73-00572
Viscosity of glasses of the systems $BaO$-$P_2O_5$, $SrO$-$P_2O_5$, and $PbO$-$P_2O_5$ in the temperature ranges of softening and annealing and their elastic properties.—73-00573
Wavelength tuning near 1.54 μm in a phosphate erbium glass laser.—73-00581
X-ray diffractometry study of orthorhombic modification of $Li_3Cr_2(PO_4)_3$ at 293, 473, and 573 K.—73-02544
Zinc sulfophosphate glasses.—73-14562
Zirconlike aspect of $KTh_2(PO_4)_3$ structures.—73-16402

**phosphides,**
Anomalous birefringence hysteresis and thermooptical memory effect in incommensurate phase of ferroelectric-semiconductor $Sn_2P_2Se_6$.—73-14776
Application of magnetooptical and optical spectroscopy to investigation of spin fluctuation in weakly ferromagnetic alloy $Fe_2P$ in paramagnetic region.—73-15305
Ballistic electron emission spectroscopy of noble metal-GaP(110) interfaces.—73-01082
Ballistic-electron emission microscopy [BEEM] at metal/GaP(110) interfaces: electron transport and Schottky barrier heights.—73-11079
Cesium on GaP(110) surfaces: a confirmation of the metal-induced gap states-plus-defects model.—73-11095
Characteristics of the valence bands of some II-IV compounds.—73-01099
Characterization of GaAs/GaAsP strained multiple quantum wells grown by gas source molecular beam epitaxy.—73-11101
Coherent precipitation of $Zn_3P_2$ during Zn diffusion in a GaInAsP/InP heterostructure.—73-07417
Coherent propagation of fs optical pulses in a monoclinic $ZnP_2$ single crystal.—73-14811
Comparison of As- and P-based semiconductors grown at low temperatures by MBE and GSMBE.—73-14812
Crystal chemical studies of inhomogeneous linear structures: IX, Series of $M_{2m+2n}X_{2m+2n}$ inhomogeneous linear structures and its new member $Ni_4Si_2P_3$.—73-16075
Cubic boron nitride phosphide films.—73-15987
Density of states and hot electron effects in ballistic electron emission spectroscopy.—73-06203
Effect of irradiation on the luminescence of $CdP_2$ crystals.—73-14851
Effect of neutron bombardment on the displacement of the *p-n* junction interface in GaAsP:Zn light-emitting diodes.—73-11160
Electrical properties of epitaxial *p-n* GaP structures deposited on Si substrates.—73-11180
Electrical properties of rare-earth monophosphides.—73-02602
Electroluminescence of epitaxial GaP *p-n* structures grown on Si substrates.—73-14877
Electronic passivation of GaP surfaces using $(NH_4)_2S$ treatment.—73-07496
Epitaxial growth of GaP by remote plasma-enhanced chemical vapor deposition.—73-05790
$FePS_3$ and $NiPS_3$ production and electrical conductivity.—73-14924
Fine structure of the A line of bound excitons in $GaAs_xP_{1-x}$:N solid solutions.—73-01165
Friction and wear behavior of electroless Ni-P coating.—73-09603
Ground state of transition elements of the Fe group in GaAs and GaP.—73-07548
High-temperature (74°C) cw operation of 634-nm InGaAlP laser diodes utilizing a multiple quantum barrier.—73-11248
Influence of nonstoichiometry on exciton, electron, and vibrational states in $ZnP_2$.—73-04367
Injection-enhanced transformation of luminescence spectra of green GaP:N light-emitting diodes.—73-14993
Interaction of an electron-hole plasma with optical phonons in GaP.—73-07611
Interface and relaxation properties of chemical beam epitaxy grown GaP/GaAs structures.—73-11278
Kondo-like anomalies in point-contact characteristics of ferromagnetic $EuFe_2P_2$.—73-07946
Laser-assisted atomic layer epitaxy of GaP in chemical beam epitaxy.—73-04379
Long-wavelength low-threshold lasers based on III-V compounds.—73-15015
Low-temperature growth of AlGaP and GaP on Si substrates by atomic layer epitaxy.—73-11297
Luminescence from $Al_{0.28}Ga_{0.72}As_{0.62}P_{0.38}$ layers grown on $GaAs_{0.61}P_{0.39}$ substrates by liquid-phase epitaxy.—73-11303
Magnetooptical investigation of shallow donors in GaP.—73-15033
Measurement of AlP/GaP(100) heterojunction band offsets by X-ray photoemission spectroscopy.—73-11307
Mechanochemical oxidation of calcium phosphide traces by combined and free oxygen in electrothermophosphorus slag.—73-16863
Molecular beam epitaxial growth of arsenide/phosphide heterostructures using valved, solid group V sources.—73-11327

Nature of the instability of the luminescence emitted by GaP:N structures.—73-07688
New phosphide $CeNi_{3-x}P_3$ ($x$=0, 1) and its crystal structure.—73-16227
Optical properties of $Zn_3P_2$ thin films.—73-08935
Optimization of interfaces in arsenide-phosphide compounds grown by gas-source [GS] molecular beam epitaxy.—73-11363
Overlayer-induced valence states, and evidence for charge transfer in Na/GaP(110) and Na/GaAs(110): a comparative photoemission [PE] study.—73-11370
Polarimetric effect in $GaP_xAs_{1-x}$ surface barrier structures.—73-11396
Preparation and properties of gallium phosphide doped by rare-earth elements.—73-04450
Remote plasma-enhanced chemical vapor deposition of GaP with in situ generation of phosphine precursors.—73-07769
Scanning tunneling microscope tip-induced migration of vacancies on GaP(110).—73-15154
Second-order Raman scattering of LO phonon-plasmon modes in $GaAs_{1-x}P_x$.—73-15155
Simultaneous impurity doping with Zn and Se in AlGaInP by MOVPE.—73-04482
Structural relaxations in irradiated Ni-P metallic glasses.—73-03763
Surface photovoltage effects in photoemission from metal/GaP(110) interfaces: temperature-dependent Fermi level movement.—73-01335
Theory of photovoltaic effects in *n*-type GaP.—73-15204
Tight binding model for $Zn_3P_2$ valence bands.—73-15211

**phosphogypsum,**
Mechanical properties of supersulfated cement containing phosphogypsum.—73-03497
Phosphogypsum waste for construction materials.—73-03517
Production technology of binders made of phosphogypsum.—73-13768

**phosphors,**
Phosphor which emits light by the excitation of X-ray, and an X-ray intensifying screen using the phosphor.—73-04529
Photoluminescence of sulfide phosphors with the $MB_2S_4$ composition.—73-01282
Two valence states of Eu in an $SrS_xO_{1-x}$:$Eu_y$ phosphor.—73-08784

**phosphorus pentoxide,**
Characteristics of glassy material production in the $SiO_2$-$P_2O_5$ system by the sol-gel method.—73-13935
Determination of activation energies for the crystallization of a cordierite-type glass.—73-03783
Determination of phosphoric anhydride in the gaseous products of firing of phosphate-bonded fireclay shapes.—73-14582
Development of phosphorus-titaniferrous glaze.—73-10822
Effect of $Sb_2O_3$ addition on water durability of $V_2O_5$-$P_2O_5$ glass.—73-00333
Effect of $Sb_2O_3$ addition on water durability of $V_2O_5$-$P_2O_5$ glass.—73-10367
Effects of $P_2O_5$ in glazes.—73-10835
Faraday rotation glass.—73-00431
Kinetics of volatilization of $P_2O_5$ from sol-gel-derived phosphosilicate glass-ceramic powder.—73-00366
Structural and physical characterization of the $Li_2O$:$P_2O_5$:$CrO_{1.5}$ ion-conducting glasses.—73-07360
Uv absorption limit of glasses of the system $TeO_2$-$P_2O_5$.—73-14306

**phosphorus,**
Catalytic decontamination of electrothermophosphorus slag.—73-15921
Chemical interaction in melts of the glassy systems $(A_2S_3)_{1-x}(P_2S_5)_x$ (A=As, Sb).—73-00307
Composition of the vapor phase in the ternary system In-As-P.—73-16061
Effect of uniaxial compression on phase transitions in the ferroelectrics $Sn_2P_2S_6$ and $Sn_2P_2Se_6$.—73-15257
Effects of Al/P composition ratio on the crystallization of MgO-CaO-$Al_2O_3$-$SiO_2$-$P_2O_5$ bioglass-ceramic system.—73-13970
Features of manifestation of giant $\Delta E$-effect in amorphous Fe-B-P alloys.—73-02274
Interaction of nickel with silicon and phosphorus.—73-12605
Interactions of zirconium (hafnium) with silicon and phosphorus.—73-16184
Magnetization of Si:P across the metal-insulator transition.—73-07654
Nonequilibrium phenomena in incommensurate phase of $Sn_2P_2Se_6$.—73-01259
Phosphorus diffusion in silicon carbide.—73-17092
Short-range order in dilute Ni-P, Ni-B alloys.—73-16300
Sintering studies of NZP materials.—73-09328
Structure and microtexture changes in phosphorous-bearing $Ca_2SiO_4$ solid solutions.—73-16331

**phosphosilicate,**
$^{31}P$ NMR study of the sol-gel process in the $SiO_2$-$P_2O_5$ system.—73-14065
Capacitance-voltage characteristics and hydrogen concentration in phosphosilicate glass films: relation to phosphorus concentration and annealing effects.—73-10420
Comparative study of simultaneous implant activation and borophosphosilicate glass (BPSG) reflow during rapid thermal processing [RTP] and furnace annealing on complex topographies.—73-03824
Defect reduction in semiconductor manufacturing: a case study of $BPO_4$ elimination in BPSG films.—73-04279
Dissolution of a citric acid–hypersoluble silicophosphate glass of agrochemical importance.—73-10363
Electronic state of transition metals in phosphosilicate glasses in relation to their structure and applications.—73-13976
Kinetics of volatilization of $P_2O_5$ from sol-gel-derived phosphosilicate glass-ceramic powder.—73-00366
Nucleation and crystallization behavior of a glass-ceramic as a dental veneer in the CaO-$SiO_2$-$P_2O_5$ system.—73-14058
Properties of CaO-$P_2O_5$-$SiO_2$ glasses.—73-07065
Reliability issues of a crack-resistant passivation layer process for submicron nonvolatile memory technology.—73-03883
Selective reactive ion etching [RIE] of phosphorus-doped oxide over undoped $SiO_2$.—73-06031
Sodium passivation dependence on phosphorus concentration in tetraorthosilicate plasma-enhanced chemical vapor deposited phosphosilicate glasses.—73-00399
Statistical approach to parameter study of stress in multilayer films of phosphosilicate glass and silicon nitride.—73-03354
Synthesis, structure, and properties of sol-gel glasses of the systems: $SiO_2$-$P_2O_5$, $SiO_2$-$P_2O_5$-$Al_2O_3$, $SiO_2$-$P_2O_5$-$Na_2O$.—73-14514
Variations of the stress of silicon glass during annealing.—73-07099
Water-related capacitance-voltage recovery effect in low-temperature-annealed chemical-vapor-deposited phosphosilicate (*P* glass) films.—73-10493

**photocatalysis,**
Electrochemical aspects of light-induced heterogeneous reactions on semiconductors.—73-07488
Photocatalytic hydrogenation of acetylene by molybdenum-sulfur complexes supported on $TiO_2$.—73-16563
Semiconductor photocatalysts: X, Visible-light-induced photoreduction or aromatic ketons and electron-deficient alkenes catalyzed by quantized CdS.—73-07793
Structural investigation of titanium dioxide photocatalysts.—73-02448

**photochemistry,**
Vuv [vacuum ultraviolet] photochemical reactions over solid surfaces.—73-17070

**photochromic materials,**
Distribution and growth of isolated spherical particles of separated AgCl phase in photochromic glass from the standpoint of Greenwood theory.—73-00326
Obtaining photochromic glasses from synthetic batches.—73-07157
Photochromic and photosensitive glass.—73-00526
Photochromic glasses which darken to a pink hue.—73-10656
Photonic materials by the sol-gel process.—73-02920
Possibility of synthesis of photochromic glasses for the core of an optical fiber.—73-00390
Possibility of synthesizing photochromic glasses for the core of an optical fiber.—73-00680
Properties of glass tubes made of photochromic glasses.—73-00535
Slow fading photochromic glass.—73-03967

**photochromic properties,**
Fundamental role of oxygen for the photochromic effect of $WO_3$.—73-12804
Low-temperature photochromic response of bismuth silicon oxide.—73-02628
Photochromic effects of impurity and structural centers in YAG.—73-02663

**photoconductors/photoconductivity,**
Covered electrode HgCdTe photoconductor under high illumination levels.—73-07424
Laser-induced photoconductivity in thin films of amorphous $Sb_{15}Ge_5Se_{80}$ alloy.—73-07633
Long-wavelength edge of the residual photoconductivity of In-doped $Pb_{0.78}Sn_{0.22}Te$.—73-11294
Photoconductivity spectrum, deformation potentials, and effective masses of carriers of the chalcopyrite semiconductor alloy $CuIn_{0.6}Ga_{0.4}Se_2$.—73-15090
Photoconductivity transient measurements on III-V semiconducting layers using a microwave technique.—73-04436
Photoexcited processes related to semiconductor technology.—73-11378
Spectral characteristics of variable-gap structures with a nonlinear composition profile.—73-01316
Spectrum of persistant photoconductivity in $YBa_2Cu_3O_{6.4}$ films.—73-01661
Transient photoconductivity in CdTe films grown by the hot wall flash evaporation technique.—73-04501

**photodiode,**
Dark current and noise factor of "staircase" avalanche photodiodes.—73-01118
Effect of dead space in gain and noise in Si and GaAs avalanche photodiodes.—73-01133
Fabrication of a lateral *p-i-n* photodiode in an $Si/(Si_{0.8}Ge_{0.2}/Si)$ superlattice/Si/sapphire structure.—73-11207
Generation-recombination currents in HgCdTe midwavelength infrared photodiodes.—73-07546
High-speed (≥6 GHz) InGaAs/InP avalanche photodiodes grown by gas source molecular beam epitaxy with a thin quaternary grading layer for high bit rate (≥5 Gbit/s) systems.—73-14961
High-speed (≥6 GHz) InGaAs/InP avalanche photodiodes grown by gas source molecular beam epitaxy [GSMBE] with a thin quaternary grading layer for high bit rate (≥5 Gbit/s) systems.—73-07566
$In_{0.53}Ga_{0.47}As$ *p-i-n* photodiode for detection in the 1.3 to 1.6 μm spectral range.—73-15510
Long-wavelength HgMnTe avalanche photodiodes.—73-07640
Noise (1/*f*) and dark currents in midwavelength infrared PACE-I HgCdTe photodiodes.—73-07694
Simple reliable processing technique for low-threshold high-power strained InGaAs-AlGaAs GRINSCH SQW laser diodes.—73-15162
Tunneling and 1/*f* noise currents in HgCdTe photodiodes.—73-07844

**photoelasticity,**
Real-time holographic photoelasticity using BSO.—73-05082

**photoelectric properties,**
Photoreflectance characterization of GaAs as a function of temperature, carrier concentration [CC], and near-surface electric field.—73-11390
Surface photo-EF in MOS structures on InAs.—73-04493
Thermal wave photopyroelectric characterization of advanced materials: state of the art.—73-08450

**photoelectronic effects,**
Chemical shift low-energy photoelectron diffraction: a determination of the InP(110) clean surface structural relaxation.—73-11110
Photoelectronic properties of $YBa_2Cu_3O_6$.—73-15581

**photoemission,**
Calculation of Cu-2*p* resonant photoemission spectra in CuO.—73-05365
Corrosion inhibitor surface chemistry studied by core and valence band photoemission.—73-09441
Green photoemission of $\alpha$-$Ga_2S_3$ crystals.—73-01177

**photography,**
Advanced camera for photomicrography.—73-12103

**photoluminescence,**
1.54-μm photoluminescence of erbium-implanted hydrogenated amorphous silicon.—73-04422
1.9-eV photoluminescence-induced by 4-eV photons in high-purity wet synthetic silica.—73-12842
Bright visible photoluminescence in thin silicon films.—73-16416
Classification of dislocation-related luminescence lines on silicon.—73-17073
Dislocation detection using polarization-resolved photoluminescence.—73-07448
Effects of heat treatment on the 0.8-eV photoluminescence emission in GaAs grown by molecular beam epitaxy at low temperatures.—73-14863
Effects of microstructure on photoluminescence of $SrS:Eu^{2+},Sm^{3+}$ thin films.—73-04293
Energy dependence of the polarization parameters of the hot photoluminescence in quantum well structures.—73-14888
Exciton photoluminescence [PL] of surface quantum wells in a GaAs/AlGaAs.—73-11202
Fast photoluminescence decay in a-$SiN_x$:H films.—73-05566
Influence of isochronous annealing upon the near-band-edge photoluminescence spectra of the electron-irradiated *n*-InP.—73-07596
Kinetics of the formation reaction of two- and three-nuclear complexes of silver in radiophotoluminescent glasses.—73-14026
Photoluminescence in $TiO_2$ anatase single crystals.—73-16565
Photoluminescence intensity control by impurity and exciton avalanche breakdown transients in *n*-GaAs.—73-15097
Photoluminescence of a degenerate electron gas in GaAs:Si films grown by the method of MBE.—73-11385
Photoluminescence of an epitaxial InSb film on a quasi-insulating *p*-type InSb substrate.—73-07727
Photoluminescence of fine semiconductor (CdS, CdSe, Ge) particle-doped films prepared by a mutual counterdiffusion method and a sol-gel process.—73-04440
Photoluminescence of fine semiconductor (CdS, CdSe, Ge) particle-doped films prepared by a mutual counterdiffusion method and a sol-gel process.—73-11386
Photoluminescence spectra of plastically deformed ZnS crystals.—73-11387
Relationship between near-band-edge absorption and photoluminescence efficiency in semiinsulating GaAs.—73-15144
Room temperature photoluminescence spectra of annealed PECVD silicon nitride thin films.—73-05633
Time-and-spectral studies of fluctuation surface luminescence in CdS crystals.—73-16382
Time-resolved photoluminescence from excitons in $TiO_2$.—73-05681
Time-resolved spectroscopy of photoluminescence in hydrogenated amorphous silicon.—73-02716
Visible photoluminescence related to Si precipitates in $Si^+$-implanted $SiO_2$.—73-09429

**photometers/photometry,**
Use of different flames for the photometric determination of traces of sodium, potassium, and lithium in glasses.—73-00422

**photons,**
Echelle grating–curved waveguide demultiplexer for photonic integrated circuits.—73-07459

**photorefraction,**
Effect of counterpropagating beams on beam fanning in $BaTiO_3$.—73-02577
Mechanism of photorefractive enhancement of photochromic gratings in $Bi_{12}SiO_{20}$—experimental results and phenomenological modeling.—73-05595
Nonsteady-state photocurrent technique for the characterization of photorefractive $BaTiO_3$.—73-06265
Photorefractive diffraction dynamic in paraelectric $KTa_{1-x}Nb_xO_3$ crystals.—73-08952
Photorefractive performances of 45°-cut $BaTiO_3$ crystals.—73-08953
Photorefractive phase conjugation of an image field: fidelity analysis.—73-02667
Recording of higher spatial harmonics of a photorefractive grating through the phase-locked detection mechanism.—73-08963
Spectral dependence of the photorefractive effect in lithium niobate at 77 K.—73-01432

Temperature dependence of the photorefractive effect in undoped $Bi_{12}GeO_{20}$.—73-08978
Theoretical analysis of mechanism of photorefractive enhancement of photochromic gratings in bismuth silicon oxide.—73-05650
**photosensitive materials,**
Method of processing photosensitive glass with sections of differing exposure energies and article.—73-14553
Photochromic and photosensitive glass.—73-00526
Photosensitivity of *n*-$Cd_{0.8}Zn_{0.2}$-*p*-$CuInSe_2$ heterojunctions.—73-11392
**photovoltaic effect,**
New materials for the photovoltaic conversion of solar energy.—73-07693
**physical properties,**
Changes in the physical properties of hydrated ß-$CaSO_4{\cdot}H_2O$ by a drastic reduction of the water/plaster ratio.—73-00033
Effect of laser irradiation on physical properties of high-resistivity ZnSe crystals.—73-14852
Influence of properties on carbon solid by preheat-treatment temperature.—73-13553
Influence of silica fume replacement of cement on physical properties and resistance to sulfate attack, freezing and thawing, and alkali-silica reactivity.—73-00123
Influences of various factors on physical properties of concretes heated to high temperature.—73-10017
Inside look at graphite.—73-15965
Introduction to physical properties of incommensurate structures: from modulated to composite structures.—73-12611
Physical properties of PZT-PNN-PZN ceramics.—73-04564
Point defects and collective interactions in $Ti_{1-x}V_xO_2$ single crystals.—73-03106
**physical vapor deposition,**
Physical vapor deposition of titanium nitride on a nonconductive substrate.—73-05324
Removal and transfer of material in laser-assisted physical vapor deposition of ceramics.—73-13235
**physicochemical properties,**
Physicochemical study of ternary oxides formed in the system $In_2O_3$-CaO-CuO.—73-16274
**piezoelectric materials,**
Applications of piezoelectrics in smart actuators.—73-04538
Barocurrents in piezoelectrics with diffusion conductance mechanism.—73-15249
Bonded type piezoelectric apparatus, method for manufacturing the same, and bonded type piezoelectric element.—73-15303
Chemical processing and microstructure of piezoelectric lead titanate ceramics.—73-15251
Design for AE transducer by 1-3 piezoelectric composite.—73-15254
Dielectric constant for binary piezoelectric 0-3 composites.—73-01400
Electric-field-induced fatigue crack growth in piezoelectrics.—73-11570
Laminated-type piezoelectric actuator.—73-04579
Lateral field FBAR.—73-01442
Lead-titanate-based piezoelectric ceramic material.—73-04580
Mechanical dampers using piezoelectric composites.—73-01419
Mechanical-vibration-cancelling piezoceramic microphone.—73-04581
Method for encapsulating a ceramic device for embedding in composite structures.—73-11634
Method for making a piezoelectric stack.—73-04582
Method for manufacturing low noise piezoelectric transducer.—73-04584
Method of driving piezoelectric bimorph device and piezoelectric bimorph device.—73-01443
Nonlinearities of the mechanical and piezoelectric coefficients during mechanoelectrical conversion in spark generators.—73-11591
Phase boundary of an LMN-PZ-PT three-component system.—73-11596
Physical properties of PZT-PNN-PZN ceramics.—73-04564
Piezoelectric actuator connected to flexible cables.—73-01444
Piezoelectric ceramic laminate device.—73-11636
Piezoelectric ceramic transformer being driven with thickness extensional vibration.—73-01445
Piezoelectric ceramic transformer material with large output power.—73-04565
Piezoelectric ceramic transformer.—73-11637
Piezoelectric composite material.—73-01446
Piezoelectric composite material.—73-15304
Piezoelectric effect device.—73-04586
Piezoelectric measurement of bulk modulus.—73-11598
Piezoelectric properties of $PbMg_{1/3}Nb_{2/3}O_3$-based perovskites.—73-11599
Piezoelectric tubes and tubular composites for actuator and sensor applications.—73-07908
Piezoelectric/electrostrictive element having auxiliary electrode disposed between piezoelectric/electrostrictive layer and substrate.—73-11638
Piezoelectrics for medical ultrasonic imaging.—73-11600
Preparation of piezoelectric ceramic layers on glass and metallic substrates.—73-04568
Quasi-horizontally polarized quasi-bulk surface acoustic waves in piezoelectric crystals.—73-15284
Speakers utilizing semiconductive piezoelectric monomorph devices.—73-01431
Speakers utilizing semiconductive piezoelectric monomorph devices.—73-11616
Temperature characteristics of (Pb,Sr,Ba)[(Zr, Ti)(Mn, Sb)]$O_3$ piezoceramics.—73-15292
Testing apparatus for a multilayer piezoelectric actuator.—73-11643
Theoretical study on the static performance of piezoelectric ceramic–polymer composites with 1-3 connectivity.—73-11625
Ultrathin surface mount crystal package.—73-04588
**piezoelectric properties,**
Effect of sintering and polarizing conditions on electrical properties of $Pb(Zr_{0.53}Ti_{0.47})O_3$- $BiFeO_3$-$Ba(Cu_{1/3}Nb_{2/3})O_3$ (PZT-BF-BCN).—73-11564
**pigments,**
Action mechanism of mineralizers in synthesis of $ZrO_2$-$SiO_2$ ceramic pigments.—73-09009
Barium-doped iron oxide pigments for high-density magnetic recording: thermal stability and magnetic properties.—73-15306
Brown spinel pigments based on zinc chromite, method of their production and use.—73-05148
Ce-Pr pigment synthesis mechanism and its coloring characteristics.—73-10805
Ceramic pigments based on chain-structure silicates.—73-08493
Ceramic pigments of rutile type.—73-14647
Chromium, cobalt, and iron as coloring elements for ceramic pigments.—73-10808
Colored crystallized glass article and method for producing the same.—73-10623
Determining pigments in glass by XFA.—73-00321
Determining the crystal phases in ceramic pigments by X-ray diffraction analysis.—73-08391
Doped zirconium mixed silicate pigment, method for the preparation thereof, and products containing such pigment or a thus prepared pigment.—73-10912
Effect of frit compositions on the glass transition temperature, water durability, and coloring of the CdS-CdSe pigment containing low-temperature porcelain red enamel in the system $SiO_2$-$B_2O_3$-$Na_2O$-$K_2O$-$Li_2O$-ZnO-$Al_2O_3$-$ZrO_2$-F.—73-03722
Effect of frit compositions on the glass transition temperature, water durability, and coloring of the CdS-CdSe pigment containing low-temperature porcelain red enamel in the system $SiO_2$-$B_2O_3$-$Na_2O$-$K_2O$-$Li_2O$-ZnO-$Al_2O_3$-$ZrO_2$-F.—73-14358
Effects of particle size of $Nd_2O_3$-$SiO_2$ system pigment on glaze coloring.—73-07250
Fabrication of dark brown ceramic pigment and its coloring properties.—73-09131
Golden yellow pigment.—73-02041
Imitation agate red ceramic pigment of rare earths.—73-10856
Nontraditional types of ceramic pigments.—73-00919
Paper whiteners: I, Titania-coated silica.—73-01991
Process for producing fluorescent or phosphorescent pigments coated with glass.—73-03960
Purple pigments, a process for their production and use thereof.—73-03963
Rose, high-temperature, Cr-Ti-Sn pigment for porcelain.—73-10897
Stable color dispersions, their preparation and use in ceramic glazes.—73-00928
Synthesis and characterization of $V_2O_5$-$SiO_2$-$ZrO_2$ pigments by sol-gel method.—73-13293
Synthesis and study of $CeO_2$-$V_2O_5$ ceramic pigment.—73-10900
Synthesis of and research on $Nd_2O_3$-$Fe_2O_3$-$Al_2O_3$ ceramic pigments.—73-10901
Synthesis of black low-priced pigment using industrial waste.—73-08501
Synthesis of brown ceramic pigments from mineral slag containing staining oxides.—73-10902
Synthesis of clay-based pigments.—73-07274
Synthesis of pigments according to the method of coprecipitation.—73-07275
Synthesis of zirconium silicate ceramic pigments from zircon mineral: I.—73-14668
Synthesis of ZnO-CoO-$Cr_2O_3$-$Fe_2O_3$-based chocolate color ceramic pigment and its coloration properties.—73-14669
Use of chromium, cobalt, and iron as coloring elements for ceramic pigments.—73-14672
Use of surfactants in processing abrasive pigments.—73-02074
Use of surfactants in processing abrasive pigments.—73-12100
**pinning,**
Experimental evidence of a crossover in the pinning of vortices in untwinned single crystals of $YBa_2Cu_3O_{7-\delta}$.—73-11753
Force-displacement characteristics of fluxoid lattice and pinning potential in Y-Ba-Cu-O bulk superconductor.—73-15478
Importance of electromagnetic pinning in high-$T_c$ superconductors with long defects.—73-11794
Pinning and the size of grains in high-$T_c$ ceramics.—73-08166
**pipe,**
Ceramic products for hydrogen sintering kilns.—73-03993
Production of hume concrete pipes using cements [with] adjusted particle size distribution.—73-10104
Vitrified clay pipes for clean water and a healthy environment.—73-03986
**pistons,**
High-pressure/high-temperature piston-cylinder apparatus.—73-00282
Silicon-nitride-inserted piston.—73-05341
**plasma spraying,**
Arc plasma spraying as a manufacturing process for ceramic components.—73-08319
Beneficial effects of mixtures of hydrocarbons and carbon dioxide in thermal plasma spraying.—73-08321
Ceramic membranes produced by APS [air plasma spraying] technology.—73-09033
Characterization of laser-glazed plasma-sprayed yttria-stabilized zirconia coatings.—73-00215
Characterization of plasma-sprayed hydroxyapatite powders and coatings.—73-09038
Chemical homogeneity of plasma-sprayed materials.—73-09040
Combined plasma nitridation/PVD processes.—73-10205
Computer design of the plasma-spraying technology.—73-08327
Densification of plasma-sprayed ceramic coatings by HIP treatment and their cracking behavior.—73-02766
Deposition of $TiO_2$ on heated substrates by the spray–inductively coupled plasma technique.—73-16697
Economics of arc vs plasma spray for aircraft components.—73-08332
Effect of plasma-spray operating conditions on plasma jet characteristics and coating properties.—73-09084
Effect of spraying parameters of the LPPS [low-pressure plasma spraying] method on the structure of ceramic coatings.—73-09098
Evolving technology of high-energy plasma spraying.—73-08336
Fatigue crack growth behavior of alumina plasma-sprayed stainless steel.—73-10229
Influence of the velocity of plasma-sprayed particles on the splat formation.—73-09181
Influence of thermal conductivity of the spray powder on the adherence of plasma-sprayed ceramic coatings.—73-09182
Integrated [computer numerical control] CNC—plasma spray workcell for machinery components.—73-08347
Intelligent control strategies for the plasma spray process.—73-09185
Mathematical modeling in thermal plasma spraying.—73-09198
Measurement of flow velocity and correlation to particle velocity under plasma-spraying conditions.—73-09199
Microstructure and properties of plasma ceramics.—73-09486
Optimization of robotic trajectories in the atmosphere- and temperature-controlled plasma spray process on ceramic substrate using heat flow modeling.—73-09227
Performance characteristics of a low-velocity plasma spray torch.—73-08356
Plasma processing of materials underwater.—73-09244
Plasma spraying ceramics onto smooth metallic substrates.—73-06838
Plasma spraying of biologically derived hydroxyapatite on implantable materials.—73-16899
Plasma spraying of boron carbide using pressures up to two bar.—73-09245
Plasma spraying of glass–polyamide composite coatings.—73-06839
Plasma-sprayed perovskite of the composition $La_{1-x}Sr_xMnO_{3-\delta}$: phase analysis and electrical conductivity.—73-07351
Porosity of free-standing ceramics manufactured by plasma spraying.—73-08955
Prediction model to assist plasma and HVOF spraying.—73-16904
Processing stabilized zirconia underwater—spherical composite powders for plasma-sprayed thermal barrier coatings.—73-09281
Quasi-one-dimensional analysis of the two-phase flow in a de Laval spray coating nozzle and exit plume.—73-09288
Reactive spray forming [REFORM] production of titanium aluminides in the tail flame of a dc plasma torch.—73-06846
Structural and electrical properties of low-pressure plasma-sprayed silicon-based materials.—73-16318
Structures and properties of vacuum-plasma-sprayed [VPS] NiAl and NiAl-B.—73-09512
Synthesis of composite materials by reactive plasma-spray processing.—73-06860
Tribological performance of plasma-treated and -coated surfaces.—73-10293
Use of a computer model to assist in VPS [vacuum plasma spray] parameter development.—73-09382
Use of de Laval nozzles in spray forming.—73-08369
VPS [vacuum plasma spray] forming of refractory metals and ceramics for space furnace containment cartridges.—73-06873
**plasma,**
Anode arc attachment control using boundary layer bleed holes.—73-08317
Application of an in situ hydrogen plasma to the epitaxial regrowth of InP grown by molecular beam epitaxy.—73-11071
Applications of in situ ellipsometry to microwave electron cyclotron resonance plasma processes.—73-07382
Comparative study of plasma nitriding behavior of a type 316 stainless steel and a microalloyed steel.—73-13810
Determination of electron density of laser-produced Y-Ba-Cu-O plasma with laser interferometry.—73-15415
Electrode material and geometry effects on the formation and electrical properties of particle traps in a plasma etch system.—73-07317
Entrainment and demixing in subsonic argon/helium thermal plasma jets.—73-09119
Experimental search for current-driven plasma instabilities in superconducting layers.—73-04720
High energy density induction plasma system for materials processing.—73-08340
Inductively coupled plasma for glass analysis: results from a practical experience.—73-15806
Innovative high-deposition-rate plasma-transferred arc [PTA] surfacing technique.—73-08346
Kinetics of growth of plasma nitrided layers on a titanium-modified stainless steel.—73-13856
Large radium new etching system using electron beam excited plasma [EBEP].—73-08348
Microgravimetric plasmochemical apparatus.—73-01916
Parametric evaluation of electon cyclotron resonance deposited $SiO_2$ using a multicusp plasma applicator.—73-09230

Plasma characterization and process control diagnostics.—73-09240
Plasma coatings of FeMoCrNiB alloy with amorphized structure.—73-09499
Plasma etching of ZnS, ZnSe, CdS, and CdTe in electron cyclotron resonance $CH_4/H_2/Ar$ and $H_2/Ar$ discharges.—73-11395
Plasma etching: an enabling technology for GHz silicon integrated circuits.—73-07736
Plasma sputter deposition systems: plasma generation, basic physics, and characterization.—73-04940
Plasma-activated sintering [PAS] combined with resistance heating provides new method for densifying powdered metals and ceramics in minutes.—73-05951
Remote plasma-etching reactors: modeling and experiment.—73-12186
Silicidation using electron cyclotron resonance plasma.—73-09320
Surface-type conversion of InP by $H_2S$ plasma exposure: a photoemission investigation.—73-07826
Transformer coupled plasma etch technology for the fabrication of subhalf micron structures.—73-08368

**plasma-enhanced CVD,**
Characteristics of low-temperature and low-energy plasma-enhanced chemical-vapor-deposited $SiO_2$.—73-09035
Correlations between properties of plasma-enhanced chemically vapor deposited silicon nitride and the deposition conditions.—73-12959
Cubic boron nitride crystallites grown by laser-induced plasma CVD.—73-02758
Deposition of silicon oxide films from TEOS by low-frequency plasma chemical vapor deposition.—73-05737
Deposition of $Y_2O_3$ by plasma-enhanced organometallic chemical vapor deposition using an electron cyclotron resonance source.—73-09065
Diamond deposition using an *X-Y* stage in a dc plasma jet chemical vapor deposition.—73-02773
Diamond thin-film growth by microwave plasma chemical vapor deposition and investigation by scanning tunneling/force microscopy and scanning electron microscopy.—73-09070
Distribution and morphology of diamond deposited on wire substrate by microwave plasma CVD.—73-13821
Effect of rf power on remote plasma-deposited $SiO_2$ films.—73-09094
Effects of nitrogen trifluoride on the growth and properties of plasma-enhanced chemical vapor deposited diamondlike carbon [DLC] films.—73-05781
Effects of silicon source gas on PECVD $SiO_2$ properties.—73-03837
Growth and characterization of silicon nitride films produced by remote microwave plasma chemical vapor deposition.—73-02843
Growth and morphological changes of chemically vapor deposited diamond in the presence of argon.—73-16806
Growth of diamond films by high rate thermal plasma CVD.—73-02845
Helium plasma-enhanced chemical vapor deposited oxides and nitrides: process mechanisms and applications in advanced device structure.—73-02850
Highly conductive silicon films via plasma-enhanced chemical vapor deposition at low temperatures.—73-09161
Inhomogeneous dielectrics grown by plasma-enhanced chemical vapor deposition.—73-10963
Intrinsic stress and mechanical properties of hydrogenated silicon carbide produced by plasma-enhanced chemical vapor deposition.—73-03321
Low-temperature deposition of TiN on steel substrate by plasma-assisted CVD.—73-06815
Low-temperature preparation of $TiO_2$ thin films by plasma-enhanced chemical vapor deposition.—73-05901
Mechanical properties and microstructure of plasma-enhanced chemical vapor deposition silicon nitride thin films.—73-03327
Monte Carlo simulation of surface kinetics during plasma-enhanced chemical vapor deposition of $SiO_2$ using oxygen/tetraethoxysilane chemistry.—73-16875
Morphology of diamond in radio-frequency thermal plasma CVD.—73-03179
Optical emission investigations of the plasma-enhanced chemical vapor deposition of silicon oxide films.—73-13157
Plasma-assisted chemical vapor deposition of diamond by hollow cathode arc discharge.—73-13166
Plasma-assisted chemical vapor deposition of tin oxide coatings.—73-02926
Plasma-enhanced chemical vapor deposited oxide for low surface recombination velocity and high effective lifetime in silicon.—73-07738
Plasma-enhanced chemical vapor deposition silicon oxides as studied by X-ray photoelectron spectroscopy, Rutherford backscattering, electron recoil detection analysis, infrared spectroscopy, and electron spin resonance.—73-08702
Plasma-enhanced chemically vapor deposited $Si_3N_4$ thin films for optical waveguides.—73-13167
Preparation of Al-C-O-N films by microwave plasma chemical vapor deposition.—73-05967
Preparation of microcrystalline Si (μC-Si) thin films by remote plasma-enhanced chemical vapor deposition.—73-02954
Quasi-stoichiometric silicon nitride thin films deposited by remote plasma-enhanced chemical vapor deposition.—73-06004
Role of oxygen in the electron cyclotron resonance plasma-assisted chemical vapor deposition of diamond films.—73-09309
Using a design of experiments approach for characterization of undoped plasma-enhanced chemical vapor deposited $SiO_2$ film properties.—73-03070

**plasmon,**
Raman scattering by plasmons in Fibonacci superlattices.—73-05464

**plaster molds,**
Applications of porosity of plaster molds.—73-09822
Casting with plaster molds.—73-08325

**Plaster of Paris,**
Production and use of industrial calcium sulfates and the properties of gypsum building materials produced of them.—73-00170
Rheology in the plaster of Paris industry—possibilities of the application.—73-12188
Technology of plaster of Paris production and exportation of plant.—73-13786

**plasters,**
Automatic plaster mixing for molds for ceramics—an update.—73-08320
Babcock-BSH supplies for new plasterboard works.—73-13680
Design, construction, and first experiences with a production line of plasterboards.—73-00056

**plasticizers/plasticity,**
Effect of Peierls relief on the low-temperature plasticity of pure CdTe crystals.—73-07467
Experimental study of stress-induced localized transformation plastic zones in tetragonal zirconia polycrystalline ceramics.—73-09451
High-temperature plasticity effects in bridged cracks and subcritical crack growth in ceramic composites.—73-09611
Plasticizer for concretes on the basis of heavy resins of pyrolysis.—73-00164
Screw dislocation annihilation by cross gliding as dynamic relaxation mechanism.—73-17099

**plastics,**
Behavior of lightweight mortar including powder of scrap FRP [fiber-reinforced plastic].—73-09828
Development and application of $\alpha$-$Al_2O_3$ fiber-reinforced refractory plastics.—73-10713
Mixing behavior in the ceramic oxide thermoplastic resin system near CPVC [critical powder volume concentration].—73-16871
Role of plastic deformation in the structure formation of ceramic materials.—73-03000

**plate glass,**
Distribution laws of inclusions across the thickness of plate glass.—73-07119
Modification of a plate glass surface under conditions of a molten tin bath.—73-07053

**plating,**
Aluminum oxide thin-film deposition by reactive ion plating using the cathode system composed of $LaB_6$ disk and Ta pipe.—73-09013
Application of electroless plating on ceramics.—73-13799
Characteristics of hollow cathode discharge plasma and its application for the reactive ion plating of TiN and TiC.—73-09034
Electroless silver plating of oxide particles in aqueous solution.—73-10224
Improved suction apparatus for plating clay specimens onto ceramic tiles.—73-12036
Magnetic and biomagnetic films obtained by ferrite plating in aqueous solution.—73-13126

**platinum,**
Behavior of the platinum group metals in a borosilicate waste glass and their effects on the operation of a joule heated ceramic melter.—73-08284
Ceramic-to-conducting-lead hermetic seal.—73-00280
Characterization and significance of the sequence of stages of oxide film formation at platinum generated by strong anodic polarization.—73-13805
Characterization of $TiO_2$ films modified by platinum doping.—73-13380
Cyclic voltammetric study of the electrochemical formation of platinum oxide in a Pt/yttria-stabilized zirconia cell.—73-04070
Effect of electron-beam deposition rate on the electrical properties of Ti/ and Pt/*n*-GaAs contacts.—73-12771
Effects of substrate temperature, deposition pressure, and thickness on the morphology of ultrathin platinum film on $SiO_2$/Si substrate.—73-13035
Electrode system $O_2$/Pt[$ZrO_2$:8$Y_2O_3$ investigated by impedance spectroscopy.—73-04094
Ellipsometry of hydrous platinum oxide layers [HPtOL's] and electrodispersed platinum surfaces resulting from their electroreduction.—73-17131
Etching effect of substrate on crystallinity of oriented platinum thin film.—73-00230
Etching effect of substrate on crystallinity of oriented platinum thin film.—73-10226
Formation of high adhesive and pure Pt layers on $TiO_2$.—73-10232
Formation of platinum particles during the production of optical glasses.—73-14385
Interface chemistry and band bending induced by Pt deposition onto GaP(110).—73-01218
Interfacial reactions in Pt/InP contacts.—73-10242
Interphase interactions in thin-film Pt-GaAs surface-barrier structures.—73-04374
Metallographical and microanaiytical investigations to reduce platinum corrosion in glass melts.—73-14427
Microstructural properties of Pt-doped $YBa_2Cu_3O_{7-\delta}$ high-$T_c$ superconductor prepared by melting method.—73-15555
Microstructure and associated properties of YBCO superconductors prepared by melt-processing techniques.—73-11834
Phase equilibria in the Pt-In-P system.—73-12654
Platinum coatings and glass industry.—73-14459
Preparation and structure of 1–8 monolayer-thick epitaxial iron oxide films grown on Pt(111).—73-08711
Pulsed laser deposition of heteroepitaxial thin Pt films on MgO(100).—73-03637
Separation of Pt metal complex chlorides on hydrated zirconia and their isolation from nonferrous mtals.—73-16594
Spectroscopic variations of optical constant and emissivity of Pt-$Al_2O_3$ cermet thin films.—73-10278
Synthesis, structure, and physical properties of new layered ternary telluride $TaPtTe_3$.—73-02505
Transition metal oxide–platinum alloy phase equilibria and their consequences for nonstoichiometry measurements.—73-02530
Ultrahigh vacuum scanning tunneling microscopy studies of platinum on graphite.—73-13463
Use of oxide dispersion-strengthened platinum for the production of high-quality glass.—73-10614
Viscous flow and glass formation tendency of platinum- and palladium-based metallic glasses.—73-00578

**Poisson's ratio,**
Method of determining Poisson's coefficient in glasses and devitrified glass.—73-01911

**polaritons,**
Polariton dispersion relation and stimulated Raman scattering from the 132 $cm^{-1}$ *E* mode in α-quartz.—73-16569

**polarizers/polarization,**
Electrode polarization at the Au, $O_2(g)$/yttria-stabilized zirconia interface: I, Theoretical considerations of reaction model.—73-04093
Electrode polarization at the Au, O2($g$)/yttria-stabilized zirconia interface: II, Electrochemical measurements and analysis.—73-00962
Measurement of spontaneous electric polarization in magnetite ($Fe_3O_4$) at 4.2 K.—73-16536
Parametric polarization of light in photorefractive $BaTiO_3$.—73-08943
Photopolarization effects in $Sn_2P_2Se_6$ single crystals.—73-16566
Polarization variations in lead magnesium niobate from dielectric constant measurements and Raman spectra.—73-16572
Polarizing glasses.—73-03959
Strong polarity and bond characterization of nanostructured silicon nitride solids.—73-05645

**polarons,**
Bound bipolaron at the surface: the negative *U* behavior of GaAs(110) with adsorbed alkali metals.—73-14787
Ground-state energy of the shallow bound polaron in ternary mixed crystal.—73-01178
Magnetic field dependence of polaron mass in CdTe.—73-01235
Response function of nonideal Bose gas of bipolarons.—73-01652
Stability of polarons in monoclinic $WO_3$.—73-05488

**polishing,**
Aqueous oligomer solutions as cutting fluids for glass polishing.—73-07108
Chemical polishing of small glass products.—73-14337
Efficient mechanochemical polishing for silicon nitride ceramics.—73-04913
Finishing technology for ceramic materials.—73-02830
Float polishing principle applied to working optical glass components.—73-07129
Glass polishing using cerium oxide produced via the sol-gel process.—73-14394
High-efficiency and high-precision grinding of ceramics—practice and application of ELID grinding technique.—73-05839
Polishing material.—73-09772
Polishing of ground lead crystal glasses with $CO_2$ lasers.—73-03863
Polishing of substrates.—73-12054
Transmission electron microscopy of polished AlN with ultrafine alumina abrasive.—73-03210
Transmission electron microscopy of surface damages resulting from wet polishing in a polycrystalline aluminum nitride substrate.—73-03211

**pollution,**
Catalytic converter materials for pollution control.—73-02005
Ecological problems in glass-melting process.—73-14356
Emission limits of air pollution and their legal background for the glass industry in the 18 EC and EFTA countries with reference to the values in Japan and the U.S.—73-03390
Glass-melting furnaces faced with environmental problems: evolution or revolution.—73-12223
Monitoring wastewater takes a fistful of technologies.—73-08422
Process-integrated abatement method for organic pollutants.—73-10687
Reduction of pollutant wastes in the environment of ceramic works.—73-13642
Reduction of pollution from glassworks furnaces: a new challenge for French glassmakers.—73-10595

**polyacrylate,**
Stability and processing of aqueous $BaTiO_3$ suspension with polyacrylic acid [PAA]: effect of pH.—73-03026

**polycarbosilane,**
Borazine derivatized polycarbosilane polymers and the ceramics derived therefrom.—73-05286
Kinetics of curing of polycarbosilane fiber by oxidation treatment.—73-05889
Mechanism of ceramization of electron-irradiation-cured polycarbosilane fiber.—73-16860
Sintering behavior of polycarbosilanes as polymer base for SiC materials.—73-09325
Spectroscopic characterization of the nitridation process of polymeric precursors to Si-M-N-O systems (M=Ti, Zr, Al).—73-05484
Tensile testing at high temperatures of ex-PCS Si-C-O and ex-PCSZ Si-C-N single filaments.—73-03364

**polycrystalline materials,**
Analytic procedure for evaluating grain-size and grain-aspect-ratio distribution in polycrystalline sintered bodies based on Monte Carlo simulation.—73-13372

Analytical procedure for evaluating grain-size and grain-aspect-ratio distribution in polycrystalline sintered bodies based on Monte Carlo simulation.—73-01883
Experimental apparatus for polycrystalline X-ray diffraction methods.—73-01897
Groove angles and surface mass transport in polycrystalline alumina.—73-09409
Indentation fatigue: a simple cyclic Hertzian test for measuring damage accumulation in polycrystalline ceramics.—73-15805
Microstructural and electrical characterization of ion-beam-sputtered polysilicon films for microelectronic applications.—73-11315
Microstructure and magnetic properties of polycrystalline $Y_3Fe_5O_{12}$.—73-15349
Physically based phenomenological model using Boltzmann-Matano analysis for boron diffusion from polycrystalline Si into single-crystal Si.—73-13361
Preparation and properties of polycrystalline monovalent-cation ß''-ferrites.—73-04637
Role of cracks in the nonlinear deformation and fracture behavior of polycrystalline ceramics.—73-06513
Structural features of boron nitride dense phase formation from rhombohedral modification under high static pressure.—73-17200
Structure and electrical conductivity of polycrystalline silicon carbide.—73-02692
Technology for the development of polycrystalline oxidic functional fibers at ISC Wurzburg[, Germany].—73-17052
TEM characterization of indented polycrystalline Y-PSZ.—73-17209
Transformation-transport processes in polycrystal systems and material creeping.—73-17452

**polymerization,**
Effects of degree of polymerization [DP] of water-soluble polymers on concrete properties.—73-03459
Polymerized complex synthesis of superconductors and their properties.—73-01632

**polymers,**
Aggregate mixtures for least-void content for use in polymer concrete.—73-09809
Binder distribution in macro-defect-free [MDF] cements: relation between percolative properties and moisture absorption kinetics.—73-03437
Bioabsorbable chlorophosphate glasses and bioabsorbable glass-polymer blends made therefrom.—73-03903
Borazine derivatized polycarbosilane polymers and the ceramics derived therefrom.—73-05286
Carbonization of polyfurfuryl alcohol prepared between the lamellae of saponite.—73-12933
Ceramic synthesis by pyrolysis of metal-containing polymer and metal.—73-15981
Characteristics of heat-treated polyparaphenylene (PPP) at 973 K as an anode of lithium battery.—73-10920
Composite systems and microstructure of polymer-modified cement.—73-09863
Control of particle size and orientation during in situ precipitation of oxides in polymers.—73-05720
Development and electroanalytical investigation of a novel rectifying semiconductor/polymer interface.—73-07443
Dimensional variations, capillary absorption, and freeze-thaw resistance of repair mortars admixed with polymers.—73-00065
Effect of annealing the polymer on the adhesion between carbon fibers and a thermoplastic matrix.—73-03577
Effect of phenol formaldehyde oligomer additive composition and structure on sintering and characteristics of corundum materials.—73-02792
Effect of water-soluble polymer on the flexural strength and moisture sensitivity in MDF [macro-defect-free] cement composites.—73-03457
Effects of degree of polymerization [DP] of water-soluble polymers on concrete properties.—73-03459
Electromagnetic shielding characteristics of polymer/superconductor composites.—73-11744
Electromodulation spectroscopy of CdS microcrystallites embedded in polymer films.—73-04309
Geopolymer cements to minimize carbon dioxide greenhouse warming.—73-03475
Glass surfaces and glass-polymer interfaces [investigated] by atomic force microscopy.—73-15802
Influence of polymer modification on the hydration of portland cement.—73-00120
Manipulating solid-surface properties with polymeric agents.—73-09196
Manufacture of vitreous silica product via sol-gel process using a polymer additive.—73-00738
Method for manufacturing a hafnium-containing silazane polymer and a method for manufacturing a ceramic from said polymer.—73-12486
Microstructure–property relationships in macrodefect-free cement.—73-06689
Microwave processing of geopolymer–cement-based waste forms.—73-03501
Monolithic coverings for floors with increased service strength on the basis of VNV modified by a polymer.—73-00146
New strategy for synthesizing polymer-ceramic nanocomposites.—73-13151
Optimization of properties of lightweight concrete by polymer admixtures containing amine.—73-00156
Polymer-derived ceramic fibers having improved thermal stability.—73-02056
Preparation and characterization of $Y_3Al_5O_{12}$ (YAG) from an alkoxide-derived polymer.—73-05960
Preparation of polymer hybrids of the $SiO_2$-PVA or $SiO_2$-PEG system and porous materials made from hybrid gels.—73-03874
Preparation of polymer hybrids of the $SiO_2$-PVA or $SiO_2$-PEG system and porous materials made from the hybrid gels.—73-16929
Process for preparing submicron/nanosize ceramic powders from precursors incorporated within a polymeric foam.—73-01875
Promising polymeric materials for the jacketing of glass pipes.—73-00690
Pyroelectric properties of ferroelectric-polymer composites.—73-07913
Resistance of polymer-modified cement mortar to oil attack.—73-10140
Theoretical study on the static performance of piezoelectric ceramic–polymer composites with 1-3 connectivity.—73-11625
Theory of a form [of] homogeneous admixed bands of polymers and glasses.—73-10411
Thermoset polymeric precursor for aluminum nitride.—73-05347
Use of polymeric additives as admixtures in oil well cements.—73-03552
Use of ultrasound technology to prepare polymer-impregnated concrete.—73-03556

**polymorphs/polymorphism,**
Constraints on the structure and dynamics of the ß-cristobalite polymorphs of $SiO_2$ and $AlPO_4$ from $^{31}P$, $^{27}Al$, and $^{29}Si$ NMR spectroscopy to 770 K.—73-16068
Crystalloides and polymorphism in glasses.—73-13956
Polymorphism of calcium titanate.—73-02395
Structural characterization of vitreous $SiO_2$ polymorphs using WAXS [wide-angle X-ray scattering] and computer simulation.—73-14091

**polyphosphates,**
Synthesis and crystal structure of chromium polyphosphate, $Cr(PO_3)_3$.—73-02482
Synthesis and thermal property of sodium diimidocyclotriphosphate.—73-12884

**polysilanes,**
Fractal polyzirconosiloxane cluster coatings.—73-10233

**porcelain enameling,**
Analyzing and avoiding fishscale phenomena in porcelain enameling.—73-13798
Determination of the residual stresses in a vitreous enamel by indentation.—73-06766
Development of interstitial-free porcelain enameling steel.—73-13819
Effect of addition of divalent metal oxides on the crystallization, thermal expansion, and surface roughness of alkali-free porcelain enamel in the $MgO$-$ZrO_2$-$P_2O_5$-$SiO_2$-$B_2O_3$ system.—73-13823
Effect of current laundry detergents on porcelain enamel surfaces.—73-13826
Effect of Fe/Ni/Ti interdiffusion on the microstructure of direct-on enamel on steel.—73-06772
Effect of frit composition on the crystallization and relative opacity of low-temperature melting $TiO_2$-opacified porcelain enamels in the $SiO_2$-$B_2O_3$-$Na_2O$-$K_2O$- $Li_2O$-$CaO$-$TiO_2$-$ZrO_2$-F-$P_2O_5$ system.—73-00221
Effect of manganese oxide base coats on the process parameters of direct-on porcelain enameling.—73-10221
Electrostatic spraying: the three-zone model.—73-13833
Latest in porcelain enamel powder—a panel session.—73-13862
Mechanical strength and chemical resistance of zirconium-oxide-based porcelain enamel.—73-10250
New nonstick porcelain enameling systems.—73-10256
PEI Marketing Committee Report.—73-17497
Porcelain enameling with thermal pretreatment (oxide enameling). A patent application.—73-10261
Possibilities and limits of porcelain enameling processes—economics and environmental compatibility.—73-10262
Pretreatment prior to porcelain enameling from an economical and ecological viewpoint.—73-10265
Report on PEI technical activities at the PEI Technical Forum.—73-17502
Review of 2-coat, single-fire porcelain enameling systems.—73-10273
Troubleshooting defects in porcelain enamel powder systems.—73-13905
Use of EDP [electronic data processing] for the development and selection of porcelain enamels.—73-10295

**porcelain,**
Active silica in porcelain production.—73-00892
Albite-based fine household porcelain.—73-07232
Application of ac impedance techniques in studies of porous cementitious materials: III, ACIS [ac impedance spectroscopy] behavior of very low porosity cementitious systems.—73-13678
Approach to property fluctuation of slips for sanitary porcelain.—73-07235
Bending strength and microstructure of commercial porcelains for tablewares.—73-03974
Bodies and glazes of Jingdezhen porcelain in ancientry.—73-06609
Boric-zirconium porcelain—a new type of low-firing porcelain.—73-10803
Broken porcelain as filter material.—73-07236
Ceramic properties of hard porcelain in relation to mineralogical composition and microstructure: V, Electrical resistivity.—73-00937
Comparative examinations of classic bonding oxides in ground coat porcelain enamels: I.—73-10206
Comparative examinations of classic bonding oxides in ground coat porcelain enamels: II.—73-10207
Composition and method for cleaning greenware and wetting expelled silica dust.—73-01850
Continuous on-line determination of CO concentration in kilns for firing porcelain.—73-10809
Crackle and stripping of powder-doped color porcelain.—73-10810
Development of black Tang Jun porcelain.—73-10816
Development of imitation granite porcelain brick.—73-10820
Development of imitation granite porcelain tiles.—73-10821
Development of low-temperature glaze for high-alumina porcelain of spark plugs.—73-16705
Development of reinforced porcelain using high-alumina bauxite.—73-07244
Development of talc porcelain using black talcum.—73-10823
Domestic porcelain body with china stone of Pangyang, Shandong, China.—73-10828
Durable china.—73-10829
Dynamic measuring of temperature field on porcelain body surface during firing.—73-07246
Effect of coarse quartz grains on mechanical strength of porcelain body.—73-03263
Effect of grain size of quartz on mechanical strength of porcelain body.—73-03264
Effect of production parameters on the variation of strength values for commercial porcelain.—73-00905
Effect of quartz on the sintering and bending strength of the porcelain bodies in quartz-feldspar-kaolin system.—73-17293
Effect of texture on the thermal diffusivity of a ceramic material.—73-12775
Effects of flux on properties and microstructure of fine porcelain.—73-14653
Effects of iron [on] the "whiteness" of porcelain, particularly during dry preparation: I, Investigative methods.—73-10832
Effects of iron on the "whiteness" of porcelain, particularly during dry preparation: II, Tests, results, and discussion.—73-10833
Fabrication of porcelain ware for microwave ovens.—73-10843
Fast single-fire decoration firing allows automation and energy savings.—73-00906
Feldspathic sand as raw material for porcelain.—73-01981
Fine porcelain with high silica.—73-10846
Formation and growth of mullite crystals in porcelain.—73-00908
Formulas for calculating sintering temperature of body of porcelain and melting temperature of glaze.—73-10849
Heat expansion of spodumene porcelain.—73-10852
Heat recuperation system in the Hollohaza Porcelain Factory [Hungary].—73-00910
High-grade body glaze for underglaze soft porcelain.—73-07258
High-mechanical-strength porcelain body prepared from Amakusa pottery stone containing soda feldspar.—73-14661
High-strength porcelain.—73-10854
Historical development of greenish porcelain (qingci).—73-00008
History of the ceramic whitewares industry [in Hungary], 1920-1994.—73-00911
Improvement of mechanical strength of porcelain bodies by fine grinding of raw materials.—73-02859
Improvement of mechanical strength of porcelain bodies by fine grinding of raw materials.—73-10858
Improvements in porcelain manufacturing.—73-04043
Improving the microstructural and physical properties of alumina electrical porcelain with $Cr_2O_3$, $MnO_2$, and ZnO additives.—73-16833
Improving the technology for Gzhel porcelain decorated with underglaze cobalt pigments.—73-00913
Improving thermal stability of porcelain.—73-07261
Influence of alumina on fast-fired porcelain tiles.—73-07262
Influence of basic raw materials on the behavior of isostatically pressed flatware during porcelain bisque firing.—73-00914
Influence of kiln atmospheres on electrical porcelain firing.—73-08475
Influence of the grinding of hard materials on porcelain and vitreous tableware.—73-01791
Influence of the residual humidity on the pressing of atomized powders: example of porcelain.—73-05877
Influencing microstructure and strength of high-alumina porcelain: II, Raw materials and bodies.—73-02874
Influencing microstructure and strength of high-alumina porcelain: III, Properties of porcelain test bodies.—73-02875
Influencing microstructure and strength of high-alumina porcelain: IV, Body porosity and conclusion.—73-02876
Introduction of bauxite into batch formula of porcelain body.—73-10860
Isostatic pressing of flat porcelain tableware: I.—73-00916
Isostatic pressing of flat porcelain tableware: II.—73-00915
Juanying rock-based fine porcelain fired in low-temperature reducing flame.—73-10862
Laboratory testing of porcelain coatings for home laundry.—73-13859
Material phases and properties of household talc porcelain.—73-12626
Method for increasing chemical resistance of porcelain enamels, especially titanium porcelain enamels: I.—73-10252
New possibilities for decorating glass, ceramics, and porcelain.—73-00917
New technologies for porcelain tableware production and their environmental effects.—73-00918
Nondestructive detection of acoustic emission for ceramics.—73-15825
Once or twice firing for porcelain tableware.—73-04045
Origin of pinholes in porcelain glazes.—73-00920
Orthodontic bracket formed from porcelain fused to metallic material.—73-03699
Phase formation and properties of electrical porcelain in the presence of diopside additive.—73-01008
Practice-oriented evaluations for improving the heat balance of tunnel kilns.—73-10882
Preparation of color mix for art porcelain.—73-10883
Properties of porcelain bodies containing zirconia.—73-00923

Rational use of propeller mixers.—73-01827
Rationalization of energy for glost and bisque firing of porcelain in shuttle kilns.—73-01967
Recycling and environment protection in the porcelain enamel industry.—73-13641
Relationship between fineness of glaze and quality of porcelain ware.—73-10893
Rose, high-temperature, Cr-Ti-Sn pigment for porcelain.—73-10897
Scientific analysis of ancient Jun wares in China.—73-09796
Simple preparation method to determine fracture toughness using the single edge notched beam [SENB] technique for porcelain ceramics.—73-09669
Spodumene porcelain bodies with low thermal expansion.—73-10899
Strengthening of α-alumina-containing porcelain bodies by lamination with different compositions.—73-15933
Technical progress of insulators for electric power transmission and substation.—73-07365
Temperature dependence of the electric conductivity of unfired porcelain mixture.—73-10994
Trial manufacture of giant Jun porcelain products.—73-10903
Use of solid electrolyte probes in production kilns for porcelain.—73-01972
What does Gzhel porcelain whiteness depend on.—73-10298
White and light porcelain fired at low temperature.—73-10909

**pore size distribution,**
Characteristic of the pore structures in the compacts of ultrafine zirconia powder.—73-02740
Effect of different drying techniques on pore size distribution of blended cement mortars.—73-13707
Effect of micropore structure on autoclaved aerated concrete shrinkage.—73-00074
Importance of pore-grain boundary evolution in sintering kinetics.—73-03151
Wicking technique for determination of pore size in ceramic materials.—73-15861

**pores/porosity,**
$Al_2O_3$ porous structure and strength.—73-16653
Analysis of dependence of volume fraction and micropore shape on fracture toughness by the equivalent inclusion method.—73-03236
Applications of porosity of plaster molds.—73-09822
Chemical and pore change of ALC [autoclaved lightweight concrete] under carbonation accelerated test.—73-09850
Control of the porous structure of silicate beads made by organometallic gelation.—73-14344
Dependence of ceramic fracture properties on porosity.—73-09569
Effect of gas pressure on the shape of closed pores on grain boundaries.—73-13390
Effect of porosity on properties of nanocrystalline materials.—73-06211
Ethylbenzene dealkylation and realkylation over pore-size-regulated MFI zeolite.—73-16764
Gas/vapor adsorption in imogolite: a microporous tubular aluminosilicate.—73-09456
Hydrodynamic parameters of the porous structure of molds in slip casting.—73-08343
Ideal structural model for very low porosity cementitious [VLP] systems.—73-03480
Influence of alumina porosity in glass-ceramic adhesion.—73-12327
Isolated pore generation mechanism and mechanical properties in MAS system with 3Y-TZP.—73-17366
Method for the calculation of the chemical composition of the concrete pore solution.—73-13755
Model for the isothermal isobaric chemical vapor infiltration in a straight cylindrical pore: I, Description of the model.—73-13139
Monolithic wall structures of porous concrete based on gypsum-containing materials.—73-00147
Pore structure of clinker and its grindability estimated by different grinding types in mill.—73-10085
Pore structure of thin ceramic tape.—73-05078
Pores and cracks in cemented waste and concrete.—73-03519
Porosity calculation of binary mixtures of nonspherical particles.—73-02928
Porosity dependence of material elastic moduli.—73-12864
Porosity effects on machining direction—strength anisotropy and failure mechanisms.—73-17409
Porosity of free-standing ceramics manufactured by plasma spraying.—73-08955
Production of spherical granules of alumina with controlled porous structure.—73-02982
Quantitative determination of through-coating porosity in thin ceramic physically vapor-deposited coatings.—73-06273
Relationships between composition, structure, and mechanical properties of very low porosity cementitious systems.—73-00184
Synthesis, characterization, thermal stability, acidity, and catalytic properties of large-pore MAPO-46.—73-12885
Unique adsorption properties and potential energy profiles of microporous pillared clays.—73-16645
Use of computed axial tomography for evaluation of concrete porosity.—73-10184

**porosimetry,**
Methodological instructions for mercury porosimetry of classic sedimentary rocks.—73-01914

**porous materials,**
Adsorption in pores with heterogeneous surfaces.—73-16405
Applications of porous bioceramics in surgery.—73-15918
Applications of porous glass as Merrifield-type support.—73-14134
Bending strength changes of fiber-dispersed porous $ZrO_2$ ceramics during repeating thermal shock tests.—73-17240
Ceramic filter process.—73-12346
Ceramic filter.—73-05199
Ceramic process.—73-12073
Ceramic Transactions, Volume 31: Porous Materials.—73-09761
Coating porous materials with metal oxides and other ceramics by MOCVD.—73-05208
Determination of porous silicon film parameters by polarized light reflectance measurements.—73-15788
Development of a new composite material based on λ-$MnO_2$ and porous ceramics.—73-02770
Dielectric relaxation of porous glass.—73-03784
Dielectric relaxation of porous glass.—73-14155
Drug-impregnated ceramic.—73-15941
Effect of gas pressure on the shape of closed pores on grain boundaries.—73-03135
Effect of silane treatment on the pore structure of porous glasses.—73-10523
Effect of the temperature of acidic leaching on volume change in porous glass.—73-13969
Effective elastic moduli of porous ceramic materials—comment.—73-17297
Effective elastic moduli of porous ceramic materials—reply to comment.—73-17298
Effective elastic moduli of porous ceramic materials.—73-03273
Effective optical constants of porous glass.—73-00469
Effects of $Al_2O_3$-$TiO_2$ contents on the structure and permeability of porous magnesia ceramic—fractal characteristics of pores.—73-05776
Electric cells with self-supporting porous ceramic plate.—73-14746
Electrical measurements of the porous glasses after impregnation with different ions.—73-14174
Estimation of poor size distribution in different structural cylindrical porous ceramic filters from gas permeability.—73-15797
Fabrication of porous glass-ceramics by densification and crystallization of glass compacts.—73-14377
General analytical approach toward the thermal conductivity of porous media.—73-12805
High-performance liquid chromatography packing materials made of porous glass.—73-03733
Hydrodynamic parameters of porous structure of molds for slip casting.—73-06228
Immobilization of yeast cells in porous silica carrier with sol-gel process.—73-05852
Influence of grain size and firing temperature on the structure of porous magnesia ceramic.—73-05867
Influence of grain size and firing temperature on the structure of porous magnesia ceramic.—73-13096
Kinetics of porous glass dissolution in the alkaline solutions.—73-14025
Laser-induced degradation of the photoluminescence intensity of porous silicon.—73-15009
Making porous zirconia for heat pipes.—73-08517
Manufacturing and properties of inorganic porous materials.—73-12044
Mechanical properties of porous alumina ceramics.—73-17389
Mechanical strength and thermal resistance of porous glass.—73-00514
Mesoporous materials produced from novel trioctahedral Ni smectite.—73-05910
Method for producing ceramic composite foams.—73-12379
Method for synthesizing microporous crystalline material.—73-05226
Method of cleaning porous ceramic filters.—73-01868
Method of making porous alumina.—73-05231
Method of producing ceramic sintered body having dense ceramic membrane.—73-05233
Microporous thermal insulation material.—73-10784
Microstructure and electrical properties of $MgAl_2O_4$ and $MgFe_2O_4$ spinel porous compacts for use in humidity sensors.—73-08918
Model of the porous-glass-producing process.—73-14431
Modeling the densification of porous structures in CVI ceramic composites processing.—73-16873
Modification of the pore structure and surface properties of controlled pore glasses.—73-00668
Momentum transfer across fluid-fluid interfaces in porous media: a network model.—73-08920
Nano/microstructure design for improving thermoelectric characteristics of porous silicon carbide.—73-13433
Nature of the birefringence of microporous glasses.—73-00520
Optical absorption in porous silicon of high porosity.—73-12844
Polycapillary model of a porous medium for analyzing filtration processes in ceramics.—73-03182
Polycapillary model of porous media for analysis of filtration processes in ceramic materials.—73-02927
Porous ceramic beads.—73-16007
Porous ceramic composite with dense surface.—73-10336
Porous ceramic filter and preparation thereof.—73-15950
Porous ceramic filters produced by hot isostatic pressing.—73-16901
Porous glass carrier for DNA synthesis.—73-03752
Porous glass carrier for immobilization of brewer's yeast.—73-03753
Porous semiconductor light-emitting device.—73-15241
Porous silicon carbide ceramics using filled polysiloxanes.—73-12507
Preparation and application of porous glass.—73-10573
Preparation and water permeation property of bimodal porous cordierite ceramics.—73-13180
Preparation of alumina ceramics with uniformly dispersed micropores.—73-16913
Preparation of heat-resistant microporous ceramic membranes for selective gas permeation.—73-05973
Preparation of microporous metal membranes by two-step replication of the microstructure of anodic alumina.—73-00258
Preparation of porous alumina ceramics by using the gelation of ammonium alginate.—73-05979
Preparation of porous alumina ceramics by using the gelation of ammonium alginate.—73-13199
Preparation of porous $BaTiO_3$ PTC thermistors by adding graphite porosifiers.—73-15113
Preparation of porous bodies and functional materials by the sol-gel method.—73-14477
Preparation of porous ceramics from industrial waste silica mineral.—73-02963
Preparation of porous glass-ceramics in $Na_2O$-$CaO$-$TiO_2$-$P_2O_5$ system.—73-03875
Procedure for the preparation of microporous ceramic membranes tor the separation of gas and liquid mixtures.—73-05241
Structural anisotropy and birefringence in porous glass plates.—73-00405
Structural anisotropy and double refraction in lamina of porous glass.—73-00406
Structural parameters of macroporous glasses.—73-07080
Supported microporous ceramic membranes.—73-05015
Synthesis and structure control of inorganic porous gels by the polymer-incorporated sol-gel method.—73-17024
Synthesis of a new porous borosilicate with the levyne structure.—73-06087
Synthesis of spherical porous silica particles.—73-14512
Synthetic, crystalline, porous material containing silicon oxide, titanium oxide, and aluminum oxide.—73-02071
Theoretical study of grain growth in porous solids during sintering.—73-06114
Thermal barrier structure.—73-00891
Titanium-carbide-based porous high-temperature synthesis material.—73-05279
Use of base-treated inorganic porous adsorbents for removal of contaminants.—73-05248
Very-high-temperature [porous ceramic foam] heat exchanger.—73-15958
Wicking technique for determination of pore size in ceramic materials.—73-15861

**portland cement,**
Alkali-cement system.—73-09811
Canadian database of mortar cube strength: the move toward a Canadian performance standard for portland cement.—73-09836
Carbonation of OPC [ordinary portland cement] and OPC/silica fume hardened cement pastes in air under conditions of fixed humidity.—73-06633
Chemical attack on alkali-resistant glass fibers in a hydrating cement matrix: characterization of corrosion products.—73-10421
Chemical identification of portland cements in New Zealand concretes: I, Characteristic differences among New Zealand cements in minor and trace element chemistry.—73-03442
Comparison of the microstructure and performance of alkali-slag and portland cement pastes.—73-13693
Corrosive effect of nitrate solutions on portland cement mortars.—73-00053
Crystal structure analysis of major constituent phases in ordinary portland cement.—73-09875
Decomposition of alite in portland cement clinker.—73-09880
Dissolution of sparingly soluble inorganic compound in aqueous suspension containing ion-exchange resin: VII, Calorimetric measurement of dissolution of portland cement and its related compounds.—73-13705
Dissolution of sparingly soluble inorganic compound in aqueous suspension containing ion-exchanged resin: VII, Calorimetric measurement of dissolution of portland cement and its related compounds.—73-06648
Durability of 34–31 year aged RC structures using Class-B portland blast-furnace slag cement.—73-09894
Effect of aluminate ions on the heat of hydration of cementitious waste forms.—73-09898
Effect of burning conditions and minor components on the color of portland cement clinker.—73-06649
Effect of cobalt oxide base coats on the process parameters of direct-on porcelain enameling.—73-10220
Effect of commercial plasticizers on $Cl^-$ ion partitioning in OPC mortar and its implications for the corrosion of steel embedded in concrete.—73-09901
Effect of fluorite-gypsum composite mineralizer on the microstructure and properties of portland cement clinker phase.—73-09905
Effect of mica particles on the properties of composites with a matrix of gypsum-free portland cement: I.—73-09911
Effect of pozzolana additions on hydration and performance of portland slag cement.—73-13710
Effect of structure and composition on reactivity of zeolite-tuff used as blending material of portland cement.—73-13711
Effect of the composite mineralizers of $CaF_2$, $CaSO_4$, and ZnO on the formation of the portland cement clinker in a rapid heating-up burning.—73-09922
Effect of ZnO on burning of portland cement clinker in rapid heating-up burning.—73-09927
Effects of blast-furnace slag and fly ash on the hydration of portland cement.—73-00080
Effects of fly ash in original state on properties of cement.—73-09935
Effects of kiln dust addition to portland and blended cements.—73-13713
Effects of nickel chloride and calcium chloride on hydration of portland cement.—73-06651
Effects of transition zone microstructure on bond strength of aggregate–portland cement paste interfaces.—73-03461

Electrochemical behavior of portland-cement/high-alumina-cement systems at early hydration times.—73-13716
Estimations of degree of hydration of portland cement pastes.—73-03467
Experiences in use of industrial byproduct sludge for cement manufacture by sol-gel technology.—73-09957
Flat aggregate–portland cement paste interfaces: I, Electrical conductivity models.—73-00092
Flat aggregate–portland cement paste interfaces: II, Transition zone formation.—73-00093
Formation of low-temperature portland cement clinker by using nontraditional aluminosilicate rock and mineralizer.—73-09969
Formation of portland cement clinker in low temperature and a rapid heating-up burning process.—73-09970
Forming mechanism of portland cement clinker under different burning conditions.—73-09971
Growth of hydraulic activity of portland cement clinker as a result of using precalcining.—73-09977
Hydration of brick kiln ash blended white portland cement.—73-09987
Influence of different addition on portland cement hydration heat.—73-03485
Influence of polymer modification on the hydration of portland cement.—73-00120
Influence of presaturation and freeze-thaw test conditions on length changes of portland cement mortar.—73-10011
Interpretation of compositional patterns found by quantitative energy dispersive X-ray analysis for cement paste constituents.—73-10019
Kinetics of portland cement hydration in the presence of selected chemical admixtures.—73-06681
Limestone additions to portland cement: uptake, chemistry, and effects.—73-13747
Magnesium sulfate attack on portland cement paste: II, Chemical and mineralogical analyses.—73-10030
Mechanoactivation of portland cement raw mixes.—73-10041
Method for increasing chemical resistance of porcelain enamels, especially titanium porcelain enamels: II.—73-10253
Microbial mediated attack on portland cement concrete by elemental sulfur.—73-10044
Microscopy of portland cement clinker.—73-10046
Microstructural and microanalytical studies of sulfate attack: I, Ordinary portland cement paste.—73-10047
Microstructural study of the effect produced by magnesium sulfate on plain and silica-fume-bearing portland cement mortars.—73-06688
Mossbauer and X-ray diffraction studies of two dry and hydrated portland cements and their clinkers.—73-00148
Natural remanent magnetization [NRM] of portland cement concrete.—73-00149
Negative effect of alkali on burning and properties of portland cement clinker and its improving measures.—73-10060
Neutralization of portland blast-furnace slag cement concrete subjected to atmospheric exposure for 30 years and effects of finishing materials.—73-10061
New, simple, rapid, and reliable method for determining sulfur trioxide and phosphorus pentoxide in portland cement and classes C and F fly ash.—73-06693
Ordinary-portland-cement-based solidification of toxic wastes: the role of OPC reviewed.—73-03512
Origin of portland cement setting.—73-10074
Particle size distribution of jointly ground [portland cement] clinker and limestone.—73-10076
Phase composition formation of portland cement clinker and alite formation kinetics.—73-10079
Portland and blended cement.—73-10086
Portland cement specifications: performance, prescription, and prediction.—73-10087
Pozzolanic reaction of metakaolinite and its effect on portland cement hydration.—73-00167
Processing conditions of portland cement clinker as viewed from the fine textures of the constituent minerals.—73-10099
Producing portland cement with tailings of molybdenum-iron ore.—73-10100
Properties of gypsum-free portland cements with an admixture of ABESON-TEA grinding aid.—73-10111
Properties of inorganic corrosion inhibition admixtures in steel-containing OPC mortars: I, Chemical properties.—73-10112
Properties of inorganic corrosion inhibition admixtures in steel-containing OPC mortars: II, Electrochemical properties.—73-10113
Quality control of portland cement clinker during operation by microscopy.—73-10117
Rapid burning temperature, time, and raw meal modulus range in portland cement.—73-10125
Relationship between gypsum content, porosity, and strength in cement: I, Effect of $SO_3$ on the physical microstructure of portland cement mortars.—73-00183
Secondary ettringite formation in heat-treated portland cement concrete: influence of different w/c ratios and heat-treatment temperature.—73-03535
Sintering mechanism of portland cement clinker with energy saving and early strength.—73-10154
Solid and aqueous chemistry of 10-year-old portland cement pastes: with and without silica modifier.—73-06718
Stabilization/solidification of contaminated spent blasting media in portland cement mortars.—73-03539
Structure of fully hydrated portland cement and tricalcium silicate pastes: III, Specific surface area and permeability.—73-00195
Suitability of GGBFS [ground granulated blast-furnace slag] as a cement replacement for concrete in hot arid climates.—73-03542
Texture of $SO_3$-rich portland cement clinkers.—73-03544
Thermal acceleration of portland cement mortars with microwave energy.—73-00198
Thermal behavior of mineralized portland cement raw meal.—73-10179
White belitic portland cements.—73-06732

**positive temperature coefficient of resistivity (PTCR),**
Calculations and modeling of grain-boundary acceptor states for $(Ba,Pb)TiO_3$ positive temperature coefficient ceramics.—73-07397
Characterization of PTCR barium titanate by impedance spectroscopy.—73-01102
Direct measurement of the PTC effect of a single grain boundary.—73-01128
Direct measurement of the PTC effect of a single grain boundary.—73-12769
Effect of processing variables on the mechanical and electrical properties of barium titanate positive temperature coefficient of resistance ceramics: I, Additives and processing prior to sintering.—73-09091
Effect of processing variables on the mechanical and electrical properties of barium titanate positive temperature coefficient of resistance ceramics: II, Sintering atmosphere.—73-09092
Effect of sintering aids on microstructures and PTCR characteristics of $(Sr_{0.2}Ba_{0.8})TiO_3$ ceramics—comment.—73-09096
Effect of sintering aids on microstructures and PTCR characteristics of $(Sr_{0.2}Ba_{0.8})TiO_3$ ceramics—reply.—73-09097
Effect of soaking time on the temperature coefficient of resistivity [TCR] of semiconducting barium titanate PTCR ceramics.—73-14856
Grain-boundary-layered PTCR ceramics based on $PbTiO_3$-$TiO_2$.—73-11222
Impedance analyses of cooling-rate effects on the depletion layer of PTCR materials.—73-14972
Production processes of positive temperature coefficient [PTC] $BaTiO_3$ ceramics.—73-15118
Proposed phenomenological PTCR model and accompanying phenomenological PTCR chart.—73-04457
PTCR device.—73-11641
PTCR effect of semiconducting Zn-Ti-Ni-O ceramics.—73-11408
Recent developments in understanding grain-boundary electric and dielectric properties of PTCR barium titanate ceramics.—73-01298
Role of porosity on PTCR characteristics of semiconducting [Y-doped] $BaTiO_3$ ceramics.—73-11425

**positrons,**
Lifetime of positrons in carbides with *B*1 structure.—73-05429
Positrons in $ZrO_2$.—73-02673

**potassium tantalum niobate,**
Further study of dc space charge field in [KTN] $KTa_{1-x}Nb_xO_3$:Cu crystals.—73-08874
Microstructure of $KTa_xNb_{1-x}O_3$ thin films on MgO(100) single crystals.—73-17171
Photorefractive diffraction dynamic in paraelectric $KTa_{1-x}Nb_xO_3$ crystals.—73-08952

**potassium,**
Anisotropic grating recording in photorefractive $KNbO_3$:Fe.—73-08807
Anisotropic light-induced scattering and "position-dispersion" in $KNbO_3$:Fe crystal.—73-05529
Anomalous behavior of the transverse acoustic phonons in $KTa_{1-x}Nb_xO_3$.—73-08551
Calculated electric field gradients in ferroelectric $KNbO_3$.—73-15250
Calculation of effective interaction constant between $BX_4$ tetrahedra in crystals of $K_2SO_4$ type.—73-16040
Cation-exchange characteristics of $K_2W_4O_{13}$ in molten nitrate salts.—73-08817
Cluster intergrowth of perovskite and defect sodium-chloride-type structures in the K-Nb-O system: approximate structure of $KNb_4O_6$.—73-02163
Cold nuclear fusion induced in $KD_2PO_4$ single crystals by a ferroelectric phase transition.—73-15699
Cooperative behavior during ferroelectric transitions in $KNO_3$ powder.—73-07873
Crystal structure of $K_3ZrOH(SO_4)_3{\cdot}2H_2O$.—*73-02197*
Crystal structure of octatitanate $M_2Ti_8O_{17}$ (M=K, Rb).—73-02208
Defect-induced smoothing of the superionic phase transition in $Cs_{1-x}M_xHSO_4$ protonic conductors: I, Potassium substitution.—73-03086
Dielectric response of $Li_{0.4}K_{0.6}NbO_3$ crystal in the frequency domain.—73-15256
Diffuse scattering in $K_{1-x}(ND_4)_xI$ mixed crystals.—73-05383
Domain formation by impurity dipoles in $KNbO_3$ single crystals.—73-03132
Effect of the bias field on the thermal conductivity of $KH_2PO_4$ near $T_c$.—73-16462
Elastic and piezoelectric properties of $KTiOPO_4$ crystals.—73-15258
Elastic properties of orthorhombic $KNbO_3$ single crystals by Brillouin scattering.—73-11568
Electrostriction, dielectric and piezoelectric nonlinearities of $KH_2PO_4$ crystals.—73-15795
Fabrication of $Ba_{1-x}K_xBiO_3$ superconductors [$T_c$=28.5 K] prepared by the plasma-arch melting and rapid quenching method.—73-01548
Ferromagnetism in potassium clusters incorporated into zeolite LTA.—73-07936
Formation of self-pumped phase conjugation in a Cu-doped KNSBN crystal.—73-08628
Formation region of cryptomelane with different K ion occupancy and elutriation of K ion with water.—73-05404
Formation region of cryptomelane with different K ion occupancy and elutriation of K ion with water.—73-16157
Formation region of K-Al priderite ($K_xAl_xTi_{8-x}O_{16}$).—73-05405
Formation region of K-Al priderite ($K_xAl_xTi_{8-x}O_{16}$).—73-12587
Ion exchange of potassium hexatungstate ($K_{0.3}WO_{3.15}$) by protons.—73-05425
Ionic conductivity of quasi-one-dimensional superionic conductor $KTiOPO_4$ (KTP) single crystal.—73-00987
Ir and Raman investigations of OH impurities in doped and pure $KTaO_3$ single crystals.—73-16187
Lateral straggling of Xe ions in potassium titanyl phosphate.—73-08898
Low-temperature X-ray diffraction study of potassium-neodymium nitrates, $K_3[Nd_2(NO_3)_9]$ and $K_2[Nd(NO_3)_5(H_2O)_2]$.—73-16203
Magnetic penetration depth in KBaBiO from measurements of the dynamic susceptibility of powder in an alternating magnetic field.—73-05593
Materials constants of $KNbO_3$ relevant for electro- and acoustooptics.—73-07898
Microstructure/process relations in sol-gel-prepared $KNbO_3$ thin films on (100)MgO.—73-04560
Modeling of refractive index profiles of $He^+$ ion-implanted $KNbO_3$ waveguides based on the irradiation parameters.—73-11590
New oxidation process of potassium titanium dioxide bronze with the hollandite structure.—73-02901
New vanadium(III) potassium phosphate with a cage structure: $K_6V_2P_4O_{16}$.—73-02356
Optical properties of KDP crystals obtained at high growth rate.—73-02654
$Pb_2KNb_2O_{15}$ ferroelectric ceramics: elaboration, control of stoichiometry, and dielectric properties.—73-11595
Phase-matched second harmonic blue light generation in ion-implanted $KNbO_3$ planar waveguides with 29% conversion efficiency.—73-07904
Picosecond optical parametric generation in flux grown by KTP.—73-02669
Polarization kinetics of the CDW state of $K_{0.3}MoO_3$.—73-16570
Potassium-lithium-niobate crystals and the manufacture thereof.—73-15951
Precursor effects and ferroelectric macroregions in $KTa_{1-x}Nb_xO_3$ and $K_{1-x}Li_{1-y}TaO_3$.—73-07910
Pressure dependence of the Peierls transition in the quasi-2-D purple bronze $KMo_6O_{17}$.—73-16278
Process of producing potassium fluoroaluminates.—73-15931
Properties of self-pumped phase conjugation in Co-doped potassium sodium strontium barium niobate (KNSBN:Co).—73-12872
Raman spectroscopic study of $K_{0.3}MoO_3$ in charge density wave (CDW) states.—73-05467
Raman spectroscopy of $HTaMO_6{\cdot}xH_2O$ (M=W and Te) pyrochlores and their potassium precursors.—73-02417
Resonance absorptions in $KFe_{11}O_{17}$.—73-16295
Slow-cooling calcination process of potassium tetratitanate and potassium hexatitanate fibers.—73-13275
Solvent–solute interaction in KTP crystal growth solution.—73-06066
Strophoidal Argand diagram and distribution of relaxation times in $K_{1-x}Li_xTaO_3$.—73-16601
Structure and chemistry of $Ba_{0.6}K_{0.4}BiO_y$ at high temperatures.—73-02458
Synthesis and characterization of $KV_3P_4O_{16}$: a new mixed-valence vanadium (III,IV,IV) diphosphate.—73-02476
Synthesis and crystal structure of a novel zintl phase: $K_3SbTe_3$.—73-02481
Synthesis and roentgenographic investigation of the ternary molybdates of $K_{1-x}A_{1-x}R_{1+x}(MoO_4)_3$ [A=Mg, Mn, Co, Ni; R=Yb, L, Sc].—73-02489
Synthesis and structural characterization of $K(MoO_2)(PO_4){\cdot}H_2O$, *and its topotactic reaction to form* $KMoO_2PO_4$.—*73-02490*
Synthesis of $K_2Ti_4O_9$ by the hydrolysis of KOH-Ti(iso-$C_3H_7O)_4$ ethanol solution.—73-03048
System $LaPO_4$-$K_3PO_4$.—73-02510
Thermal expansion of potassium borosilicate glasses.—73-00559
Thermal expansion of potassium borosilicate glasses.—73-00560
Thermal shock resistance of $KZr_2(PO_4)_3$ [KZP] ceramic.—73-16633
Thermodynamic investigation of the CaO-$Al_2O_3$-$CaSO_4$-$K_2O$-$H_2O$ system at 25°C.—73-16376
Thermoluminescence and defect annealing in γ-irradiated $KTiOPO_4$.—73-16639
Toward a quantum theory of polarization in ferroelectrics: the case of $KNbO_3$.—73-15296
Two-wave mixer properties of Fe:$KTa_{1-x}Nb_xO_3$ (KTN) crystal.—73-11627
Viscosity of glasses of the system $K_2O$-$P_2O_5$-$Al_2O_3$ in the temperature region of softening and annealing.—73-14310
Viscosity of potassium borosilicate glasses in the glass transition region.—73-00574
Viscosity of potassium borosilicate glasses in the vitrification interval.—73-00575
X-ray structural study of consecutive phase transitions in potassium pentafluoroantimonate(III) in the 323–98 K range: I, Dynamics, symmetry, and lattice parameters.—73-16397
X-ray structural study of consecutive phase transitions in potassium pentafluoroantimonate(III) in the 323–98 K range: II, Crystal structure.—73-16398
X-ray structural study of consecutive phase transitions in potassium pentafluoroantimonate(III) in the 323–98 K range: III, Structural modulation.—73-16399
Zirconlike aspect of $KTh_2(PO_4)_3$ structures.—73-16402

**potteries,**
Ceramic folklore of Iwami-Yaki porcelain wares.—73-06611

**pottery industry,**
Origins and development of the ceramic industry in the "Kannenbackerland" [Germany].—73-00012
**pottery,**
Archaic imported fine wares from the Acropolis, Mytilene.—73-09775
Contemporary ceramics in South Africa: an overview.—73-09778
Current situation and development of architectural pottery in China.—73-10811
Decorating with volatile materials in saggars.—73-13667
Densification process of pottery body for building construction: III, Influence of minor additives on the densification of pottery body.—73-00904
Densification process of pottery body for building construction: IV, Effect of particle size of feldspar on densification.—73-05734
Densification process of pottery body for building construction: IV, Effect of particle size of feldspar on densification.—73-14649
Direct dating and identity of fiber temper in precontact Bushman (Basarwa) pottery.—73-03422
Experimental study in distinguishing grog (chamotte) from argillaceous inclusions in ceramic thin sections.—73-09783
Fabrication of giant redware pot with loop handle.—73-10838
Fabrication processes of black pottery.—73-14656
From pots to people: ceramic production in the ancient Mediterranean.—73-09785
Imitation of ancient glazed architectural pottery.—73-10857
Kalinga ceramics and new technologies: social and cultural contexts of ceramic change.—73-00010
Late Woodland miniature pottery vessels from the Delaware Valley.—73-09788
Models for technological innovation: an ethnoarchaeological project in Pino Suarez, Mexico.—73-00011
Mycenaean pictorial pottery from the Argive Heraion.—73-09790
Overglaze colors for pottery.—73-04053
Pewabic pottery—historic and contemporary: I.—73-09736
Pewabic pottery—historic and contemporary: II.—73-09737
Politics, economics, and ceramic continuity at Gordion in the late second and first millennia B.C.—73-00013
Pottery from Archaic building Q at Kommos[, Crete].—73-09792
Pottery: A Manual of Techniques.—73-03413
Red-figured pottery from Samothrace.—73-09793
Teisias and Theodoros: East Boiotian potters.—73-10178
The Complete Potter: Throwing.—73-09765
Using sulfite waste lye as binder for architectural pottery.—73-09797
X-ray fluorescence-pattern recognition analysis of pottery from an early historic Hispanic settlement near Santa Fe, New Mexico.—73-09799
**powders,**
Agglomerate characteristics and sintering behavior of alumina powders.—73-12909
Analysis of high-purity ceramic powders and sinters by optical emission (OES) and atomic absorption (AAS) spectrometry.—73-01882
Analysis of the sedimentation curve obtained during express-analysis of the dispersion (granulometric composition) of refractory powders.—73-00774
Antimicrobial hydroxyapatite powders containing hinokitiol, protamine, or sorbic acid.—73-05190
Burnout of binder and sintering behavior of powder compacts of bimodally distributed alumina powders with stearic acid and polyethylene glycol.—73-02732
Carbon dioxide laser synthesis of ultrafine silicon carbide powders from diethoxydimethylsilane.—73-12929
Ceramic powder synthesis by spray pyrolysis [SP].—73-02737
Ceramic powder useful in the manufacture of green and densified fired ceramic articles.—73-05292
Characteristics of alumina powders prepared by spray drying of boehmite sol.—73-12937
Characterization of nanosized $ZrO_2$ powder.—73-03124
Chemical synthesis and characterization of calcium aluminate powders—correction.—73-12942
Chemical synthesis and characterization of calcium aluminate powders.—73-05705
Compaction and sintering behavior of a high-purity alumina powder treated with coupling agents.—73-05715
Compaction and sintering behavior of a high-purity alumina powder treated with coupling agents.—73-16678
Compaction and sintering behavior of zirconia powders: II, Sintering behavior.—73-12951
Compaction rate diagrams of a multicomponent atomized ceramic powder.—73-09044
Compressibility and sintering of aggregated MgO-CaO powder and the influences of adhesion of fine particles to the surface of aggregate.—73-16683
Continuous processing of monodispersed zirconia powders.—73-12954
Deformation behavior of shock-synthesized diamond powder under high pressures and high temperatures.—73-09058
Densification and grain growth of ultrafine 3 mol% $Y_2O_3$-$ZrO_2$ ceramics.—73-16695
Densification of aggregated alumina powder under cyclic compaction.—73-05733
Deposition from the vapor phase during induction plasma treatment of alumina powders.—73-09063
Depth profiling of nonconductive powders using low-pressure radio-frequency plasma.—73-09066
Development in submicron grinding of $BaTiO_3$ powder by ball milling and its applications.—73-16700
Dispersibility of fumed silica in simple media.—73-16715
Dry preparation of powders for dust pressing.—73-12025
Effect of aluminum source on synthesis process and properties of AlN powder prepared via carbothermal reduction and nitridation.—73-09076
Effect of carboxylic acid adsorption on the hydrolysis and sintered properties of aluminum nitride powder.—73-13000
Effect of forming pressure on the reactivity and microstructure of zircon powder compacts.—73-13005
Effect of powder characteristics on injection molding and burnout cracking.—73-09086
Effect of powder properties on thermal conductivity of aluminum nitride.—73-13016
Effect of the added seed on phase transformation and powder properties in the fabrication of $Al_2O_3$ powder by sol-gel process.—73-16746
Effect on the forming property of ceramic powder by dynamic CIP.—73-02800
Effects of powder processing on the characterization of magnesia derived from alkoxide precursors: I, Preparation and characterization of powders.—73-09105
Elaboration of ceramic materials and supercritical fluids.—73-13040
Electrochemical synthesis of $TiB_2$ powder in molten salts.—73-13041
Electrofused zirconia powders.—73-02010
Electron channeling pattern [ECP] of ceramic platelets.—73-17129
Experimental evaluation of the mixing process for the preparation of feedstock for powder injection molding.—73-09123
Explosive compaction of silicon nitride powder without additives using a water pressure medium.—73-13051
Formation mechanism of $ZrSiO_4$ powders.—73-13064
Formation process of sinterable MgO powder prepared from $Mg(OH)_2$ containing magnesium chloride.—73-09143
Formation process of sinterable MgO powder prepared from $Mg(OH)_2$ containing magnesium chloride.—73-17137
Forming of carbon powders by cyclic-CIP and analysis of their densification behavior.—73-16798
Forming of ceramic powders by cyclic-CIP—quantitative evaluation of densification behavior.—73-16799
Fractal properties of boundary surfaces in zircon powders prepared by plasmochemistry methods.—73-09454
Fundamentals of ceramic processing.—73-04924
Gas-pressure sintering of low-purity ß-silicon nitride powder.—73-13073
Gas-pressure sintering of low-purity beta-silicon nitride powder.—73-05823
Glass powders for circuit boards.—73-00492
Granulated product composed of silicon carbide powder and silicon carbide ceramic formed therefrom.—73-12465
High-speed centrifugal compaction and low-temperature sintering of submicron alumina powder.—73-16819
Hydrothermal corrosion of hexagonal boron nitride.—73-17223
Hydrothermal synthesis of fibrous lead titanate powder.—73-16828
Influence of coarse particle shape on packing and sintering of bimodal-size-distributed alumina powder mixtures.—73-09172
Influence of coarse particle size on packing and sintering behavior of bimodal size distributed alumina powder mixtures.—73-16834
Influence of coarse particle size on packing and sintering behavior of bimodal-size-distributed alumina powder mixtures.—73-05864
Influence of powder characteristics on sinterability and mechanical properties of silica-alumina ceramics (74 wt% $Al_2O_3$).—73-02871
Influence of the calcination temperature and atmosphere on the morphological evolution of a powder of hydroxyapatite.—73-13102
Injection molding of metal or ceramic powders.—73-04979
Injection molding of powder materials.—73-01793
Interface and microstructure development of coated alumina powders during heating.—73-13406
Interface chemistry of powders—adsorption, wetting, and dispersion.—73-16522
Latest in porcelain enamel powder—a panel session.—73-13862
Longitudinal-transverse splitting effects in ir absorption spectra of $MoO_3$.—73-02322
Low-temperature preparation of ultrafine $Fe_2O_3$ powder from organometallic precursors.—73-13123
Low-temperature synthesis of chemically homogeneous lead zirconate titanate (PZT) powders by a semiwet method.—73-13124
Material made from highly reactive [submicron] amorphous titanium diboride powder and products made therefrom.—73-12479
Mathematical simulation of the thermoactivized densification of the nonhomogeneous glass powders on the base of the phenomenological model of sintering.—73-14422
Measurement of compressibilty curve of sillimanite powders and choice of pressing pressure.—73-13129
Metallorganic surfactants as sintering aids for silicon nitride in an aqueous medium.—73-16865
Method for aqueous processing of AlN and compositions therefrom.—73-02107
Method for forming a surface coating using powdered solid oxidants and parent metals.—73-03689
Method for preparing a ceramic oxide material.—73-05222
Method for preparing zircon powder.—73-05223
Method for producing a ceramic product.—73-05313
Method for producing coprecipitated multicomponent oxide powder precursors.—73-12380
Method for separating superconductor powder from nonsuperconductive powder.—73-04847
Method for the preparation of alpha-aluminum oxide powder.—73-12384
Method of making moisture-resistant aluminum nitride powder and powder produced thereby.—73-02114
Method of manufacturing metal oxide ceramic composite powder.—73-05232
Methodology for discrete numerical modeling of powder compaction processes.—73-05911
Microstructural development in nanocrystalline zinc sulfide powders.—73-06250
Microstructure, thermoelectric power, and magnetic irreversibility of coprecipitated $YBa_2Cu_4O_8$ powders.—73-08134
Model for the characterization of agglomerated ceramic powder compaction.—73-09213
Moisture-resistant aluminum nitride powder and methods of making and using.—73-05320
Molding composition for the production of inorganic sintered products.—73-05001
Molding composition for the production of inorganic sintered products.—73-05002
Molten salt synthesis of anisotropic powders.—73-04857
New electroconductive ceramic powders.—73-14721
Novel equipment for the study of the compaction of fine powders.—73-08426
Nucleation and crystal growth of SiC ultrafine powder.—73-06266
Oriented barium titanate ceramics made from fiber-state powder.—73-16889
Outlook for the development of powder technology of glass-ceramics.—73-09229
Oxidation kinetics of silicon carbide powder.—73-13482
Oxidation kinetics of silicon carbide powder.—73-13483
Packing structure of powder compact [analyzed] by void-size distribution.—73-17179
Particle size distribution errors by sedimentation technique for mixtures of powders.—73-09233
Performance characteristics of a low-velocity plasma spray torch.—73-08356
Periodical character of the density sample weight dependence at pressing thin layers of powders.—73-16897
Physicochemical characteristics of partially stabilized zirconia powders produced at Chepetsk mechanical plant.—73-17182
Physicochemical properties of ferrite powder modified by iron hydroxide.—73-05948
Plasma production and novel processing of ultrafine ceramic powders.—73-05950
Pore size distribution of cast, compressed, and lightly sintered alumina with preliminary mechanical treatments.—73-13438
Porosimeter as a means to measure the compactibility of powders.—73-08434
Possibilities and limits in the shaping of ceramic powders.—73-15744
Powder classification technologies in ceramics.—73-01814
Powder feed composition for forming a refraction oxide coating, process used and article so produced.—73-10337
Powder glasses.—73-14464
Powder processing of intermetallic-base composites.—73-13881
Preparation and characterization of ß-spodumene powders by sol-gel process.—73-16907
Preparation and characterization of ceramic powders—powders-laser: balance and perspectives.—73-13171
Preparation and formation processes of HfC fine powders by Mg thermite method.—73-05962
Preparation and formation processes of HfC fine powders by Mg thermite method.—73-16909
Preparation and formation processes of ZrC fine powders by Mg thermite method.—73-05963
Preparation and formation processes of ZrC fine powders by Mg thermite method.—73-16910
Preparation and sintering of zirconia-toughened alumina powder.—73-05964
Preparation and thermal evolution of the microstructure of sol-gel-derived cordierite and cordierite-zirconia powders.—73-03185
Preparation and thermal expansion behavior of excess $SiO_2$ pollucite powders.—73-02939
Preparation and thermal expansion behavior of excess $SiO_2$ pollucite powders.—73-13179
Preparation and thermal expansion behavior of pollucite powders by sol-gel processing.—73-02940
Preparation of ß-spodumene ceramic powders from metal alkoxides.—73-09251
Preparation of AlN powders by nitriding of aluminum chips.—73-16912
Preparation of alumina powder from aluminum salts by precipitation method.—73-16914
Preparation of alumina powders from bauxite by wet acid process and their utilization: III, Effects of the dispersion of aluminum hydrate gel on the sintering behavior of alumina powder.—73-09255
Preparation of amorphous silica powder by sol-gel methods.—73-03870
Preparation of carbon solid from dormant mesophase pitch without using a binder.—73-02948
Preparation of cobalt oxide powders by emulsion evaporation technique.—73-13185
Preparation of molybdenum silicide powders by solid-state reactions.—73-16925
Preparation of monodispersed hydrous aluminum oxide powders.—73-02957
Preparation of rodlike ß-$Si_3N_4$ single-crystal particles.—73-16931
Preparation of SiAlON powder by carbothermal reduction and nitridation: II, Preparation of Z=0.5–1 SiAlON.—73-16933
Preparation of SiAlON powder by carbothermal reduction and nitridation: III, Preparation of Z=0 SiAlON ($Si_3N_4$).—73-16934

Preparation of silicon nitride powder by partially nitriding in a fluidized bed and then completing nitridation in a moving bed.—73-02121
Preparation of tazheranite powders by solid-phase reaction and conductivity of sintered bodies.—73-13207
Preparation of ultrafine α-$Fe_2O_3$ powders.—73-09271
Preparation of $ZrB_2$ fine powders using thermite method by reduction with Mg.—73-13212
Preparation of ZrN fine powders from $ZrO_2$ by reduction with Mg and their recovery.—73-05985
Process for making high-temperature superconducting powders.—73-11988
Process for making superconductor powder.—73-11989
Process for preparing oxide powders and superconducting oxides.—73-11991
Process for preparing silicon carbide powder for use in semiconductor equipment.—73-15970
Process for the elaboration of powders uniformly coated with ultrafine silicon-base particles using chemical vapor decomposition in the presence of core powders.—73-12095
Process for the production of a microspheroidal powder of low dispersity.—73-05009
Process for the production of sintering-active $Si_3N_4$ powders.—73-05331
Processes of ultrafine ceramic powders of high purity.—73-13215
Producing spherical powders of alumina–magnesia spinel using high-frequency heating in a cold crucible.—73-12058
Production of composite glass powder of any desired particle size from a particulate multicomponent mixture.—73-10660
Production of silicon powder by square-wave modulated rf silane plasma.—73-06002
Progress in the development of binders: I, The process.—73-13220
Properties of $Al_2O_3$- and $Y_2O_3$-dispersion-strengthened Ni powders prepared by the application of mechanical alloying process.—73-13886
Properties of calcium metaphosphate and calcium diphosphate powders prepared by spray pyrolysis technique.—73-00172
Properties of magnesia powders prepared by vapor-phase oxidation technique.—73-16960
Quantitative analysis of powder and powder processing.—73-16968
Rapid process for manufacturing aluminum nitride powder.—73-06007
Rheology and particle packing of chem- and phys-adsorbed, alkylated silicon nitride powders.—73-09306
Role of particle packing density in powder injection molding.—73-13241
Selection of a powder for ceramic injection molding.—73-06030
Silicon nitride powder from carbothermal reaction.—73-06045
Silicon-nitride-based ceramics: a review.—73-15972
Sinterability of $Al_2TiO_5$ powder synthesized by homogeneous precipitation technique.—73-16990
Sintering and crystallization of mullite powder prepared by sol-gel processing.—73-13258
Sintering characteristics of ZnO powder prepared by precipitation method.—73-13264
Size distribution of SiC powders synthesized in hybrid plasma.—73-09330
Sol-gel processing of $TeO_2$ powders.—73-13278
Spontaneous martensitic transformation at room temperature in 2Y-TZP powders.—73-09509
Strength optimization through powder modification.—73-06069
Structural investigation of powders based on zirconium dioxide obtained by high-frequency plasmochemical denitration.—73-03199
Structural investigations of zirconia powders obtained by HF-plasmochemical denitration.—73-03200
Surface activity of a boron nitride powder: a vibrational study.—73-09513
Surface composition of AlN powders studied by X-ray photoelectron spectroscopy and Bremestrahlung-excited Auger electron spectroscopy.—73-16345
Surface sites on spinel-type and corundum-type metal oxide powders.—73-08763
Surface species on a submicronic boron nitride powder—a starting FTIR characterization.—73-13456
Synthesis and characterization of amorphous $Si_2N_2O$.—73-17019
Synthesis of β′-SiAlON powder by fluidized bed furnace.—73-17025
Synthesis of β-SiAlON powder by carbothermal reduction and nitridation: III, Reaction process of β-SiAlON (Z=3).—73-17027
Synthesis of AlN powder by carbothermal reduction-nitridation method: effect of additives on reaction rate.—73-17030
Synthesis of barium hexaferrite superfine powder by means of the glass crystallization technique.—73-03042
Synthesis of ceramic oxide powders by microwave plasma pyrolysis.—73-17035
Synthesis of ceramic powders from metal alkoxides.—73-03045
Synthesis of cordierite powder by spray drying.—73-13302
Synthesis of high-purity $TiO_2$ powder from elemental titanium particles.—73-09356
Synthesis of $La_{1-x}Sr_xMnO_3$ powder and its power generation property.—73-17039
Synthesis of nanophase materials by electron beam evaporation.—73-17043
Synthesis of nanosized ceramic nitride powders by microwave-supported plasma reactions.—73-17044
Synthesis of Si(N,C) nanostructured powders from an organometallic aerosol using a hot-wall reactor.—73-03054
Synthesis of silicon and silicon nitride powders by vapor-phase reactions.—73-03057
Synthesis of starting powders for ceramics by spray-pyrolysis technique.—73-12066
Synthesis of ultrafine calcium phosphate powders from $Ca(OH)_2$ suspension and various phosphoric aqueous solutions.—73-03058
Synthesis of ultrafine hydroxyapatite powders by hydrothermal reaction.—73-13313
Synthesis of Y-Ba-Cu-O fine powder and some of its magnetic properties.—73-06100
Temperature-programmed desorption (TPD) evaluation of aluminum nitride powder surfaces produced by different manufacturing processes.—73-17054
Tetragonal zirconia powders from the zirconium *n*-propoxide–acetylacetone–water–isopropanol system.—73-13318
Thermodynamic problems of ceramic powder engineering.—73-08780
Thin-cake filtration offers improved washing capability for ceramic powders.—73-08366
Ultrafine pure mullite powder prepared by the sol-gel method.—73-13330
Viscous sintering of nonspherical borosilicate glass powder.—73-10617
Yttrium-barium-copper oxide powder and process for manufacturing yttrium-barium-copper oxide superconducting sintered body.—73-01745
Zinc oxide.—73-12307
Zirconium oxide powder, process for its preparation and its use.—73-05256

**power,**
Ceramic oxide powders and the formation thereof.—73-05203
Power consumption in the Acheson process for producing SiC.—73-09248
Power station with low environmental pollution.—73-02017

**pozzolanas,**
Acceleration of strength gain of lime-pozzolana cement by thermal activation.—73-06620
Activity and properties of pozzolan used in blended cements.—73-06622
Chemical resistivity of cement replaced with binary pozzolans.—73-09852
Effect of pozzolana additions on hydration and performance of portland slag cement.—73-13710
Effect of three zeolite-containing natural pozzolanic materials on alkali-silica reaction [ASR].—73-09924
Possibilities of laser diffraction application for a comparison of pozzolan materials.—73-12179
Reactivity test for fine silicas and pozzolanic mineral additives.—73-08438
Special oil well cements.—73-03538

**praseodymium oxide,**
Junctions of Pr-Co-O thin films and semiconductive $BaTiO_3$ and their electrical properties.—73-15004
$PrO_{2n-2}$ [*n*=7, 9, 10, 11, 12] series of oxides and the structure of $Pr_{24}O_{44}$: an investigation by high-resolution electron microscopy.—73-02407

**praseodymium,**
Anomalous electronic behavior in the layered halides $Pr_2X_5$ (X=Br, I).—73-01078
Chain-related Fermi surface in (R)$Ba_2Cu_3O_{7-\delta}$.—73-11700
Conventional and high-resolution synchrotron X-ray diffraction study of phase separations in $Pr_2NiO_{4+\delta}$.—73-02172
*c-t* characteristics of Pr-doped ZnO varistors.—73-01088
*c-t* characteristics of Pr-doped ZnO varistors.—73-11087
Decomposition of praseodymium hydroxy carbonate and praseodymium carbonate hydrate.—73-02227
Doped perovskite oxide, $PrMnO_3$, as a new cathode for solid-oxide fuel cells [SOFC's] that decreases the operating temperature.—73-10933
Dye laser-pumped $Pr^{3+}$-doped fiber laser's basic parameter investigation, cw operation, and *Q*-switched operation.—73-14159
Effects of dimensional crossover on flux pinning in model high-$T_c$ superconductor $YBa_2Cu_3O_7$/$(Pr_xY_{1-x})Ba_2Cu_3O_{7-\delta}$ superlattices.—73-08043
Electrical properties of ZnO/PrCo oxide multilayered composites.—73-04306
Energy loss related to ferroelastic behavior in $Y_{1-x}Pr_2Ba_2Cu_3O_y$.—73-15459
Epitaxial growth of $PrO_x$ thin films on sapphire by pulsed laser deposition.—73-13049
Evidence for a scaling of the superconducting gap with $T_c$ in $Pr_xY_{1-x}BaCu_4O_8$.—73-15462
Evidence for scaling invariance and universality of the irreversibility line of high-temperature superconductors.—73-08067
Evidence of superconductivity at 30 K in $Pr_2CuO_{4-x}F_x$.—73-04717
Growth of $[YBa_2Cu_3O_{7-\delta}]_M$- $[PrBa_2Cu_{3-x}Ga_xO_{7-\delta}]_N$ superlattices by pulsed laser deposition.—73-15493
Hybridization features in density of states of $Y_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$ superconducting compounds.—73-15505
Influence of Ca on superconductivity of $(Y_{1-y}Pr_y)Ba_2Cu_3O_{6.95}$ system.—73-11801
Interface states at grain boundaries and their effects on the *I-V* characteristics in ZnO:Pr varistors—theoretical calculation.—73-11279
Ir reflectivity of $PrNiO_4$ single crystals.—73-16189
Luminescence quenching in Pr-doped glasses for fiber amplifiers.—73-14418
Magnetic order of Pr ions in $PrBa_2Cu_2O_6$.—73-16207
Magnetic properties of praseodymium-substituted iron garnet films.—73-11663
Magnetoresistance and $H_{c2}$ in single-crystal $Y_{1-x}Pr_xBa_2Cu_3O_{7-y}$.—73-04766
Materials for superconducting electronics: in situ growth of $PrGaO_3$ thin films by metallorganic chemical vapor deposition.—73-07338
Mid- and near-ir ellipsometry of $Y_{1-x}Pr_xBa_2Cu_3O_7$ [x=0–1] epitaxial films.—73-11837
Negative magnetoresistance in single-crystal $Y_{1-x}Pr_xBa_2Cu_3O_{7-y}$.—73-15563
Neutron diffraction investigation of magnetic phase transitions to long-range antiferromagnetic ordering in the free-electron praseodymium halides $Pr_2X_5$ (X=Br, I).—73-02343
New laser ablation geometry for the production of smooth thin single-layer $YBa_2Cu_3O_{7-x}$ and multilayer $YBa_2Cu_3O_{7-x}$/$PrBa_2Cu_3O_{7-x}$ films.—73-15566
NMR of Cu and Pr in the two-phase compound $Pr_{1.85}Ce_{0.15}CuO_{4-y}$.—73-05440
Optical properties of $Pr^{3+}$-doped silica gel and glass monoliths.—73-00524
Pr substitution effect on $T_c$ of $YbBa_2Cu_3O_{7-\delta}$.—73-08170
Preparation and superconductivity of the T*-type $(PrGd_{0.8}A_{0.2})CuO_y$ compounds (A=Ca, Sr).—73-15589
Preparation and T*-type characterization of superconductor in the Pr-Gd-A-Cu-O system (A=Ca, Sr).—73-08174
Quantum efficiency at 1.3 μm of $Pr^{3+}$ in infrared glasses.—73-14265
Rare-earth-doped high NA fluoride fiber amplifiers.—73-07067
Size effect on variable-range-hopping transport in $PrBa_2Cu_3O_{7-x}$.—73-15622
Structural and crystal field studies on a single crystal of $PrBa_2Cu_3O_{7-\delta}$.—73-15631
Structural and magnetic studies on $PrBa_2Cu_2NbO_{8-y}$.—73-08745
Structure and superconducting properties of $Pr_{1-x}Ca_xBa_2Cu_3O_{7-\delta}$, $PrBa_{2-x}La_xCu_3O_{7-\delta}$, and $Pr_{1-x}Ca_xBaLaCu_3O_{7-\delta}$.—73-01670
Structure of high-$T_c$ superlattices.—73-08214
Superconductivity enhancement at the surface of $Y_{1-x}Pr_xBa_2CuO_{7-\delta}$ in strong electric fields.—73-08227
Superlattices of $YBa_2Cu_3O_{7-\delta}$/$PrBa_2Cu_3O_{7-\delta}$ grown by the pulsed organometallic beam epitaxy [POMBE] method.—73-08233
Suppression of superconductivity in the $Er_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$ system.—73-15641
Synthesis, crystal structure, and properties of metallic $PrNiO_3$: comparison with metallic $NdNiO_3$ and semiconducting $SmNiO_3$.—73-02700
Thermoelectric power of $Pr_{2-y}Ce_yCuO_{4-\delta}$ [$0.13<y<0.17$] superconductors with various contents of Ce.—73-16636
Unusual electronic structure in $PrBa_2Cu_3O_7$.—73-16390
Variable range hopping in $Pr_{1-x}Ca_xBa_2Cu_3O_{7-\delta}$.—73-08273
Wide composition range of T*-phase compound $Pr_{1.6-x}Y_xSr_{0.4}CuO_y$ ($0\le x\le 0.6$).—73-15669

**precalcination,**
Conversion of a four-stage cyclone preheater to a VA-PASEC precalciner system.—73-00050
New CF/FCB low-$NO_x$ precalciner.—73-05124

**preceramic,**
Preceramic composition and ceramic product.—73-05237
Preceramic composition and ceramic product.—73-05238
Self-curing ceramicizable polysiloxanes.—73-12516

**precipitation/precipitators,**
Conditions for precipitation of copper phases in DWPF [Defense Waste Processing Facility] waste glass.—73-08290
Control of particle size and orientation during in situ precipitation of oxides in polymers.—73-05720
Direct simulation of turbulent particle transport in electrostatic precipitators.—73-15716
Phase characterization of precipitated zirconia.—73-12651
Precipitation of arsenic in doped GaAs.—73-15109
Synthesis of cuprate superconductors via a dual precipitation route.—73-08238

**precursors,**
Carbonization behavior and graphitization of organic precursor films reported to give graphite.—73-12932
Crystallization of β,β″-alumina precursors prepared from metal alkoxides.—73-05378
Effect of partially oriented precursors in the melt-textured growth of $YBa_2Cu_3O_{6+x}$.—73-08035
Effect of prehydrolysis on the structure of a complex alkoxide as a cordierite precursor and their crystallization behavior.—73-08607
Effects of the columbite precursors on phase formation characteristics, microchemistry, and dielectric properties of $Pb(Zn, Mg)_{1/3}Nb_{2/3}O_3$ ceramics.—73-10941
Evaluation of naphthalene-based mesophase as a carbon fiber precursor.—73-13050
Hydridosiloxanes as precursors to ceramic products.—73-02099
Hydridosiloxanes as precursors to ceramic products.—73-15994
Low-temperature ozonolysis of silicon and ceramic oxide precursor polymers to ceramic coatings.—73-15947
Metallorganic precursors to titanium nitride.—73-16000
Method for producing coprecipitated multicomponent oxide powder precursors.—73-12380
New polycarbosilazane precursors of monofilamental ceramics Si-C-N and Si-C-N-O.—73-02902
Polymer precursors for aluminum nitride.—73-12505
Polysilazane precursors for silicon nitride and resultant products.—73-12506
Preparation of Y-Ba-Cu oxide precursor by the citrate gel process.—73-11873
Process for making ceramic/metal and ceramic/ceramic laminates by oxidation of a metal precursor.—73-05006
Process for preparing submicron/nanosize ceramic powders from precursors incorporated within a polymeric foam.—73-01875

Production of ß′-SiAlON's through carbon/oxide nanocomposites obtained from montmorillonite/aromatic-ammonium complexes.—73-13219
Production of ultrastructural ceramics by supercritical processing of the ceramic precursor.—73-01877
Silica precursors derived from TEOS.—73-08500
Silicon carbide precursors and their preparation and use.—73-05337
Silicon carbide precursors.—73-12520
Zirconium acetylacetonate as a precursor for the chemical vapor deposition of $ZrO_2$.—73-06137

**preforms,**
Method for producing glass preform for optical fiber.—73-00287
Method for producing glass preform for optical fiber.—73-14549
Method for producing porous glass preform for optical fiber.—73-00660
Method of doping porous glass preforms.—73-00743
Method of forming a preform by precoating glass fibers prior to chopping and preforming.—73-14552
Method of forming fluoride glass fiber preform.—73-03946
Method of manufacturing a silica glass preform.—73-00746
Method of producing glass preform in furnace for heating glass.—73-03953
Preformed superconductive devices.—73-11867
Process for fabricating an optical fiber preform.—73-10657
Production of preforms for single-mode optical fibers.—73-00687

**preheating,**
Apparatus for batch preheating and pollution abatement in glass manufacture.—73-12070
Change in design reduces preheater disturbance—an experience.—73-05103
Effect of low-temperature preheating on properties of superconducting $YBa_2Cu_3O_x$ ceramics prepared by chemical solution process.—73-04704
Effect of low-temperature preheating on properties of superconducting $YBa_2Cu_3O_x$ ceramics prepared by chemical solution process.—73-11735
Energy-saving cullet preheater.—73-10526
Glass cullet preheating modeling.—73-03847
Use of waste gas heat for glass batch preheating.—73-03901

**preparation,**
α ?ß′ SiAlON composites.—73-02144
Aluminum nitride sintered body and process for preparation thereof.—73-05282
Ceramic articles and methods for preparing ceramic articles and for sintering.—73-12345
Composition of melilites crystallized from $CaO$-$Al_2O_3$-$Fe_2O_3$-$SiO_2$ melts.—73-13695
Dry preparation of substandard raw materials.—73-03998
Effect of preparation conditions on properties of green and sintered body in alumina.—73-16735
Effect of sample preparation technique on X-ray diffraction analysis results.—73-15791
Effects of preparation conditions on properties of green and sintered body in alumina.—73-09107
Effects of the characteristics of silicon nitride powders on the preparation of α′-SiAlON ceramics.—73-05782
Enstatite ceramics: a multicomponent system via sol-gel.—73-13048
Fabrication and properties of functionally gradient materials.—73-00232
Gas film levitation: a unique containerless technique for the preparation of fluoride glass rods.—73-07132
High-mechanical-strength porcelain body prepared from Amakusa pottery stone containing soda feldspar.—73-14661
Influence of preparation conditions on characteristics of the $YBa_2Cu_3O_{7-\delta}$ compound.—73-01578
Influence of preparation procedure in the mullite preparation by solution method to the mixing of Al and Si and the crystallization behavior.—73-16840
Influence of production conditions on the densification of zirconia powders obtained from acetates.—73-09175
Kinetics of deoxidizing of hexagonal boron nitride preparations.—73-09415
Mixed zeolites and method for producing [the] same.—73-02053
Peculiarities of separate preparation of concrete mixes.—73-00160
pH-metric and Raman investigation of zirconium aqueous solutions and gels submitted to a reflux.—73-08707
Plasma production and novel processing of ultrafine ceramic powders.—73-05950
Pottery: A Manual of Techniques.—73-03413
Preparation and characterization of a new polymorph of $V_2O_5$.—73-02398
Preparation and characterization of diopside powder by several methods from solution.—73-02930
Preparation and characterization of fine $TiO_2$ powders by vapor-phase hydrolysis of $TiCl_4$.—73-02931
Preparation and characterization of $Y_3Al_5O_{12}$ (YAG) from an alkoxide-derived polymer.—73-05960
Preparation and optical properties of CuCl-doped $Na_2O$-$B_2O_3$-$SiO_2$ glasses.—73-00681
Preparation and properties of an SiC-fiber-reinforced glass-ceramic matrix composite.—73-00682
Preparation and properties of perovskite-type oxides from three-dimensional heterometal assemblies, $\{Ln[Cr(ox)_3]\cdot 10H_2O\}_x$ (Ln=La, Pr, or Nd).—73-11668
Preparation and sintering of aluminum nitride suitable for electronic substrate purposes.—73-07352
Preparation and water permeation property of bimodal porous cordierite ceramics.—73-02941
Preparation of $(La_{1-x}Sr_x)_2MnO_4$ [0.35≤x≤0.65] with the $K_2NiF_4$ structure and its electrical properties.—73-05619
Preparation of aluminum nitride from poly(isopropyliminoalane).—73-02943
Preparation of aluminum nitride from poly(isopropyliminoalane).—73-13182
Preparation of aluminum nitride using slightly oxidized Al powders.—73-02944
Preparation of aluminum nitride using slightly oxidized Al powders.—73-13183
Preparation of C-SiC composites and its properties.—73-02946
Preparation of ceramic bodies with special consideration given to the available grinding systems and processes.—73-08357
Preparation of ceramic raw materials through the dry process.—73-08358
Preparation of cordierite ceramics by the sol-gel process and their properties.—73-09260
Preparation of fine-grained high-μ ferrites by spray-roasting nitrate solutions.—73-11669
Preparation of high-purity, ultrafine α-$Al_2O_3$ powders.—73-15930
Preparation of monodispersed $BaTiO_3$ powders by hydrolysis of Ba/Ti bimetallic alkoxide.—73-02956
Preparation of mullite by transient viscous sintering of alumina with sol-gel-derived silica.—73-05976
Preparation of mullite ceramics from kaolin and aluminous materials: I, Effects of grain size and grinding of raw materials.—73-16926
Preparation of pyrochlore-type $Na_{0.39}Bi_{3.47}O_7$ containing $Bi^{3+}$ by low-temperature hydrothermal reaction.—73-16276
Preparation of SiC powder by Wurtz-Fittig reaction.—73-13200
Preparation of SiC powder by Wurtz-Fitting reaction.—73-02966
Preparation of spherical monodispersed Y-doped $ZrO_2$ powders from metal alkoxide.—73-05981
Preparation of superfine fiber by vacuum arc plasma jet method.—73-05982
Preparation of $YBa_2Cu_3O_{7-x}$ powder by chemical methods.—73-04790
Preparation of $YBa_2Cu_4O_8$ supc.:conductor from oxalate precursor under ambient pressure.—73-04792
Preparation of $ZrB_2$ fine powders using thermite method by reduction with Mg.—73-05984
Preparations and characteristics of chemically bonded ceramics.—73-05988
Process for preparing superconductor of compound oxide of Bi-Sr-Ca-Cu system.—73-11993
Process for the preparation of glass fiber optical waveguides with increased tensile strength.—73-00758
Processes of ultrafine ceramic powders of high purity.—73-13215
Production of functionally fine particles by $CO_2$ laser evaporation and condensation.—73-16958
Solution-based processing of $YBa_2Cu_3O_x$ superconducting thin films.—73-11901
Summary on the modified Pechini method to prepare high-purity ceramic superconducting powders.—73-04810
Synthesis and characterization of titanium pillared clays: influence of the temperature of preparation.—73-03038
Synthesis of single-crystal barium titanium isopropoxide complex to form barium titanate.—73-06097
The Complete Potter: Throwing.—73-09765
Thin foil preparation of small-diameter ceramic or glass fibers for observation by TEM.—73-08451

**presses/pressing,**
Advances in pressed ware manufacture.—73-10494
Cracking, end-capping, and other defects in pressed ceramic compacts.—73-12961
Drying of ceramic materials shaped by unidirectional pressing: I, Kinetic model.—73-12992
Energy-saving presses.—73-04917
European pressed glass, 1986 to 1990.—73-06568
Formation mechanism of pressing cracks on ceramic body.—73-09137
Influence of the residual humidity on the pressing of atomized powders: example of porcelain.—73-05877
Larger, faster, press machines for TV glass production.—73-12041
Method for manufacturing ceramic products.—73-04987
Periodical character of the density sample weight dependence at pressing thin layers of powders.—73-16897
Press forming in the ceramic industry.—73-12180
Pressing ceramic components for integrated circuit frames.—73-01818
Pressing of crucibles with an elastic die.—73-01819
Pressing technology meets manufacturing challenges.—73-04943
Production processes of semidry pressed bricks.—73-07195
Quasi-isostatic pressing for the production of ceramics.—73-01824
Range of Sacmi presses.—73-08360
Rotary glass-molding press with cushioned, trunnion-mounted hydraulic drive.—73-12096
Warm pressing as a forming process for ceramics: I, Literature survey.—73-01837
Warm pressing as a forming process for ceramics: II, Application.—73-00882

**pressure,**
High-pressure studies on superconducting materials.—73-11784
Influence of oxygen pressure on the structure of reactively deposited indium oxide films.—73-06234
Influence of pressure on the electrical conductivity and Hall effect in indium selenide.—73-07598
Low-pressure injection molding.—73-12043
Pressure exerted by the packing in a blast-furnace air heater on the wall and supporting surface.—73-00839
Pressure machining in relation to problems in machining of ceramics.—73-05989
Pressure sensitivity for particle packing of aqueous $Al_2O_3$ slurries vs interparticle potential.—73-09274
Simple fabrication process of intermetallic compounds utilizing low-temperature pressure casting of alumina.—73-03641

**pretreatment,**
Porcelain enameling with thermal pretreatment (oxide enameling). A patent application.—73-10261
Pretreatment prior to porcelain enameling from an economical and ecological viewpoint.—73-10265

**probes,**
Ammonia and water as probes for the surface reactivity of covalent solids: cristobalite and SiC.—73-08372
Electric field strength/power density and temperature measurements in an electromagnetic field.—73-05043
Ion beam fabrication of diamond probes for a scanning tunneling microscope.—73-05881
New metallized ceramic coaxial probe for high-temperature broad band dielectric property measurements.—73-05072
New near-field microscope offers many potential uses.—73-05073
Noninvasive optical probe of ferroelectric films.—73-08425
Pick the right probe for your SPM (scanning probe microscopy) needs.—73-12176
Quantum interference effects as a tool to probe the sidewalls of submicrometer-size $n^+$-GaAs channels.—73-07755
Scanning ion microprobe analysis of composite materials.—73-03190
Solid electrolyte probes for magnesium, calcium, and strontium in molten aluminum.—73-04171
Surface properties of clay laponite using pyrene as a photophysical probe molecule: II, Photoinduced electron transfer.—73-16608
Use of solid electrolyte probes in production kilns for porcelain.—73-01972

**processing,**
Activities of microwave processing of ceramics in Germany.—73-05685
American Chemet: combining TQM and SPC for total customer satisfaction.—73-03379
Application of microprocessor to batching, mixing, and conveying system in the glass industry.—73-03820
Application of the Boltzmann-Ehrenfest [B-E] principle to containerless microwave processing in microgravity.—73-05696
Application of the Taguchi method of experimental design to improving ceramic processing.—73-04900
Applicators for industrial microwave processing.—73-05100
Carbons and fullerenes.—73-12417
Ceramic foaming—the effect of material components and processing on properties.—73-09032
Ceramic Matrix Composites.—73-06600
Ceramic Transactions, Volume 29: Advances in Fusion and Processing of Glass.—73-06602
Ceramic Transactions, Volume 32: Dielectric Ceramics: Processing, Properties, and Applications.—73-09762
Chemical characterization of materials for pyrochemical applications.—73-08287
Colloidal processing of $PbZr_{1-x}Ti_xO_3$ thin films.—73-12947
Coloring glass in processing flows.—73-00598
Crack-free processing of hot-pressed silicon nitride ceramics using pulsed YAG laser.—73-05721
Design, materials, and process optimization by Taguchi experiment.—73-13818
Device for continuous production of ceramic superconductor.—73-01852
Effects of addition of polyacrylic ammonium [PAN] on colloidal processing of α-alumina.—73-02802
Efficient algorithm for mineral processing data adjustment.—73-01779
Electrochemical processing of metal-matrix composites.—73-06779
EVOP [evolutionary operation process] design for process optimization.—73-13834
Experimental design for improved ceramic processing, emphasizing the Taguchi method.—73-04920
Filter-based power conditions boost productivity at glass plant.—73-10531
Formation and microstructure of nodular filamentous carbon.—73-13398
Freezing gels.—73-00631
Fundamentals of ceramic processing.—73-04924
High-$T_c$ ceramic superconductors: overcoming a materials processing challenge.—73-11783
Impact of modern software technology on the man-machine interface in process control systems.—73-01788
Influence of composition and processing on the properties of cordierite glass-ceramics.—73-00645
Influence of powders and processing methods on microstructure and properties of dense silicon nitride.—73-05871
Intelligent processing of ceramic powders and slurries.—73-16845
Key issues in microwave process technology.—73-05885
Key issues in microwave processing, research, and commercialization—an open forum.—73-05886
Liquid immersion-polarized light microscopy as a powerful tool in the research of ceramic processing.—73-15812
Low-temperature processing of ceramic woven fabric/ceramic matrix composites.—73-05902
Mixed wirebond, TAB, and flipchip interconnections on multilayer ceramic [MLC] MCM's [multichip modules].—73-04141
Modeling the microwave process—challenges and new directions.—73-05931
New forms of carbons and nonequilibrium processing.—73-12638
New high-quality Chinese bauxite.—73-12289
New trends of microwave processing of ceramic materials.—73-02906
Novel processing route for the fabrication of monolithic and composite silicon nitride.—73-05936

Processing and applications of advanced ceramics.—73-05178
Processing maps for the micropyretic synthesis of structural composites and intermetallics.—73-05997
Processing of ceramic carbide powders in a nontransferred arc thermal plasma reactor.—73-05998
Processing of functional ceramics by metallorganic route.—73-02979
Processing of ultrafine mullite powder through alkoxide route.—73-03404
Quantitative analysis of powder and powder processing.—73-16968
Rapid thermoprocessing methods used for fine-grained lime production.—73-13772
Reaction-rate-controlled microwave processing of ceramic materials.—73-06013
Reactions taking place during the sol-gel processing of PLZT.—73-06014
Recent developments in ceramic materials processing and applications.—73-15932
Recent developments, performance improvements, and new ceramic fibers produced by the viscous suspension spinning process.—73-16972
Results of the Workshop on Microwave-Absorbing Materials for Accelerators [MAMA]: a personal view.—73-05629
Scaleup and modeling of forced chemical vapor infiltration.—73-16979
Selection criteria for straight-line edgers.—73-12061
Statistical process control: beyond chart keeping.—73-15756
Temperature measurements in rapid thermal annealing.—73-01932
Thermal analysis of microwave processing of ceramics.—73-06115
Thermal processing for TV tube manufacture: process modeling.—73-00711
Weaving ability of pitch-based carbon fiber and its evaluation method.—73-12446

**production processes,**
Aluminum nitride sintered body and process for producing the same.—73-05283
Apparatus and methods for producing ceramic products.—73-01842
Aqueous process for injection molding ceramic powders at high solids loadings.—73-04958
Article of ceramic material and production thereof.—73-01846
Automated flatware production.—73-14325
Batch compositions for cordierite ceramics.—73-15934
Brickworks with sea view.—73-03975
Ceramic hollow bodies and method of manufacturing such bodies.—73-04962
Ceramic log molding process.—73-04963
Ceramic oxide powders and the formation thereof.—73-05203
Ceramic process.—73-12073
Ceramic slip casting technique.—73-04964
Ceramic Transactions, Volume 31: Porous Materials.—73-09761
Ceramics based on aluminum titanate, process for their production, and their use.—73-12351
Ceramics—their use as microoelectronic packaging materials.—73-04062
Cevisama.—73-17465
Clay industry 1950-1990.—73-12265
Colored glasses and method.—73-10624
Compound and process for an injection molding.—73-04967
Controlled resistivity ceramic fibers and process for making them.—73-12456
Current status of enameling in the U.S.—73-10212
Developing a production procedure for VK94-1 ceramics using silicon oxide.—73-01773
Development of black Tang Jun porcelain.—73-10816
Development of ceramic high-performance materials: I, State of the art and research.—73-12324
Development of ceramic high-performance materials: II, Technical actuality—market introduction.—73-12325
Efficient modification of the production line at the Kaohsiung cement works in Taiwan.—73-09941
Fabrication of low-thermal-expansion, high-porosity cordierite body.—73-05213
Fabrication processes of black pottery.—73-14656
Flexible, trouble-free process management.—73-10532
From grinding device to roll turning machine—economic servicing of roller shells.—73-04923
Glass-ceramics—an overview.—73-14399
Glazing today.—73-14660
High-efficiency process for producing high-purity alumina.—73-12369
High-hardness fine-grained beta tungsten carbide.—73-12469
High-pressure fluid jet orifice made of oxygen-enhanced sapphire and process for making [the] same.—73-12470
High-strength silicon nitride sintered body and process for producing [the] same.—73-15993
How to replace a complex control system with minimum production interruption.—73-07140
Hydroceric technology now also in North America.—73-03979
Increasing AlN thermal conductivity via predensification treatment.—73-12475
Inverse shape replication method of making ceramic composite articles and articles obtained thereby.—73-10319
Method for flexible continuous production.—73-01797
Method for making ceramic matrix composites.—73-04986
Method for producing an elongated sintered article.—73-04989
Method for producing carbon-carbon composite materials.—73-02112
Method for producing ceramic sintered article and molding method and molding apparatus to be used therefor.—73-01866
Method for producing coprecipitated multicomponent oxide powder precursors using guanidine oxalate as precipitating agent.—73-05225
Method for producing fiber product.—73-14548
Method for producing glass soot deposit.—73-03944
Method for producing permanent magnet and sintered compact and production apparatus for making green compacts.—73-04666
Method for producing zeolites with reduced surface acidity.—73-02049
Method for silicon carbide production by reacting silica with hydrocarbon gas.—73-16003
Method of and an apparatus for forming fibers.—73-12085
Method of making a ceramic burner head.—73-10783
Method of making a core/pattern combination for producing a gas-turbine blade or component.—73-04994
Method of making a tile.—73-04052
Method of manufacture of a contact guide.—73-04996
Method of manufacturing inorganic insulation.—73-12385
Method of manufacturing silicon nitride sintered bodies.—73-02117
Method of producing a glass body.—73-10647
Method of producing high-temperature parts by way of low-temperature sintering.—73-12387
Method of producing sintered ceramic body.—73-04999
Modified agar and process for preparing modified agar for use [in] ceramic composition to add green strength and/or improve other properties of a preform.—73-12087
Moldable composition, process for producing sintered body therefrom, and products from [the] same.—73-10333
Nanocomposite ceramic powder production by laser-induced gas-phase reactions.—73-13144
New technologies for porcelain tableware production and their environmental effects.—73-00918
Oxygen supplying.—73-05127
Pneumatic handling conveys productivity at British Gypsum.—73-10082
Preparation of anatase titanium dioxide.—73-15952
Preparing granular borates.—73-05003
Preparing titanium dioxide by the vapor phase oxidation of titanium tetrachloride.—73-12395
Principles of processing for technical ceramics: II.—73-12056
Problems in producing a thermally stable, high-strength, heat-resistant ceramic.—73-08520
Procedure for the preparation of microporous ceramic membranes for the separation of gas and liquid mixtures.—73-05241
Process for depositing a thin layer of a ceramic composition and a product obtained thereby.—73-01874
Process for preparation of alumina.—73-12396
Process for preparing crystalline mixed metal oxides.—73-02060
Process for preparing LTL nanocrystalline zeolite compositions.—73-15954
Process for preparing polycrystalline cBN ceramic masses and resulting product.—73-16011
Process for preparing self-supporting ceramic composite bodies and bodies produced thereby.—73-10341
Process for producing β-SiAlON-based sintered bodies.—73-12510
Process for producing a curved glass plate partially coated with a ceramic.—73-00757
Process for producing aluminum nitride sintered body.—73-02125
Process for producing an aluminum nitride sintered product.—73-16012
Process for producing ceramic sintered body having metallized via hole.—73-14760
Process for producing crystalline sodium silicates having a layered structure.—73-02062
Process for producing flakes of glass.—73-10658
Process for producing rod glass having refractive index distribution.—73-03961
Process for producing shaped article of oriented calcium phosphate type compound.—73-02063
Process for producing small particles of aluminum nitride and particles so introduced.—73-02126
Process for the preparation of a dental prosthesis and the prosthesis produced by said process.—73-03962
Process for the preparation of silicon nitride having a small crystallite size.—73-02130
Process for the production of sintered material based on alpha-aluminum oxide, especially for abrasives.—73-00004
Process of drawing optical fiber.—73-14557
Process of preparing zirconium oxide-containing ceramic formed bodies.—73-15956
Production of nonoxide monolithic ceramic shaped articles.—73-12512
Production of ultrastructural ceramics by supercritical processing of the ceramic precursor.—73-01877
Production process of glass beads for accessories.—73-00688
Reforming common clay–brick production line into perforated brick one.—73-10689
Right approach to the future: the new Pfleiderer Dachziegelwerk in Thuringia.—73-03984
Self-supporting ceramic articles having shape-replicated surfaces.—73-05011
Silicon nitride sintered body and process for producing the same.—73-12522
Silicon nitride sintered body.—73-12523
Sintered body of aluminum nitride.—73-12526
Soft mud method of brickmaking—an overview of the essential aspects of the process.—73-03985
Stoichiometric B1-type tantalum nitride and a sintered body thereof and method of synthesizing the B1-type tantalum nitride.—73-12527
Thermally durable antireflective glass.—73-03971

**propagation,**
Propagation of nonequilibrium phonons in ceramic materials.—73-09419

**prosthetic ceramics,**
Evolution of total hip prostheses.—73-09715

**protection,**
Conservation treatments for an Italian sandstone: laboratory tests.—73-17471
Current trends in environmental protection legislation in the Federal Republic of Germany and in Europe.—73-03388
Environmental protection through and for ceramics.—73-02011
Function and advantageous uses of protective refractory coatings.—73-04004
Protective coats for high-temperature strain gages.—73-13888

**protons,**
Equilibrium of the protonic species in hydrates of some heteropolyacids at elevated temperatures.—73-00964

**pullout,**
Embedded-end debonding during fiber pullout.—73-09589

**pulse,**
Generation and measurement of picosecond electrical pulse and dispersion on stripline.—73-14941
Intense bandwidth- and diffraction-limited ps pulses with large tuning range.—73-08891
Propagation of ultrashort electromagnetic videopulses [$\approx 10^{-14}$ s] in ceramic ferroelectrics.—73-15283

**pumps,**
Pumpable ceramic fiber composition.—73-04039

**purification,**
Low-temperature catalytic gas purification from CO.—73-16530
Process for the deferrization of kaolin, quarztrose sand, paper filler, white pigment, pumice, and electronics materials.—73-05008

**purity,**
Rapid purity evaluation and impurity rare earth analysis of zirconium oxide powders by ICP-MS.—73-01926
Sintering and grain growth of ultrapure alumina.—73-09506

**pyrite,**
Influence of precursors on the preparation of thin pyrite films by metallorganic chemical vapor deposition.—73-05872
Thermal behavior of arsenopyrite.—73-02522

**pyrochlore,**
Preparation of pyrochlore-type $Na_{0.39}Bi_{1.47}O_7$ containing $Bi^{5+}$ by low-temperature hydrothermal reaction.—73-16276
Raman spectroscopy of $HTaMO_6{\cdot}xH_2O$ (M=W and Te) pyrochlores and their potassium precursors.—73-02417
Variation of dielectric constant with grain size of pyrochlore phase in the PMN-pyrochlore diphasic mixtures.—73-12905
Variation of dielectric constant with the volume fraction of pyrochlore phase in the PMN-polychlore diphasic system: application of general effective media equation.—73-09006

**pyroelectric materials/pyroelectricity,**
Artificial pyroelectricity in gallium arsenide.—73-04539
Pyroelectric properties of $Ni_{0.65}Zn_{0.35}Cu_xFe_{2-x}O_4$ ferrites for thermoelectric energy conversion.—73-11609
Pyroelectric properties of $TlInS_2$ single crystal in temperature range of 1.5–100 K.—73-16580
Thin film pyroelectric imaging array.—73-11644

**pyrolysis,**
Ceramic synthesis by pyrolysis of metal-containing polymer and metal.—73-15981
Effect of oxygen on pyrolysis of SiC fiber synthesized from polycarbosilane.—73-13012
Phase behavior during synthesis by metal carboxylate pyrolysis.—73-16246
Pyrolysis of Si-C-O fibers (Nicalon) at temperature from 1473 to 1673 K.—73-02985
Pyrolysis of Si-C-O fibers (Nicalon) at temperatures from 1473 K to 1673 K.—73-13222
Pyrolytic behavior of CVD-coated SiC fibers.—73-02986
Pyrolytic route to fluoride glasses: I, Preparation and thermal decomposition of metal trifluoroacetates.—73-00693
Pyrolytic route to fluoride glasses: II, Preparation of glasses in the system $ZrF_4$-$BaF_2$-$LaF_3$-$AlF_3$-NaF.—73-00694
Suppression of pyrolysis of Si-C-O fiber with oxide film.—73-06074
X-ray diffraction analysis of the pyrolytic conversion of perhydropolysilazane into silicon nitride.—73-12731

**pyrometers/pyrometry,**
Multiwavelength pyrometry to correct for reflections.—73-08424
Pyrometric measurements in glass furnaces, tanks, feeders, and in the glass-forming area.—73-03879
Pyrometry without spurious reflections.—73-15833

**pyrophyllite,**
$^{29}Si$ and $^{27}Al$ magic angle spinning nuclear magnetic resonance study of the thermal transformations of pyrophyllite.—73-02429
Microstructure and properties of pyrophyllite fire bricks.—73-07218
Mineralogical investigation of raw materials from the Tan Mai pyrophyllite deposit in Vietnam.—73-01987
Preliminary study and laboratory characterization of the Carpentier pyrophyllite mineral.—73-05145
Pyrophyllite.—73-12293
Surface coulomb energy and proton coulomb potentials of pyrophyllite {010}, {110}, {100}, and {130} edges.—73-12883

**quality control,**
Achieving quality satisfaction by utilizing full employee participation.—73-17459
Advanced vertical melting furnace for high-quality glass.—73-15863

Advantages of using an ISO 9000 certified supplier.—73-17460
Approach and realizations in the domain of quality assurance.—73-03380
Behavior-based safety at PPG Industries, Inc.—73-17462
Ceramic fabricator quality revolution: a case study.—73-01766
Choice of statistical control cards and testing method sets for total quality management [TQM] of traditional ceramics.—73-08326
Consumer looks at the broader aspects of quality (from a packaging technologist's point of view).—73-06565
Customized process control systems ensure quality at Vitro plants.—73-14346
Design, materials, and process optimization by Taguchi experiment.—73-13818
Following numbers to productivity benefits.—73-15726
Gage R&R for ceramics.—73-12143
How the ISO 9000 quality standards program works.—73-17487
In search of global quality.—73-14662
Is there life after ISO 9000.—73-09724
ISO 9000: insight into the certification process.—73-09725
Key factors in obtaining maximum results from statistical process control.—73-15732
Look at ISO 9000.—73-09726
Machine vision can keep quality high and production lines moving.—73-15813
Machining of ceramic components: process-technological potentials.—73-05904
Method for auditing suppliers' quality systems.—73-17494
Mold reader evolution.—73-15734
Operational assurance and quality improvement of high-performance ceramics: II, Introduction of a system into a firm.—73-01807
Pass/fail tolerancing based on artificial intelligence and superellipsoids.—73-08431
Philosophy, principles, and implementation of continuous improvement.—73-09738
Practical pointers for implementing an ISO 9000 quality system.—73-09740
Precontrol: implementation and effect on washer parameters.—73-13882
Process centering—the Taguchi loss function.—73-15745
Product specifications: their importance to the business.—73-07165
Quality assurance during manufacture of refractory kiln furniture according to DIN ISO 9000.—73-00845
Quality assurance of building materials [in Hungary].—73-13638
Quality control in mold manufacture.—73-15746
Short run SQC (statistical quality control) charting methods for monitoring laboratory repeatability.—73-12194
Thermal analysis for improved quality.—73-01933
Total quality management [TQM] at Saudi Ceramic Company.—73-08367
Total quality management and world-class quality.—73-15757
Total quality.—73-10610
Using existing documentation to comply with ISO 9000 standards.—73-17512

**quantum wells,**
Γ-X-Γ electron transfer in mixed type I–type II GaAs/AlAs quantum well structures.—73-01173
600-mW cw single-mode GaAlAs triple quantum well laser with a new index-guided structure.—73-11447
Absorption of ir radiation by holes in [GaAs] quantum well structures.—73-14766
Aspects of interface modes and LO eigenmodes in GaAs/AlAs quantum wells.—73-07384
Auger recombination, gain, and temperature sensitivity of 1.5-μm compressively strained semiconductor laser.—73-14780
Band-filling effect in quantum well with excitation of 532-nm picosecond laser.—73-11083
Barrier-modulated semiconductor quantum wires.—73-11084
Biexciton formation by two-photon absorption in quantum wells.—73-07392
Calculation of the X-valley intersubband optical transition linewidth in [111] grown AlAs/(GaAl)As quantum wells.—73-04257
Chemical beam epitaxy and structural analysis of InAs/InP strained single- and multi-quantum well heterostructures.—73-04269
Collective intersubband excitation in a *p*-doped GaAs/AlGaAs multiple quantum well.—73-01105
Creation of radiative hydrogen-related states within strained $In_xGa_{1-x}As$/GaAs quantum wells by hydrogenation.—73-01115
Definite identification of $D^-$ centers in GaAs quantum wells by tilt-induced splitting in a magnetic field.—73-07439
Determination of the homogeneity of quantum wells in the InGaAs/GaAs system from photomodulation spectra.—73-07442
Dimensional reduction of GaAs quantum well cut by dislocation slip observed by photoluminescence.—73-07445
Effect of structural and chemical parameters on the optical properties of highly strained AlGaAs/InGaAs/AlGaAs quantum wells.—73-11164
Electric subband studies in an $In_{0.53}Ga_{0.47}As$/InP one-side-modulation-doped quantum well.—73-01140
Electron *g* factor of quantum wells and superlattices.—73-01153
Energy dependence of the polarization parameters of the hot photoluminescence in quantum well structures.—73-14888
Exciton gain and laser emission in ZnSe-based quantum wells.—73-07517
Exciton properties of $Zn_{1-x}Cd_xSe$/ZnSe quantum well structures grown by metallorganic vapor phase epitaxy.—73-04340
Femtosecond dynamics of resonantly excited RT excitons in II-III CdZnTe/ZnTe quantum wells.—73-07527
Focused ion-beam implantation in strained InGaAs-GaAs quantum wells.—73-07531
Free-carrier effects in GaAs single modulation-doped quantum well as applied to active *Q* switching of injection lasers.—73-07539
Growth and characterization of digital alloy quantum wells of CdSe/ZnSe.—73-04349
Growth of InAs-AlSb quantum wells having both high mobilities and high concentrations.—73-04353
Hole "spin" relaxation in the semiconductor quantum wells.—73-07568
Improved two-band model for quantum well excitons: asymmetric wells.—73-04362
Influence of the substrate on the photoconductivity of InGaAs/GaAs quantum wells.—73-04369
InGaAs-InAlAs multiple quantum well optical bistable devices using the resonant tunneling effect.—73-01213
Interface structure in InAs/AlSb quantum wells grown by molecular beam epitaxy.—73-11280
Intersubband absorption in (Hg,Cd)Te quantum wells.—73-07619
Intersubband absorption line broadening in $In_{0.53}Ga_{0.47}As$/$In_{0.52}Al_{0.48}As$ quantum wells: a pseudopotential calculation.—73-07620
Low threshold, room temperature, pulsed, and quasi-continuous lasing in optically pumped CdZnTe/ZnTe quantum wells.—73-04384
Lower-dimensional quantum structures by selective growth and gas-phase nucleation.—73-11302
Luminescence from $Si_{1-x}Ge_x$/Si quantum wells grown by Si molecular beam epitaxy.—73-11304
Luminescence studies of confined excitons in pseudomorphic Si/SiGe quantum wells grown by solid-source molecular beam epitaxy [SSMBE].—73-11305
Magnetic-field-induced unbinding effects in CdTe-$Cd_{1-x}Mn_xTe$ quantum wells.—73-04396
Magnetophotoconductivity studies of $D^0$ and $D^-$ centers in GaAs quantum wells in metallic and insulating states.—73-07655
Modeling and performance characteristics of GaAs quantum well infrared detector structures.—73-01248
Modeling of nonlinear absorption and refraction in quantum well structures for all-optical switching.—73-15043
Molecular beam epitaxial growth condition dependence of reflection high energy electron diffraction dampening and quantum well photoluminescence.—73-11325
Molecular beam epitaxy investigation of interface disorder effects in magnetic II-VI quantum wells.—73-11335
Novel carrier confinement (*p*-*n*-*p* junctions) on (111)A GaAs substrates patterned with equilateral triangles.—73-04420
Optical anisotropy due to exciton polaritons in $Al_{1-x}Ga_xAs$-GaAs quantum wells.—73-04427
Orientation dependence of normal incidence [ir] absorption in ellipsoidal-valley quantum wells.—73-11367
Oscillatory magnetoabsorption of multilayer quantum well structures.—73-15081
Partial strain release and surface states formed on the sidewall of InGaAs quantum well wires.—73-07709
Photoelectron phenomena in GaAs layers with a built-in surface quantum heterowell.—73-07718
Photoluminescence [PL] spectroscopy of near-surface quantum wells: electronic coupling between quantized energy levels and the sample surface.—73-11382
Photoluminescence and photoluminescence excitation spectroscopy of H-related defects in strained $In_xGa_{1-x}As$/GaAs(100) quantum wells.—73-07724
Photoluminescence from pseudomorphic $Si_{1-x}Ge_x$ quantum wells grown by molecular beam epitaxy: variation of the band gap with high pressure.—73-07726
Picosecond dynamics of resonantly excited excitons in GaAs quantum wells.—73-15102
Piezospectroscopy of a GaAs/$Ga_{0.73}Al_{0.27}As$ single quantum well structure: piezoelectric effects.—73-04566
Polarization dependence of the interband optical absorption by an InGaAs quantum well in GaAs.—73-11398
Polaronic effects and donor polarizability in a quantum well.—73-01287
Quantum dot levels produced by strain modulation of GaAs-AlGaAs quantum wells.—73-07753
Relaxation processes and in-plane electron mobility limited by interface defects in CdTe-$Cd_{1-x}M_xTe$ quantum wells.—73-04468
Resonant generation of biexcitons in a GaAs quantum well.—73-07771
Scanning tunneling optical spectroscopy of semiconductor thin films and quantum wells.—73-07785
Selective exciton formation in thin GaAs/$Al_xGa_{1-x}As$ quantum wells.—73-11439
Spin-flip-induced hole burning in GaAs quantum wells: determination of exciton Zeeman splitting.—73-07807
Spontaneous emission of highly excited GaAs/(Ga,Al)As quantum wells.—73-01319
Stabilization and growth interruption effects at $ZnS_xSe_{1-x}$/ZnSe quantum-well interfaces grown by metallorganic vapor phase epitaxy.—73-11451
Steady-state carrier escape from single quantum wells.—73-15177
Surface-layer modulation of electron concentrations in InAs-AlSb quantum wells.—73-11470
Temperature dependence of the binding energy of Wannier-Mott excitons in quantum wells.—73-07829
Temperature-dependent hydrogenation on near-surface strained quantum wells.—73-11479
Terahertz emission in single quantum wells after coherent optical excitation of light hole and heavy hole excitons.—73-07832
Theory of the capture of holes by a quantum well in GaAs-type semiconductors.—73-07835
Three-dimensional simulations of quantum transport in semiconductor nanostructures.—73-11483
Tunable generation of microscopic and mesoscopic step arrays on non-(100)-oriented GaAs: a new route to quantum wire structures by epitaxial growth.—73-11489
Two-dimensional exciton magnetic polaron in CdTe/$Cd_{1-x}Mn_xTe$ quantum-well structures.—73-07846
Ultraviolet quantum well structures based on ZnS/$ZnS_{1-x}Se_x$ and ZnS/$Zn_{1-x}Cd_xS$ multilayers grown by molecular beam epitaxy.—73-11494
Unusually slow temporal evolution of femtosecond four-wave-mixing signals in intrinsic GaAs quantum wells: direct evidence for the dominance of interaction effects.—73-07854
Very narrow SiGe/Si quantum wells deposited by low-temperature atmospheric pressure chemical vapor deposition.—73-11505
Zero-magnetic-field spin splitting in the GaAs conduction band from Raman scattering on modulation-doped quantum wells.—73-07867

**quarrying,**
Efficient quarrying equipment at the Mannersdorf Cement Works, Austria.—73-03463
Hydraulic excavators and wheeled front-end loaders in rock quarries.—73-15729
New loading and transporting equipment at Heidelberger Zement AG's Nussloch quarry.—73-15737

**quartz,**
Anticorrosion coating for quartz glass.—73-00590
Artificial olfactory sensor on plural quartz crystals.—73-03776
Behavior of α-quartz and pressure-induced $SiO_2$ glass under pressure: a molecular dynamical study.—73-08555
Body of cerium-doped quartz glass.—73-00726
Brillouin scattering investigation of elastic constants in strained quartz glass.—73-14139
Calculation of the temperature and stress fields of the base-quartz tube during MCVD technology.—73-14334
Casting-up parameters for quartz ceramics.—73-01765
Centrifugal casting of ceramics. Principal parameters and regularities of the process.—73-02735
Composite GaAs-on-quartz substrate for integration of millimeter-wave passive and active device circuitry.—73-11514
Computer modeling of structure and thermal expansion of ß-quartz- and keatite-type aluminosilicates.—73-02564
Conflicting values of the third-order nonlinear permittivity of α-quartz.—73-11705
Conversion of fused silica powder to quartz.—73-17120
Determination of optical constants of crystalline quartz and ultrathin niobium films from surface electromagnetic wave propagation study.—73-16440
Determining the depth of the fissured layer of the polished surface of quartz glass using the method of ir ellipsometry.—73-07009
Direct bonding of quartz crystal onto silicon.—73-12990
Dose dependence of the thermoluminescence (TL) peak at 200 K in Al-Na-containing quartz crystals.—73-05541
Effect of coarse quartz grains on mechanical strength of porcelain body.—73-03263
Effect of gas-flame treatment on the structure and properties of the surface of doped quartz glass.—73-00614
Effect of grain size of quartz on mechanical strength of porcelain body.—73-03264
Effect of laser treatment on the structure and optical properties of the surface of polished quartz glass.—73-00460
Effect of quartz on the sintering and bending strength of the porcelain bodies in quartz-feldspar-kaolin system.—73-17293
Effect of wind transport on the shapes of quartz silt grains.—73-15901
Effects of alkali oxides on the cristobalitization of quartz in whiteware body.—73-10831
Electrical surface conductivity in quartz induced by ion implantation.—73-12791
Electronic trapping mechanisms in an irradiated single crystal of quartz.—73-08612
EPR of surface bound $Fe^{3+}$ ion in polycrystalline quartz.—73-02268
Experimental study of the parameters that determine take-off velocity and CSS performance of thin film disks.—73-08868
Faience beads of the Irish Bronze Age.—73-09784
Failure of glass during intensive pulsed action.—73-00479
Features of hydrothermal crystallization of quartz under heterogeneous solvent conditions.—73-16781
Geochemical features of quartz from the deep parts of Eldzhurtinsk granite massif (northern Caucasus).—73-15904
High-resolution Si *K*- and *L* 2, 3-edge XANES of α-quartz and stishovite.—73-16167
Hydrothermal growth of α-quartz using high-purity α-cristobalite as feed material.—73-16824
Hydrothermal growth of quartz from ammonium fluoride solution.—73-16825
Hydroxyl defects and electrodiffusion (sweeping) in natural quartz crystals.—73-09411
Implantation of quartz with high-dose Ti ions as studied by XPS.—73-13401
In-plane acceleration sensitivity of contoured quartz resonators stiffened by quartz cover plates supported by clips.—73-12812
Influence of quartz and particle size on the blast wear of ceramic materials.—73-17360
Influence of reactor radiation on spectroscopic characteristics of quartz glass.—73-14008
Infrared spectra of quartz glass in the 20–1100°C temperature range.—73-00352
Infrared spectra of quartz glass in the temperature interval 20–1100°C.—73-00353

Low-temperature sintering low-dielectric inorganic composition.—73-11025
Luminescence of europium-activated quartz glass irradiated with protons.—73-00510
Manufacturing of low-water uv-absorbing quartz glass.—73-14421
Metal-ceramic structure with intermediate high temperature reaction barrier layer.—73-10323
Method for producing interlevel stud vias.—73-04218
Microbiotic deferrization of the upper cretaceous quartz sands of Weferlingen (Germany).—73-01986
Modeling of the structure and compressibility of quartz with a molecular potential and its transferability to cristobalite and coesite.—73-08669
Molecular mechanics study on the α-quartz/ß-quartz transition.—73-12632
Monte Carlo model for trapped charge distribution in electron-irradiated α-quartz.—73-12836
New high-pressure transformation in α-quartz.—73-16226
New material—quartz light-diffusing glass.—73-00671
New model for the shock-induced α-quartz→stishovite phase transition in silica.—73-12639
New preparation method of raw materials for high-purity and heat-resistant quartz glass.—73-02904
New technique of wet processing of quartz sandstone and its application.—73-14440
Nonimpact generation of defects in quartz crystals.—73-0616ø
Optical quartz fibers with nontraditional doping agents[—literature review].—73-12329
Optical study of time variation of memory effect in incommensurate phase of quartz.—73-08940
Origin of the incommensurate phase of quartz: I, Inelastic neutron scattering study of the high-temperature ß-phase of quartz.—73-08684
Origin of the incommensurate phase of quartz: II, Interpretation of inelastic neutron scattering data.—73-08685
Particle size of quartz sand and its effects on the erosive wear of ceramics.—73-12853
Phase composition changes in quartzitic waste from grain processing in relation to firing temperature.—73-01992
Photoinduced short-lived optical absorption in quartz glass.—73-00528
Piezogyration in quartz enantiomorphic crystals.—73-01426
Polariton dispersion relation and stimulated Raman scattering from 132 $cm^{-1}$ *E* mode in α-quartz.—73-05615
Polariton dispersion relation and stimulated Raman scattering from the 132 $cm^{-1}$ *E* mode in α-quartz.—73-16569
Pressure effects on the thermoluminescence of quartz.—73-05620
Pressure-amorphized $SiO_2$ α-quartz: an anisotropic amorphous solid.—73-08959
Production of a hermetically coated optical fiber.—73-00759
Production of preforms for single-mode optical fibers.—73-00687
Quartz ceramic structures for chemistry.—73-16287
Quartz glass crucible for pulling a semiconductor single crystal.—73-10661
Quartz glass crucible for pulling a single crystal.—73-10662
Quartz glass doped with rare-earth element and production thereof.—73-03964
Quartz glass substrate for polysilicon thin film transistor liquid crystal display.—73-14558
Quartz optical waveguide and method for producing the same.—73-00760
Quartz tank member and method of production thereof.—73-15895
Reduction of strength of optical quartz fibers upon removal of polymer coatings.—73-14267
Relationship between thermal expansion and X-ray intensity of quartz and cristobalite in electroporcelain bodies.—73-12877
Shear flocculation of quartz.—73-01997
Spectrophotometric technique of determination of optical parameters of hyrotropic crystals.—73-01930
Spectroscopic investigation of structural reorganization of surface layers of quartz glass under the action of ion implantation.—73-00400
Stability of quartz glass slips.—73-07175
Strength of glass under a prolonged load.—73-00547
Surface-acoustic-wave devices with low sensitivity to mechanical and thermoelastic stresses.—73-13599
Temperature dependence of the threshold of brittle disintegration of quartz glass with a compact pulsed electron beam.—73-03814
Thermal shock of quartz lascas.—73-12894
Time-resolved X-ray diffraction study of hot phonons in quartz.—73-02528
Transformation from quartz to α-cristobalite.—73-12726
Transparent quartz glass and process for its production.—73-14560
Ultrasonic control of the hydrothermal treatment of quartz ceramics.—73-03068
Ultrathin surface mount crystal package.—73-04588
Viscosity measurement of quartz glass.—73-01938

**quenching,**
Algorithm for determining instantaneous and residual quenching stresses.—73-00433
Amorphous intergranular films in silicon nitride ceramics quenched from high temperatures.—73-03119
Effect of low-temperature quenching on $T_c$ and substructural thermal activity of $YBa_2Cu_3O_{7-\delta}$ ceramics.—73-15428
Effect of temperature dependence of material properties on the critical quenching temperature difference under thermal shock test of ceramics.—73-16461
Efficiency in glass quenching.—73-00620
Guaranteed heat transfer coefficients in quenching glass.—73-00496
Inclusion of the nonlinearities of the physical contents in an algorithm for calculation of quenching stresses.—73-08885
Properties of the glasses prepared by rapid quenching in the $V_2O_5$-MO (M=Mg, Ca, and Ba) system.—73-06958
Quenching diagram of glass.—73-07166
Quenching of $N^{3+}$ ion luminescence by iron impurity ions in $Y_3Al_5O_{12}$ crystals.—73-02411
Superconducting $Bi_2Sr_2Ca_1Cu_2O_x$ ceramics prepared via melt quenching.—73-15633
Twin-roller quenching of $Bi_2Sr_2Ca_2Cu_3O_{10}$ melts.—73-07185

**quicklime,**
Burning moderate quicklime for aerated fly ash concretes in vertical kiln.—73-10706
Emergence and duties of the International Lime Association (ILA) and the European Lime Association (EuLA).—73-09944
History of quicklime production and use from early times to the industrial revolution.—73-09982
Influence of additives on the expansive stress of quicklime.—73-00110
Influence of hydration degree and pore structure on the expansive stress of nonexplosive demolition agent.—73-10008

**R-curve,**
Effect of thermoelastic anisotropy on the *R*-curve behavior of monolithic alumina.—73-17295
Effects of residual stress and frictional sliding on *R*-curve behavior in fiber-reinforced ceramics.—73-06398
Evaluation of critical defect size of ceramics based on *R*-curve method.—73-06407
Experimental *R*-curve behavior in partially stabilized zirconia using moire interferometry.—73-06412
Flat *R*-curve from stable propagation of indentation-cracks in coarse-grained alumina.—73-06422
Flat and rising *R*-curves for elliptical surface cracks from indentation and superposed flexure.—73-06423
Interrelation between flaw resistance, $K^R$-curve behavior, and thermal shock strength degradation in ceramics.—73-06465
Interrelation between flaw resistance, *R*-curve behavior, thermal shock strength degradation, and stress-strain behavior of ceramics.—73-06466
Load–cycling technique for *R*-curve behavior: application to a low-cement refractory.—73-10738
Method and some results of the investigation of *R*-curves in ceramics.—73-09646
*R*-curve behavior in a gas-pressure-sintered silicon nitride.—73-13581
*R*-curve behavior in $Al_2O_3$-$ZrO_2$-SiC whisker composite.—73-13582
*R*-curve and compliance change upon renotching.—73-03347
*R*-curve and fatigue behavior of gas-pressure-sintered silicon nitride.—73-06504
*R*-curve behavior and its effect on strength for advanced ceramics.—73-06505
*R*-curve behavior of alumina and PSZ at ambient and high temperatures.—73-06506
*R*-curve behavior of ceramics.—73-06507
*R*-curve behavior of PZT ceramics near morphotropic phase boundary.—73-06508
*R*-curve behavior of silicon nitride ceramics under a cyclic loading condition at elevated temperatures.—73-17418
*R*-curve properties of alumina measured by stable fracture test in bending.—73-06509
Universal *R*-curve of crack propagation resistance in ceramic composites.—73-06548

**radiation,**
Applications of microwave radiation in environmental remediation technologies.—73-06556
Detection of optical radiation with bismuth-containing high-$T_c$ films.—73-01518
Directional emissivities of semitransparent media: cases of dihedron, infinite cylinder, and cone.—73-07012
Discoloration of alumina ceramics with ultraviolet radiation and elucidation of its mechanism.—73-16449
Effect of radiation on longevity of light guides.—73-00331
Effect of radiation treatment on durability of light guides.—73-00461
Evaluation of radiation-synthesized clinker.—73-09953
Generation of tunable coherent vacuum uv radiation in $LiB_3O_5$ crystals.—73-01415
Glasses doped by $Cu^+$, $Cr^{3+}$, $Ce^{3+}$, $Mn^{2+}$ and their optical properties and potential application for high-intensity radiation.—73-14198
Green-colored infrared and ultraviolet radiation absorbing glass and method of producing [the] same.—73-14543
Interactions of wide band-gap single crystals with 248-nm excimer laser radiation: I, MgO.—73-09469
Local crystallization of titanium-containing glasses under the action of laser radiation.—73-00652
Modification of the spectrum of shallow states in GaAs by the action of laser radiation pulses.—73-01250
Powerful continuously tunable parametric generator of ir radiation on $LiNbO_3$ crystals with high optical homogeneity.—73-02674
Radiation effects on wet and dry oxide metal-oxide-semiconductor devices.—73-01294
Radiation resistance in cast-stone materials.—73-02678
Surface treatment of glass and ceramics using XeCl excimer laser radiation.—73-07178

**radioactive materials,**
Alkali-activated slag–cement-based radioactive waste forms.—73-00019
Immobilization of radioactive ash in glass.—73-01747
Immobilization of radioactive wastes in glass.—73-01748
Mathematical modeling of physicochemical characteristics of concrete in immobilization of radioactive wastes.—73-00131
Microstructure of glass composite materials in immobilization of radioactive wastes.—73-01754
Microstructure of materials of glass composition for immobilization of radioactive wastes.—73-00516
Progress of research and development of high-level radioactive waste materials.—73-12011
Use of local clays for vitrification of radioactive wastes.—73-01759
Use of local loam in vitrifying radioactive wastes.—73-01760

**Raman spectroscopy,**
Characterization of carbon-carbon composites by laser Raman spectroscopy.—73-17114
CuO chain contribution to the electronic Raman scattering of a $YBa_2Cu_3O_7$ single crystal.—73-04693
Dependence of Raman light scattering line shape on scattering geometry in $YBa_2Cu_3O_{7-x}$.—73-15413
Electrochemical synthesis and in situ Raman spectroscopy of thin films of titanium dioxide.—73-02810
Infrared and Raman scattering studies of apex anharmonicity in high-$T_c$ cuprates.—73-11807
Phonon Raman scattering study of $Nd_{2-x}Ce_xCuO_4$.—73-05457
Polariton dispersion relation and stimulated Raman scattering from 132 $cm^{-1}$ *E* mode in α-quartz.—73-05615
Raman scattering and resistivity measurements for ion-irradiated $YBa_2Cu_3O_7$ epitaxial films.—73-01643
Raman scattering in layer indium selenide under pressure.—73-15139
Raman spectrum of $Sr_{0.61}Ba_{0.39}Nb_2O_6$.—73-01429
Structural distortions in diamond from coherent anti-Stokes Raman spectroscopy data.—73-16322
Symmetry lowering due to site occupation disorder in vibrational spectra of gehlenite $Ca_2(AlSi)AlO_7$.—73-12709
Utilization of Raman spectroscopy in tribochemistry studies.—73-08456

**rare earths,**
ΔE effect in rare-earth phosphates $RPO_4$.—73-16438
Analysis of rare-earth elements in silicates by ion microprobe using doubly charged ions.—73-05355
Calculations of the Faraday rotation in RE-substituted iron garnets.—73-04592
Carbides of Rare-Earth Metals: Phase Diagrams of R.E.M.-C Systems.—73-13650
Combustion synthesis and properties of fine-particle rare-earth-metal zirconates, $Ln_2Zr_2O_7$.—73-16677
Comparative study between $(RE_{1-x}Pr_x)Ba_2Cu_3O_{7-\delta}$ with $x$=0 or 0.3.—73-08004
Coordination of atoms in structures of ternary compounds of rare-earth element–transition element–silicon systems.—73-16070
Crystal and magnetic structures of $Ca_3NdRuO_6$, $Ca_3HoRuO_6$, and $Sr_2ErRuO_6$.—73-02175
Crystal field in heterodesmic compounds.—73-16077
Current status and future aspects of bonded rare-earth magnets.—73-04601
Dc magnetization measurements in $Eu_2CuO_4$:$Gd^{3+}$.—73-04602
Densification behavior of compression-molded resin-bonded rare-earth magnets.—73-15311
Determination of high-frequency pseudosurface mode velocity in high-$T_c$ superconducting $RBa_2Cu_3O_{7-y}$ (R=Tm, Er, Ho, Dy, Gd, Eu, Sm, Nd, Pr) single crystals by Mandelstamm-Brillouin light scattering spectra.—73-01520
Effect of fabrication conditions on microwave dielectric properties of $BaO$-$RE_2O_3$-$TiO_2$ ceramics.—73-14696
Effect of rare-earth additives on electromechanical properties of modified lead titanate ceramics.—73-00952
Effect of rare-earth elements on microstructure and wear resistance of laser-remelted iron alloy coatings containing metalloids.—73-06776
Effect of rare-earth elements on microstructure and wear resistance of laser-remelted iron alloy coatings containing metalloids.—73-13828
Effect of rare-earth ions on the phase transition of $Na_2SO_4$ crystals.—73-02245
Effect of rare-earth oxide addition on the thermal conductivity of sintered aluminum nitride.—73-02587
Electrical properties of rare-earth monophosphides.—73-02602
Electrical relaxation of dimers in rare-earth-doped calcium fluoride.—73-05388
Electron structure and mechanism of excitation of the rare-earth ions in the III-V semiconductors.—73-04311
Electron structure of rare-earth impurities in III-V compounds (a review article).—73-11186
Electronic properties and their relations to optical properties in rare-earth-doped III-V semiconductors.—73-04313
Epitaxial rare-earth fluoride insulating layers on semiconductors: structure, phase transitions, and interface reactions.—73-11197
ESR of rare-earth impurities ($Dy^{3+}$, $Er^{3+}$, $Yb^{3+}$) in the narrow gap semiconductor PbTe.—73-04330
Excitation energy transfer of $Nd^{3+}$-$Yb^{3+}$-$Er^{3+}$ in several glasses.—73-03730
Formation and magnetic properties of rapidly quenched $R_2Fe_{17}C_x$ (R=Gd and Ho) compounds with higher C concentrations.—73-05569
Furnace technology for the manufacture of rare-earth permanent magnets.—73-01954
Glass industry represents an important market for rare earths.—73-12275
Growth and some properties of $Na_{0.5-x}R_{0.5+x}F_{2+2x}$ single crystals (R=Y, Dy–Ln; $x$=0.1 and 0.15) with fluorite structure.—73-16501
Imitation agate red ceramic pigment of rare earths.—73-10856
Influence of impurities on the luminescence quantum efficiency of (La, Ce, Tb)$PO_4$.—73-04118

Interaction of niobium(IV) oxide with the rare-earth oxides.—73-12606
Interaction of the titanates of the rare-earth elements ($LnTiO_3$) with sulfur.—73-02297
Irreversible phenomena in the absorption of electromagnetic field in HTSC plates.—73-08117
Judd-Ofelt analysis and multiphonon relaxations of rare-earth ions in fluorohafnate glasses.—73-00508
Kinetics of the luminescence of isoelectronic rare-earth ions in III-V semiconductors.—73-04378
Local structures of rare-earth ions in glasses: the crystal-chemistry approach.—73-14029
Luminescence of divalent and trivalent rare-earth ions in SYAM-fluoride glass.—73-10450
Magnetic and crystal structure of [polycrystalline] rare-earth cuprates $R_2BaCuO_5$ [R=Dy, Ho, Er, Tm, Yb].—73-16205
Magnetic anisotropy of dysprosium and terbium orthochromites.—73-15332
Magnetic properties of perovskite-structure rare-earth orthomanganites.—73-15341
Magnetic resonance and magnetic ordering in the oxygen-deficient $RBa_2Cu_3O_x$ superconductors.—73-04762
Magnetoelastic properties of rare-earth cuprates $R_2Cu_2O_5$ [R=Tb–Lu, Y].—73-17374
Magnetoelastic waves in orthoferrites with non-Kramers rare-earth ions.—73-07964
Metallike electrical resistivity and excess electrical resistivity of rare-earth cobaltites.—73-16541
Microelectronic devices: prospects for rare earths.—73-04405
MOVPE of rare-earth-doped III-V semiconductors.—73-04412
Nondestructive concentration measurements of rare-earth ions in doped glasses.—73-06944
Nonresonant-type third-order optical nonlinearity of rare-earth-oxide-containing $GeO_2$ glasses.—73-03805
Novel electronics enabled by rare-earth arsenides buried in III-V semiconductors.—73-04421
Novel $R_2Ba_{1.25}NiO_{5.25}$ (R=Tm, Yb, Lu) structure type.—73-02363
Optical activation of ion-implanted rare earths.—73-04424
Optical gain in glass fiber doped with rare-earth ions.—73-03806
Phase separation in rare-earth-doped $SiO_2$ glasses.—73-06952
Polycrystalline *t*-$ZrO_2$($Ln_2O_3$) formed by displacive transformations.—73-09656
Preparation and properties of gallium phosphide doped by rare-earth elements.—73-04450
Preparation of rare-earth-oxide dispersion tungsten powder by spray dry method and its sintering.—73-09268
Pressure effect on the superconducting transition temperature of $Dy_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$.—73-04793
Properties of epitaxial InAs doped with rare-earth elements.—73-15125
Quartz glass doped with rare-earth element and production thereof.—73-03964
Radiative and nonradiative transitions from the $^1T_2$ upper excited state of the $Ni^{2+}$ ion in rare-earth garnet crystals.—73-02679
Raman spectroscopy of some (M)$Ba_2Cu_3O_{7-\delta}$ "cocktails."—73-11886
Rare-earth applications in III-V crystal growth technology.—73-04463
Rare-earth doping by ion implantation and related techniques.—73-04464
Rare-earth oxide powder.—73-12401
Rare-earth-containing high-silica zeolite having pentasil type structure and process for the same.—73-02066
Science and technology in composite materials—permanent magnetic materials based on interstitially modified rare-earth iron nitride alloys.—73-04648
SiAlON ceramics sintered with yttria and rare-earth oxides.—73-06039
Silicon nitride containing rare-earth-silicate intergranular phases.—73-06043
Specific heat and characteristic temperature of yttrium- and gadolinium-aluminum borates.—73-02438
Stabilization and thermoelectric properties of rare-earth chalcogenides $\gamma$-$LaS_y$.—73-08740
Structural changes in isostoichiometric family of $Cs_2[Ln(NO_3)_5(H_2O)_2]$ [Ln=La, Ce, Nd].—73-02447
Structure defects in rare-earth-iron carbides with the hexagonal $Th_2Ni_{17}$ structure type: a study by means of high-resolution electron microscopy.—73-03113
Subsolidus phase relationships in the systems Re-Al-O-N (where RE=rare-earth elements [Ce, Pr, Nd, and Sm]).—73-02471
Superconductivity and microstructure of powder-melting-processed YHoBaCuO and YGdBaCuO superconductor.—73-08226
Synthesis and structure of $R_2TiO_5$ [R=La–Lu, Y] thin films.—73-03039
Synthesis and structure of the rare-earth titanates, $R_2TiO_5$, in films.—73-13457
Synthesis and X-ray diffractometry study of rubidium rare-earth nitrates, $Rb_2[Ln(NO_3)_5(H_2O)_2]{\cdot}2H_2O$, *where Ln*=La, Ce.—73-16354
Synthesis of a new series of rare-earth vanadates $RBa_2V_3O_{11}$ (R=Y, La, Pr, Nd, Eu, Gd, Dy, Ho, Er, Tm).—73-05508
Temperature dependences of the lattice constants and thermal expansion coefficients of $Sm_3Fe_5O_{12}$ and $Er_3Fe_5O_{12}$ single crystals.—73-04661
Tensor of crystalline electric field gradient at copper sites in $RBa_2Cu_3O_7$ lattices [R=Nd, Gd, Y, Yb]. Sternheimer's coefficient of $Cu^{2+}$ centers.—73-15650
Ternary silicon–rare-earth nitrides and process for their preparation.—73-12529
Tetragonal↔monoclinic phase transition temperature of rare-earth-doped zirconia prepared by arc melting.—73-08774
Tetragonal-to-monoclinic phase transition temperature of rare-earth-doped zirconia prepared by arc melting.—73-16366
Theory of rare-earth impurities in semiconductors.—73-04497
Thin films of (RE)$Ba_2Cu_3O_7$ [RE=Y, Pr, Eu, Gd, Ho] epitaxially grown in situ by excimer laser ablation: structural and superconducting behavior.—73-01693
Transport and magnetic properties of polycrystalline $Nd_{1.85}Ce_{0.15}CuO_{4-y}$ under applied magnetic fields.—73-04821
Upconversion and relaxation of high-lying states in rare-earth-doped ZBLAN bulk and fibers.—73-07095
Vibrational study of $R_2BaNiO_5$ (R=Y, Ho, Er, or Tm), $NiO_6$ 1-D chains, and $Tm_2BaNiO_5$ pyramids.—73-08790
Weak ferromagnetism induced by the external field above $T_c$ in $Gd_2CuO_4$.—73-04662

**raw materials,**
Alumina.—73-12254
American Chemet: combining TQM and SPC for total customer satisfaction.—73-03379
Are glassmakers consistent or just insistent.—73-10497
Automatic raw mix preparation process in the cement works of Vibo Valentia and Salerno.—73-09825
Bauxite.—73-12258
Beryllia.—73-12259
Biotechnology—state of the art and applications in ceramic technologies.—73-00893
Ceramic raw materials and their uses.—73-00895
Ceramic tile from raw material from Kazakhstan.—73-00896
Complex evaluation of waste from the electroplating industry as a secondary source of raw materials for silicate production.—73-08494
Developing high-performance refractories based on Chinese raw materials.—73-14583
Diamond, industrial.—73-12267
Discharge of the raw materials used in the production of chromium-oxide-based products from bunkers.—73-01774
Dry preparation of substandard raw materials.—73-03998
Effect of aging on properties of brickmaking raw materials: I.—73-10676
Effect of aging on properties of brickmaking raw materials: II.—73-10677
Effects of charge preparation technique and type of boron raw material on the working properties of molten glasses.—73-00618
Essential need for good housekeeping.—73-10527
Experience with moist screening of impure cement raw materials.—73-00086
Extension of the raw material base for keramzit production.—73-15903
Formation of $C_3S$ [tricalcium silicate] in the mixtures containing different silicate raw materials.—73-09968
Grinding, mixing, and blending—controlling the hazards.—73-12031
Impact of nontraditional raw materials on the formation and properties of clinker.—73-09996
Impact of recycled glass on the usage of primary raw materials.—73-01982
Industrial oxide raw materials.—73-01789
Influence of basic raw materials on the behavior of isostatically pressed flatware during porcelain bisque firing.—73-00914
Influence of raw mix burnability on cement clinker.—73-03487
Maximizing the performance of a sanitary ware formula.—73-07264
Mechanism of the drying process of raw materials for a glass batch.—73-07148
Metallurgical wastes—an important raw material base for ceramic industry.—73-05144
Methods of granulometric analysis: application in the granulometry control of raw materials.—73-08414
Modified bentonite.—73-05150
New data on raw mixes burning in dry process kilns on the basis of an artificial clayish component.—73-10064
Nonmetallic raw materials in former East Germany.—73-01990
Nontraditional types of ceramic pigments.—73-00919
Particle size measurement of ceramic raw materials.—73-08430
Polarographic determination of small amounts of nickel and cobalt in glasses and in some glass raw materials.—73-12178
Practical experience with raw material preheating on glass-melting furnaces.—73-03864
Preparation of ceramic raw materials through the dry process.—73-08358
Problems of slurry formation and processing of ceramic casting bodies caused by raw material quality.—73-00922
Property beneficiation of clay raw materials.—73-12059
Quality inspection of incoming raw materials.—73-15747
Raw material stockpiling techniques.—73-12294
Raw materials for the single firing of tiles.—73-07268
Reducing environmental pollution by using fly ash as a raw meal component.—73-03527
Safe burning of cement raw mixes.—73-03534
Safety and ecological problems in burning energy-saving raw materials.—73-10145
Synthesis of colored, nonfritted glazes based on mining-ore waste products.—73-00925
Thermal behavior of mineralized portland cement raw meal.—73-10179
Use of rasorite as a source of boron in borosilicate glasses.—73-00717
Using borax in the production of flat and container glass.—73-10615

**reaction bonding,**
Bonding of ceramic components made of reaction-bonded silicon nitride.—73-12413
Comparative study of microstructure and fracture behavior in reaction-bonded alumina.—73-03127
Effect of oxygen on the strength of reaction-bonded silicon nitride.—73-03271
Effect of processing parameters on phase and microstructure evolution in RBAO ceramics.—73-16737
Fabrication of low-shrinkage reaction-bonded alumina ceramics.—73-02826
Infiltration of reaction-bonded silicon nitride with equilibrium Y-Si-O-N melt.—73-05860
Joining of SiC using reaction-bonding methods.—73-05884
Processing and microstructure of postsintered reaction-bonded silicon nitride.—73-05996
Properties of reaction-bonded silicon carbide depending on graphite additions.—73-09660
Sintered reaction-bonded silicon nitride [SRBSN] by microwave [MW] heating.—73-06050
Transient liquid phase joining of reaction-bonded silicon carbide.—73-03659

**reactions,**
Ceramic surface reactions and carbon retention during nonoxidative binder removal: $Al_2O_3$/poly(methyl methacrylate) at 20–700°C.—*73-16666*
Effect of reaction products on the fracture resistance of a metal/ceramic interface.—73-03581
Effects of deicing salts on alkali-aggregate reaction.—73-09933
Interaction of $NO_2$ with copper phthalocyanine thin films: I. Characterization of the copper phthalocyanine films.—73-13405
Interaction of $NO_2$ with copper phthalocyanine thin films: II. Application to gas sensing.—73-12821
Interactions in the system KF-$CuF_2$-$BiF_3$.—73-16182
Interactions in the systems BaS-$Ln_2S_3$ (Ln=La, Nd).—73-02298
Kinetics of interaction between titanium diboride and molten glasses.—73-00364
Kinetics of reaction of $Si_3N_4$ with Ni.—73-00247
Nanophase oxide formation by intraparticle reaction.—73-13146
Physicochemical reaction heat during ceramic firing.—73-08432
Reaction between magnesia and carbon at high temperature.—73-00847
Reactions between $Bi_2Sr_2CaCu_2O_x$ superconducting oxide and metallic copper and their preventions.—73-11887
Reactions between $YBa_2Cu_3O_{7-x}$ superconducting oxide and metallic copper and preventions of them.—73-11888
Self-disseminating high-temperature synthesis: general principles.—73-16980
Synthesis and characterization of crystalline analogs of alkali-aggregate reaction products.—73-03543
Thermite reactions: their utilization in the synthesis and processing of materials[—review].—73-09376

**reactivity,**
Effects of glass reactivity, surface corrosion.—73-14166
Hydrogen reactivity as a structural probe for glasses.—73-06925
Reactivity of a Y-Ba-Cu-O superconductor with electrooptic crystals.—73-11889
Reactivity of alkoxysilanes studied by methods of theoretical chemistry.—73-09298
Reactivity of high-purity $ZrSiO_4$ sintered bodies for alkaline glass melts.—73-13489
Reactivity test for fine silicas and pozzolanic mineral additives.—73-08438
Semitheoretical method for the assessment of reactivity of fly ashes.—73-03537

**reactors,**
Gas-phase chemistry in a direct current plasma jet diamond reactor.—73-13069
Influence of mass transfer on homogeneity of etching in a planar reactor.—73-04366
Materials for structural and functional components in fission and fusion nuclear power reactors.—73-08300
Numerical simulation of hydrodynamics and heat transfer in a hot-wall CVD reactor.—73-13156
Plasma diagnostics of a dc arcjet chemical vapor deposition diamond reactor.—73-12860
Radiative heat transfer in hot-filament chemical vapor deposition diamond reactors.—73-13224
Remote plasma-etching reactors: modeling and experiment.—73-12186

**reclamation,**
Reclaimed ceramic material for use in road construction.—73-09743

**recombination,**
Recombination processes in 6H-SiC *p-n* structures and the influence of deep centers.—73-01299

**recording medium,**
Creation of high-functional magnetic thin films by electrochemical method.—73-15310
Magnetic recording medium rubbed with a super hard alloy blade containing tungsten carbide powder and cobalt.—73-01489
Magneto- and magnetooptical recording materials.—73-07963
Optical parameters of the film-type reversible recording media Al-$VO_2$-AK-113F and Al-$VO_2$-$Al_2O_3$.—73-05603
Recording media on the basis of porous glasses.—73-14266

**recrystallization,**
Point-defect–flux-stimulated solid phase recrystallization of amorphous silicon and structure modification in ion-implanted layers.—73-06173
Processing phenomena for recrystallized silicon carbide.—73-02980

**recuperators,**
High-pressure ceramic joint.—73-05216
Integrated recuperation of heat between kiln and atomizer.—73-12228

**recycling,**
Apparatus for recycling glass.—73-01845
Carbon recycling system using waste heat: studies on activated magnetite.—73-02004
Chemical technologies for global environment.—73-03386
Concrete recycled.—73-13697
Development of solidification technique for recycling of concrete wastes by hydrothermal hot-pressing and its mechanical property.—73-15714
Dutch goals for glass recycling.—73-10519
Gearing up for recycling 2000.—73-14390
How glassmaking wastes can be used as raw materials.—73-14406
Impact of recycled glass on the usage of primary raw materials.—73-01982
New electric infrared and recycling technology promises environmental and economic benefits for foundry industry.—73-09732
Preparation of reclaimed cement from waste concrete.—73-13764
Processing and recycling of the waste materials in ceramic tile industry.—73-10886
Processing systems for inorganic and toxic chemical wastes.—73-13637
Recycling of glass bottles in Japan.—73-10593
Recycling of glass wastes.—73-10594
Recycling waste laminated glass.—73-15750
Recycling wastewater.—73-15751
Refractory recycling developments.—73-07221
Refractory recycling.—73-14618
Utilization of industrial wastes and byproducts in cement industry.—73-10188
Utilization of waste FRP as resources.—73-10189

**reduction,**
Autocatalytic effect in the processes of metal oxide reduction: I, Kinetic model of reduction.—73-02145
Autocatalytic effect in the processes of metal oxide reduction: II, Kinetics of molybdenum oxide reduction.—73-02730
Ceramics made of slag obtained in aluminothermic reduction of niobium.—73-02007
Controlling stage of the calcium phosphate (tertiary) with natural gas reduction process.—73-16069
Ellipsometry and X-ray photoelectron spectroscopy study of $SnO_2$ reduction at the interface with sputtered a-Si:H.—73-08613
Fireclay refractories for service in reducing conditions.—73-00816
Internal reduction of (Mg, Cu)O.—73-08645
Making the most noise.—73-10561
Photoreduction and oxidation of amorphous indium oxide.—73-09536
Reduction of FeO dissolved in $CaO$-$SiO_2$-$Al_2O_3$ slags by Fe-C droplets.—73-17234
Reduction of supported iron oxide studied by temperature-programmed reduction combined with Mossbauer spectroscopy and XRD.—73-12674
Selecting an effective size-reduction system.—73-01830
Thermodynamic model for reducing $ABO_3$ perovskites by converted methane.—73-08779
Vanadia/titania catalysts in selective catalytic reduction of nitric oxide with ammonia.—73-02535
X-ray phase analysis and small-angle X-ray scattering study of the reduced layer of microchannel plates.—73-00427

**reduction-oxidation,**
Compositional effects on the iron redox state in model glasses for nuclear waste immobilization.—73-08289
Contribution to basicity of technical glass melts in relation to redox equilibria and gas solubilities.—73-00602
Determination of reduction components in glassmaking raw materials—report of the International Commission on Glass Technical Committee 2, "Chemical Durability and Analysis."—73-07117
Development of a combined antioxidant for a periclase-graphite ramming body.—73-00799
Effect of the batch redox number and melting temperature on the redox equilibria in soda-lime industrial glass.—73-00617
Influence of water content and basicity on redox ratio—consequences on radiation heat absorption and emission of glass melts during fusion and processing.—73-10556
Kinetics of oxidation-reduction processes in $YBa_2Cu_3O_x$.—73-15529
Redox control in industrial glass melting by means of zirconia-based sensors.—73-01968
Regularities of the oxidation-reduction reactions in mixtures of carbides and oxides of metals of the IVA and VA groups.—73-12675
Spectrophotometry as a tool for redox process control.—73-00705
Thermodynamic modeling of cement degradation: impact of redox conditions on radionuclide release.—73-03548

**refining,**
Comparative model study of antimony and cerium oxide refining.—73-00599
Evaluation of the efficiency of refining molten metals by filtration.—73-04000
Glass refining at reduced pressures.—73-10544
Glass-melting furnace with flexible melting capacity.—73-01955
Influence of glass compostion on refining.—73-14410
Innovation in glass melting.—73-12227
Refining of glasses under subatmospheric pressures: II.—73-14487

**reflection,**
Effect of technological parameters on thin-film reflection.—73-00464
Modification of the reflection coefficient of III-V semiconductors by pulsed laser bombardment.—73-07677
Multiwavelength pyrometry to correct for reflections.—73-08424
Photoreflection of GaAs.—73-11391
Reflection spectrum and coloring of mixed black glazes colored by ions.—73-10892

**reflectivity,**
Clean and oxygen-covered InP(110) surface differential reflectivity.—73-01103
Relationship between the composition and the reflection coefficient of thin films.—73-00542

**refraction,**
Nature of double refraction of microporous glasses.—73-00519

**refractive index,**
Carrier-induced change in the refractive index of $InAs_{1-x}Sb_x$.—73-12748
Concentration criteria for the focusing distribution of the refractive index in gradient glasses.—73-00439
Effects of OH group [680–850 ppm] on distribution of refractive index in silica glass.—73-00471
High refractive index glasses for cinematography.—73-00498
High refractive index glasses.—73-14202
Refractive index of densified silica glass.—73-07071
Refractive indices of lithium niobate as a function of wavelength and composition.—73-02681
Structural relaxation of glass BK7 during the development of refraction index gradients by Na/K exchange at $T \leq T_g$.—73-00550
Systematic study of refractive index variations with composition in heavy metal fluoride glasses.—73-07082
Variation of the refractive index and polarizability of sapphire under high pressures.—73-02722

**refractories blast-furnace,**
Thermomechanical behavior of slide gate refractories.—73-14631

**refractories brick,**
Carbon bricks for blast-furnace hearth lining under the effect of hot metal.—73-14577
Change of spinel in magnesia chrome bricks used in vacuum-oxygen decarburization [VOD] refining furnaces.—73-07198
Computer application to the refractory firing process development.—73-14581
Development and application of refractories for tuyere zone of nickel converters: II.—73-07204
Development of $Al_2O_3$-C-SiC brick for blast-furnace taphole.—73-14584
Development of high-alumina brick with good thermal shock resistance.—73-10718
Development of semigraphitized silicon carbide–carbon brick.—73-07206
Effect of ultrafine powder on properties of rebonded fused magnesia chrome refractories.—73-07207
Effects of additives on magnesia alumina spinel bricks.—73-07208
Effects of rare-earth oxides and silica on sintering and microstructure of $Al_2O_3$-$ZrO_2$-$SiO_2$ (AZS)-40 brick.—73-10725
Experience with magnesium-aluminum-spinel bricks in a 3000 ton/day [cement] rotary kiln.—73-10727
Fabrication of electrofusion-cast zircon mullite brick.—73-10728
Fabrication of quality silica brick using barium salt–lime slurry as mineralizer.—73-07212
Implications of toughening of clay brick on performance.—73-03980
Improvement of the life of lightweight refractory bricks and radiant roof burners.—73-14595
Lining recommendation for high thermally stressed lime recovery kilns.—73-04010
Low-cement castable replaces silicon carbide bricks used to line shaft furnace at CCR.—73-10739
MgO-MgO·$Al_2O_3$-C brick.—73-10743
Microstructure and properties of pyrophyllite fire bricks.—73-07218
Microwave radiation of refractory bricks: II, Experiments and results.—73-01958
Microwave radiation of refractory bricks: III, Conclusions for practical application.—73-01959
New types of calcia mineralizers for silica brick production.—73-04011
Recent development of China's refractories for glass furnaces.—73-10758
Recent findings in the development of magnesia-carbon brick.—73-10759
Thermal shock resistance of silica brick for a coke oven by the panel method.—73-10773
Thermomechanical properties of $Al_2O_3$-C slide plate brick.—73-10776
Wear mechanism of fused dolomite–graphite brick.—73-07229
Wear mechanism of periclase spinel brick for crown of open hearth furnace.—73-07230

**refractories casting,**
Application of rheology in monolithic refractories.—73-14571
Effect of stainless steel fibers on thermal properties of castable refractories.—73-00805
Near-net-shape casting and refractories needed to develop it.—73-00832
Particle size control for high-solids castable refractories.—73-14608

**refractories cement,**
Hardening processes for some refractory binding systems—kinetic considerations and mechanisms.—73-14593
Mechanical activation of periclase cements.—73-14603
Theory and practice of fume silica–aluminous cement interactions.—73-03545

**refractories coatings,**
Evaluation of plasma-arc-sprayed refractory metal crucible coatings for containing molten ceramic oxides.—73-06787
Function and advantageous uses of protective refractory coatings.—73-04004
Sprayed ceramic fiber substrates. Reinforcing and anchoring linings with refractive textiles.—73-00867

**refractories concrete,**
Concrete shapes based on zirconia and a calcium-aluminum zirconate binder.—73-10709
Concrete shapes based on zirconia and aluminum-barium zirconate cement.—73-10710
Melting temperatures of the alkali-earth aluminates and their mixtures with $ZrO_2$ and $Al_2O_3$ in the atmosphere of combustion gases.—73-10741
Refractory concretes of a new generation: relationship between their composition, structure, and properties.—73-14614
Testing the hot-temperature strength of ceramic pins.—73-03365

**refractories fused cast,**
Chemical reactions during the manufacture of electrically fused refractories: I.—73-00786
Comparative quality characteristics of fused cast baddeleyite-corundum and corundum refractories.—73-14579
Corrosion of fusion-cast alumina refractories by silicate melts.—73-03996
Emission properties of fused cast refractories in the ir region.—73-00812
Fused-cast high-zirconia blocks in an electric furnace for lead crystal glass.—73-10730
Fusion cast refractories for the glass industry.—73-10731
Glassy phase in ZAS refractories [studied] with Raman probe.—73-14592
High-resistant fused cast refractories for glass-melting furnaces: development and optimal application.—73-00819
High-zirconia fused-cast refractories: a solution to defect and corrosion problems in special glasses.—73-00821
Influence of sodium chloride on the corrosion and exudation of fused cast refractories.—73-14597
Inhomogeneous characteristics of fusion-cast refractories.—73-07217
New high-resistant fused cast refractories for glass-melting furnaces.—73-14606
Present state and future outlook of electrofused magnesia.—73-00838
Recent development of fused high zirconia refractory.—73-14612
Refractories based on fused materials of mullite composition.—73-04015

**refractories industry,**
Outlook of refractory development in China for 1990's.—73-04012
Progress in Japanese refractory industry.—73-04014

**refractories magnesite ($MgCO_3$),**
Development of rebonded brick of electrically fused high-purity periclase–magnesia alumina (MA) spinel.—73-07205
Effect of mechanical activation of basic refractories and mixes on sintering.—73-14587
Fabrication of quality magnesite-chrome brick.—73-04001
High corrosion-resistant magnesite chrome refractories for RH degassing lower vessel.—73-00818
Magnesite chrome refractories and its usage in nickel converter.—73-14601
Reaction processes in the interior of an MgO-carbon brick with boron carbide additive.—73-13891

**refractories,**
Accelerators for refractory magnesia.—73-00885
Advanced techniques for measuring rheology of cement-based refractories.—73-08371
Advantages of using high-zirconia refractories in lead crystal glass electric furnaces.—73-10694
Alternative regenerator systems for the 90's.—73-03990
Aluminosilicate refractories—their quality and resistance to corrosive agents in cement and lime kilns.—73-10695
Aluminum nitride refractory materials and methods for making the same.—73-15976
Analysis of the sedimentation curve obtained during express-analysis of the dispersion (granulometric composition) of refractory powders.—73-00774
Anisotropy of the properties of magnesia-graphite refractories.—73-07196
Apparatus which comes in contact with molten metal and composite member and sliding structure for use in the same.—73-04027
Application and development of CAE/CAD [computer-aided engineering/computer-aided design] system in refractory industry.—73-14568
Application of basic refractories for regenerators.—73-03991
Application of computer to estimation of refractory wear and solidified-layer distributions in the blast-furnace hearth.—73-14570
Applications of steel fiber-reinforced refractory to kiln car.—73-10700
Behavior of Al on microstructure and properties of MgO-C-Al refractories.—73-03992
Behavior of Al on microstructure and properties of MgO-C-Al refractories.—73-14573
Behavior of carbon obtained from pitch and resin added to carbon-containing refractories.—73-14574
Behavior of carbon-containing refractories at high temperature.—73-00780
Bonding and recent progress of monolithic refractories.—73-10703
Bonding of bodies of refractory hard materials to carbonaceous supports.—73-14634

Bubble generation at glass/refractory interfaces: a review of fundamental mechanisms and practical considerations.—73-10705
Burned refractories with low soluble chromium.—73-14635
Calculation of refractoriness of ceramic products.—73-12113
Carbon-containing carbon-bonded refractories with improved physical properties.—73-14636
Catalytic converter having a metallic monolith mounted by a heat-insulating mat of refractory ceramic fibers.—73-05196
Ceramic adhesive composition and use thereof.—73-04028
Ceramic fiber insulation structure with readily repairable perimeter insulation.—73-14637
Ceramic linings for waste incinerators: I.—73-00784
Ceramic welding process.—73-04965
Chrome-corundum refractory in the packing for a glass furnace regenerator.—73-00787
Clay-graphite refractory crucibles containing variable amounts of silicon carbide.—73-00789
Coated refractory composition and method for making the same.—73-00886
Composite heat-insulating bodies and a method for producing [the] same.—73-10779
Composite of refractory material.—73-14638
Composite refractory materials.—73-12356
Continuous casting plant for graphitized alumina refractories.—73-03994
Continuous process inspection of refractory ceramics.—73-07201
Control of permanent shrinking of recycled castable refractories from waste refractories of $Al_2O_3$-$SiO_2$.—73-00791
Corrosion test for BOF [basic oxygen steelmaking furnaces] tap hole refractories.—73-00793
Corundum-chromite refractories with improved thermal shock resistance.—73-00795
Design of refractories and bindings for modern high-productivity pyrometallurgical furnaces.—73-10712
Destruction of refractories by a high-temperature gas stream.—73-00796
Destructive processes in silicon carbide refractories in a high-temperature gas flow.—73-03997
Determination of $B_4C$ in refractories containing graphite.—73-00797
Developing high-performance refractories based on Chinese raw materials.—73-14583
Development and application of $\alpha$-$Al_2O_3$ fiber-reinforced refractory plastics.—73-10713
Development and application of semidry hot gunning mix for converter.—73-10715
Development of $Al_2O_3$-C refractories for iron-ore smelting reduction furnace.—73-00800
Development of an ultrasonic method to determine the residual thickness of refractory blocks.—73-08392
Different forms of refractories for the service conditions in coke ovens.—73-00801
Dry refractory composition.—73-10780
Effect of andalusite, sillimanite, and kyanite on phase composition and thermal shock resistance of refractories.—73-03999
Effect of iron oxides on the service life of periclase-spinellide refractories.—73-10722
Effect of iron oxides on the service life of periclase-spinellide refractories.—73-14586
Effect of microcoolers on the structure and properties of melt-cast baddeleyite-corundum refractories.—73-00802
Effect of microcoolers on the structure and properties of melt-cast baddeleyite-corundum refractories.—73-00803
Effect of temperature on the corrosion of refractories in glass melts (review).—73-00806
Effect of temperature on the corrosion of refractories in glass melts—review.—73-00807
Effects of additives on properties of basic refractories.—73-10724
Effects of Al, Si, and $B_4C$ additives on oxidation resistance of $Al_2O_3$-C refractories.—73-07209
Effects of high-temperature vaporization of impurities from refractory on the colorization of zirconia surface.—73-14589
Electronic Structure of Refractory Carbides and Nitrides.—73-09763
Energy savings and the features of unshaped refractories.—73-14590
Fireclay refractories for service in reducing conditions.—73-00816
Formation of precipitated-complex spinel in magnesia-chrome refractories and its characteristics.—73-10729
Gas-permeable forsterite refractories.—73-00817
Gunning technology used to speed refractory plastic installation.—73-10732
Heat treatment of resin-bonded refractories in an atmosphere of volatilization and decomposition products of the binder.—73-04006
High neutron absorbing refractory compositions of matter and methods for their manufacture.—73-03684
High-temperature abrasion of refractories.—73-00820
Hotter refractories increase the risk of downward drilling.—73-10735
Improvement on repair technique of tap hole sleeve for BOF [basic oxygen steelmaking furnace].—73-00824
Improving the thermal shock resistance of siliceous refractories.—73-00827
Inhouse refractory capability for U.S. specialist glassmaker.—73-14599
Insulating ceramic fiber batting module, anchoring system, ladle cover assembly and method of assembly.—73-00887
Insulating refractory.—73-04032
Insulation material.—73-10782
Is the refractories industry able to cope with the steadily increasing demand for ceramic fast-firing technology.—73-10737
Jet spraying for refractory linings in USTK units.—73-00829
Load–cycling technique for *R*-curve behavior: application to a low-cement refractory.—73-10738
Low-sodium zircon refractory and fused silica process.—73-14639
Magnesia chrome refractories—quality and performance.—73-10740
Magnesia-carbon refractory compositions for slide gate plates and method of manufacture.—73-04033
Materials synthesis on the basis of ultrafine refractory compound powders.—73-13128
Metal guiding separation rings for horizontal continuous casting machines.—73-00831
Method for insulating a furnace and furnace manufactured according to the method.—73-05139
Method of estimating the limiting strain in cast refractories on crystallization and annealing.—73-01912
Method of making a complex ceramic core for use in metal casting process.—73-04035
Method of making refractory ceramic products and the products thereof.—73-04036
Method of nitriding refractory metal articles.—73-10331
MgO-C brick containing a novel graphite.—73-04037
Monitoring thermal-shock damage development in refractories by stress-wave-factor technique.—73-12169
Mullite grain mixes for steel plant refractories.—73-10745
Multistepped submerged nozzle for continuous casting.—73-14605
New die designing for refractory testing bar.—73-04933
New kinds of refractories for ferrous metallurgy.—73-10746
New refractory practices in the anode casting department of Noranda Minerals' Horne Smelter, Rouyn-Noranda, Quebec[, Canada].—73-10747
New technologies widen usage of monolithic refractories for tundishes.—73-10748
Nonaqueous composition for slip casting or cold forming refractory material into solid shapes.—73-01873
Nondestructive testing of refractories in the glass industry.—73-01922
Optimization of the composition and properties of plastic shapes for producing silicon carbide refractories.—73-14607
Oxidation of calcia-stabilized zirconia–graphite refractories containing silicon and/or silicon carbide additives.—73-10750
Penetration of $Al_2O_3$- and $CaF_2$-containing secondary refining slags into magnesia-dolomite refractories.—73-14609
Periclase-carbon refractories bonded with lignosulfonates and complex additives.—73-00835
Permeability of molten Cu or Ni into the calcium oxide refractory.—73-10753
Phase analysis and wear mechanism of basic refractories.—73-10754
Phase composition of sintered lime refractories with $TiO_2$ addition.—73-14610
Phase equilibria, microstructure, and properties of some MgO-$Al_2O_3$ refractories.—73-10755
Possibilities of decreasing dust releases in transportation and firing of refractory raw material as the result of local dust removal.—73-01812
Powder mixture for monolithic refractories containing graphite and a method of making thereof.—73-00889
Principles of development of protective coatings on refractories.—73-00842
Process for the manufacture of a rigid insulating refractory material and material thus obtained.—73-04038
Progress in application technology of refractories to steel industry.—73-04013
Progress in basic research of refractories in China.—73-14611
Quality assurance during manufacture of refractory kiln furniture according to DIN ISO 9000.—73-00845
Reaction between chrome ore and slag.—73-00846
Refractories based on hollow periclase-containing granules.—73-00851
Refractories based on sintered and fused periclase chromite.—73-00852
Refractories for casting process.—73-10786
Refractories for lining mobile mixtures.—73-00853
Refractories for special glasses.—73-10760
Refractories for the New World Economy UNITECR '93 highlights.—73-04016
Refractories for use in firing ceramics.—73-00890
Refractories history—1950 to 1990.—73-10761
Refractories in fluidized-bed combustors.—73-14613
Refractories in South Africa.—73-10762
Refractories: traditional or advanced ceramics.—73-10763
Refractory beam for tundish purging.—73-10764
Refractory channel composition based on production waste from silicon carbide articles.—73-00854
Refractory characteristics of spinels with various MgO contents.—73-00855
Refractory concerns within the glass container industry.—73-07220
Refractory for gas blowing for molten metal refining vessel.—73-04040
Refractory installation and tearout.—73-14615
Refractory lining of a furnace for pyrolysis of dichlorethane.—73-14616
Refractory lining of waste incineration plants.—73-10765
Refractory materials between traditional ceramics and advanced ceramics.—73-10766
Refractory materials consisting of grains bonded by a binding phase based on aluminum nitride containing boron nitride and/or graphite particles and process for their production.—73-10787
Refractory materials for kiln furniture in the ceramic industry.—73-00856
Refractory products for refining molten metals by filtration.—73-00857
Refractory recycling developments.—73-07221
Refractory recycling.—73-14618
Refractory-glass outgassing—a test procedure evaluation.—73-14619
Relation between corrosion rate of magnesia refractories by molten slag and penetration rate of slag into refractories.—73-04018
Relation between corrosion rate of magnesia refractories by molten slag and penetration rate of slag into refractories.—73-14620
Relationship of emissivity of refractories to temperature and wavelength.—73-04019
Role of sintering additives in the production of lime refractories.—73-04020
Segmented ceramic liner for induction furnaces.—73-14640
Self-propagating high-temperature synthesis (SHS): SHS-based technology.—73-14624
Service of refractories in steelmaking plants.—73-00860
Service of refractory materials in shaft furnaces with melting of ferroalloys by the thermal reduction method.—73-00861
Si-Ti-C-O fiber addition to alumina-graphite refractories.—73-00862
SiAlON-bonded silicon carbide refractories for blast furnace.—73-00863
SiAlON-containing silicon carbide refractories.—73-10769
Silicon carbide refractory composition and products.—73-14641
Sprayable refractory composition.—73-10788
Stability of metals, carbides, and oxides in carbon-magnesia refractories.—73-00868
Static plate corrosion test, a novel method for the reproducible determination of the corrosion rate of refractories by glass melt.—73-14625
Stress relaxation in refractories during different modes of loading.—73-00869
Study by finished elements of the behavior of refractive pieces thermally solicited.—73-00873
Subsecond measurements of optical properties in the spectral range 0.4–1.1 μm near high-temperature phase transitions in refractory oxides.—73-16604
Surface treatment of graphite for monolithic refractories.—73-00874
Technical and environmental aspects of the use of phenolic resins in modern day refractories.—73-14626
Technical ceramics for refractory applications.—73-04021
Testing of magnesia-spinellide refractories for gas-oxygen refining of corrosion-resistant steels.—73-00876
Theoretical and practical principles for obtaining lightweight refractories from self-densifying bodies.—73-14629
Theoretical experimental method for evaluating the limiting stressed state of cast-melted refractories on crystallization and annealing.—73-00879
Theory of heat treatment of resin-bonded refractories.—73-04023
Thermal stress analysis of fused-cast AZS refractories during production: I, Industrial study.—73-10774
Thermal stress analysis of fused-cast AZS refractories during production: II, Development of thermoelastic stress model.—73-10775
Thermal stress analysis on the refractories at the bottom part of top and bottom blowing BOF (basic oxygen furnace).—73-14630
Thermomechanical behavior of refractory linings.—73-04024
Top paving solution for glass furnace bottoms.—73-07227
Total emissivities of refractories in vacuum.—73-10777
Trace determination of uranium, thorium, calcium, and other heavy metals in high-purity refractory metal silicides, niobium, and silicon dioxide with isotope dilution mass spectrometry.—73-15857
Trends in refractory technology.—73-07228
Tribochemical aspects of producing binders for refractory coatings.—73-00881
Ultra-high-strength refractory silicon carbide fiber and process for producing [the] same.—73-16022
Universal arch blocks for adaptable forehearths.—73-10778
Use of refractory concrete based on silicate-natrium composite binders.—73-13792
Volume stability of escolaite materials corroded by basalt melt.—73-04026
VPS [vacuum plasma spray] forming of refractory metals and ceramics for space furnace containment cartridges.—73-06873
Warm pressing as a forming process for ceramics: II, Application.—73-00882
Wear mechanism of monolithic linings for steel ladles.—73-00884

**regenerators,**
Alternative regenerator systems for the 90's.—73-03990
Application of basic refractories for regenerators.—73-03991
Energy reduction by z-type checker blocks in regenerators.—73-00813
Improvements of basic knowledge of heat transfer in regenerators based on industrial-scale experiments.—73-15878
Mexican success with regenerative ceramic burners.—73-12230
Refractory material application in glass furnace regenerators, Philips' experience in relation to corrosion phenomena.—73-14617

**regulations,**
Amendment to the thermal insulation order.—73-06555
Clean Air Act Amendments $NO_x$ compliance requirements—glass industry.—73-09704
Compliance's contribution to quality and productivity.—73-17468

EC [European Community] competition policy and its impact on British industry.—73-09713
Environmental regulations of the manufacture and use of cement-based products.—73-03466
Keeping stack emissions and you within the law.—73-05060
Reduction of pollutant wastes in the environment of ceramic works.—73-13642
Regulatory and research methods used by the U.S. FDA for determination of lead in ceramic foodware.—73-07270

**reinforcement,**
Ceramic matrix composites.—73-05158
Effect of microstructural scale on thermal shock resistance of aluminum-reinforced alumina.—73-03578
Elastic modulus and interface stress constraint of particle-reinforced composites.—73-12782
Fatigue and fracture toughness of aluminum alloys reinforced with SiC and alumina particles.—73-03286
Fiber- and whisker-reinforced composites and method for making the same.—73-01855
Flexural and shear behavior of concrete beams reinforced with 3-D continuous carbon fiber fabric.—73-00094
Macrocrystalline alpha-alumina hexagonal platelets.—73-12311
Microstructure and properties of self-reinforced silicon nitride.—73-03342
Particulate reinforcement of a magnesium aluminosilicate glass-ceramic.—73-00677
Reinforcements for ceramic matrix composites for elevated-temperature applications.—73-09662
Self-diagnosing performance for fracture in CFGFRP [carbon fiber–glass fiber-reinforced plastics]-reinforced concrete.—73-06714
Tape casting of platelet-reinforced ceramics.—73-09369
Turning of fiber- and particle-reinforced aluminum.—73-03662
Whisker and particulate reinforcement of glass and glass-ceramics.—73-14530

**relaxation,**
Absence of difference between $^{11}B$ nuclear spin relaxation and Li ion conductivity relaxation in $(LiCl)_{0.6}$-$(Li_2O)_{0.7}$-$(B_2O_3)_1$ superionic glasses.—73-06882
Comparison of nuclear spin relaxation rates of Y and O sites in $YBa_2Cu_3O_{7-y}$.—73-15400
Dielectric and mechanical relaxation in liquids and glasses: transition from effective medium to percolation treatments.—73-04075
Dielectric relaxation in $Ba(Ti_{0.8}Zr_{0.2})O_3$ ceramics prepared from sol-gel and solid-state reaction powders.—73-01401
Dielectric relaxation in $TlInS_2$ crystals with admixtures.—73-04545
Dielectric relaxation of Vycor-type borosilicate glass.—73-14156
Effect of temperature on stress relaxation of concrete at early ages.—73-09920
Electron spin echo studies of spin-lattice and spin-spin relaxation of $SeO_3$ radicals in $(NH_4)_3H(SeO_4)_2$ crystal.—73-08610
Experimental and theoretical investigation of femtosecond carrier relaxation in CdSe.—73-07521
Influence of defects on relaxation in high-$T_c$ superconductors.—73-04743
Long hole spin relaxation times in diluted magnetic semiconductor heterostructures.—73-04382
Low- and high-frequency dielectric relaxations in lead magnesium niobate ceramics.—73-07333
Measurement of spin-lattice relaxation times at millikelvin temperatures.—73-08663
Multifrequency and Fourier transform electron paramagnetic resonance and electron spin echo spectroscopies for determination of the $T_1$ and $T_2$ spin-lattice relaxation times of the $E'_1$ center.—73-03742
Nonmonotonic isothermal relaxation of the current in an *n*-$\pi$-*p* structure associated with a reversal of the electric field.—73-01261
Primary relaxation processes at the band edge of $SiO_2$.—73-16280
Relaxation of the HTSC $YBa_2Cu_3O_x$ ceramics after heat treatment in hydrogen.—73-15610
Relaxation of the intermediate decay structure of glasses and of solid solutions to a state of complete thermodynamic equilibrium.—73-14272
Relaxation of the lattice due to photoionization of different deep impurities.—73-11418
Relaxation processes during microindentation of ionic crystals.—73-16587
Spin-lattice relaxation of $^{63}Cu$ in high-$T_c$ related antiferromagnetic Cu oxides.—73-04806
Stress relaxation in refractories during different modes of loading.—73-00869
Structural relaxation of glass-forming systems.—73-14098
Structural relaxation under conditions far from equilibrium.—73-14099

**relaxors,**
Compositional instability and the resultant charge variations in mixed B-site cation relaxor ferroelectrics.—73-07928
Grain-boundary-phase identification of a lead-based relaxor by X-ray photoelectron spectroscopy.—73-14708
Relaxor ferroelectrics.—73-01430
Spontaneous relaxor–ferroelectric transition of $Pb(Sc_{0.5}Ta_{0.5})O_3$.—73-11618
Temperature-stable lead-relaxor-based ceramic dielectrics with chemical inhomogeneity.—73-10995

**removal,**
Microbiotic deferrization of the upper cretaceous quartz sands of Weferlingen (Germany).—73-01986
Preliminary organic binder removal from castings.—73-01817
Water jet coating removal applications: aircraft engines and beyond.—73-08370

**repair,**
Application of a computer system for the repair pattern in torpedo cars.—73-14569
Are furnace repairs hazardous to health.—73-10496
Blast furnace life prolongation through taphole relining at No. 1 BF in Kure Works [Japan].—73-14575
Ceramic Restoration.—73-06601
Compounds for semidry hot repair of the lining of the legs of a circulation vacuum degasser.—73-00790
Extending the campaign life of the Kashima No. 3 blast furnace [Ibaraki, Japan]—73-14591
Improvement activities of life prolongation at Nakayama No. 2 blast furnace [Osaka, Japan].—73-14594
Improvement on repair technique of tap hole sleeve for BOF [basic oxygen steelmaking furnace].—73-00824
Measures to extend the campaign lives of blast furnaces at Kakogawa Works [Japan].—73-14602
Refractories for lining mobile mixtures.—73-00853
Repair of glass by sol-gel coating and heating with microwave or conventional techniques.—73-14488
Repair of glass by sol-gel coating using either conventional or microwave heating.—73-03884
Reparation of large area setting slump in annular kiln preheat zone during firing.—73-12239
Techniques to extend campaign life of blast furnace at Mizushima Works [Kurashiki, Japan].—73-14627

**research,**
Advanced ceramics: international trends.—73-03377
Assessment of carbon-carbon composite research in the Far East.—73-15959
Canadian advanced ceramic developments.—73-06559
Cements Research Progress 1990.—73-09760
Center for Ceramics Research, Research Laboratory of Engineering Materials, Tokyo Institute of Technology.—73-03382
GaN, AlN, and TiN: a review.—73-08875
Glass information center.—73-17483
Industrial R&D on advanced materials in the CIS.—73-17488
Innovative materials: an area of future competitiveness for Italy.—73-09722
Mullite and Mullite Ceramics.—73-17533
New materials—Western Australia.—73-06584
Progress in basic research of refractories in China.—73-14611
Recent trend of research and development on silicon carbide.—73-02087
Research and applications of new glasses.—73-06589
Research and education in Glass and Ceramics Institute in the Institute of Chemical Technology, Prague [Czech Republic].—73-06590
Research needs and opportunities in highly conducting electroceramics.—73-01020
Research on cement-based materials: expanding our horizons.—73-06712
Research on intelligent materials developed in relationship with the National Center for Scientific Research (CNRS), France.—73-06591
Research-intensive universities in the U.S.—73-03405
Robert L. Coble: a retrospective.—73-06592
Role of R&D in the product development process.—73-10896
Science and Technology of Zirconia V.—73-09764
Star war materials launch commercial products.—73-06595
Superplasticity of ceramic materials.—73-12332
Trends in the research of advanced ceramics.—73-09754

**resins,**
Accelerators for refractory magnesia.—73-00885
Epoxy resins—materials for simulating the process of fritting.—73-00622
Ground floor.—73-00097
Plasticizer for concretes on the basis of heavy resins of pyrolysis.—73-00164
Technical and environmental aspects of the use of phenolic resins in modern day refractories.—73-14626

**resistance,**
Exciton, intracenter, and structure-defect transitions in quasi-2-D $TlGaS_2$:$Nd_2S_3$ crystals.—73-01161
Failure mechanism of chromium-silicon-oxide resistive films stressed by electric pulse loading.—73-07323
Film thickness dependence of microwave surface resistance for $YBa_2Cu_3O_7$ thin films.—73-01551
Influence of regime of application of compressive load on long-term resistance of concrete.—73-00122
Microwave surface resistance of plasma-sprayed YBaCuO thick films on large-area metallic substrates.—73-15557
Radiation resistance in cast-stone materials.—73-02678
Resistance in high-temperature superconductors.—73-04801
Resistance of blast-furnace refractories to the action of aggressive reactants under conditions of oxidizing gaseous atmosphere.—73-14621

**resistivity,**
Comparison of two methods for resistivity measurements on repair mortar for cathodic protection systems.—73-13694
Effects of gas atmospheres on resistivity of $V_2O_5$-SrO-$Sb_2O_3$ glasses at high temperature.—73-14861
Frequency dependence of vortex-state resistivity in $YBa_2Cu_3O_{7-\delta}$.—73-15487
Resistivity of glass under production conditions.—73-00697
Scaling of the longitudinal and Hall resistivities from vortex motion in $YBa_2Cu_3O_7$.—73-11896
Systematic deviation from *T*-linear behavior in the in-plane resistivity of $YBa_2Cu_3O_{7-\delta}$: evidence for dominant spin scattering.—73-15648
Testing for nonuniformity of the resistivity in semiinsulating GaAs substrates by the "dark spot" method.—73-07833

**resistors,**
Development and fabrication of $RuO_2$ thin-film resistors.—73-04071
Effect of physical properties of glass on the TCR of $RuO_2$ thick-film resistors for hybrid integrated circuits (HIC's).—73-14697
Influence of the matrix glass and $Al_2O_3$ substrate on the electrical conduction paths in the $SnO_2$ thick-film resistor system.—73-10962
Mechanism of resistance variation of thick-film resistors on commercial 96% alumina substrates.—73-00994
Mechanism of resistance variation of thick-film resistors on commercial 96% alumina substrates.—73-10971
Microstructural analysis and modeling of $RuO_2$ thin-film resistors.—73-07341
Model of electric conductivity of thick-film resistors: I, Piezoresistivity.—73-10975
Model of electric conductivity of thick-film resistors: II, Simple computer model.—73-10976
Nature of zero temperature coefficient of resistance of $RuO_2$ thin-film resistor formation using in situ annealing.—73-07346
Resistor composition and its use.—73-01068
Size effect on the electrical conduction and noise of $RuO_2$-based thick-film resistors.—73-10990
Tantalum nitride films as resistors on chemical vapor deposited diamond substrates.—73-01035
Temperature dependence of the electrical conduction in $RuO_2$-based thick-film resistors.—73-14739
Thin glass film between ultrafine conductor particles in thick-film resistors.—73-07368
VDR [voltage-dependent resistor] effect in Bi-diffused $SrTiO_3$-based ceramics.—73-11504

**resonance,**
Electronical and Raman two-photon resonances interference in KGW:Nd crystals.—73-02262
Resonance states in the vibrational spectra of intermediate-valence semiconductors.—73-11420
Resonant states in doped and undoped PbTe crystals.—73-01306

**resonators,**
Ceramic coaxial resonator.—73-14744
Dielectric resonators for quasi-microwave filters.—73-07300
High *Q*-factor triplate resonator with an inner conductor of melted silver.—73-10954
High-temperature superconductor support structures for dielectric resonator.—73-15679
In-plane acceleration sensitivity of contoured quartz resonators stiffened by quartz cover plates supported by clips.—73-12812
Laminated plate theory for high-frequency, piezoelectric thin-film resonators.—73-07895
Nonlinear response of $YBa_2Cu_3O_{7-y}$ thin-film microstrip resonator at microwave frequency.—73-01615
Preparation of fine-particle $(PbCa)ZrO_3$ for resonator.—73-10983
Separation between first overtone and fundamental resonant frequencies in PZT ceramic resonators.—73-04571
$YBa_2Cu_3O_{7-\delta}$ thin films and microstrip resonators on $MgLaAl_{11}O_{19}$ substrates.—73-08278

**retardants,**
Complex additive-retarder of cement setting mortars.—73-00047
Simple retarder response test for oil well cements at high temperatures.—73-13778

**rhenium,**
Structural and electrical properties of $^{28}Si^+$ and $^{40}Ar^+$ ion-implanted epitaxial $ReSi_2$ films grown on *n*-Si(100) substrates.—73-16317

**rheology,**
Direct connection between anisotropic optical properties, polarizability, and rheological behavior of single-phase glass melts.—73-07011
Effect of rheological properties on power consumption with helical ribbon agitators.—73-15721
Experimental investigation of rheology and thickening time of Class G oil well cement slurries containing glycerin.—73-00087
Importance of rheology.—73-05054
Rheological behavior of silicon nitride whiskers.—73-06022
Rheological studies on slurry materials—on the hardening and softening properties of suspending materials.—73-16975
Rheology in the plaster of Paris industry—possibilities of the application.—73-12188
Rheology of cementitious systems.—73-06713
Rheology of fine ceramics.—73-16976
Rheology of non-Newtonian glass-forming melts: II, Kinetics of relaxation and retardation.—73-07170
Rheology of solid earth.—73-15913
Rheology.—73-16977
Rheology: a versatile materials characterization technique.—73-12189
Simultaneous rheological and optical analyses.—73-12195
Structural aspects of the rheology of glass-forming melts.—73-14088

**rheometry,**
Importance of rheology.—73-05054
Oscillating rheometer measurements on oilfield cement slurries.—73-00157
Simultaneous rheological and optical analyses.—73-12195

**rhodium,**
Formation of very thin oxide films on polycrystalline rhodium electrodes: applications of the Mott-Cabrera theory.—73-07325
Low-temperature oxidation and reduction of ceria particles on Rh(111).—73-06816

**rice hulls,**
Effects of using rice husk and its ash as fuel and raw material component, respectively, in cement manufacture.—73-09940
Relationship between the strength and nondestructive parameters of rice husk ash [RHA] concrete.—73-03528
Thermal plasma synthesis of SiC from rice hull (husk).—73-06117

**robotics,**
Engineering and user considerations for custom robotic thermal spray systems.—73-08334
Manipulator for applying powder enamels.—73-08349
Not too hot to handle.—73-12050
**rocks,**
Characterization of different glass mineral fibers obtained from igneous rocks of the Canary Islands.—73-15898
Contribution to the formation mechanism of the transition zone between rock-cement paste.—73-00049
Disintegration of rocks by electric impulses.—73-01775
Feldspar.—73-12271
Formation of dispersed cement rocks.—73-00095
Methodological instructions for mercury porosimetry of classic sedimentary rocks.—73-01914
Multifunctional foam glasses from volcanic glassy rocks.—73-00670
Perlite.—73-12292
Petrurgic materials obtained from rocks and industrial wastes.—73-14454
Porosity dependence of thermal conductivity of ceramics and sedimentary rocks.—73-08954
SEM investigation of fracture surfaces using stereo pairs: II, Fracture surfaces of rock-cement paste composite specimens.—73-10146
SEM investigations of fracture surfaces using stereo pairs: I, Fracture surfaces of rock and of cement paste.—73-03536
Two experimental techniques for studying the effects of the interfacial zone between cement paste and rock.—73-08452
Use of rock in ceramic production.—73-00926
Use of the volcanic rock of Zakarpatya as active mineral admixture in cement.—73-15915
Using rocks in ceramic production.—73-02000
**roller hearth kilns,**
Apparatus for driving rollers in roller hearth kiln.—73-12247
Fast firing of copper luster glaze in roller kilns.—73-10845
One-step firing of color glazed tile in coal-fired roller kilns.—73-10872
Roller hearth continuous furnace.—73-05140
Roller kilns with postcombustion for brick firing.—73-12242
Walking a tightrope or modern methods for kiln linings.—73-01973
**rollers,**
Advantages of external material recirculation in vertical roller mills.—73-12013
Apparatus for driving rollers in roller hearth kiln.—73-12247
Application of antiabrasive nodular cast iron to double rollers.—73-12106
Approaches to improve wear resistance of rolling ring of double roll.—73-12110
Bevel-gear planetary gear units for roller mills.—73-04902
Deformation and fracture by sharp rolling contacts.—73-09568
Operating results of OK roller mills in Japanese and Korean cement plants.—73-03511
Wear-resistant double rolls.—73-12207
**roofing tile,**
Changes in roofing tile technology.—73-00767
Hydroceric technology now also in North America.—73-03979
Right approach to the future: the new Pfleiderer Dachziegelwerk in Thuringia.—73-03984
**rotary kilns,**
Burning of solid waste in cement kilns.—73-05102
Choice of optimum methodology and procedure for the correct alignment of rotary kilns and parameters influencing such a choice.—73-00040
Experience with magnesium-aluminum-spinel bricks in a 3000 ton/day [cement] rotary kiln.—73-10727
Fuel gas obtained from tree bark for operating a rotary lime kiln in a sulfate pulp plant.—73-01952
Minimizing energy consumption in kilns by the SCAP system.—73-05122
New curved internal fittings for rotary and planetary coolers [of cement making rotary kilns].—73-10063
$NO_x$ reduction by injecting ammonia into cement kiln systems.—73-03506
Open gear lubrication—new technology for the '90's.—73-03509
Optimal parameters of clinker formation in a rotary kiln.—73-10073
Optimized control system for rotary cement kilns based on a linguistic model.—73-01963
Pulverized coal fueling for rotary cement kilns with rotor weight feeders.—73-01965
Reduction of emissions and energy consumption in rotary kilns by means of a technology for peak combustion.—73-12238
Rotary kiln with a polygonal lining.—73-12251
Structural features of the PYRORAPID short rotary kiln.—73-01971
Use of RSP [reinforced suspension preheater] calciners in Sweden's largest rotary kiln plant at the Slite cement works.—73-03553
Used lubricating oil as a fuel for cement kilns.—73-05136
Utilization of advanced combustion technology in kilns.—73-05137
**roughness,**
Effect of surface roughness on thin-film optical properties.—73-02589
Effects of fiber roughness on interface sliding in composites.—73-17127
Influence of nozzle roughness on conditions in a gas-blast erosion rig.—73-06461
Quantitative microroughness analyses down to the nanometer scale.—73-17188
Roughness effect of silicon nitride sliding on steel under boundary lubrication.—73-17423
**rubidium,**
Brillouin scattering in $RbHSeO_4$ near the ferroelectric transition.—73-16417
Calorimetric study of the deuteration effect in the phase behavior of $Rb_3H(SeO_4)_2$ and $Rb_3D(SeO_4)_2$.—73-02155
Calorimetric study of the deuteration effect on the phase behavior in $Rb_3H(SeO_4)_2$ and $Rb_3D(SeO_4)_2$: II, Heat capacities at very low temperatures.—73-16042
Crystal structure of new pyroelectric $RbLiCrO_4$ at room temperature.—73-02207
Crystal structure of octatitanate $M_2Ti_8O_{17}$ (M=K, Rb).—73-02208
Crystal structure of $Rb_4CdBr_6$ and $Rb_4CdCl_6$.—73-16093
Defect-induced smoothing of the superionic phase transition in $Cs_{1-x}M_xHSO_4$ protonic conductors: III, Rubidium substitution.—73-03088
Effects of oxidation and air exposure on $Rb_xBa_{1-x}BiO_3$ superconducting thin films.—73-01535
Electronic properties of ionic insulators on metal and semiconductor surfaces: RbCl on Si(100) and W(110).—73-04096
Hydrogen and $PO_4$ modes of $RbH_2PO_4$.—73-08638
Influence of an RbF interlayer on the Ge/GaAs interface properties.—73-01199
Microwave studies of dielectric properties of $Rb_3H(SeO_4)_2$ superionic crystals.—73-[illegible]996
Mixed valence vanadium phosphate with a tunnel structure: $Rb_6V_8P_8O_{31}$.—73-02330
New high-pressure phase and local distortion of $PO_4$ in $RbH_2PO_4$.—73-16225
Photoinduced currents in superionic conductor $RbAg_4I_5$.—73-14723
Rubidium beam flux dependence of film properties of $Ba_{1-x}Rb_xBiO_3$ deposited by molecular beam epitaxy using distilled ozone.—73-13243
Second threshold, switching, and sharp *I-V* characteristics of $Rb_{0.3}MoO_3$ at 77 K.—73-05635
Soft mode, "relaxor," and glassy-type dynamics in the solid solution $Rb_{1-x}(ND_4)_xD_2PO_4$.—73-16305
STM-STS studies of molybdenum oxide conductors.—73-14733
Synthesis and crystal structure of new double silicate $RbNbSiO_5 = Rb_2Nb_2[Si_2O_8]O_6$.—73-16351
Synthesis and X-ray diffractometry study of rubidium rare-earth nitrates, $Rb_2[Ln(NO_3)_5(H_2O)_2]\cdot 2H_2O$, *where* $Ln$=La, Ce.—73-16354
X-ray diffraction study of high-temperature modification of $Rb_2ZnBr_4$, *T*=368 K.—73-02543
**ruby,**
Chemical stability of leucosapphire and ruby laboratory ware.—73-08821
Preparation of copper-ruby glasses by sputtering and their optical properties.—73-03872
Preparation of copper-ruby glasses by sputtering and their optical properties.—73-10579
Preparation of gold ruby glasses by the sol-gel method.—73-10581
Single-ended ir photothermal radiometric measurement of quantum efficiency and metastable lifetime in solid-state laser materials: the case of ruby ($Cr^{3+}$:$Al_2O_3$).—73-15847
**rupture,**
Disintegration of rocks by electric impulses.—73-01775
Monotonic and cyclic rupture of a silicon nitride ceramic.—73-17403
**ruthenium oxide,**
Development and fabrication of $RuO_2$ thin-film resistors.—73-04071
Development of cell structure due to Benard–Marangoni-type convection in $RuO_2$-glass thick films.—73-04074
Effect of physical properties of glass on the TCR of $RuO_2$ thick-film resistors for hybrid integrated circuits (HIC's).—73-14697
Formation of $RuO_2$-$TiO_2$ thin films by thermal decomposition technique.—73-00972
Formation of $RuO_2$-$TiO_2$ thin films by thermal decomposition technique.—73-13066
Frequency dependence of conductivity of glass- and ruthenium-oxide-based resistive composition.—73-14192
Microstructural analysis and modeling of $RuO_2$ thin-film resistors.—73-07341
Nature of zero temperature coefficient of resistance of $RuO_2$ thin-film resistor formation using in situ annealing.—73-07346
Phase equilibria in $RuO_2$-$TiO_2$-$Al_2O_3$ and $RuO_2$-$TiO_2$-$Bi_2O_3$ systems.—73-16249
Phase equilibria in the $RuO_2$-PbO-$Al_2O_3$ and $RuO_2$-PbO-CuO systems.—73-16250
Raman spectroscopy of $BaRuO_3$.—73-05468
Reaction between ruthenium dioxide and aluminum nitride in resistor pastes.—73-14727
Resistor composition.—73-11049
Size effect on the electrical conduction and noise of $RuO_2$-based thick-film resistors.—73-10990
Surface stability of bismuth-ruthenium oxide electrodes.—73-07363
Temperature dependence of the electrical conduction in $RuO_2$-based thick-film resistors.—73-14739
X-ray photoelectron spectroscopy and electrochemical surface characterization of $IrO_2$+$RuO_2$ electrodes.—73-14741
**ruthenium,**
Antiferromagnetic resonance in the heavy fermion state of $URu_2Si_2$.—73-08282
Characterization of fine particles of ruthenium–alumina composites prepared by different methods.—73-10202
Characterization of fine particles of ruthenium-alumina composites prepared by different methods.—73-03566
Crystal and magnetic structures of $Ca_2NdRuO_6$, $Ca_2HoRuO_6$, and $Sr_2ErRuO_6$.—73-02175
Effects of chemistry on the grain size refinement in nanocrystalline Ru and Ru-C powders prepared by mechanical attrition.—73-16747
Structural properties of the molybdenum-ruthenium telluride of composition $Mo_4{}_5Ru_1{}_5Te_8$.—73-02451
**Rutherford backscattering,**
YBaCuO ceramics [studied] by positron annihilation and Rutherford backscattering techniques.—73-15672
**rutile,**
Ceramic pigments of rutile type.—73-14647
Compensation modes in counterdoped rutile.—73-02166
Electromagnetic modes and prism-film coupling in anisotropic planar waveguides of epitaxial (101) rutile thin films.—73-08860
Electronic structure of rutile ($TiO_2$).—73-13394
Formation and sintering of corundum-rutile composite powders prepared from alkoxides.—73-05811
Microwave heating characteristics of rutile.—73-02645
Oxygen self-diffusion in rutile under hydrothermal conditions.—73-09418
Rutile-type $TiO_2$ formation by ion beam dynamic mixing.—73-09311
**safety,**
Behavior-based safety at PPG Industries, Inc.—73-17462
Ceramic fiber—aspects of use under COSHH.—73-06561
How to avoid thermocouple hazards.—73-12146
Keeping workers safe from toxic gas exposure.—73-13627
Quenching system for single-pane safety glass.—73-10589
Safety and environmental aspects of CVD.—73-08362
Working environment: "better safe than sorry."—73-06599
**saggars,**
Decorating with volatile materials in saggars.—73-13667
Development of silica–magnesia sagger using fine particle raw materials.—73-10721
**salts,**
Characteristics and sintering behavior of 3 mol% $Y_2O_3$-$ZrO_2$ powders synthesized by reaction in molten salts.—73-02741
Effects of deicing salts on alkali-aggregate reaction.—73-09933
Film formation from molten salts by electrochemical process.—73-14706
Forces between alumina surfaces in salt solutions: non-DLVO forces and the implications for colloidal processing.—73-05809
Mild surface fluorination of glass fibers.—73-03858
Synthesis of $Pb(Mg_{1/3}Nb_{2/3})O_3$ by $Li_2SO_4$-$Na_2SO_4$ molten salts.—73-13308
**samarium,**
Densification of zirconia-containing SiAlON composites by $Sm_2O_3$.—73-09060
Dielectric dispersion of valence fluctuation compound $Sm_3Se_4$.—73-08835
Electric resistance and estimate of skin effect in samarium cuprate single crystals.—73-08846
Electron microscopic observation of rapidly cooled $ZrO_2$-3 mol% $Sm_2O_3$ from the melt.—73-17130
Electronic structure of samarium atoms adsorbed on the GaAs(110) surface.—73-07501
Ferromagnetic phase in $SmBa_2Cu_3O_{6+x}$ at low temperatures.—73-16153
Fluorescence line narrowing of $Sm^{3+}$ in ZBLAN fluoride glasses.—73-07026
Interactions in the systems ZnS-$Sm_2S_3$ and Zn-$Sm_2S_3$.—73-02299
Internal field and EPR in $Sm_{1.995}Gd_{0.005}CuO_4$ crystals.—73-08644
Liquidus of the system Sm-Sb-Se.—73-12622
Low-temperature resistivity of valence fluctuation compound $SmB_6$.—73-16531
Magnetic ordering of Sm in $Sm_2CuO_4$.—73-07952
Microscopic structure and flux pinning effect in the $Sm_xBa_{1-x}CuO_y$ system.—73-01604
Model of $Sm_{11}Fe_{12}C_{18}$ crystal structure.—73-16219
Neutron scattering study of the intermediate-valent ground state in $SmB_6$.—73-08677
Photomagnetic properties of $Eu_{1-x}Sm_xO$ magnetic semiconductor films.—73-12859
Pressure dependence of the fluorescence spectra of the Sm doped YAG to 73 GPa.—73-16277
Raman spectra of ethane and ethylene adsorbed of surfaces of catalyst $Sm_2O_3$/MgO at high temperatures.—73-12670
$SiO_2$-$Sm_2O_3$ vitreous films via the sol-gel method.—73-09329
$Sm_2Fe_{17}N_y$ powder with high coercivity prepared by high-energy ball milling.—73-17003
Variation of crystal-field coefficients with carbon content in the $Sm_2Fe_{17}C_{3-\delta}$ series of compounds.—73-09005
**sampling,**
Progress in sampling and on-stream analysis.—73-10105
Sampling of trace constituents in the clean gas coming from rotary cement kilns.—73-00187
**sands,**
Alkali-silica reaction [ASR]: VIII, Correlation between mortar-bar expansion and Δ values.—73-00021
Characterization and electrical properties of some materials obtained from natural beach sand of the Canary Islands.—73-15897
Clay-mineralogical investigation of tertiary natural sands from Grefrath and Suchteln [Germany] for use as molding sands.—73-01980
Comparison of different methods of detection of alkali-silica reactivity of aggregates.—73-05029
Microstructure of sand concrete.—73-03500
New electric infrared and recycling technology promises environmental and economic benefits for foundry industry.—73-09732

Process for purifying silica sand by abrasive attrition.—73-12094
Sand erosion of ceramics.—73-06515
Silica.—73-12297
Strength development and adiabatic temperature rise of concrete with crushed sand partly replaced by coal ash.—73-10165

**sandstone,**
Conservation treatments for an Italian sandstone: laboratory tests.—73-17471

**sanitary ware,**
Application of illite group raw materials to sanitary pottery body.—73-14644
Casting of sanitary ware comparison of technology.—73-14563
Development of the tableware and sanitary ware industry from 1950 to 1990.—73-10824
Maximizing the performance of a sanitary ware formula.—73-07264
Mixed drying uhf/hot air for the sanitary ceramics industry.—73-10869
Problems of slurry formation and processing of ceramic casting bodies caused by raw material quality.—73-00922
Redeveloping a sanitary ware formula for optimum performance.—73-07269
Research on low-temperature and fast-firing sanitary ware of $K_2O$-$Na_2O$-$Al_2O_3$-$SiO_2$.—73-14666
Selection of materials and parameters for sanitary ware casting.—73-07272
Turnkey ceramic plants for developing countries.—73-04051
Ultimate firing machine for sanitary ware.—73-05134

**sapphire,**
CdTe(111) growth on sapphire(0001) substrates by hot wall epitaxy.—73-07401
Chemical stability of leucosapphire and ruby laboratory ware.—73-08821
Continuously tunable coherent source over 202–3180 nm based on a Ti:sapphire laser.—73-16429
Crack direction effects along copper/sapphire interfaces.—73-13814
Design of a hot tensile stage for an ultra-high-voltage electron microscope and its application to in situ deformation of sapphire at 1620 and 1720 K.—73-05036
Development of a fiber optic sensor for ceramic materials characterization.—73-16701
Effect of cleaning and abrasion-induced damage on the Weibull strength distribution of sapphire fiber.—73-17282
Environmentally compatible double coating concepts for sapphire fiber-reinforced γ-TiAl.—73-06781
First-principles calculations for niobium atoms on a sapphire [(0001)] surface.—73-05401
Fracture at Cu/sapphire interfaces.—73-03590
Fracture of brittle spheres under compression and impact loading: II, Results for lead glass and sapphire spheres.—73-09600
High-pressure fluid jet orifice made of oxygen-enhanced sapphire and process for making [the] same.—73-12470
High-temperature fracture toughness of sapphire.—73-17346
Indentation fracture of pure and MeV energy ion-implanted sapphire.—73-06456
Large-area epitaxial MgO buffer layers on sapphire substrates for Y-Ba-Cu-O film deposition.—73-15531
Measurement of residual stresses in sapphire fiber composites using optical fluorescence.—73-06476
Mechanism to describe the basal twinning of sapphire.—73-16211
Method for producing a superconductor layer of $YBa_2Cu_3O_7$ on a sapphire substrate.—73-11967
Microstructural observations on constrained densification of alumina powder containing a periodic array of sapphire fibers.—73-13421
New experimental setup for wettability characterization under monitored oxygen activity: II, Wettability of sapphire by silver-oxygen melts.—73-03628
Optical fluorescence from chromium ions in sapphire: a probe of the image stress.—73-05442
Optical resistance of sapphire.—73-08937
Picosecond and femtosecond pulse generation in a regeneratively mode-locked Ti:sapphire laser.—73-07733
Producing large sapphire for optical applications.—73-08521
Recent attempts to detect magnesium in a heavily doped sapphire bicrystal by spatially resolved electron energy loss spectroscopy.—73-17192
Sapphire-fiber-reinforced RBAO [reaction-bonded alumina].—73-16978
Sensitivity of intracavity absorption measurements with Ti:sapphire laser.—73-16593
$SiO_2$-doped sapphire single-crystal growth by Verneuil method.—73-13271
Slip and twinning in sapphire ($\alpha$-$Al_2O_3$).—73-05639
Slow crack growth in sapphire fibers at 800° to 1500°C—correction.—73-17432
Synchronous pumping of a visible dye laser by a frequency-doubled mode-locked Ti:sapphire laser and its application for difference frequency generation in the near ir.—73-08975
System and method for producing electrooptic components integratable with silicon-on-sapphire circuits.—73-01447
Theory of cw passive mode locking of solid-state lasers with addition of nonlinear index and group velocity dispersion.—73-05651
Time synchronization measurements between two self-mode-locked Ti:sapphire lasers.—73-16642
Time-dependent strength of sapphire fibers at high temperatures.—73-09687
Ultrashort pulse generation from a passively mode-locked Ti:sapphire-based system.—73-07851
Valence Auger analysis of the annealing effect on atomic interaction at titanium–sapphire, titanium–silica, and silver–silica interfaces.—73-10296
Variation of the refractive index and polarizability of sapphire under high pressures.—73-02722

**saws,**
Carbide tips for bandsawing.—73-15960

**scaling,**
Mathematics of concrete scaling.—73-03495

**scandium oxide,**
Laser damage threshold of $Sc_2O_3$/$SiO_2$ high-reflector [HR] coatings for a laser wavelength of 355 nm.—73-05587
Scandia.—73-12295

**scandium,**
Crystal structure of $Sc_{1.2}Fe_4Si_{9.8}$.—73-02211
Crystal structure of $Sc_6Co_{30}Si_{19}$.—73-02212
High dielectric constant ceramics in the $PbSc_{0.5}Ta_{0.5}O_3$-$PbZrO_3$ and $PbSc_{0.5}Ta_{0.5}$-$PbTiO_3$ systems.—73-00975
Microstructural features of $Sc_3TaO_7$.—73-13419
Mixed orthoborate pyroborates $Sr_2Sc_2B_4O_{11}$ and $Ba_2Sc_2B_4O_{11}$: pyroborate geometry.—73-02329
Neutron diffraction refinement of atomic structure of α- and γ-phases of $Li_3Sc_2(PO_4)_3$ crystals at 293 and 573 K.—73-02344
SiC sintered body.—73-05336
Structural features of $Sc_3TaO_7$.—73-16323

**scanning electron microscopy (SEM),**
Advanced characterization techniques.—73-05017
First results of microspectroscopy from a scanning photoemission microscope with a submicron probe size.—73-07530
Quantitative backscattered electron analysis of cement paste.—73-10121
Scanning electron acoustic microscopy [SEAM] of $Bi_2Sr_2CaCu_2O_8$.—73-15616
SEM for nontraditional users.—73-08441
Subnanometer microscopy the easy way: an under-utilized tool for reliability assurance.—73-05088

**scanning tunneling microscopy (STM),**
Cross-sectional scanning tunneling microscopy of epitaxial GaAs structures.—73-11126
Effect of bulk doping on scanning tunneling microscopy images of GaAs(001) 2×4 surfaces.—73-07461
Elevated-temperature oxidation and etching of the Si(111) 7×7 surface observed with scanning tunneling microscopy.—73-09449
Nanoscale processing with a scanning tunneling microscope (STM) under atmospheric or reduced pressure.—73-16877
Scanning tunneling microscope for use in vacuum.—73-15843
Scanning tunneling microscope tip-sample interactions: atomic modification of Si and nanometer Si Schottky diodes.—73-07782
Scanning tunneling microscopy of doping and compositional III-V homo- and heterostructures.—73-11431
Scanning tunneling microscopy study of [LT] low-temperature grown GaAs.—73-17195
Scanning tunneling optical spectroscopy of semiconductor thin films and quantum wells.—73-07785

**scattering,**
Anomalous light scattering in the glass transition region.—73-06997
Backward conical photorefractive scattering on $LiNbO_3$.—73-11555
Evidence for rapid suppression of quasi-particle scattering below $T_c$ in $YBa_2Cu_3O_{7-\delta}$.—73-08066
High-field transient of photoexcited GaAs electrons and holes with acoustic and TO-phonon momentum scattering.—73-07561
Inelastic hot electron scattering at GaAs(110) surface.—73-01198
Inelastic light scattering in halide glasses at high temperatures: boson peaks and the degree of disorder.—73-07038
Inelastic light scattering in the regime of the fractional quantum Hall effect.—73-05581
Light scattering in halide glasses at high temperatures: anomalous scattering and nanoscale inhomogeneities.—73-07044
Optical fibers with suppressed stimulated Brillouin scattering.—73-02651
Temperature dependence of intensity of scattering of visible light in transition of glasses to the state of metastable liquid.—73-00553
Very low frequency light scattering in glass matrix.—73-10414

**science,**
Dictionary of Ceramic Science and Engineering, Second Edition.—73-17525
Extracurricular science enrichment program—a 35-year success story.—73-03391
Interface science of controlled metal/metal and metal/ceramic interfaces prepared using ultrahigh vacuum diffusion bonding.—73-00244
Virginia Tech fosters elementary classes.—73-03411

**scintillator,**
Method for producing a scintillator ceramic.—73-12378
Optical properties of ceramic scintillator for X-ray CT equipment: I, Analysis about quality response characteristic.—73-16557
Optical properties of ceramic scintillator for X-ray CT equipment: II, Analysis about distribution of light output.—73-16559

**screen process printing,**
Art of successful screen printing.—73-14324
Characterization of screen-printed $YBa_2Cu_3O_x$ thick films.—73-15398
Influence of mesh fabric on screen printing.—73-10555

**screening and sieving,**
Experience with moist screening of impure cement raw materials.—73-00086

**seals and sealing,**
Ceramic-to-conducting-lead hermetic seal.—73-00280
Evolution of mechanical seals by the use of advanced ceramics as tribomaterial.—73-02012
Glass powders for hermetic seal of semiconductor devices.—73-00493
Glass sealants for carbon-carbon composites.—73-00494
High-thermal-expansion sealing glass.—73-03933
Improved glass sealing process for electronic device package.—73-14203
IRSS investigations of chemical resistance of sealing glasses.—73-00361
Low-melting glass for sealing thick-film microcircuits.—73-00653
Low-temperature sealing glass composition.—73-10638
Method for making glass to metal seals.—73-10326
Nonlead sealing glasses.—73-00751
Preparation, properties, and chemistry of glass– and glass-ceramic–to–metal seals and coatings.—73-06842
Sealing glass composite.—73-10663
Transpiration-cooled ceramic fiber seal.—73-10789

**second harmonic generation,**
Anisotropy in SHG from reconstructed surfaces of GaAs.—73-14772
Bulk and surface second harmonic generation in noncentrosymmetric semiconductors.—73-01497
Cherenkov second harmonic generation in multilayer waveguide structures.—73-01395
Cherenkov-type SHG from an $LiNbO_3$ waveguide with a periodic domain grating.—73-04541
Computation of the efficiency of semiconductor laser second harmonic generation in $LiNbO_3$.—73-01108
Depletion-electric-field-induced changes in second harmonic generation from GaAs.—73-14830
Influence of surface roughness on the electrical properties of Si-$SiO_2$ interfaces and on second harmonic generation at these interfaces.—73-12817
Optical second harmonic generation (SHG) on *p*-nitroaniline in large crystals of $AlPO_4$-5.—73-12852
Optical second harmonic generation from unbiased single $Ga_{1-x}Al_xAs$ quantum wells with symmetric structures.—73-01266
Optically induced organization in glasses—second harmonic generation.—73-07062
Phase matching retracing behavior for second harmonic generation in $LiB_3O_5$ crystal.—73-02662
Resonantly enhanced optical second harmonic generator.—73-00583
Second harmonic generation [SHG] in Si-$SiO_2$ heterostructures formed by chemical, thermal, and plasma-assisted oxidation and deposition processes.—73-06029
Second harmonic generation as a sensitive technique for estimation $H_{c1}$ of high-$T_c$ materials.—73-01655
Second harmonic generation from $PbTiO_3$-based ferroelectric thin films.—73-11612
Temperature dependence of SHG in NYAB crystals.—73-08771
Temperature-insensitive SHG at 0.5321 μm in KTP.—73-08773
Theoretical analysis of Cherenkov second harmonic generation [CSHG] in proton-exchanged *c*-cut MgO:$LiNbO_3$ optical waveguides.—73-07922

**secondary ion mass spectrometry (SIMS),**
Quantification of lithium, beryllium, and boron in silicates by secondary ion mass spectrometry using conventional energy filtering.—73-08437
Scanning ion microprobe analysis of composite materials.—73-03190

**sediments/sedimentation,**
Methods of plotting curves for sedimentation in centrifugal fields.—73-08415
Multifaceted analysis of 0.01- to 100-μm particles by sedimentation field flow fractionation (FFF).—73-12170
Sedimentation behavior of a fine kaolinite in the presence of fresh Fe electrolyte.—73-13246
Sedimentation of flocculated alumina suspensions: γ-ray measurements and comparison with model predictions.—73-09312

**Seebeck coeff.,**
Electrical conductivity and Seebeck coefficient of high-pressure phase of zinc sulfide.—73-16476
Seebeck coefficient in the system $(Gd_{1-x}Ca_x)MnO_{2.98}$ $(0.6\leq x\leq 0.95)$.—73-02684

**seeding,**
Formation of the high-$T_c$ 2223 phase in Bi-Sr-Ca-Cu-O by seeding.—73-15677
Microstructure control of silicon nitride by seeding with rodlike ß-silicon nitride particles.—73-13428
Nucleation and growth of ß′-SiAlON.—73-13435

**segregation,**
Mathematical simulation for segregation of PVA during drying.—73-05908
Phenomenon of segregation in glasses.—73-14457
Surface segregation of PVA during drying of a PVA-water-$Al_2O_3$ slurry.—73-03032

**selenides,**
Acoustic emission and memory effects in $TlGaSe_2$ [crystals].—73-16025
Ambipolar photoconductivity of amorphous $As_2Se_3$ films.—73-01072
Anomalous anisotropy in the absorption coefficient of vacancy-ordered $Ga_2Se_3$.—73-04241
Anomalous birefringence hysteresis and thermooptical memory effect in incommensurate phase of ferroelectric-semiconductor $Sn_2P_2Se_6$.—73-14776
CDW phase slip and current conversion in $NbSe_3$.—73-08564

Crystal and magnetic structures of hardened CrSe and $Mn_{0.1}Cr_{0.9}Se$.—73-16074
Crystal structure and magnetic susceptibility of UOSe single crystals.—73-04889
Crystal structures of $I_2$-Mn-IV-$VI_4$ [I=Cu, Ag; IV=Si, Ge, Sn; and VI=S, Se, Te] compounds.—73-02221
Crystallographic and magnetic properties of $Fe_{0.5}Cu_{0.5}Cr_2Se_xS_{4-x}$.—73-08592
Damping of CDW's in $NbSe_3$.—73-07433
Davydov multiplets in the vibrational spectra and effective ionic charges in $TlInS_2$ and $TlGaSe_2$ crystals.—73-14823
Decomposition of ferroelectric $LiH_3(SeO_3)_2$.—73-07877
Depth-sensitive visualization of irradiation-induced columnar defects in the layered superconductor 2H-$NbSe_2$ via scanning probe microscopy.—73-08017
Dielectric dispersion of valence fluctuation compound $Sm_3Se_4$.—73-08835
Effect of electric field on magnetostatic wave attenuation in ferromagnetic semiconductor $HgCr_2Se_4$.—73-14848
Effective mass of holes in ferromagnetic semiconductor $HgCr_2Se_4$.—73-14860
Electrical properties of a contact between modified and unmodified glassy $As_2Se_3$.—73-01146
Electrical properties of $Bi_2Se_3$ thin films prepared by reactive evaporation.—73-08856
Electronic structure of the channel compound $TlCr_2Se_8$: an XPS study.—73-05393
Empirical pseudopotential band structure calculation for $Zn_{1-x}Cd_xS_ySe_{1-y}$ quaternary alloy.—73-07503
Epitaxial $Ga_2Se_3$ layers grown on GaAs(100) using a heterovalent exchange reaction.—73-07505
EPR of the thermally produced $CrO_4^{3-}$ in $CrO_4^{2-}$-doped $(NH_4)_3H(SeO_4)_2$ crystals.—73-02269
Growth and characterization of digital alloy quantum wells of CdSe/ZnSe.—73-04349
Hall effect in ferromagnetic *n*-type semiconductor $HgCr_2Se_4$ in strong electric field.—73-14955
High-pressure study of photoluminescence [PL] spectra in magnetic semiconductor EuSe.—73-07564
Holographic recording in $Ge_{1-x}Sn_xSe_2$ glassy films.—73-10446
Hume-Rothery rule in V-VI compounds.—73-04356
Hydrothermal synthesis and crystal structure of $Mn(SeO_3)_2$.—73-02286
Indium impurity states in $Pb_{1-x}Sn_xSe$ solid solutions.—73-01197
Influence of halogen impurities of charge transport in glassy Se-As semiconductors.—73-14981
Influence of the absorption edge on dispersion nonlinearity of $CdS_xSe_{1-x}$ microcrystals in glasses and its appearance in self-diffraction experiments.—73-14986
Junction formation and characteristics of CdS/CuInSe$_2$/metal interfaces.—73-05586
Laser-induced photoconductivity in thin films of amorphous $Sb_{15}Ge_5Se_{80}$ alloy.—73-07633
Long hole spin relaxation times in diluted magnetic semiconductor heterostructures.—73-04382
Low-temperature phase transition in layered $TlInSe_2$ and $TlGaSe_2$ ferroelectric semiconductors.—73-15023
Magnetic spin effects in the photoconductivity of amorphous $As_2Se_3$.—73-07651
Magnetic-field effects in $NbSe_3$.—73-08909
Narrow-band "noise" in $NbSe_3$ as a function of magnetic field and temperature: a reassessment.—73-04415
Negative photoacoustic effect in glassy arsenic selenide.—73-01257
Nonequilibrium phenomena in incommensurate phase of $Sn_2P_2Se_6$.—73-01259
Optical constants of laser-deposited $CuGaSe_2$ films near the fundamental absorption edge.—73-11358
Optimization of ratio of coloring components during the electric founding of ruby-colored selenide glass.—73-00382
Percolation theory and concentrated phase transition of ε-γ type in $GaS_xSe_{1-x}$ solid solutions.—73-16244
Phase transitions and phase composition in cathode reduction of 2H niobium diselenide.—73-02392
Phonon and electronic properties of $TlBiSe_2$ thin films.—73-08948
Photoconductivity spectrum, deformation potentials, and effective masses of carriers of the chalcopyrite semiconductor alloy $CuIn_{0.6}Ga_{0.4}Se_2$.—73-15090
Photoelectric properties of $CuInSe_2$.—73-05613
Photoluminescence in $Ge_{25}Se_{75-x}Bi_x$ sputtered films.—73-08951
Polarized micro-Raman spectra in $CuGaSe_2$.—73-01286
Preparation and properties of electrodeposited ternary $CdS_xSe_{1-x}$ and $Zn_xCd_{1-x}S$ films.—73-05618
Preparation of CdSSe-ZnS superlattices, SrS, and CdSSe-SrS superlattice by hot wall epitaxy, and applications to electroluminescent devices.—73-04452
Radiative and nonradiative recombination in quaternary $Pb_{1-x}Sn_xSe_{1-y}Te_y$ solid solutions.—73-01295
Space-charge-limited conduction in a-$Ge_{22}Se_{68}M_{10}$ (M=Cd, In, Pb, Te).—73-04485
Spectral characteristics of $Ga_2Se_3$ at millimeter and submillimeter wavelengths.—73-04487
Static and dynamic characteristics of bulk and contact electrical resistivity in $CdCr_2Se_4$ under stochastic current instability.—73-15176
STM study of distortion and instability of inclined flux-line-lattice structures in the anisotropic superconductor 2H-$NbSe_2$.—73-08743
Structural analysis of $Tl_4SnSe_4$.—73-02446
Structural features and diffusive motion of copper ions in $Ag_2Se$-$Cu_2Se$ superionic conductor alloys from NMR data.—73-17101
Structural variants in the low-temperature ß-phase of stoichiometric cuprous selenide.—73-02457
Structural- and conductivity-type transitions in vapor-phase-grown $(ZnTe)_x(CdSe)_{1-x}$ single crystals.—73-04491
Superionic properties of semiconductor $Cr_{2-x}Se$ as a manifestation of a charge-transfer exciton phase.—73-15192
Synthesis and characterization of the new quaternary two-dimensional materials $KCu_2NbQ_4$ (Q=Se, S).—73-02477
System $Bi_2Se_3$-InSe.—73-12714
Thermochemistry of the selenides of titanium of variable composition, $TiSe_{1.5-2}$.—73-02523
*T*(*z*) diagram and optical energy gap values of $Cd_{1-x}Mn_xGa_2Se_4$ alloys.—73-07827
Valence band structure and Mn 3*d*-derived density of states in epitaxially grown zinc blende MnSe.—73-11503
Variation of the electron-spin polarization in EuSe tunnel junctions from zero to near 100% in a magnetic field.—73-16646
X-ray study of the cation distribution in $Cu_2Se$, $Cu_{1.8}Se$, and $Cu_{1.8}S$; analysis by the maximum entropy method.—73-02547

**selenium,**
Anisotropy induced by photoinduced alloying of vitreous $As_2Se_3$ by silver.—73-16409
Auger electron spectroscopy, low-energy electron diffraction, and electron energy loss spectroscopy studies of Se overlayers grown on Cu(111) surfaces.—73-05362
Brillouin scattering in $RbHSeO_4$ near the ferroelectric transition.—73-16417
Calorimetric study of the deuteration effect in the phase behavior of $Rb_3H(SeO_4)_2$ and $Rb_3D(SeO_4)_2$.—73-02155
Calorimetric study of the deuteration effect on the phase behavior in $Rb_3H(SeO_4)_2$ and $Rb_3D(SeO_4)_2$: II, Heat capacities at very low temperatures.—73-16042
Crystal structure of ferroelastic phase II of $Cs_3H(SeO_4)_2$.—73-02194
Crystallization of glasses in the As-Se and Tl-As-Se system during heating.—73-00605
Crystallization processes and glass-forming ability of a set of glassy alloys in the As-Se-Te system.—73-06899
Dielectric losses in glasses of the Ag-Ge-Se system.—73-00448
Electrical resistivity studies of Ge-Se glasses at high pressures and low temperatures.—73-10437
Electron spin echo studies of spin-lattice and spin-spin relaxation of $SeO_3$ radicals in $(NH_4)_3H(SeO_4)_2$ crystal.—73-08610
Emissions of selenium compounds of glass-melting furnaces and state of the art of selenium waste gas treatment.—73-14372
Influence of crystallization on electrical and optical properties of Te-Se-Sn and Te-Se-Sn-O films.—73-08887
Liquidus of the system Sm-Sb-Se.—73-12622
Microwave studies of dielectric properties of $Rb_3H(SeO_4)_2$ superionic crystals.—73-00996
Phase equilibria in the system Cd-Si-Se and the properties of the compound $Cd_4SiSe_6$.—73-02379
Photoemission investigation of the electronic structure at polycrystalline $CuInSe_2$ thin-film interfaces.—73-11377
Polyselenide formation in borosilicate glasses.—73-03751
Projection of the liquidus surface of the ternary system Nd-As-Se.—73-12662
Projections of the liquidus surface in the ternary reciprocal system InSe-$Sb_2Se_3$-$Sb_2Te_3$.—73-12663
Raman scattering in amorphous $As_xSe_{100-x}$ layers. Anomaly of concentration dependence.—73-15138
Sol-gel preparation of $CdS_xSe_{1-x}$ solid solution microcrystal-doped glasses.—73-07173
Space-charge-limited conduction in a-$Se_{100-x}Te_x$.—73-11448
Structural changes in thin As-Se films: DSC and EXAFS studies.—73-14090
Structural transformation in thin films of the system As-Se investigated by the method of differential scanning calorimetry.—73-16327
Structure and optical properties of one-dimensional selenium atom chain in cancrinite channels.—73-16332
Syntheses and crystal structures of two novel aluminum selenites, $Al_2(SeO_3)_3{\cdot}6H_2O$ and $AlH(SeO_3)_2{\cdot}2H_2O$.—73-02475
Synthesis and crystal structure of a new nickel selenite hydrate $Ni_3(SeO_3)_3{\cdot}H_2O$.—*73-02480*
Synthesis and structure of $Ln_2Ta_2Se_2O_8$ (Ln=La, Ce, Pr, Nd).—73-02492
Ternary system Tm-As-Se.—73-12717
Thermal expansion and network constraints in Ge-In-Se glasses.—73-07086
Threshold behavior in the nonisothermal properties of Ge-Sb-Se glasses.—73-03770
Vitrification and structure of glasses of the $GeSe_2$-$GeBr_4$ system.—73-00424
Vitrification in the system Ge-Se-Cu and investigation of the physicochemical properties of glasses.—73-00425
X-ray spectral investigation of glasses and crystals of the Ge-Se system.—73-16396
X-ray study of the ordering behavior in the low-temperature phase of $Cs_3D(SeO_4)_2$.—73-08795

**self-propagating high-temperature synthesis (SHS),**
Application of self-propagating high-temperature synthesis in thermal spraying technology.—73-08318
Behavior of the synthetic diamond in the propagating wave of self-propagating high-temperature synthesis.—73-16659
Chemical aspects of forced SHS compaction.—73-16052
Development of functional ceramic composites by SHS routes.—73-16704
Economics of advanced self-propagating, high-temperature synthesis materials fabrication.—73-04911
Explosive treatment of SHS products (high-temperature superconductors).—73-15465
Fundamentals of the SHS joining process.—73-01784
Macrokinetics of SHS compaction.—73-16857
Microstructure and properties of extruded SHS materials.—73-17163
Nitriding of titanium surface by the self-propagating high-temperature synthesis.—73-10258
Regularities of structure formation at ignition of titanium in nitrogen.—73-13443
Regularities of structure formation of synthetic hard tool materials at SHS compaction.—73-13894
Self-disseminating high-temperature synthesis: general principles.—73-16980
Self-propagating high-temperature synthesis (SHS): SHS-based technology.—73-14624
Self-propagating high-temperature synthesis of SiC powder in pressurized $N_2$ atmosphere.—73-06032
Self-propagating high-temperature synthesis—review.—73-06033
SHS combustion characteristics of several ceramics and intermetallic compounds.—73-06038
SHS extrusion of electrode materials and their application for spark alloying of steel surfaces.—73-13898
Structurization of SHS [self-propagating high-temperature synthesis] products [investigated] under model experiments.—73-13597
Synthesis and characterization of Ti-B-C system ceramics prepared by self-propagating high-temperature synthesis method.—73-06080
Synthesis and mechanical properties of $B_4C$ by self-propagating high-temperature synthesis chemical furnace.—73-13294
Synthesis of titanium nitride by SHS method.—73-17047
Technological fundamentals of shock-wave SHS compaction.—73-16359
Technological fundamentals of SHS extrusion.—73-17051
Theoretical predictions of the synthesis by self-propagating combustion.—73-06113
Thermite reactions: their utilization in the synthesis and processing of materials[—review].—73-09376

**semiconductors,**
Analysis of critical points in semiconductor optical functions from in situ and real-time spectroscopic ellipsometry [SE].—73-16408
Auger electron spectroscopy studies of interfacial reactions in metal/semiconductor multilayers activated during differential scanning calorimetry measurements.—73-11077
Band engineering of high band gap semiconductors by superlattices.—73-04251
Band structure and disorder effects on electron localization in semiconductor superlattices.—73-04254
Ceramic package for memory semiconductor.—73-04510
Characteristics and new capabilities of intercalated chalcogenide semiconductors.—73-07403
Chip type varistor.—73-15235
Coherent epitaxy, surface effects, and semiconductor alloy phase diagrams.—73-08577
Complementary semiconductor device using diamond thin film and the method of manufacturing this device.—73-11513
Contribution of semiconductive materials to gas detection.—73-05031
Diamond rectifying contact with undoped diamond layer.—73-11519
Dielectric response functions of heavily doped zinc blende semiconductors with finite particle lifetime.—73-11138
Dielectric/semiconductor interfaces.—73-10932
Efficient method for calculating quasi-particle energies in semiconductors.—73-04298
Einstein relation in ultrathin films of nonparabolic semiconductors under magnetic quantization.—73-04299
Electrically pumped rare-earth-doped semiconductor lasers.—73-04307
Electrochemical aspects of light-induced heterogeneous reactions on semiconductors.—73-07488
Electromagnetic wave dispersion in semiconductor-dielectric structures at frequencies below the plasma frequency.—73-04308
Electron cyclotron resonance etching of semiconductor structures studied by in situ spectroscopic ellipsometry.—73-14879
Electron structure and mechanism of excitation of the rare-earth ions in the III-V semiconductors.—73-04311
Electronic properties and their relations to optical properties in rare-earth-doped III-V semiconductors.—73-04313
Electronic surface state resonant Raman scattering from vibrational modes of adsorbed monolayers: Sb on III-V semiconductors.—73-04315
Elemental vapor transport epitaxy [EVTE] of II-VI semiconductors.—73-04316
Epitaxial heterojunctions of oxide semiconductors and metals on high-temperature superconductors.—73-11522
Erbium-doped semiconductor thin films prepared by rf magnetron sputtering.—73-04329
Experimental investigation of N-MOS inversion layers in the electric quantum limit.—73-14902
Formation of semiconductor diamond.—73-15236
Guide hole sleeves for boat transports supporting semiconductor device assemblies.—73-11523
High-density local interconnect in a semiconductor circuit using metal silicide.—73-04515
In situ STM observation of MBE surfaces of III-V semiconductors.—73-14974
Influence of thickness and index inhomogeneities on the transmission of semiconductor thin films.—73-07942
Interfacial atomic structure and band offsets at semiconductor heterojunctions.—73-07617
Isolation method in a semiconductor device.—73-04517
Kinetics of the luminescence of isoelectronic rare-earth ions in III-V semiconductors.—73-04378
Low dimensionality semiconductors: modeling of excitons via a fractional-dimensional space.—73-07641
Manufacture of silicon carbide (SiC) metal oxide semiconductor (MOS) device.—73-04518
Materials in microelectronics.—73-07339

MBE growth of rare-earth-doped fluoride insulators on semiconductors for laser applications.—73-04399
Metal–semiconductor interfaces.—73-01243
Method for fabricating a semiconductor integrated circuit device.—73-04520
Method for forming a field oxide film of a semiconductor device.—73-15237
Method for manufacturing semiconductor device having grown layer on insulating layer.—73-11528
Method for pulling up semiconductor single crystal.—73-11529
Method of doping single-crystal diamond for electronic devices.—73-11530
Method of forming a pattern in semiconductor device manufacturing process.—73-01377
Method of forming an oxide superconductor/semiconductor junction.—73-04851
Method of forming ohmic contact electrodes for *n*-type semiconductor cubic boron nitride.—73-11531
Method of improving the mechanical properties of semiconductor materials.—73-01378
Method of making a semiconductor device using a nanochannel glass matrix.—73-11532
Method of making metal oxide semiconductor field effect transistors with a lightly doped drain structure having a recess-type gate.—73-04524
Method of producing a silicon nitride film and method of fabricating a semiconductor device.—73-15239
Modification of the reflection coefficient of III-V semiconductors by pulsed laser bombardment.—73-07677
Molecular recognition by a *p-n* semiconductor contact.—73-11338
MOVPE of rare-earth-doped III-V semiconductors.—73-04412
Near-to-surface layers of semiconductor substrates studied by X-ray diffraction and electrophysical technique.—73-15822
Optically encoded phase-matched second harmonic generation device and self-frequency doubling laser material using semiconductor microcrystallite-doped glasses.—73-04528
Peculiar behavior of carrier effective mass and lifetime in $CuCr_2S_{2.5}Se_{1.5}$ ferromagnetic semiconductor with strong *s-d* interband exchange.—73-15085
Performance of an ultrahigh-vacuum sample transfer system for investigation of molecular beam epitaxy grown semiconductor surfaces.—73-15086
Phonon bottleneck effects in the course of carrier heating in semiconductor microstructures.—73-07711
Photocatalytic oxidation of propan-2-ol by semiconductor-zeolite composites.—73-11375
Photoexcited processes related to semiconductor technology.—73-11378
Photoinduced thermal Faraday rotation in semimagnetic semiconductors.—73-07722
Photoluminescence of fine semiconductor (CdS, CdSe, Ge) particle-doped films prepared by a mutual counterdiffusion method and a sol-gel process.—73-11386
Piezooptical response of semiconductors.—73-15103
Plasma arc apparatus for producing diamond semiconductor devices.—73-04530
Platinum ohmic contact to *p*-type silicon carbide.—73-15240
Polarization-induced transformation of ionization potentials of 3*d* ions into their impurity levels in diamond-type semiconductors.—73-15106
Porous semiconductor light-emitting device.—73-15241
Porous silicon carbide (SiC) semiconductor device.—73-11539
Possibilities and problems of semiconductor quantum microstructures.—73-15107
PTCR effect of semiconducting Zn-Ti-Ni-O ceramics.—73-11408
Pulsed-laser-deposited metal-oxide-based superconductor, semiconductor, and dielectric heterostructures and superlattices.—73-04796
Quantitative and sensitive profiling of dopants and impurities in semiconductors using sputter-initiated resonance ionization spectroscopy [SIRIS].—73-07752
Radiation effects on wet and dry oxide metal-oxide-semiconductor devices.—73-01294
Raman and X-ray scattering from dense semiconductor-dielectric nanocomposites.—73-05463
Rapid thermal annealing of semiconductors by microwave energy.—73-09291
Rare-earth doping by ion implantation and related techniques.—73-04464
Recent developments in ohmic contacts for III-V compound semiconductors.—73-04466
Refractory overcoat for semiconductor devices.—73-04531
Resonance states in the vibrational spectra of intermediate-valence semiconductors.—73-11420
Schottky barrier height—do we really understand what we measure.—73-11436
Semiconductor ceramic composition for secondary electron multipliers.—73-11542
Semiconductor Ceramics: Grain Boundary Effects.—73-17537
Semiconductor device having a capacitor dielectric film of multilayer structure and a method of controlling the same.—73-11543
Semiconductor device having a mechanical buffer.—73-01383
Semiconductor device having a ternary boron nitride film and a method for forming the same.—73-15242
Semiconductor device having differently doped diamond layers.—73-04533
Semiconductor device having field effect transistor using ferroelectric film as gate insulation film.—73-11544
Semiconductor device having silicon carbide grown layer on insulating layer and MOS device.—73-15243
Semiconductor device with ferroelectric and method of manufacturing the same.—73-11545
Semiconductor device.—73-01384
Semiconductor devices having an improved gate.—73-04534
Semiconductor heterojunctions at the Conference on the Physics and Chemistry of Semiconductor Interfaces: a device physicist's perspective.—73-11443
Semiconductor light-emitting element.—73-11546
Semiconductor researchers probe for new SPM [scanning probe microscopy] uses.—73-08442
Semiconductor wafer bonding: a review of interfacial properties and applications.—73-15159
Silicon carbide semiconductor device.—73-15246
Size effect of nanosecond switching in submicron coplanar structures based on amorphous semiconductors.—73-04483
Speakers utilizing semiconductive piezoelectric monomorph devices.—73-01431
Speakers utilizing semiconductive piezoelectric monomorph devices.—73-11616
Stress-induced optical activity in the zinc blende type semiconductors.—73-11458
Structure and properties of semiconductor melts.—73-15185
Superconductive switching element with semiconductor channel.—73-04884
Temperature dependence of the electrical conductivity of monocrystalline oxide semiconductors [studied] through the dependence on temperature of the electronic bands on collective excitations.—73-11477
Theory of rare-earth impurities in semiconductors.—73-04497
Transmission of the bipolar electromagnetic field through thin semiconductor film with a superlattice.—73-15215
Twenty years of semiconductor surface and interface structure determination and prediction: the role of the annual conferences on the physics and chemistry of semiconductor interfaces.—73-11491
Two-photon absorption of semiconductor microcrystals under space limitation.—73-15221
Ultraviolet semiconductor laser structures with pseudomorphic ZnCdSSe quaternary alloys on GaP substrates.—73-04504
Universal tight-binding model for II-VI semiconducting compounds.—73-04506
XPS/XAES study of highly dispersed semiconductor CdS and CdO in zeolites.—73-11511
Zinc solid sources for $A^{III}B^{V}$ semiconductors via the sol-gel route.—73-15234

**sensitivity,**
Characterization of new materials by surface-sensitive techniques.—73-01890
High-responsivity $YBa_2Cu_3O_{7-x}$ microbolometers with fast response times.—73-01569

**sensors,**
Alcohol sensor by using a *p-n* semiconductor contact.—73-11063
Application of glass-ceramics for sensor technologies.—73-14132
Artificial olfactory sensor on plural quartz crystals.—73-03776
Characterization of $TiO_2$-based sensor materials using immittance spectroscopy.—73-06199
Chatter and surface pattern detection for cylindrical grinding using a fluid coupled acoustic emission [AE] sensor.—73-05026
Chemical sensor for carbon monoxide detection.—73-04511
Contact combustion type carbon monoxide sensor.—73-11515
Developments in sensors and sensitive ceramic elements.—73-11135
Effects of added $TiO_2$ on the characteristics of $SnO_2$-based thick-film gas sensors.—73-11169
Electrical properties of semiconducting $VO_2$-based critical temperature sensors.—73-14872
Electrochemical oxygen sensors.—73-14875
High-temperature humidity sensor using a limiting current type plane oxygen sensor.—73-11250
High-temperature humidity sensor using a limiting-current-type plane oxygen sensor.—73-01188
Humidity sensor of semiconductor ceramics.—73-11251
Humidity sensor using $Al_2O_3$, $TiO_2$, and $SnO_2$ prepared by sol-gel method.—73-04357
Humidity sensor using $Al_2O_3$, $TiO_2$, and $SnO_2$ prepared by sol-gel method.—73-11252
Humidity sensor using porous $xLi_2O{\cdot}Al_2O_3{\cdot}2SiO_2$.—73-11253
Humidity sensor using porous ceramics $xLi_2O{\cdot}Al_2O_3{\cdot}2SiO_2$.—73-01191
Humidity-sensing effects of the layered oxides $SrO(LaScO_3)_n$ ($n$=1, 2, ∞).—73-14969
Hydrogen sensor based on bonded hydronium Nasicon.—73-00976
Improvement of output voltage in ir sensor using semiconductive fiber by treatment of high-voltage pulse.—73-07576
Improvement of output voltage in ir sensor using semiconductive fiber by treatment of high-voltage pulse.—73-14973
Infrared sensing by semiconducting ceramic monofiber.—73-02622
Intellectualization of semiconductor gas sensors by layer building of oxide thin films with heterostructure.—73-04370
Ionic ceramic materials used in potentiometric electrochemical sensors.—73-00984
Making resistance gas sensors.—73-11026
Method for making porous glass optical fiber sensor.—73-03819
Microwave detection of a superconducting infrared sensor.—73-11981
Miniature gas sensor.—73-04526
Miniature gas sensor.—73-11535
New gas-sensing method for detecting carbon monoxide by use of the complex impedance of a CuO/ZnO heterocontact under a dc bias voltage.—73-11348
Novel applications of silver beta-alumina in galvanic cell sensors.—73-07347
Optical remote sensing for measurement of toxic gases.—73-15740
Oxidizing gas sensing by SiC/ZnO heterocontact—$NO_x$ sensing.—73-01269
Oxygen gas-sensing properties of semiconductive $V_2O_5$-$SrO$-$Sb_2O_3$ glass at high temperature.—73-15082
Photoemission spectromicroscopy: a new insight in the chemistry of $SnO_x$ films for gas sensors.—73-01274
Plunger mechanism with a Hall sensor movement detection device for a glassware forming machine.—73-15773
Pressure transducer utilizing diamond piezoresistive sensors and silicon carbide force collector.—73-11639
Proposal of gas discrimination method by one sensor.—73-04456
Protonic conductivity of hydrotalcite-type compound thick films: application to a humidity sensor.—73-01292
Quadrangular bulk ZF-7 glass double layer optical path current sensor.—73-07066
Redox control in industrial glass melting by means of zirconia-based sensors.—73-01968
Rugged $O_2$ microsensor.—73-11541
Selective sensing of carbon monoxide gas in CuO-banded ZnO ceramics.—73-15157
Sensor system [with $ZrO_2$ sensor].—73-15244
Smart ceramic materials and systems.—73-09749
$SnO_2$-based gas sensors affected by addition of several metal oxides.—73-15164
Sol-gel vanadium pentoxide glucose biosensor.—73-05180
Synthesis of zinc oxide films for gaseous sensors.—73-03060
Temperature sensor having a temperature correction in itself.—73-04818
Temperature sensor or temperature sensor arrangement made from glass-ceramic and bonding film resistors.—73-04535
Temperature sensor.—73-02072
Three-phase zirconia sensor for rapid determination of silicon levels in hot metal.—73-10997
Voltammetric sensor for glass tanks.—73-10619
Zirconia oxygen sensor.—73-11552
$ZrO_2$ oxygen sensors: an evaluation of behavior at temperatures as low as 300°C.—73-01369
$ZrO_2$ oxygen sensors: an evaluation of behavior at temperatures as low as 300°C.—73-04185

**separators/separation,**
Arrival of color sorting.—73-15707
Cullet sorter investment pays off for UK glass recycler.—73-15710
Electrical field-flow fractionation [EFFF] in particle separation: I, Monodisperse standards.—73-08397
Fluid particle separation equipment.—73-08338
New electromagnetic separators.—73-01477
New electromagnetic separators.—73-01802
New generation of high efficiency separators for ball mills and roller presses.—73-01803
Simple air-stream clay separator.—73-12062

**sepiolite,**
Formation of "Na-sepiolite" fibers by hydrothermal treatment of Na-fluor-taeniolite and Na-fluor-tetra-silicic mica.—73-05812
Formation of "Na-sepiolite" fibers by hydrothermal treatment of Na-fluor-taeniolite and Na-fluor-tetra-silicic mica.—73-16787
Heat-resistant expansion member.—73-02043
Influence of preparation method on the characteristics of Ni/sepiolite catalysts.—73-13098

**serpentine,**
Hydrothermal synthesis of kaolinite from serpentinite.—73-02854

**setting,**
Alkali metal salts as set accelerators for high-alumina cement.—73-03434
Controlling method of setting time for low-heat cement concrete.—73-09800
Gypsum-free high early-strength cement.—73-06665
Influence of set-retarding superplasticizers and microsilica on setting times of pastes at various tempcratures.—73-06676
Lithium salts as set accelerators for high alumina cement [HAC].—73-06682
Origin of portland cement setting.—73-10074

**settling,**
Settling behavior of iron oxide suspensions.—73-06035

**shales,**
Cost-effective utilization of oil shale at Rohrbach Zement Co.—a review of two significant process developments.—73-09872

**shape parameter,**
Shape evolution of a coherent tetragonal precipitate in partially stabilized cubic $ZrO_2$: a computer simulation.—73-03192
Shaping technology for ceramic sheets using vacuum filtration.—73-08363

**shaping,**
Influence of shaping method on the strength of ceramics.—73-09177
Near-net-shape casting and refractories needed to develop it.—73-00832
Possibilities and limits in the shaping of ceramic powders.—73-15744
Practical approach of the use of dry steam injection in clay processing.—73-04941

Problems of protective colored glass shaping drawing the ribbon.—73-03876

**shear,**
In-plane shear properties of 2-D ceramic matrix composites.—73-17355
Quick change shear assembly for glassware-forming machine.—73-01878

**sheets,**
Binders for forming a ceramic sheet and applications thereof.—73-01848
Composition dependence of sheet glass properties (review).—73-00438
Composition optimization for thermally polished sheet glass.—73-00601
Densified ceramic green sheet and stack having conductors therein.—73-04198
Dependence of sheet glass properties on its composition—review.—73-00608
Distribution of relief variations in glass strips produced on molten metal.—73-07120
Effects of edge effects on sheet glass bending strength.—73-00470
Electrochemical element and method of producing [the] same.—73-11014
Fabrication of alumina sheets by extrusion.—73-02823
Fabrication of alumina sheets by extrusion.—73-13053
Film blowing of ceramics.—73-16782
Influence of knot construction, skimming-tank neck, and mechanical mass stirring on the quality of furnace operation for sheet glass production.—73-15883
Lightweight vacuum shuttle.—73-03938
Magnetic plate punch actuator.—73-01861
Making bent chilled items.—73-00655
Method and apparatus for bending glass sheets.—73-12082
Method and apparatus for handling glass sheets.—73-01862
Method and apparatus for heat-strengthening glass sheets.—73-00739
Method of laminating glass sheets.—73-03948
Method of manufacturing ceramic multilayer electronic component.—73-11034
Mica.—73-12288
Model for the complex deformation of sheet glass.—73-00666
Model of the process of complex deformation of sheet glass.—73-00667
Operation of a high-capacity furnace for sheet glass [analyzed] by the method of physical modeling.—73-12235
Pouring on band.—73-01813
Process and device for the production of curved glass sheets.—73-00755
Process for producing a glass sheet with ceramic color composition and a conductive strip.—73-14556
Sheet glass strength in relation to production parameters.—73-00700
Time and temperature in pressing sheet glass components.—73-07184
Volterra principle in calculating sheet glass deformation.—73-00580

**shells,**
Decalcification studies on avian eggshell.—73-05727

**shielding,**
Composite superconductor-polymer material preparation for low-magnetic-field shielding.—73-04683
Electromagnetic shielding characteristics of polymer/superconductor composites.—73-11744
Glass shielding effects of protons in space.—73-14196

**shock resistance,**
Increasing of the glass articles' mechanical shock resistance related to their technological history.—73-14206

**shock,**
Shock compressibility of the sphalerite modification of boron nitride.—73-06036
Technological fundamentals of shock-wave SHS compaction.—73-16359

**shrinkage,**
Autogenous shrinkage of cement paste.—73-09823
Autogenous shrinkage properties of various cement pastes.—73-09824
Control of permanent shrinking of recycled castable refractories from waste refractories of $Al_2O_3$-$SiO_2$.—73-00791
Drying shrinkage of high-strength concrete.—73-09893
Effect of heating rate on the shrinkage of isothermal sintering.—73-05760
Effect of micropore structure on autoclaved aerated concrete shrinkage.—73-00074
Influence of shrinkage mismatch between copper and ceramics on dimensional control of the multilayer ceramic circuit board.—73-03601
Method for reducing shrinkage during firing of ceramic bodies.—73-04992
Method of minimizing lateral shrinkage in a cofired, ceramic-on-metal circuit board.—73-11035
Relationship between hardened and pore structure of hardened blended cement mortar and its drying shrinkage.—73-10135
Synthesis and characterization of cordierite glass-ceramics for low-firing-temperature substrate: I, Crystallization and shrinkage behavior of MgO-$Al_2O_3$-$SiO_2$ glass powders.—73-00709

**SiAlON,**
*o*´-ß´ SiAlON ceramics.—73-09226
$^{29}$Si, $^{27}$Al, and $^{15}$N magic angle spinning nuclear magnetic resonance study of O´-SiAlON's and some related phases.—73-12680
Analysis of the α-to-ß phase transformation in Y-Si-Al-O-N ceramics.—73-08549
Densification of zirconia-containing SiAlON composites by $Sm_2O_3$.—73-09060
Effect of post-HIP treatment on the properties of Y-SiAlON ceramics.—73-13015
Effect of yttria and ceria on mechanical properties and oxidation behaviors of α-SiAlON ceramics.—73-17296
Effects of the characteristics of silicon nitride powders on the preparation of α´-SiAlON ceramics.—73-05782
Fabrication and characterization of ß-SiAlON components from polymeric precursors.—73-05798
Formation and densification of R-α´-SiAlON's (R=Nd, Sm, Gd, Dy, Er, and Yb).—73-05810
Heat treatment of SiAlON ceramics densified with higher atomic number rare-earth and mixed yttrium/rare-earth oxides.—73-02849
High-temperature strength of ion-implanted SiAlON and nickel joints.—73-03596
Influence of oxygen content on formation of yttrium α-SiAlON ceramics.—73-16838
Mechanical and tribological properties of α-SiAlON/SiC whisker composites.—73-17378
Mechanical properties of SiC whisker-reinforced ß-SiAlON composites.—73-06481
Mg-Si-Al-O-N glasses prepared by nitriding cordierite powders derived from polymer precursors.—73-03857
Microstructure and mechanical properties of the in situ ß-$Si_3N_4$/α´-SiAlON composite.—73-17159
Neutron diffraction study of yttrium α´-SiAlON.—73-08676
Nucleation and growth of α´-SiAlON on α-$Si_3N_4$.—73-13434
Nucleation and growth of ß´-SiAlON.—73-13435
Oxidation behavior of RE-α-SiAlON ceramics (RE=Nd, Sm, Gd, Dy, Y, Ho, Er, Yb).—73-17228
Oxidation behavior of zirconia–SiAlON composites.—73-06314
Parameters affecting pressureless sintering of α´-SiAlON's with lanthanide-modifying cations.—73-05944
Phase relations between α´- and ß´-SiAlON's in $Si_3N_4$(-$SiO_2$)-AlN-$Y_2O_3$ system.—73-08694
Phase relations between α´- and ß´-SiAlON's in $Si_3N_4$(-$SiO_2$)-AlN-$Y_2O_3$ system.—73-16255
Phases and kinetics of ß´-SiAlON formation from clays.—73-16269
Preparation of SiAlON powder by carbothermal reduction and nitridation: II, Preparation of Z=0.5–1 SiAlON.—73-16933
Preparation of SiAlON powder by carbothermal reduction and nitridation: III, Preparation of Z=0 SiAlON ($Si_3N_4$).—73-16934
Process for producing ß-SiAlON-based sintered bodies.—73-12510
Processing and microstructure of a Ce-doped in situ O´+ß´-SiAlON composite.—73-16950
Production of ß´-SiAlON's through carbon/oxide nanocomposites obtained from montmorillonite/aromatic-ammonium complexes.—73-13219
Reaction sintering of ß-$Si_3N_4$/α´-SiAlON ceramics.—73-06012
Residual α-$Si_3N_4$ in O´ crystals in $CeO_2$-doped O´+ß´-SiAlON ceramics.—73-17193
SiAlON ceramics sintered with yttria and rare-earth oxides.—73-06039
SiAlON ceramics: retrospect and prospect.—73-05274
SiAlON's and silicon nitrides: microstructural design and performance.—73-06281
SiAlON-bonded silicon carbide sidewall pieces for the aluminum reduction cell.—73-10768
SiAlON-containing material based on the Ovruch quartzite, aluminum powder, and coke.—73-12443
SiC/combustion-synthesized ß´-SiAlON composite.—73-16984
Solid-liquid reactions in the system $Si_3N_4$-ß-SiAlON-$Y_3Al_5O_{12}$.—73-16308
Stability of yttrium α-SiAlON under high pressures.—73-16312
Structure and corrosion properties of PVD coatings in the system Si-Al-O-N.—73-06320
Superplastic forming of SiAlON ceramics.—73-17015
Superplastic SiAlON—a bird's eye view of silicon nitride ceramics.—73-05278
Synthesis and characterization of ß´-SiAlON whiskers prepared from the carbothermal reaction of silica fume and α-$Al_2O_3$.—73-17018
Synthesis of ß´-SiAlON powder by fluidized bed furnace.—73-17025
Synthesis of ß-SiAlON powder by carbothermal reduction and nitridation: III, Reaction process of ß-SiAlON (Z=3).—73-17027
Temperature dependence of the elastic moduli, dilational and shear internal frictions, and acoustic wave velocity for alumina, (Y)TZP, and ß´-SiAlON ceramics.—73-09684
Thermal stability of phases in $Si_3N_4$-(-$SiO_2$)-AlN-$Y_2O_3$ system.—73-16373
Variations of aluminum concentration in ß´-SiAlON grains formed during liquid-phase sintering of $Si_3N_4$-$Al_2O_3$-$Nd_2O_3$.—73-06872
Wear and friction of Y-TZP spheres reciprocating against various SiAlON plates.—73-09691

**Sialons,**
α´/ß´ SiAlON composites.—73-02144
Change of surface grinding flaw of ß-SiAlON with oxidation and its influence on bending strength.—73-02739
Creep processes in SiAlON ceramics.—73-03254
Creep variability of SiAlON ceramics.—73-03255
Effect of process-related oxidation on microstructure and mechanical properties of ß´-*o*´-SiAlON ceramics.—73-02793
Effects of grain-boundary phases on the corrosion of ß-SiAlON in molten copper oxide.—73-00810
Evaluation of grain-boundary phases of ß-SiAlON by cryogenic specific heat measurements.—73-03143
High-temperature strength of the hot-pressed partially stabilized α-SiAlON ceramics having the composition of $Y_{0.1}(Si, Al)_{12}(N, O)_{16}$.—73-03309
Influence of nitrogen on the mobility of lithium in oxynitride glasses of the Li-Si-Al-O-N system.—73-00503
Interfacial characterization of ß-SiAlON powder prepared from Hadong kaolin.—73-03157
Local structural distortions of Yb-α´-SiAlON's determined by extended X-ray absolution fine structure spectroscopy.—73-02320
Local structure of ß´-SiAlON's: an EXAFS study.—73-02321
Multi-cation α-SiAlON's.—73-02338
Quantitative analysis of *o*´-phase in ß´-*o*´ SiAlON ceramics by image analysis technique.—73-03187

**SiAlONs,**
Reaction hot-pressing of α´- and ß´-SiAlON ceramics.—73-06011

**Sialons,**
SiAlON type sintered bodies and method of producing the same.—73-02133
SiAlON-bonded silicon carbide refractories for blast furnace.—73-00863
Sintering, properties, and applications of silicon nitride and SiAlON ceramics.—73-03014

**silanes,**
$^{29}$Si NMR study of the hydrolysis and condensation of EPOXS [an epoxysilane] sol-gel solution.—73-14082
Chemical foundations in understanding the step coverage problem in chemical vapor deposition using silane chemistry.—73-09039
Microstructure and grain growth of polycrystalline silicon deposited using silane and disilane.—73-06253
Power dissipation mechanisms in radio-frequency-driven silane discharges: the influence of discharge geometry.—73-05954
Production of $Si_{2-x}P_xN_{2+x}(NH)_{1-x}$, where $x$=0.1 to 1.—73-12513
Properties of ORMOSIL with adding organic silane in TEOS system: I.—73-06272
Reactivity of alkoxysilanes studied by methods of theoretical chemistry.—73-09298
Reverse reactions in the functional group kinetics of TMOS hydrolytic polycondensation.—73-06021
Silane oxidation in a low pressure chemical vapor deposition system in the temperature range 100–450°C.—73-06042
Silicon nitride formation from a silane–nitrogen electron cyclotron resonance plasma.—73-03003
Solvent dependence of tetramethoxysilane hydrolytic products on electron structure and reactivity.—73-06065

**silazanes,**
Growth, composition, and structure of plasma-deposited siloxane and silazane.—73-16811
Method for manufacturing a hafnium-containing silazane polymer and a method for manufacturing a ceramic from said polymer.—73-12486
New polycarbosilazane precursors of monofilamental ceramics Si-C-N and Si-C-N-O.—73-02902
Preceramic polysilazanes for structural applications.—73-15969
Tensile testing at high temperatures of ex-PCS Si-C-O and ex-PCSZ Si-C-N single filaments.—73-03364

**silica fume,**
Ac impedance spectroscopy: II, Microstructural characterization of hydrating cement–silica fume systems.—73-06619
Carbonation of OPC [ordinary portland cement] and OPC/silica fume hardened cement pastes in air under conditions of fixed humidity.—73-06633
Chloride ion permeability and pore solution compositions of mortars containing silica fume.—73-09854
Dispersibility of fumed silica in simple media.—73-16715
Effect of silica fume on cement hydration in low-porosity cement pastes.—73-00075
Effect of silica fume on pore structure and chloride diffusivity of low-porosity cement pastes.—73-00076
Effects of silica fume on alkali-silica expansion in mortar specimens.—73-03460
Fundamental study on the durability of silica fume concrete in marine environment.—73-09973
Hydration of cement and silica fume paste.—73-00106
Hydration of type K expansive cement paste and the effect of silica fume: II, Pore solution analysis and proposed hydration mechanism.—73-06668
Hydraulic binders based on condensed silica fume and slaked lime.—73-13732
Influence of condensed silica fume on the concrete strength.—73-00114
Influence of silica fume replacement of cement on physical properties and resistance to sulfate attack, freezing and thawing, and alkali-silica reactivity.—73-00123
Mechanical behavior of silica fume mortar slabs reinforced by AFRP and CFRP rods.—73-10035
Modification of transition zone microstructure—silica fume coating of aggregate surfaces.—73-10057
Occurrence of large silica-fume-derived particles in hydrated cement paste.—73-10071
Pore solution composition and reinforcement corrosion characteristics of microsilica-blended cement concrete.—73-00165
Properties of blended cement containing silica fume and super-pulverized materials with water-cementitious material ratios.—73-10108
Properties of silica fume concrete and mortar.—73-13770
Quantitative determination of residual silica fume in DSP [densified with small particles] cement pastes by $^{29}$Si NMR.—73-03524
Theory and practice of fume silica–aluminous cement interactions.—73-03545

**silica,**
$^{129}$Xe NMR studies of the porous structure of silica gels.—73-13465
1.9-eV photoluminescence-induced by 4-eV photons in high-purity wet synthetic silica.—73-12842

Active silica in porcelain production.—73-00892
Adsorption of perfluoropolyethers on $SiO_2$ surfaces for thin-film magnetic disk overcoats.—73-06883
Alkali passivation mechanism of sol-gel-derived $TiO_2$-$SiO_2$ films coated on soda-lime-silica glass substrates.—73-00304
Alkali passivation mechanism of sol-gel-derived $TiO_2$-$SiO_2$ films coated on soda-lime-silica glass substrates.—73-10355
Alteration of electron-electron interaction effects in metal-insulator-metal trilayers.—73-14679
Aluminum impurity in $SiO_2$-Si semiconductor structures.—73-14768
Amorphous silica spherical particles.—73-02020
Analysis of EPR spectra of Cu(II) spin label of heat-treated $SiO_2$ xerogels.—73-03707
Analytical and chemical techniques in the study of surface species in atomic layer epitaxy.—73-05020
Antimony(V) oxide grafted onto a silica gel surface: acidic properties and thermal stability.—73-05533
Application of silica sol to permeable cermet.—73-06738
Application of silica-sol investment to dental castable ceramics.—73-16657
Application of X-ray absorption spectroscopy (XANES) for the investigation of $SiO_2$ glass local structure.—73-13926
Aqueous sol-gel synthesis of powders in the $ZrO_2$-$SiO_2$ system using zirconium formate and tetraethoxysilane.—73-09020
Aspects of mullite synthesis in relation to the grain size of $Al_2O_3$ and $SiO_2$.—73-00778
Azimuthal anchoring energy at an $SiO_x$-nematic interface.—73-16412
Behavior of α-quartz and pressure-induced $SiO_2$ glass under pressure: a molecular dynamical study.—73-08555
Behavior of rf sputter-deposited $SiO_2$ and $Al_2O_3$ diffusion barriers on float glass at 300°C in air.—73-10499
Benzene adsorption on silica, modified by chromium oxochloride.—73-16414
Bi-implanted $SiO_2$: a potential optical device material.—73-14135
Breakdown mechanism in buried silicon oxide films.—73-07284
Breakdown of the semiclassical description of hot-electron dynamics in $SiO_2$.—73-09390
Buried $SiO_2$ layer formation in Si with an MeV O ion beam.—73-03122
Calculation of the CaO-$SiO_2$-$Me_xO_y$ system viscosity.—73-02554
Catalyst composition for improving combustion efficiency of liquid fuels.—73-02024
Cation site energies for high-silica FAU-type zeolites.—73-12544
CdS semiconductor-doped silica xerogels.—73-11091
Ceramic materials based on amorphous silicon oxide.—73-07111
Ceramic thin film memory device.—73-11007
Changes in physical properties and structure of sol-gel-derived $SiO_2$ films in an environment of high temperature and high humidity.—73-14142
Changes in the electronic properties of Si-$SiO_2$ system due to laser irradiation.—73-01093
Characteristics and structure of LPD-$SiO_2$ film incorporating organic dye.—73-13934
Characteristics of glassy material production in the $SiO_2$-$P_2O_5$ system by the sol-gel method.—73-13935
Characteristics of low-temperature and low-energy plasma-enhanced chemical-vapor-deposited $SiO_2$.—73-09035
Characterization and depth profiling of $E'$ defects in buried $SiO_2$.—73-09391
Characterization of fluorine-doped silica glasses.—73-06887
Characterization of radiative surface modes and anisotropy in Ag/$SiO_2$ multilayers, by visible and ir ellipsometry.—73-13378
Characterization of Si-$SiO_2$ interface states: comparison between different charge pumping and capacitance techniques.—73-07410
Characterization of silicon dioxide films deposited at low pressure and temperature in a helicon diffusion reactor.—73-16669
Characterization of silicon oxide films grown at room temperature by point-to-plane corona discharge.—73-10922
Characterization of $SiO_2$ films on glass substrate by sol-gel and vacuum deposition methods.—73-10506
Characterization of $SiO_2$-GaAs interface structures using spectroscopic ellipsometry.—73-14805
Characterization of the degradation processes in $SiO_2$-Si structure by means of electrolyte-insulating-semiconductor systems.—73-05025
Characterization of titania silicalites.—73-08574
Characterization of $ZrO_2$-$SiO_2$ glasses prepared with silicium and zirconium alkoxides.—73-13937
Characterization of ZSM-5 zeolite synthesized from silica stone (Ioh Island, Kagoshima pefecture).—73-02162
Charge trapping on different cuts of a single-crystalline α-$SiO_2$.—73-07288
Charge-trapping properties of thin plasma-nitrided oxides induced by nitrogen and hydrogen incorporation.—73-05536
Chemical agents for reducing solubility of silica in 1*N* sodium hydroxide.—73-09849
Chemical interaction and structural defects in ion-implanted $SiO_2$ glass.—73-13940
Chemical vapor deposition of $SiO_2$ from tetraethoxysilane: the effect of the surface hydroxyl concentration.—73-02745
Chemically corroded pristine silica fibers: blunt or sharp flaws—correction.—73-06200
Chemically corroded pristine silica fibers: blunt or sharp flaws.—73-03126
Coating of ferric oxide particles with silica by hydrolysis of TEOS.—73-02748
Coating of ferric oxide particles with silica by hydrolysis of TEOS.—73-10508
Coatings for $SiO_2$ optical fibers.—73-03914
Color center formation and destruction in silica glasses with 248- and 242-nm absorption bands under the 248-nm laser irradiation.—73-13944
Colored glass.—73-00730
Combined temperature-programmed desorption and FTIR spectroscopy study of $CO_2$, CO, and $H_2$ interactions with model ZnO/$SiO_2$, Cu/$SiO_2$, and Cu/ZnO/$SiO_2$ methanol synthesis catalysts.—73-12552
Comparative study of radiation-induced electrical and spin active defects in buried $SiO_2$ layers.—73-13341
Comparative study of sorptional capacity of silica-containing phases of various nature in respect to protein.—73-16422
Comparison of the density and distribution of traps generated by high-voltage stress in silicon oxide and silicon oxynitrides.—73-04066
Comparison of the spectroscopic properties of $Eu^{3+}$-doped silica dried gel, silica gel glass, and conventional silicate glass.—73-10422
Composite dependence of electromotive force of silica-alumina ceramics as oxygen solid electrolyte.—73-14684
Composite materials consisting of $Li_2O$-$SiO_2$ [LS] crystals and $Na_2O$-CaO-$SiO_2$ [NCS] glass.—73-00311
Compositional investigations of sputtered amorphous $SiO_x$:H.—73-16062
Computer simulation of the structure of silica glass.—73-06893
Control of pore characteristics of porous glass in the $ZrO_2$-$SiO_2$ system prepared by the sol-gel method.—73-10512
Controlled atomic spontaneous emission from $Er^{3+}$ in a transparent Si/$SiO_2$ microcavity.—73-16431
Controlling the plasma chemistry of silicon nitride and oxide deposition from silane.—73-09551
Corrections to the phase diagram of the MgO-$Al_2O_3$-$SiO_2$ system.—73-08581
Coupled thermostimulated luminescence/electron spin resonance study in pure vitreous silica: application to alpha radiation damage study.—73-07006
Cracking and delamination of metallorganic vapor-deposited alumina and silica films.—73-09052
Crystalline zeolites and method of preparation from amorphous silica particles.—73-12360
Crystallization behavior of $Li_2O$-2$SiO_2$ melt and a melt model.—73-13951
Crystallization of an $Al_2O_3$-MgO-$SiO_2$ glassy grain-boundary phase.—73-12566
Cyclic annealing-induced microstructural and crystallographic changes in crystalline yttria films on silica.—73-09056
Decalcification of stabilized zirconia by silica and some other oxides.—73-12571
Defects in silicon dioxide films on Si(100) [studied] by a variable energy positron beam.—73-13344
Defects induced by electron bombardment and substrate doping in $SiO_2$ thin films.—73-06149
Degradation of transmission of silica glass on excimer laser irradiation.—73-03781
Degradation of transmission of silica glass on excimer laser irradiation.—73-10429
Dehydroxylation of vitreous silica.—73-13958
Densification and crystallization of amorphous $SiO_2$ by neutral beam bombardment.—73-05731
Densification of silica gels by hydrothermal hot-pressing.—73-09059
Density of low energy states in vitreous silica: specific heat and thermal conductivity down to 25 mK.—73-14151
Density, thickness, and interface roughness of $SiO_2$, $TiO_2$, and $Ta_2O_5$ films on BK-7 glasses analyzed by X-ray reflection.—73-07008
Dental ceramic material with a relatively low processing temperature.—73-12361
Deposition of silicon oxide films from TEOS by low-frequency plasma chemical vapor deposition.—73-05737
Depth profiling of oxygen vacancy defect generation in buried $SiO_2$.—73-06150
Design and fabrication of a broad-band silica-based optical waveguide coupler with asymmetric structure.—73-07116
Detection of hydrogen in bulk and thin-film silicon dioxide by hydrogen nuclear magnetic resonance.—73-06204
Determination of stoichiometry of $SiO_x$ thin films using an Auger parameter.—73-08597
Developing a production procedure for VK94-1 ceramics using silicon oxide.—73-01773
Development of ceramic composite membranes for gas separation: I, Coating characteristics of nanoparticulate $SiO_2$ sols.—73-02771
Development of ceramic composite membranes for gas separation: V, Synthesis of nanoparticulate silica membranes by the pressurized sol-gel coating technique.—73-08509
Development of silica–magnesia sagger using fine particle raw materials.—73-10721
Diatomite.—73-12268
Dielectric breakdown properties of $Ta_2O_5$/$SiO_2$ stacked thin films prepared by rf sputtering.—73-10930
Dielectric polarization relaxation measurement in α-$SiO_2$ by means of a scanning electron microscope technique.—73-07298
Differences in properties of natural and synthetic silica glass on the basis of impurity levels.—73-14157
Diffraction study of the sol-gel-derived $SiO_2$ gels.—73-13960
Dissipative tunneling in two-state systems at the Si/$SiO_2$ interface.—73-11144
Distribution of defects created by xenon implantation into silica.—73-06906
Drying of monolithic silica gels in a porous powder.—73-07121
DSC study of the effect of water on the nucleation of $Li_2O$-2$SiO_2$ *glass.—73-13963*
Dynamic light scattering studies of the stability and growth of silica particles.—73-09075
Effect of additions of oxides of calcium, magnesium, and aluminum on the crystallization of aegirine in glasses of the $Na_2O$-$Fe_2O_3$-$SiO_2$ system.—73-00613
Effect of additives on the thermal nitridation of sol-gel-derived silica gel.—73-07122
Effect of carbon on thermal oxidation of silicon and electrical properties of $SiO_2$-Si structures.—73-05545
Effect of electrolyte exposure on silicon dioxide in electrolyte-oxide-semiconductor structures.—73-14694
Effect of gel parameters on monolithicity and density of silica aerogels.—73-09078
Effect of heat treatment on the parameter of an interface in Si-$SiO_2$ structures after irradiation.—73-11155
Effect of hydrogen on hot electron energy relaxation in $SiO_2$ and $Si_3N_4$ films.—73-10937
Effect of hydrolysis time and type of catalyst on the stability of tetragonal zirconia-silica composites synthesized from alkoxides.—73-14359
Effect of oxygen ions on filling $SiO_2$ into holes using biased electron cyclotron resonance plasma deposition.—73-13010
Effect of powder processing on slip-casting parameters and sintering of $Si_3N_4$-$SiO_2$-$Y_2O_3$.—73-05766
Effect of pressure on plasma-assisted chemical vapor deposition of silicon oxide(s).—73-09088
Effect of rf power on remote plasma-deposited $SiO_2$ films.—73-09094
Effect of silicic acid gelation operating conditions on the production of silica gels having molecular sieve properties.—73-16740
Effect of $SiO_2$ addition on the microstructure and mechanical properties of Y-TZP.—73-05771
Effect of $SiO_2$ and $P_2O_5$ on the MgO-$Al_2O_3$-$SiO_2$ system glass-ceramics produced by sintering.—73-00616
Effect of $SiO_2$ on the reliability of multilayer ceramic capacitors with Ni electrode.—73-07306
Effect of substrate temperature and bias on the stress, chemical etch rate, and microstructure of high deposition rate sputtered $SiO_2$ films.—73-02797
Effect of the composition of titania silica on its physical and catalytic properties.—73-12776
Effect of $TiO_2$ layer on dielectric properties of pyrogenic silica.—73-16463
Effect of various oxide additives on sintering of BaO-$SiO_2$ system glass-ceramics.—73-03836
Effects of diols on surface area and pore radius of alkoxy-derived silica gels.—73-05779
Effects of diols on surface area and pore radius of alkoxy-derived silica gels.—73-14165
Effects of OH group [680–850 ppm] on distribution of refractive index in silica glass.—73-00471
Effects of OH group on distribution of refractive index in silica glass.—73-10433
Effects of organic substances in the preparation of porous silica glass by the sol-gel process.—73-14369
Effects of predeposition HF/$NH_4$F treatments on the electrical properties of $SiO_2$/Si structures formed by low-temperature plasma-assisted oxidation and deposition processes.—73-05551
Effects of silicon source gas on PECVD $SiO_2$ properties.—73-03837
Effects of $SiO_2$ substitution on the structure and properties of low-melting phosphate glass.—73-13972
Effects of thermal nitridation on the radiation hardness of the $SiO_2$/Si interface.—73-08841
Effects of thin-film deposition rates and process-induced interfacial layers on the optical properties of plasma-deposited $SiO_2$/$Si_3N_4$ Bragg reflectors.—73-05783
Elastic anomaly and structure of F-doped silica glass.—73-01894
Elastic properties of a-Ge:H/Si and a-Ge:H/$SiO_2$ heterostructures.—73-12783
Elastic properties of sodium magnesium silica and sodium calcium silica glasses by Brillouin scattering.—73-14169
Electrical characteristics and hydrogen concentration of chemical-vapor-deposited silicon dioxide films: effect of water treatment.—73-12785
Electrical conductivity of dry silica gel under high pressure.—73-10435
Electrical properties of thin reoxidized dual-layer oxides.—73-07315
Electrical resistivity of silica glasses.—73-14179
Electrokinetics of the silica-solution interface: a flat plate streaming potential study.—73-16483
Electron properties of dielectric-semiconductor interfaces in $SiO_2$-α-Si:H Langmuir-Blodgett film structure.—73-01155
Electronic properties of semiconductor-insulator interfaces in a thin-film $SiO_2$/a-Si:H/Langmuir-Blodgett film transistor structure.—73-14882
Electronic states of $SiO_2$-$M_xO_y$ ($M_xO_y$=$P_2O_5$, $TiO_2$, and $ZrO_2$) glasses.—73-13977
Electronic structure and conductivity of $SiO_2$ layers obtained at 100°C.—73-05558
Electrophoretic deposition of silica/alumina colloids for the manufacture of CMC's.—73-16761
Energy dependence of $E'$ spin production in X-irradiated vitreous $SiO_2$.—73-06910
Energy-filtered electron diffraction [ED] from silica thin films.—73-06217
Epitaxial growth of monoclinic and cubic $ZrO_2$ on Si(100) without prior removal of the native $SiO_2$.—73-16138
Equilibrium concentration of inherent defects in vitreous silicon dioxide.—73-13979

Etching rate characterization of $SiO_2$ and Si using ion energy flux and atomic fluorine density in a $CF_4/O_2/Ar$ electron cyclotron resonance plasma.—73-09121
Etherification of silanol groups of silica surface under interaction with tert-butanol.—73-16142
Evidence for low-temperature uv annealing of uv CVD, PECVD, and [spin-on-glass] SOG-based $SiO_2$ films.—73-04098
Evolution of elastic and mechanical properties of silica aerogels during gel-glass transformation.—73-06411
Evolution of gel silica monoliths during convective drying.—73-07126
EXAFS analysis of $V_2O_5$ thin overlayers on $SiO_2$ prepared by CVD.—73-08622
Fabrication of quality silica brick using barium salt–lime slurry as mineralizer.—73-07212
Fabrication of silica glass in aqueous solution.—73-14378
Fabrication techniques and characteristics of Al-$SiO_2$ laminated optical parameters.—73-13836
Factors and mechanism of changes in the refractive index of sol-gel-derived $80TiO_2$:$20SiO_2$ films coated on soda-lime-silicate glass substrates.—73-13987
Features of formation of radiation-induced $E'$ centers in silica glasses melted of one-type raw materials by different methods.—73-14185
Field-emitter-array development for high-frequency operation.—73-11214
Fine porcelain with high silica.—73-10846
Finite size effects and short-range crystalline order in Si and $SiO_2$ studied by X-ray absorption fine structure spectroscopy.—73-06917
Floating temperature deposition of device-quality $SiO_2$ thin films by DECR [distributed electron cyclotron resonance] plasma.—73-03843
Foaming phenomena in sol-gel-derived glasses.—73-10533
Formation mechanism of hydrogen-associated defect with an 11.9-mT doublet in electron spin resonance and red luminescence in $9SiO_2$:$GeO_2$ fibers.—73-07027
Formation of photosensitive materials by ion implantation of oxygen ions in silica.—73-07028
Formation of Si–C bonds at the surface of silica and glass fibers.—73-03844
Formation of $SiO_2$/GaAs(100) interface by electron stimulated oxidation of ultrathin Si overlayers: subcutaneous oxidation processes.—73-07537
Fractographic analysis of hydrothermally treated silica glass.—73-14191
Frequency upconversion in $Er^{3+}$- and $Yb^{3+}/Er^{3+}$-doped silica fibers.—73-00488
Frequency upconversion in $Er^{3+}$-doped silica fibers.—73-10443
Friction behavior of ceramic fiber-reinforced aluminum metal-matrix composites against a 440C steel counterface.—73-03591
FTIR studies of gel to glass conversion in TEOS-fumed silica-derived gels.—73-03731
Fundamental absorption edge of crystalline and amorphous $SiO_2$.—73-16159
GaAs surface stabilization by vacuum anneal with SiO.—73-04108
Gain saturation characteristics of Raman amplification in silica and fluoride glass optical fibers.—73-06920
Gel formation and drying characteristics in the $Na_2O$-$ZrO_2$-$SiO_2$ system.—73-02839
Gel formation and drying characteristics in the $Na_2O$-$ZrO_2$-$SiO_2$ system.—73-10540
Gelation on solid surfaces in water-free $Na_2O$-$ZrO_2$-$SiO_2$ sols.—73-16802
Generation mechanisms of paramagnetic centers by gamma-ray irradiation at and near the Si/$SiO_2$ interface.—73-07545
Geometrical factors affecting the $CO_2$ laser chemical vapor deposition of silicon oxide films in parallel configuration.—73-13074
Glass and ceramic thin films deposited by an ultrasonically assisted sol-gel technique.—73-13075
Glass panel resistant to coloring when irradiated with electron rays.—73-10630
Glass powder which is crystallizable to yield a sintered glass-ceramic containing hexagonal cordierite as the principal crystalline phase.—73-03924
Glass produced from silica from a geothermic plant.—73-14395
Glass-ceramic article decorated with ceramic color and process for its production.—73-03926
Glass-ceramic materials in the $Na_2O$-$Nb_2O_5$-$SiO_2$ system and formation of optical materials with variable refractive index therefrom.—73-14197
Glaze composition.—73-10913
Grain-size composition of mullite silica fibers.—73-03149
Granulometric composition of mullite-silica fibers.—73-01786
Growth of plasma-generated particles and behavior of particle clouds during sputtering of silicon and silicon dioxide.—73-09156
Hall effect and magnetoresistance in Au/$SiO_x$ thin films.—73-08877
Heat treatment of $SiO_2$ xerogels [investigated] by EPR and ir spectroscopy.—73-03732
Heat treatment of strengthened epoxy acrylate-coated silica light guides.—73-00639
Helium plasma-enhanced chemical vapor deposited oxides and nitrides: process mechanisms and applications in advanced device structure.—73-02850
High-frequency *c-v* investigation of metal-oxide-semiconductor capacitors prepared by low-temperature subatmospheric pressure chemical vapor deposition of $SiO_2$ films on silicon substrates.—73-14958
High-pressure X-ray diffraction of $SiO_2$ glass.—73-06923
High-quality, high-deposition-rate $SiO_2$ films at low temperatures using silicon fluorides and plasma-assisted deposition techniques.—73-16818
High-resolution X-ray photoemission spectroscopy studies of thin $SiO_2$ and Si/$SiO_2$ interfaces.—73-12595
High-temperature stability of $Ca_2ZrSi_4O_{12}$.—73-16169
Hydration of amorphous $12CaO{\cdot}7Al_2O_3$ [$C_{12}A_7$] coated with $SiO_2$.—73-13730
Hydraulic and electroosmotic flow through silica capillaries.—73-08882
Hydrolytic resistance of the surface of soda-lime glass coated with silica layer.—73-03792
Hydrophobic silica $CO_2$ aerogels.—73-00641
Hydrothermal synthesis of magadiite and kenyaite.—73-13093
Hydroxyl-type specificity of diborane chemisorbed on the surface of silica gel.—73-06926
Hydroxyl-type specificity of diborane chemisorbed on the surface of silica gel.—73-16170
Identification of strained Si layers at Si-$SiO_2$ interfaces and clean Si surfaces by nonlinear optical spectroscopy.—73-16171
Immobilization of yeast cells in porous silica carrier with sol-gel process.—73-05852
Immobilization of yeast cells in porous silica carrier with sol-gel process.—73-10551
Impact ionization, degradation, and breakdown in $SiO_2$.—73-06161
Implications of toughening of clay brick on performance.—73-03980
Improved electrical properties of silicon dioxide films for MOS gate dielectrics grown in an inductively coupled rf plasma.—73-10960
Incorporation of organic compound into silica matrix by a sol-gel process for NLO [nonlinear optical] applications.—73-05859
Increases in photovoltage of "indium tin oxide/silicon oxide/mat-textured *n*-silicon" junction solar cells by silicon preoxidation and annealing processes.—73-12813
Inelastic electron tunneling spectroscopy and atomic force microscopy investigation of ultrathin sputtered amorphous silica films on gold.—73-03154
Influence of grinding medium on contamination of powdered silica.—73-01790
Influence of ion energy in plasma deposition of a-$SiO_2$ films.—73-03851
Influence of pressure on nitrogen incorporation in ultraviolet chemical-vapor-deposited $SiO_2$ films.—73-13100
Influence of surface roughness on the electrical properties of Si-$SiO_2$ interfaces and on second harmonic generation at these interfaces.—73-12817
Influence of temperature and pressure on the structure of remote plasma-enhanced chemically vapor deposited $SiO_2$ investigated by spectroscopic ellipsometry.—73-17147
Influence of the magnetic field on hole heating by microwave electric field in silica.—73-14987
Influence on the chemical durability of $B_2O_3$-$SiO_2$ and $Al_2O_3$-$SiO_2$ thin films at the addition of $P_2O_5$.—73-12818
Infrared absorption and X-ray photoelectron spectroscopy studies of the anodic oxidation of plasma silicon nitride.—73-02877
Inhibiting coke formation by coating gas turbine elements with alumina-silica sol-gel.—73-13916
Inorganic fiber composition.—73-15996
Instability in amorphous silicon dioxide/amorphous silicon structures.—73-04120
Insulation of silica crown on glass tank furnace.—73-04008
Interaction between colloidal particles in $SiO_2$ and $TiO_2$ sols.—73-07146
Interaction of 1-olefins with silica surface.—73-17150
Interaction of atomic hydrogen with ion-bombardment-induced defects at Si/$SiO_2$ interfaces.—73-04121
Interactions of water with trisiloxane rings: I, Experimental analysis.—73-02301
Interactions of water with trisiloxane rings: II, Theoretical analysis.—73-02302
Interior hydroxyls of the silica gel system as studied by $^{29}Si$ CP-MAS NMR spectroscopy.—73-14016
Interpretation of the X-ray emission spectra of a-$SiO_x$.—73-02306
Ion migration in thin sol-gel silica coatings.—73-14020
Ir ellipsometry investigations of $N_2O$-nitrided silicon oxide thin films on silicon.—73-13411
Ir ellipsometry of the highly anisotropic materials $\alpha$-$SiO_2$ and $\alpha$-$Al_2O_3$.—73-12615
Ir spectroscopic investigation of condensation in $SiO_2$–sol-gel layers.—73-00360
Ir spectroscopic investigation of $SiO_2$ film structure.—73-08650
Ir study of plasma-nitrided thermal $SiO_2$ and pure silicon.—73-05427
Isopropylation of dibenzofuran over solid acid catalysts.—73-02625
Kinetic study of the hydrothermal reaction between lime and rice-husk-ash silica.—73-10023
Kinetics and mechanism of silicon dioxide deposition through thermal pyrolysis of tetraethoxysilane.—73-09188
Kinetics of the oxide charge trapping and breakdown in ultrathin silicon dioxide.—73-02626
Laser aerosol deposition of porous and transparent silica glasses.—73-14416
Laser damage threshold of $Sc_2O_3$/$SiO_2$ high-reflector [HR] coatings for a laser wavelength of 355 nm.—73-05587
Laser processing of sol-gel coatings.—73-10559
Liquid-phase-deposited $SiO_2$ film with incorporated organic dye.—73-03855
Low-expansion USP type I amber glass.—73-03939
Low-frequency dielectric relaxation of hematite and silica sols.—73-08902
Low-temperature formation of device-quality $SiO_2$/Si interfaces by a two-step plasma-assisted oxidation/deposition process.—73-09194
Low-temperature plasma-assisted oxidation and thin-film deposition processes for forming device-quality $SiO_2$/Si and composite dielectric-$SiO_2$/Si heterostructures.—73-10968
Low-temperature process for converting silica precursor coatings to ceramic silica coatings by exposure to ammonium hydroxide or an environment to which water vapor and ammonia vapor have been added.—73-05221
Luminescence spectra of porous silicate glass excited by laser radiation in the transparency range of $SiO_2$.—73-01234
Magnetic and optical properties of $SiO_2$ surface layers containing small $\alpha$-*Fe ferromagnet particles produced by ion bombardment.—73-02636*
Manufacture of vitreous silica product via sol-gel process using a polymer additive.—73-00738
Mass spectrometric study of the thermodynamic properties of melts of the $B_2O_3$-$GeO_2$-$SiO_2$ system at 1373–1453 K.—73-00371
Mass spectrometric study of the thermodynamic properties of melts of the system $B_2O_3$-$GeO_2$-$SiO_2$ at temperatures 1373–1453 K.—73-00372
Measurement of high-voltage stress-induced traps inside thin silicon oxide films.—73-04132
Mechanical stress in plasma-enhanced chemical-vapor-deposited $SiO_2$ and SiN layers.—73-11310
Mechanism of diffusion of water in silica glass.—73-06937
Mechanism of interaction of amorphous silica with diluted solutions of hydrofluoric acids.—73-14033
Mechanism of photorefractive enhancement of photochromic gratings in $Bi_{12}SiO_{20}$—experimental results and phenomenological modeling.—73-05595
Metal-promoter interactions in vanadium-oxide-promoted $Rh/SiO_2$ catalysts.—73-16213
Method for manufacturing an optical waveguide fiber with a very thin titania-silica outer cladding layer.—73-14428
Method for producing silicon dioxide film which prevents escape of Si component to the environment.—73-14550
Method of forming Si-O containing coatings.—73-14752
Method of manufacturing a silica glass preform.—73-00746
Method of preparing silica glass.—73-00748
Methyl- and dimethyl-associated paramagnetic centers in $SiO_2$ thin films.—73-12834
Microstructure analysis of [optical] thin films deposited by reactive ion plating.—73-17157
Microstructure and optical properties of CdSe-microcrystal-doped $SiO_2$ glass thin films prepared by rf sputtering.—73-03802
Microstructure and optical properties of CdSe-microcrystal-doped $SiO_2$ glass thin films prepared by rf sputtering.—73-14227
Microstructure control of porous silica glass with monodispersed spherical silica particles.—73-00664
Microstructure control of porous silica glass with monodispersed spherical silica particles.—73-10566
Microstructure of puffed silica xerogel.—73-09490
Microwave condensation and densification of porous silica gel.—73-14429
Microwave densification of porous silica gel.—73-05916
Microwave-induced atmospheric pressure plasma application to fabrication of fluorine-doped silica glass.—73-14430
Mixing effects in $CeO_2$/$TiO_2$ and $CeO_2$/$SiO_2$ systems submitted to $Ar^+$ sputtering.—73-05437
Modeling of the process of space charge accumulation in insulator layers of MIS structures subjected to irradiation—Me-$Si_3N_4$-$SiO_2$-Si MNOS structures.—73-01249
Moisture-resistant low-melting-point glass for magnetic head and magnetic head.—73-03954
Molecular adsorption on silica gel surface from liquid mixtures.—73-16545
Molecular orbital study of an environmentally enhanced crack growth process in silica.—73-17402
Monolithic silica glasses made from alcoholate gels.—73-07153
Monte Carlo simulation of surface kinetics during plasma-enhanced chemical vapor deposition of $SiO_2$ using oxygen/tetraethoxysilane chemistry.—73-16875
Multifrequency and Fourier transform electron paramagnetic resonance and electron spin echo spectroscopies for determination of the $T_1$ and $T_2$ spin-lattice relaxation times of the $E'_1$ center.—73-03742
Multinuclear high-resolution solid-state nuclear magnetic resonance studies of amorphous silica aluminas.—73-02339
Multiplication of photocurrent in Pd-$SiO_2$-*n*(*p*)-Si diode structures.—73-11341
Nanocomposite dielectric material: Au/$SiO_2$ gel.—73-04143
Nanoparticulate alumina, silica, and aluminosilicate membranes.—73-13145
New approach to low-temperature deposition of high-quality thin films by electron cyclotron resonance microwave plasmas.—73-09221
New interpretation of the ir reflectance spectra of $SiO_2$-rich films on soda-lime glass.—73-03744
New isotropic defect in as-oxidized thermal (111)Si/$SiO_2$ revealed by ESR.—73-13359
New types of calcia mineralizers for silica brick production.—73-04011
Numerical model of polydispersed silica grain dissolution in glass-melting furnaces.—73-10570
Optical characterizations of photoinduced chemical vapor deposition produced $SiO_2$ films in vacuum ultraviolet, ultraviolet, and visible region.—73-12846
Optical emission investigations of the plasma-enhanced chemical vapor deposition of silicon oxide films.—73-13157
Optical properties and laser demonstration of Nd-doped sol-gel silica glasses.—73-10465

Optical properties and structure of defects in silica glass.—73-00522
Optical properties of amorphous semiconductors.—73-01265
Optical properties of $Ni^{2+}$-doped silica and silicate gel monoliths.—73-10467
Optical properties of $Pr^{3+}$-doped silica gel and glass monoliths.—73-00524
Optical studies of $SiO_2$, $TiO_2$, and $SiO_2$-$TiO_2$ coatings prepared by the sol-gel process.—73-03807
Optical waveguide fiber with very thin titania–silica outer cladding layer.—73-00753
Optical waveguide of silica glass film on ceramic substrate.—73-03957
Optimization of the polycrystalline silicon-on-silicon dioxide characterization using spectroscopic ellipsometry.—73-15828
Oxidation of silicon in an oxygen plasma generated by a multipolar electron cyclotron resonance source.—73-05939
Oxide catalyzed reactions of ethylene oxide under conditions relevant to ethylene epoxidation over supported silver.—73-02660
Oxygen detection in thin silicon dioxide layer by low-energy X-ray fluorescence spectrometry.—73-16242
Paper whiteners: I, Titania-coated silica.—73-01991
Paramagnetic defect analysis in uv-lamp-induced chemical vapor deposited a-$SiO_2$ films.—73-06170
Parametric evaluation of electon cyclotron resonance deposited $SiO_2$ using a multicusp plasma applicator.—73-09230
Particle coating of silica fibers by aerosol and sol-gel processes.—73-09232
Phase relations in the system CaO-$B_2O_3$-$SiO_2$.—73-08695
Phase separation in rare-earth-doped $SiO_2$ glasses.—73-06952
Photochemical reactions of pyrene on surfaces of γ-alumina and silica–alumina.—73-12856
Photochromism of spiropyran doped in $Al_2O_3$-$SiO_2$ gels prepared by the sol-gel process.—73-12858
Photoinduced chemical vapor deposition of silicon oxide thin films.—73-13164
Photoinduced transient optical absorption in vitreous silica.—73-00529
Physicochemical and catalytic properties of a silica-enriched zeolite ZSM-20.—73-08701
Physicochemical study of the aging of colloidal silica gels used in zeolite Y synthesis.—73-13437
Plasma-enhanced chemical vapor deposited oxide for low surface recombination velocity and high effective lifetime in silicon.—73-07738
Plasma-enhanced chemical vapor deposition silicon oxides as studied by X-ray photoelectron spectroscopy, Rutherford backscattering, electron recoil detection analysis, infrared spectroscopy, and electron spin resonance.—73-08702
Pore characterization of $SiO_2$ chromatographic gels using nuclear magnetic resonance.—73-08433
Pore structure evolution in silica gel during aging/drying: III, Effects of surface tension.—73-10572
Porous amorphous silica-alumina.—73-10785
Positive charge generation in $SiO_2$ by electron-impact emission of trapped electrons.—73-13362
Possible reaction of $WF_6$ with $SiO_2$ and $Si_3N_4$ at several temperatures.—73-03184
Preparation and analysis of the SOG films.—73-13580
Preparation and characterization of antireflective film in $TiO_2$-$SiO_2$ system by sol-gel method.—73-10574
Preparation and characterization of silica-supported maghemite.—73-02933
Preparation and characterization of silica-supported maghemite.—73-13172
Preparation and densification of autoclave-dried $SiO_2$-$GeO_2$ gels.—73-14467
Preparation and investigation of $SiO_2$ films activated by CdS semiconductor nanocrystals.—73-07744
Preparation and optical nonlinear property of sol-gel-derived Cu-$SiO_2$ thin films.—73-09250
Preparation and processing of metal-ceramic composite materials.—73-10264
Preparation and thermal expansion behavior of excess $SiO_2$ pollucite powders.—73-02939
Preparation and thermal expansion behavior of excess $SiO_2$ pollucite powders.—73-13179
Preparation of γ-$Fe_2O_3$-containing silica glasses by the sol-gel process.—73-14474
Preparation of $(Al_2O_3)_x(SiO_2)_y$ thin films using $[Al(OSiEt_3)_3]_2$ as a single-source precursor.—73-09252
Preparation of amorphous silica powder by sol-gel methods.—73-03870
Preparation of amorphous silica-alumina particles by acid-treating spherical P-type zeolite particles crystallized from a sodium aluminosilicate gel.—73-02057
Preparation of Au-doped silica glass by sol-gel method.—73-03871
Preparation of Au-doped silica glass by sol-gel method.—73-10576
Preparation of CdS-doped $SiO_2$ glass coating films by the sol-gel method.—73-14475
Preparation of colored silica glasses made by sintering of particulate gels.—73-10578
Preparation of polymer hybrids of the $SiO_2$-PVA or $SiO_2$-PEG system and porous materials made from hybrid gels.—73-03874
Preparation of polymer hybrids of the $SiO_2$-PVA or $SiO_2$-PEG system and porous materials made from the hybrid gels.—73-16929
Preparation of porous bodies and functional materials by the sol-gel method.—73-14477
Preparation of porous silica glass by the sol-gel method—change of properties of gel by addition of formamide.—73-07163
Preparation of porous $SiO_2$-$ZrO_2$ glass from sol containing polyethylene glycol [PEG].—73-00685
Preparation of $SiCl_4$ from rice hull ashes: III, FTIR-PAS analysis of chlorination mechanism of rice hull ashes containing alkaline and alkaline-earth metal salts.—73-02969
Preparation of $SiO_2$-$Al_2O_3$ gels from tetraethoxysilane and aluminum chloride—a new sol-gel method using propylene oxide as a gelation promoter.—73-16935
Preparation of $SiO_2$-$M_xO_y$ [M=Ti, Sb, V, Zr, Sn] thin films and gels by sol-gel method using silicic acid and metal halides.—73-02970
Preparation of $SiO_2$-$M_xO_y$ thin films and gels by sol-gel method using silicic acid and metal halides.—73-13203
Preparation of $SiO_2$-$TiO_2$ gels with controlled pore structure via sol-gel route.—73-05980
Preparation of $SiO_2$-$TiO_2$-$ZrO_2$ gel glasses and coatings by means of modified alkoxide solutions.—73-10585
Preparation of thick silica films by combined sol-gel and electrophoretic deposition methods.—73-14478
Preparation of transparent mullite-silica film by heat treatment of imogolite.—73-02974
Preparation of $ZrSiO_4$ powder using sol-gel process: IV, Preparation from $ZrOCl_2$ and colloidal $SiO_2$.—73-02978
Pressure-induced structural transition in $SiO_2$ glass.—73-06957
Primary relaxation processes at the band edge of $SiO_2$.—73-16280
Process for fabricating gate insulating structure of a charge coupled device.—73-01064
Process for purifying silica sand by abrasive attrition.—73-12094
Process of formation of bonelike apatite layer on silica gel.—73-06270
Process optimization of 200-nm-wide trenches in $SiO_2$ using a chemically amplified acid-catalyzed e-beam resist.—73-07353
Production of amorphous silicon dioxide from hexafluorosilicic acid.—73-14481
Production of silica-based MFI zeolites.—73-02065
Prolonged storage of electrons in MONOS [metal oxide–silicon nitride–dioxide semiconductor] structures.—73-06174
Properties of buried $SiO_2$ films in SIMOX structures.—73-04151
Properties of silicon dioxide films deposited at low temperatures by microwave plasma-enhanced decomposition of tetraethylorthosilicate.—73-08960
Property modification of silica glass by ultrahigh pressure heating.—73-00538
Property modification of silica glass by ultrahigh pressure heating.—73-10474
Protective coating for ceramic materials.—73-12400
Quantitative infrared analysis of the stretching peak of $SiO_2$ films deposited from tetraethoxysilane plasmas.—73-13223
Quasi-static and high-frequency *c-v* measurements on Al/$Ta_2O_5$/$SiO_2$/Si.—73-07354
Radiation damage in $SiO_2$/Si induced by low-energy electrons via plasmon excitation.—73-07759
Radio frequency plasma etching of Si/$SiO_2$ by $Cl_2/O_2$: improvements resulting from the time modulation of the processing gases.—73-02987
Reaction kinetics of $SiO_2$ and ZnO-$SiO_2$ sol-gel solutions.—73-07168
Reactive-ion-etching-induced damage to $SiO_2$ and $SiO_2$-Si interfaces in polycrystalline Si overetch.—73-07763
Real-time holographic photoelasticity using BSO.—73-05082
Reduction of sidewall roughness during dry etching of $SiO_2$.—73-09300
Refractive index of densified silica glass.—73-07071
Relationship between stress and dangling bond generation at the (111)*Si*/$SiO_2$ interface.—73-15145
Review of the chemical reaction mechanism and kinetics for hydrofluoric acid etching of silicon dioxide for surface micromachining applications.—73-14079
Role of cations in the formation of aqueous silica gels.—73-00698
Role of the buffer gas in the ArF laser chemical vapor deposition of silicon oxide.—73-09310
SANS study of $x$$TiO_2$-$SiO_2$ gels with low titania content.—73-16299
Science and technology of composite materials: optical fibers made by fluoride glasses.—73-00699
Second harmonic generation [SHG] in Si-$SiO_2$ heterostructures formed by chemical, thermal, and plasma-assisted oxidation and deposition processes.—73-06029
Sequential deposition of $SiO_2$ and poly-Si in isolation trenches.—73-06034
Several nonlinear phenomena in $Er^{3+}$-doped silica optical fibers.—73-14276
Silica bayerite/eta alumina.—73-12402
Silica gel and process for making it from polysilicic acid.—73-10664
Silica glass flakes with submicron thickness.—73-14489
Silica investment prepared for dental purposes: effect of cristobalite content on mechanical properties.—73-17427
Silica precursors derived from TEOS.—73-08500
Silica-stabilized alumina.—73-05244
Silica.—73-12297
Silicon dioxide thin films prepared by photochemical vapor deposition from silicon tetraacetate.—73-16985
Silicon dioxide trench filling process in a radio-frequency hollow cathode reactor.—73-13254
Singular influence of calcium on elastic properties in sodium-calcium-silica glasses.—73-14277
Sintering of coated powders: I, Silica–yttria system.—73-06058
Sintering of silica gels at a constant rate of heating.—73-16996
Sintering of titania–silica powder compacts with a bimodal pore size distribution.—73-13268
$SiO_2$ coating and soda-lime glass formed by sol-gel method.—73-03885
$SiO_2$ deposition as a byproduct of $SF_6$ plasma in an electron cyclotron resonance reactor.—73-13270
$SiO_2$ film stress—thickness dependence, nonplanar oxidation, and fluorine-related effects.—73-02688
$SiO_2$ films by low-pressure chemical vapor deposition using diethylsilane—processing and characterization.—73-03015
$SiO_2$ thin films deposited by a new sol-gel technique.—73-10600
$SiO_2$-$Al_2O_3$ liquids: in situ study by high-temperature $^{27}Al$ NMR spectroscopy and molecular dynamics simulation.—73-02433
$SiO_2$-based vitreous coatings obtained by sol-gel method.—73-10601
$SiO_2$-doped sapphire single-crystal growth by Verneuil method.—73-13271
$SiO_2$-$Nb_2O_5$ thin films using sol-gel technology.—73-13272
$SiO_2$-$Sm_2O_3$ vitreous films via the sol-gel method.—73-09329
Slip-cast glass-silica materials.—73-00701
Slow dynamics of isotropic-nematic phase transition on silica gels.—73-06969
Sol-gel processing and optical nonlinearity of gold colloid-doped silica glass.—73-03889
Sol-gel processing and optical nonlinearity of gold colloid-doped silica glass.—73-10603
Sol-gel synthesis of silica gel disk as applied to supports of organic molecules with optical functions.—73-07174
Sol-gel ultra-low-expansion glass.—73-14497
Sol-gel-derived ORMOSIL's [organically modified $SiO_2$ materials]—spectroscopic monitoring of hydration level with atmosphere.—73-03890
Solid and aqueous chemistry of 10-year-old portland cement pastes: with and without silica modifier.—73-06718
Solid solutions in the $ZrO_2$-$HfO_2$-$SiO_2$ system and obtaining new refractories from them.—73-00865
Solubility of silica–alumina gels in different pH solutions—discussion on the hydration of slags and fly ashes in cement.—73-10158
Sorption in energetically heterogeneous model silica systems.—73-16596
Spectroscopic studies of the structural reorganization of the surface layer of vitreous silica after ion implantation.—73-00402
Spectroscopy of defects in germanium-doped silica glass.—73-07077
Sputter distribution of a large scale ion beam coater.—73-17007
Stability and vibrational spectra of three-ring-containing zeolitic silica polymorphs.—73-12690
Stable and metastable phase relations in the system $Bi_2O_3$-$SiO_2$.—73-02445
Strengthening of glasses by sol-gel coating $TiO_2$-$SiO_2$ films.—73-14501
Structural and induced heterogeneity at the surface of some $SiO_2$ polymorphs from the enthalpy of adsorption of various molecules.—73-16319
Structural behavior of fluorine in silica gels and glasses.—73-14089
Structural changes of sol-gel-derived $TiO_2$-$SiO_2$ coatings in an environment of high temperature and high humidity.—73-00407
Structural characterization and optimization of acid-treated montmorillonite and high-porosity silica supports for $ZnCl_2$ alkylation catalysts.—73-08748
Structural characterization of photochemically grown silicon dioxide films by ellipsometry and infrared studies.—73-03198
Structural characterization of vitreous $SiO_2$ polymorphs using WAXS [wide-angle X-ray scattering] and computer simulation.—73-14091
Structural correlations in porous silica: molecular dynamics simulation on a parallel computer.—73-14283
Structural imperfections in silica glasses with an optical absorption peak at 3.8 eV.—73-10485
Structural investigations of binary glasses and solid solutions in the $SiO_2$-$GeO_2$ system by EXAFS spectroscopy.—73-14094
Structural model for PbO-$Ga_2O_3$-$SiO_2$ glasses.—73-00409
Structural transformation, intermediate-range order, and dynamic behavior of $SiO_2$ glass at high pressure.—73-10407
Structure and properties of ceramics of the system $Al_2O_3$-$ZrO_2$-$SiO_2$.—73-07224
Structure and vibrational states of [molecular dynamics] MD-simulated silica glass.—73-14104
Structure of aggregated NiO particles in NiO/$SiO_2$ particles prepared by CVD method.—73-17201
Structure of $Al_2O_3$-$SiO_2$ gels derived from aluminum nitrate and tetraethylorthosilicate.—73-05500
Structure of $Al_2O_3$-$SiO_2$ gels derived from aluminum nitrate and tetraethylorthosilicate.—73-12703
Structure of CdO-$SiO_2$ low-silica-content inverted glasses.—73-14108
Structure of rapidly quenched glasses in the system $Li_2O$-$SiO_2$.—73-06975
Superfluorescence in RE-doped silica fiber.—73-14286
Support effects in methanol synthesis over copper-containing catalysts.—73-02698
Surface characterization of an $SiO_2$-$ZrO_2$ glass by gas-solid adsorption.—73-14115
Surface NiO species in NiO/$SiO_2$ catalysts [studied] using temperature-programmed reduction and X-ray diffraction.—73-02473

Synthesis and characterization of self-assembled hydrophobic monolayer coatings on silica colloids.—73-07181
Synthesis and stability of silica-substituted hydrogarnet $Ca_3Al_2Si_{3-x}O_{12-4x}(OH)_{4x}$.—73-10176
Synthesis of ceramic fibers in the Si-O-C system.—73-03044
Synthesis of microporous silica-gel particles in W/O emulsion and an application to high-performance liquid chromatography.—73-00710
Synthesis of polymetalloxanes and their properties as a precursor for amorphous oxide: VI, Preparation of $SiO_2$-$TiO_2$ fibers containing various $TiO_2$ contents from polytitanosiloxane [PTS].—73-03051
Synthesis of Si-O-C fibers from rice husk carbide—explanation of formation condition.—73-03055
Synthesis of $SiO_2$-$TiO_2$ glasses by sol-gel process.—73-14511
Synthesis of spherical porous silica particles.—73-14512
Synthesis of ZSM-5 zeolite from silica stone occurred in Ioh Island, Kagoshima Prefecture, Japan.—73-03061
Synthetic silica glass articles and a method for manufacturing them.—73-10666
Synthetic, crystalline, porous material containing silicon oxide, titanium oxide, and aluminum oxide.—73-02071
System InSb-$SiO_2$ [investigated] by spectroscopic multiangle ellipsometry.—73-17208
TEM observation of Cu particles dispersed in sputtered $SiO_2$ film.—73-17210
Theoretical analysis of mechanism of photorefractive enhancement of photochromic gratings in bismuth silicon oxide.—73-05650
Theoretical calculation of impact ionization rate in $SiO_2$.—73-08982
Theory of the self-trapped hole in a-$SiO_2$.—73-12718
Thermal and dielectric properties of silica/glass composites with the controlled amount of tridymite.—73-05652
Thermal and dielectric properties of silica/glass composites with the controlled amount of tridymite.—73-14294
Thermal annealing behavior of ion-implanted silica glass.—73-06978
Thermal effects on the growth of $SiO_2$ on GaAs(100) by reduction of native oxides.—73-07838
Thermal properties of the Sn/$SiO_2$ interface as studied by surface spectroscopies.—73-02711
Thermal shock resistance of silica brick for a coke oven by the panel method.—73-10773
Thermodissociation and reduction of calcium phosphates in presence of silica.—73-16374
Thermodynamic activities in $B_2O_3$-$SiO_2$ melts at 1475 K.—73-00420
Thick coatings of doped synthetic silica glass by plasma impulse CVD.—73-00713
Thin $SiO_2$-$Si_3N_4$-$SiO_2$ films: Auger depth profile evaluation by means of factor analysis.—73-05519
Third harmonic generation in PbO-$SiO_2$ and PbO-$B_2O_3$ glasses.—73-03816
Three-level charge pumping on submicronic MOS transistors.—73-01355
Tick-proof ceramics.—73-05183
Time-resolved low-temperature luminescence of nonbridging oxygen [NBO] hole centers in silica glass.—73-00567
$TiO_2$-$SiO_2$ glasses prepared by the alkoxide route.—73-10609
Titanium silica glass [investigated] by vibration spectroscopy.—73-14121
Transparent glass-ceramics on $Al_2O_3$-$SiO_2$ system.—73-03896
Transparent silica gel tubes by the sol-gel process.—73-03897
Transport of detrapped charges in thermally wet-grown $SiO_2$ electrets.—73-13371
Two-precursor model for low-pressure chemical vapor deposition of silicon dioxide from tetraethylorthosilicate.—73-13328
Ultrasonic evaluation of elastic properties of silica aerogels.—73-12904
Ultrastructural evolution during gelation of $TiO_2$-$SiO_2$ sols.—73-10413
Uranium adsorption capacity of $TiO_2$-$SiO_2$ porous glass-ceramics.—73-01758
Use of oxygen probes in the study of thermodynamic properties of the system $Na_2O$-$SiO_2$ and the effect of electron conductivity of solid electrolyte on emf of the concentration cell.—73-12727
Using a design of experiments approach for characterization of undoped plasma-enhanced chemical vapor deposited $SiO_2$ film properties.—73-03070
Uv-laser-induced decay of oxygen-deficient centers in silica glasses.—73-14307
Uv-visible–near-ir and EXAFS study of Co(II) coordination chemistry in postdoped silica sol-gel glasses.—73-12728
Vacancy-type defects in crystalline and amorphous $SiO_2$.—73-09428
Valence Auger analysis of the annealing effect on atomic interaction at titanium–sapphire, titanium–silica, and silver–silica interfaces.—73-10296
Various bonding forms of OH groups in hydrogen-treated silica.—73-06986
Very high-*Q* whispering-gallery mode resonances observed on fused silica microspheres.—73-07100
Very thin silicon dioxide film thickness determination using transmission electron microscopy, spectroscopic ellipsometry, and X-ray photoelectron spectroscopy.—73-08458
Visible photoluminescence related to Si precipitates in $Si^+$-implanted $SiO_2$.—73-09429
Voltage, fluence, and polarity dependence of trap generation inside of thin silicon oxide films.—73-03772
Water and the silica surface as studied by variable-temperature high-resolution $^1H$ NMR.—73-06988
Water vapor controlling selective reactive ion etching of $SiO_2$/Si in $NF_3$ plasma.—73-07859
Wetting dynamics studies on silica surfaces of varied hydrophobicity.—73-14312
X-ray fluorescence measurements of X-ray absorption near edge structure [XANES] at the Si, P, and S *L* edges.—73-16395
X-ray reflectivity study of rf-sputtered thin $SiO_2$ films.—73-07103
XPS and XAES [X-ray-excited AES] study of $TiO_2$-$SiO_2$ mixed oxide system.—73-02548
XPS measurements on glass surfaces.—73-00429
Yellow high silica glass.—73-00722
Zirconium and silicon oxide fibers and microspheres produced by the sol-gel transition and plasma-chemical methods.—73-14531

**silicalite,**
Adsorption of methanol and related molecules on zeolite HZSM-5 and silicalite.—73-12534
EPR study of chromosilicalite.—73-08616
FTIR and Raman spectra of pure and Al-, B-, Ti-, and Fe-substituted silicalites: stretching-mode region.—73-12589
Low-temperature FTIR investigation of the interaction of CO with nanosized ZSM5 and silicalite.—73-16202
NMR studies of the synthesis of silicalite by the fluoride method.—73-12641

**silicates,**
$^{11}B$, $^{29}Si$, and $^{27}Al$ nuclear magnetic resonance studies of $Na_2O$-$Al_2O_3$-$B_2O_3$-$SiO_2$ glasses.—73-10356
$^{23}Na$ NMR chemical shifts and local Na coordination environments in silicate crystals, melts, and glasses.—73-16224
$^{29}Si$ MAS NMR study on structural change of silicate anions with carbonation of synthetic 11 Å tobermorite.—73-12679
$^{29}Si$ MAS NMR study on structural change of silicate anions with carbonation of synthetic 11-Å tobermorite.—73-02430
$^{29}Si$ NMR spectroscopy of silicate anions in hydrothermally formed CSH.—73-05477
$^{57}Fe$ Mossbauer effect in sol-gel silicate glasses.—73-10375
Analysis of rare-earth elements in silicates by ion microprobe using doubly charged ions.—73-05355
Atomistic models for silicate glasses.—73-05156
$BaNb_{10}SiO_{19}$: a complex oxide with a variety of different niobium-niobium interactions.—73-02148
Basic studies of the corrosion of SiC by silicate melts.—73-03212
Behavior of admixtures for pressed silicate concretes.—73-09827
Bismuth- and lead-containing silicate glasses as materials for microchannel multipliers.—73-14137
Building material based on the wastes of tungsten and molybdenum integrated works.—73-03976
Ceramic coating material for a microfuse.—73-04190
Ceramic pigments based on chain-structure silicates.—73-08493
Change of refractive index upon ion exchange; elasticity and optical properties of alkali silicate glasses containing titanium oxide.—73-14141
Characteristics of excitation of X-ray luminescence of $Ce^{3+}$ and $Tb^{3+}$ ions in silicate glass.—73-14143
Chemical strengthening of some silicate- and borate-based glasses.—73-13941
Chemical, morphological, and structural changes of silicate fibers in NaOH and $Ca(OH)_2$ solution.—73-13942
Classical nucleation theory with a size-dependent interfacial tension: $Li_2O$-$2SiO_2$ *crystal nucleation.—73-00308*
Coating (of silicate films) on steel sheet by the sol-gel method.—73-06751
Colloid size distribution in ion-implanted glass.—73-06890
Color center absorption in binary alkali silicate glasses.—73-14145
Comparative analysis of the state of surfaces of lead silicate glasses and microchannel films.—73-00309
Comparative study of all-electron and core pseudopotentials basis sets for periodic ab initio Hartree-Fock calculation: the case of $MgSiO_3$-ilmenite.—73-05373
Comparison of iron and aluminum silicates with the ton topology.—73-12554
Comparison of particulate and platelet reinforcement of a lithium disilicate glass-ceramic.—73-07003
Complex evaluation of waste from the electroplating industry as a secondary source of raw materials for silicate production.—73-08494
Composition fluctuation in an alkali silicate glass.—73-06891
Composition of a protective atmosphere on water-resistant surfaces of silicate glass.—73-00312
Compositional and temperature effects on five-coordinated silicon in ambient-pressure silicate glasses.—73-06892
Contribution of sodium and potassium oxides to the optical constants and density of silicate glasses.—73-00443
Contribution of sodium and potassium oxides to the optical constants and density of silicate glasses.—73-00444
Control of the porous structure of silicate beads made by organometallic gelation.—73-14344
Corrosion of fibrous silicates in electrolyte solutions.—73-14148
Corrosion of refractory materials in molten lead silicate glasses.—73-07202
Crystal structure of $\alpha$-$Li_{2.5}Al_{0.5}SiO_4$.—73-02185
Crystal structure of $K_2Gd[Si_6O_{15}]$.—73-16085
Crystal structure of new natural manganese silicate from epidote group.—73-02206
Crystal structure of new ring Na, K silicate, $Na_{16}K_2[Si_{18}O_{36}(OH)_{18}]$·38$H_2O$.—73-16090
Crystal structure of rare-earth analog of ilerite.—73-16092
Crystal structure of revdite, $Na_{14}[Si_4O_8(OH)_5]_2$-$[Si_6O_{15}(OH)_6](OH)_{10}$·28$H_2O$.—73-16094
Crystal structure of Sr-containing britholite.—73-02214
Crystal structure of taikanite, $Sr_2BaMn_2[Si_4O_{12}]O_2$.—73-16096
Crystal structure of two modifications of natural Ba, Mn titanium silicate.—73-02217
Crystal structures of sphenes, $NaSbGeO_5$, $NaTaGeO_5$, and $LiTaSiO_5$.—73-16098
Crystal structures of the high-temperature forms of $Ln_2Si_2O_7$ (Ln=La, Ce, Pr, Nd, Sm) revisited.—73-16099
Crystallization behavior of multicomponent nonalkali silicate glasses.—73-03718
Cuprous-cupric redox equilibrium in binary alkali silicate glasses.—73-10359
Currents of thermostimulated depolarization and internal friction in sodium silicate glasses.—73-00316
Deformation of atomization granules under uniaxial compression.—73-02764
Dehydration and rehydration of magadiite and kenyaite.—73-12764
Dependence of thermomechanical properties of silicate glass on the ratio of charge to cullet.—73-00609
Description of experimental *I-V* characteristics of $Bi_{12}SiO_{20}$ crystals using analytical approximations of theory of space-charge-limited currents.—73-16439
Determination of fatigue parameters of sodium calcium silicate glass on measurement of strength by different methods.—73-00446
Determination of surface silanol group on silicate glasses using static SIMS.—73-00320
Determination of surface silanol on silicate glasses using static SIMS.—73-10361
Development of a system of computing refractive index, mean dispersion, and density of silicate optical glasses based on their composition.—73-00322
Developments in forming machine for silicate brick in China.—73-12131
Discrete bond model (DBM) of sodium silicate glasses derived from XPS, Raman, and NMR measurements.—73-06905
Dispersion behavior of alkali-silicate glasses as a function of short-range structural units.—73-00449
Distribution and chemical states of ions around the interface between sol-gel-derived silicate films and substrates.—73-02775
Distribution and chemical states of ions around the interfaces between sol-gel-derived silicate films and substrates.—73-10365
Distribution of electron density in the dioptase $Cu_6Si_6O_{18}$·6$H_2O$ according to the results of precision X-ray diffraction investigation.—73-16112
Distribution of $Na^+$ ions in corrosive layer of silicate glasses.—73-03720
Doped zirconium mixed silicate pigment, method for the preparation thereof, and products containing such pigment or a thus prepared pigment.—73-10912
DSC and Raman studies of lead borate and lead silicate glasses.—73-00327
Effect of composition of the protective atmosphere on the adhesion properties of the surface of silicate glass.—73-03786
Effect of diffusion stresses on the properties of ion-exchanged layers of alkali zirconium silicate glasses.—73-00453
Effect of electric field stimulation on the optical and photoelectric properties of $Bi_{12}SiO_{20}$.—73-02579
Effect of $Fe^{3+}$ concentration on its molar absorptivity in silicate glasses.—73-13965
Effect of iron on formation of color centers in cerium-containing silicate glasses.—73-00457
Effect of lithium salts on the ionic conductivity of lithium silicate gels.—73-10431
Effect of manganese oxide on the properties and structure of lead silicate semiconducting glasses.—73-14853
Effect of optical bias on grating formation dynamics in photorefractive BSO.—73-02586
Effect of precursors on the ionic conductivity in lithium silicate gels.—73-05548
Effect of the composition of a protective atmosphere on the adhesion properties of the surface of silicate glass.—73-07124
Effect of the processes of thermal cycling on the structure and properties of heat-resistant ceramics.—73-00808
Effect of thermal treatment on the structural incorporation of NiO in silicate materials prepared by sol-gel method.—73-14363
Effects of dopants on the formation of hafnon via a sol-gel route.—73-16750
Effects of oxide of aluminum and phosphorus on liquation in sodium calcium silicate glasses.—73-13971
Efficient 2.05-μm RT $Y_2SiO_5$:$Tm^{3+}$ cw laser.—73-12780
Elastic moduli of glasses in the $Li_2O$-$Na_2O$-$Nb_2O_5$-$SiO_2$ system.—73-00472
Electrically conducting $Pb_xO_x$-$SiO_2$ glass films deposited by reactive radio-frequency magnetron sputtering.—73-00959
Electrochemical investigation of multivalent elements in molten silicates at 1273 K.—73-13973
Electron spin resonance characterization of nonbridging oxygen-hole centers in alkali silicate glasses.—73-13975
Electrooptic and photoelectric effects of $Bi_{12}SiO_{20}$ (BSO) crystals.—73-11190
Encapsulating efficiency for vanadium of $ZrO_2$-$SiO_2$ gels prepared from alkoxides to give V-$ZrSiO_4$ blue colored stains.—73-08614
EPR spectra of alkali-metal silicate glasses subjected to ion exchange and γ-irradiation.—73-00336
ESR method of studying the glass-formation process in chemically synthesized lead silicate batches.—73-00623
ESR studies of iron-containing lithium, sodium, and potassium silicate glasses before and after irradiation with γ- and X-rays.—73-10373

Estimate of the temperature dependence of the viscosity of vitreous melts of the system $R_2O$-$SiO_2$ and RO-$SiO_2$.—73-14376

$Eu^{3+}$ probe-ion spectroscopy in the superionic conductor $Na_5YSiO_4O_{12}$: effects due to the dynamics of fused sublattice.—73-10946

$Eu^{3+}$-ion probe spectroscopy in $Na_5YSiO_4$ at low temperatures.—73-08619

Evaluation of the coordination state of $Mn^{2+}$ ions in glasses of the system (Na, K)$_2$O-MnO-$SiO_2$ according to the absorption spectra in the region 2–5 micrometers.—73-00338

Evaluation of the coordination state of $Mn^{2+}$ ions in glasses of the system (Na, K)$_2$O-MnO-$SiO_2$ with the absorption spectra in the 2–5 μm region.—73-00966

Experimental effects of light intensity modulation on the recording and erasure of holographic gratings in BSO crystals.—73-16495

Features of the recombination kinetics of paramagnetic defects during vitrification of molten silicates in external magnetic fields.—73-00627

Fluorescence of silicate fine-pored glasses activated by fractal clusters of organic-dye molecules.—73-14189

Formation and chemical durability of Na-Si-O-N and Na-Al-Si-O-N oxynitride glasses.—73-00629

Formation of a profile of refractive index of sodium silicate glass upon electrodiffusion treatment in a melt of potassium nitrate.—73-00486

Formation of MFI crystalline zeosilites from fluoride-containing silicate gels.—73-12585

Further $^{29}Si$ MAS NMR study on binary alkali silicate glasses.—73-10378

Glass dimensional control using ion exchange.—73-00733

Glass forming processes in silicate systems under the action of a beam of accelerated electrons.—73-07133

Glass-ceramics of the system BaO-$B_2O_3$-$SiO_2$.—73-14398

GRIN [gradient-index] elements with large geometry.—73-13077

Growth of Cd(S,Se) nanocrystals in silicate glasses: high-resolution electron microscopy and small-angle X-ray scattering.—73-00350

High- and medium-range viscometers and their test with some alkali silicate glasses.—73-01902

High-resolution Si *K*- and *L* 2, 3-edge XANES of α-quartz and stishovite.—73-16167

High-temperature mechanical properties and chemical stability of $Ba_{1+x}Zr_4P_{6-2x}Si_{2x}O_{24}$ low-thermal-expansion ceramics.—73-13546

High-thermal-expansion $NaAlSiO_4$ ceramics.—73-05578

High-thermal-expansion $NaAlSiO_4$ ceramics.—73-13089

Hydrogen reactivity of barium galliosilicate and related glasses.—73-10381

Hydrothermal synthesis of magadiite and kenyaite.—73-02855

Improving the system of calculating the refractive index, the mean dispersion, and the density of silicate optical glasses on the basis of their composition.—73-00501

Indication and characterization of Fe(II) and Fe(III) species in silicate and aluminosilicate glasses.—73-14408

Induction time analysis of nucleation and crystal growth in di- and metasilicate glass.—73-06927

Influence of structural-chemical features of silicate glasses on the effect of gaseous leaching.—73-14009

Influence of synthesis conditions on the morphology of dodecasil 1H.—73-09179

Inhomogeneity of silicate glasses.—73-10382

Ionic conductivity of alkali silicate glasses.—73-03795

Ionic conductivity of ceramics prepared by sintering of $M_2O$-$Ln_2O_3$-$2SiO_2$ mixtures (M=Li, Na, K, Rb, Cs; Ln=La, Nd, Sm, Gd, Dy, Y, Ho, Er, Yb).—73-14714

Ir spectroscopic measurements of crystallinity and phase purity of ZSM-5 samples.—73-08651

Kinetics of leaching and structural features of the surface layers of silicate sheet glass.—73-14213

Kinetics of silver staining in $Na_2O$-CaO-$SiO_2$ glass.—73-00650

Lithium-aluminate-doped lithium orthosilicate: sol-gel ceramics and lithium dynamics.—73-02887

Load dependence of the hardness of silicate glasses—not just due to indenter tip defects.—73-12158

Local environment of Ca in some silicate glasses.—73-14028

Localized behavior of metallic contamination in fine ceramic silicate bodies.—73-01795

Low-temperature [20-K] ir reflection spectra of $Bi_{12}SiO_{20}$ crystals.—73-16201

Luminescence of $SrZrSiO_2O_7$.—73-12829

Magnetic properties of green dioptase $CuSiO_3$·$H_2O$ and black dioptase $CuSiO_3$ and magnetic structure of black dioptase.—73-15340

Mathematical model of cationic order in structures of band and layered silicates.—73-02325

Matrix cracking in unidirectional ceramic matrix composites under quasi-static and cyclic loading.—73-06473

Mechanical properties and fracture behavior of some chemically strengthened silicate and borate glasses.—73-10452

Mechanical properties and microstructure of $Ca_2SiO_4$-$CaZrO_3$ composites.—73-06244

Metal on rare-earth-modified silica–alumina as hydrocarbon conversion catalyst.—73-02047

Microstructure and electrical properties for $LiXSiO_4$ (X=Al, Y, La, Nd, Sm, Gd, Dy, Ho, Er, Yb).—73-13423

Microstructures and electrical properties for $LiXSiO_4$ (X=Al, Y, La, Nd, Sm, Gd, Dy, Ho, Er, Yb).—73-03176

Microtwinning of Na, Ba, Nd silicate, $NaBa_6Nd[SiO_4]_4$.—73-02328

Model concept of vaporization from silicate melts.—73-00665

Molecular dynamics simulation of the trivalent europium ion doped in silica and sodium disilicate glasses.—73-00374

Molecular modeling of oxygen bridges in amorphous and crystalline silicates and aluminosilicates.—73-00375

Molecular structure and nucleation in silicate glasses.—73-00376

Mossbauer effect, electron spin resonance, and electrical conductivity studies of the effect of iron on the magnetic and electrical properties of sodium silicate glass.—73-07054

Multiple forward phase conjugation in a photorefractive bismuth silicate crystal.—73-08921

Neutron diffraction study of the structure of alkali silicate glasses.—73-03743

Neutron diffraction study of the structure of alkali silicate glasses.—73-14050

New data on natural and synthetic fenaksite.—73-15909

New developments at laboratory for silicate materials and structures.—73-16878

New lithium disilicate glass-ceramics.—73-14438

Nitridation of $Li_2O$-($B_2O_3$,$P_2O_5$)-$SiO_2$ glasses prepared by sol-gel.—73-14441

Nitridation of silicate and borosilicate glasses prepared by sol-gel process.—73-06943

NMR studies of cation ordering in crystalline silicates.—73-03745

NMR study of organically modified silicates.—73-03746

Numerical analysis of photorefractive grating formation dynamics at large modulations in BSO ($Bi_{12}SiO_{20}$).—73-08930

Obtention and characterization of new optical glasses on the ZnO-CdO-$SiO_2$ system depicting high refraction index and low dispersion.—73-14238

Optical absorption and Raman scattering spectra of Zn–S bonds in silicate glasses.—73-07057

Optical constants and density of oxide elements of group II in the periodic system as components of silicate glasses.—73-14240

Oriented color centers formed upon anisotropic action of optical irradiation on sodium silicate glass.—73-14061

Pentacoordinate silicon complexes as precursors to silicate glasses and ceramics.—73-08690

Phase equilibria in $Al_2O_3$-$Y_2O_3$-$SiO_2$ system and phase separation and crystallization behavior of glass.—73-02376

Phase relations in the system $Ce_2O_3$-$Ce_2Si_2O_7$ in the temperature range 1150° to 1970°C in reducing and inert atmospheres.—73-16257

Photostimulated reorientation of color centers in silicate glasses.—73-14249

Phototransfer of electrons between rare-earth coactivators in alkali silicate glasses.—73-14250

Plasma diagnostic studies of the influence of process variables upon the atomic and molecular species ejected from (1−*x*)$Li_4SiO_4$·x$Li_3PO_4$ targets during radio frequency magnetron sputtering.—73-02924

Polar-oriented crystallization of fresnoite ($Ba_2TiSi_2O_8$) on glass surface due to ultrasonic treatment with suspensions.—73-14072

Polarization state evolution and eigenmode switching in photorefractive BSO.—73-16571

Polysomatism and structural models of Ca silicates.—73-02397

Precise marking of silicate glass by excimer-laser and TEA-$CO_2$-laser irradiation.—73-14466

Preferential paths in alkali ion migration and the mixed alkali effect in silicate glasses.—73-06956

Preparation and properties of PbO-$B_2O_3$-ZnO-$SiO_2$ glasses of low softening point.—73-14471

Preparation of glass-ceramics in $Li_2O$-$Al_2O_3$-$TiO_2$-$SiO_2$ system by sol-gel technique: I, Preparation of porous monolithic gel in $Li_2O$-$Al_2O_3$-$TiO_2$-$SiO_2$ system by sol-gel method.—73-10580

Preparation, structural, and thermal properties of $MAlSiO_4$ (M=Li, Na, K, Rb, Cs, Tl, Ag) of ABW-type.—73-08958

Process for producing crystalline sodium silicates having a layered structure.—73-02062

Process for the preparation of sodium silicates.—73-05151

Processing and properties of CVD SiC fiber-reinforced $BaAl_2Si_2O_8$ glass-ceramic matrix composites.—73-13216

Profile of the index of refraction of sodium silicate glass in electrodiffusion treatment in potassium nitrate melt.—73-00534

Property improvement of silicate ceramics by coating the structural grain with a matrix paste in a fluidized bed granulator.—73-10756

Protective atmosphere composition and surface water stability of silicate glass.—73-00692

Quantification of lithium, beryllium, and boron in silicates by secondary ion mass spectrometry using conventional energy filtering.—73-08437

Quantitative analysis of alkali silicate solutions by ICP AES.—73-06959

Quasi-continuous wave laser operation of $Cr^{4+}$-doped $Y_2SiO_5$ at RT.—73-16581

Radiation effects on thermal expansion of some ternary alkali silicate glasses.—73-00539

Radiative properties of glass and cast silicates. Modeling of heat transfer: IV, Measurement of infrared spectra. Determination of $n_\lambda$.—73-10476

Radiative properties of glass and cast silicates. Modeling of heat transfer: V, Diffusing media. Applications: fibrous insulation.—73-10477

Radiative properties of glass and cast silicates. Modeling of heat transfer: VI, Nondiffusing media. Application to sheet glass.—73-10478

Raising transmission in optically transparent lithium aluminum.—73-00695

Reactivity of high-purity $ZrSiO_4$ sintered bodies for alkaline glass melts.—73-00849

Real structure and thermodynamic properties of olivine solid solutions of ($Fe_{1-x}Ni_x$)$_2SiO_4$.—73-05471

Reduced layers of microchannel films studied by methods of X-ray phase analysis and X-ray small-angle scattering.—73-00394

Refractive index, mean dispersion, and density of lead oxide in silicate glasses of ordinary systems.—73-00541

Refractory-oxide corrosion resistance in molten high-lead silicate glasses.—73-00858

Relationship between thermomechanical properties and shaping parameters for sheet silicate glass.—73-07072

Relaxation of residual deformations in the surface layers of silicate glasses.—73-00696

Research and education in Glass and Ceramics Institute in the Institute of Chemical Technology, Prague [Czech Republic].—73-06590

Role of electron injection in formation electret state in $Bi_{12}SiO_{20}$ crystals.—73-16590

Roles of microstructure in super $Na^+$ ionic conduction of glass-ceramic NARPSIO-V.—73-14728

Second-order diffraction efficiency in Bragg gratings written within germanosilicate fibers.—73-16592

Secondary electron emission from lead silicate glasses from the point of plasmon theory of emission.—73-14080

Silicate bonding of laterites: an ancient process for construction components.—73-00014

Silicate species formed by dissolution of (2-hydroxyethyl)trimethylammonium silicate in water and in methanol.—73-12681

Silicon nitride containing rare-earth-silicate intergranular phases.—73-06043

Single-component alkali metal silicate cement composition.—73-12403

Sintering and crystallization of glasses with roedderite-type composition $(Na,K)_2Mg_5Si_{12}O_{30}$.—73-10598

Sintering of high-purity $ZrSiO_4$ powder.—73-03008

Sintering of $SrSiO_3$ ceramic and its dielectric property.—73-03011

Slip casting of zirconium silicate for the production of structural parts as an alternative to traditional extrusion methods.—73-12063

Sodium and silver environments and ion-exchange processes in silicate and aluminosilicate glasses.—73-06970

Sol-gel preparation and lithium dynamics in the $Li_4SiO_4$-$Li_3PO_4$ solid solution.—73-04170

Solid electrolytes on the basis of the $Li_4SiO_4$-$Li_3NbO_4$ system.—73-14731

Spectroscopic studies of silicate glasses activated by solid-state solutions.—73-14278

Strength and fracture behavior of alkali strontium silicate glass.—73-14280

Structural microstresses in alkali silicate glass induced by low-temperature ion exchange.—73-14095

Structural relaxations in alkali silicate systems by Brillouin light scattering.—73-00551

Structural study of undensified and densified silicate glasses containing iron by Mossbauer and infrared spectroscopy: implication for bond deformation in silicate glasses.—73-10406

Structure and molar volumes of alkali silicate glasses.—73-00414

Structure of tin silicate glasses.—73-03766

Structure-dependent effects on the magnetic behavior of Fe ions in borate and silicate glasses.—73-15369

Surface characterization of lead- and bismuth-lead-silicate glasses by X-ray photoelectron spectroscopy (XPS).—73-14116

Surface chemistry of multicomponent silicate gels.—73-10410

Surface conductivity of silicate glasses.—73-00552

Surface roughness effects at lithium silicate glass/blocking metal interfaces.—73-01338

Synthesis and crystal structure of new double silicate $RbNbSiO_5$=$Rb_3Nb_3[Si_3O_9]O_6$.—73-16351

Synthesis of laminar silicates of magnesium and aluminum in molten salts.—73-12713

Synthesis of pure fresnoite, $Ba_2TiSi_2O_8$.—73-03052

Synthesis, characterization, and catalytic properties of titanium silicates prepared using phosphonium ions.—73-08769

Tetrahedral site ordering in synthetic gallium albite: a $^{29}Si$ MAS NMR study.—73-02519

Thermal expansion of $Y_2SiO_5$ single crystals—correction.—73-12892

Thermodynamic properties of melts of sodium metasilicate according to data from the method of molecular dynamics.—73-00565

Thermomechanical properties of silicate glass as a function of the batch-to-cullet ratio.—73-00712

Thermostimulated depolarization currents and internal friction in sodium silicate glasses.—73-00421

Tobermorite formation in the system CaO, $C_3S$-$SiO_2$-$Al_2O_3$-NaOH-$H_2O$ under hydrothermal conditions.—73-00200

Trace determination of uranium, thorium, calcium, and other heavy metals in high-purity refractory metal silicides, niobium, and silicon dioxide with isotope dilution mass spectrometry.—73-15857

Transformation–range viscosity and thermal property of sodium silicate glasses.—73-14300

Transient response of a photorefractive grating produced in a $Bi_{12}SiO_{20}$ (BSO) crystal by a short light pulse.—73-05682

Transition metal ions in silicate melts: III, Nickel in quenched oxide glasses.—73-10412

Traps and recombination centers in pure and Co-doped $Bi_{12}SiO_{20}$ crystals.—73-16643

Use of diopsides of various mineralogical compositions in silicate production technology.—73-15914

Use of NMR spectroscopy for study of glass structures: I, NMR spectroscopy of the silicate solutions[—literature review].—73-01936

Using internal friction technique to study defects in [pure and] Cr- and Al-doped $Bi_{12}SiO_{20}$ [single crystals].—73-17106

Using polymer theory to study the relationship between the structure of silicate melt and the color stability of Cd(S,Se) crystals.—73-10904
Wet chemical etching of silicate glasses in hydrofluoric acid-based solutions[—review].—73-14529
Wollastonite.—73-12306
X-ray fluorescence (XRF) spectrometer for analysis of silicate ceramic materials.—73-15862
X-ray photoelectron spectroscopy study of the structure of lead silicate glasses.—73-00428
ZnO-modified high-modulus glass fibers.—73-00723

**siliceous materials,**
Effect of siliceous slurry coating on water tightness of cold joint.—73-09916
Improving the thermal shock resistance of siliceous refractories.—73-00827
Siliceous articles with improved thermal stability for coke furnace.—73-00864

**silicides,**
Anomalous magnetotransport in epitaxial $TbSi_{2-x}$.—73-03079
Antiferromagnetic resonance in the heavy fermion state of $URu_2Si_2$.—73-08282
Cerium silicide formation in thin Ce-Si multilayer films.—73-02738
Change of electrical properties of Co-doped and Cr-doped $FeSi_2$ thin films during amorphous-to-crystalline transformation.—73-01092
Change of electrical properties of Co-doped and Cr-doped $FeSi_2$ thin films during amorphous-to-crystalline transformation.—73-12749
Characterization of plasma-sprayed silicide intermetallic compound coatings.—73-06747
Cobalt disilicide as dopant diffusion source for polysilicon gates in MOS devices.—73-04271
Comparison of the geometric structure and electron reflectivity of A/B-$NiSi_2$/Si(111) and U/F-Si(111)-7×7 interfaces.—73-08825
Coordination of atoms in structures of ternary compounds of rare-earth element–transition element–silicon systems.—73-16070
Crystal chemical studies of inhomogeneous linear structures: IX, Series of $M_{2m+2n}X_{2m+2n}$ inhomogeneous linear structures and its new member $Ni_5Si_2P_3$.—73-16075
Crystal structure of $Sc_{1.2}Fe_4Si_{9.8}$.—73-02211
Crystal structure of $Sc_6Co_{30}Si_{19}$.—73-02212
Electrical properties of the thermal-induced degradation in $TiSi_2$/TiW/AlSi layered structures.—73-08857
Electrical, thermal, thermoelectric, and related properties of magnesium silicide semiconductor prepared from rice husk.—73-11184
Electronic and vibrational properties of semiconducting crystalline $FeSi_2$ layers grown on Si(111).—73-01156
Electronic properties of epitaxial erbium silicide.—73-02607
Electronic structure of epitaxial erbium silicide films on Si(111).—73-02261
Epitaxial $CoSi_2$ formation on Si(001) from an amorphous $Co_{75}W_{25}$ sputtered layer.—73-05789
Features of magnetic ordering in highest manganese silicide single crystals $[MnSi_{1.71-1.75}]$ with incommensurate structure.—73-16149
Formation of epitaxial CsCl-type iron silicide on Si(111).—73-16156
Geometric and electronic structure of epitaxial iron silicides.—73-05409
High-density local interconnect in a semiconductor circuit using metal silicide.—73-04515
High-temperature stability of CrSi(W)-N films.—73-12810
Nanocrystalline intermetallic compounds prepared by mechanical alloying.—73-16876
Preliminary study of the formation of $WSi_2$ by high-current W ion implantation.—73-08708
Processing of chromium silicide–silicon carbide nanostructured composite by thermal conversion of spray-dried precursor powders.—73-05999
Real-time spectroellipsometry investigation of the interaction of silane with a Pd thin film: formation of palladium silicides.—73-08720
Relaxed $Ge_xSi_{1-x}$ structures for III-V integration with Si and high-mobility two-dimensional electron gases in Si.—73-07768
Si(111)/$FeSi_2$ heterostructures: formation and properties of the low-temperature metallic (gamma) and semiconducting (beta) disilicide phases.—73-07798
Structural and electrical properties of $^{28}Si^+$ and $^{40}Ar^+$ ion-implanted epitaxial $ReSi_2$ films grown on *n*-Si(100) substrates.—73-16317
Subsurface growth of silicide structures in silicon.—73-15190
Synthesis and characterization of group VI metal silicide–silicon carbide compositions via solid-state displacement reactions of nanosize grains of $M_2C$ and silicon.—73-06078
Synthesis of tungsten silicide by pulsed laser irradiation of sputtered alloy layers.—73-09366
Thermal expansion of highest manganese silicide $[MnSi_{1.71-1.75}]$.—73-16629
Topological relation between the LaIrSi-type and the EuNiGe-type structures in ternary phases MPdSi (M=Ca, Eu, Sr, Ba).—73-02529

**silicon carbide,**
Abrasive wear of $Al_2O_3$-SiC composites.—73-03233
Abrasive wear of monolithic silicon nitride and a silicon carbide whisker-reinforced silicon nitride composite.—73-09539
Abrasive wear of sintered aluminum alloy and its composite containing SiC particles.—73-03559
Acoustic microscopy of ceramic fiber composites: I, Glass-matrix composites.—73-09431
Acoustic microscopy of ceramic fiber composites: II, Glass-ceramic-matrix composites.—73-09432
Active-to-passive transition and bubble formation for high-temperature oxidation of chemically vapor deposited silicon carbide in CO-$CO_2$ atmosphere.—73-09523
Agglomeration property of SiC powders prepared from fine $SiO_2$-C mixed powders.—73-02724
Amorphous silicon, amorphous carbon, and amorphous silicon carbide deposited by remote plasma chemical vapor deposition.—73-09017
Analysis of the wear behavior of SiC whisker-reinforced alumina from 25° to 1200°C.—73-09544
Anisotropies of room temperature mechanical properties of hot-pressed SiC whisker/$Si_3N_4$ composite ceramics.—73-06324
Anisotropies of room temperature mechanical properties of hot-pressed SiC whisker/$Si_3N_4$ composite ceramics.—73-13493
Anomalous temperature dependence of cyclic fatigue-crack growth in a silicon carbide matrix composite.—73-17238
Apparatus for continuous growth of SiC single crystal from SiC synthesized in a vapor phase without using graphite crucible.—73-12071
Application of $Si_3N_4$-bonded SiC in electric arc furnace ladle.—73-10699
Applications of SiC to Jun red glaze.—73-14645
Aspects of the morphology and creep behavior of a unidirectional $SiC_f$-MLAS material.—73-06326
Atomic layer epitaxy controlled by surface superstructures in SiC.—73-06189
Atomic level epitaxy of 3C-SiC by low pressure vapor deposition with alternating gas supply.—73-06190
Attempt at measuring the crack extension resistance of ceramics by fracture test in bending.—73-03239
Attempt for measuring the crack extension resistance of ceramics by fracture test in bending.—73-13494
Basic studies of the corrosion of SiC by silicate melts.—73-03212
Bending strength of SiC/$Al_2O_3$ composite sheet obtained from polycarbosilane/alumina powder/binder mixture.—73-03242
Black glass-ceramic from rapid pyrolysis in oxygen-containing atmospheres.—73-03905
Bulk growth of single-crystal cubic silicon carbide by vacuum sublimation method.—73-16660
Burner rig oxidation of continuous carbon fiber-reinforced silicon carbide.—73-09524
C/SiC turbine rotor development.—73-12414
Calculation of the dynamic characteristics of an SiC impact diode.—73-07396
Capacitor discharge and flash welding of SiC-reinforced high-temperature Al alloys.—73-00212
Carbon dioxide laser cutting of a carbon-fiber–silicon carbide-matrix composite.—73-05697
Carbon dioxide laser synthesis of ultrafine silicon carbide powders from diethoxydimethylsilane.—73-12929
Carbon fiber-reinforced SiC composites produced by reaction bonding.—73-12930
Carbon removal and oxidation of SiC powder synthesized by carbothermic reduction of silica.—73-02733
Carbon-containing black glass monoliths.—73-00728
Carbon-containing black glass.—73-03907
Carbon-fiber-reinforced SiC composites produced by reaction bonding.—73-05698
Carbon-layer formation at silicon carbide-glass interface.—73-16043
Carbon-silicon carbide composite material and method for the preparation thereof.—73-15979
Casting defects and properties of cast A356 aluminum alloy reinforced with SiC particles.—73-06742
Ceramic composite and process for its production.—73-15936
Ceramic composite of aluminoborosilicate fibers coated with several layers.—73-05290
Ceramic fiber-reinforced silicon carboxide composite.—73-03909
Ceramic Transactions, Volume 42: Silicon-Based Structural Ceramics.—73-17522
Ceramic-ceramic composite materials with improved friction and wear properties.—73-15962
Ceramic/ceramic composite components advance furnace systems and processes.—73-05261
Characteristics of $Al_2O_3$-SiC nanocomposite prepared by sol-gel processing.—73-17113
Characterization by atomic force microscopy of nanometer-scale plastic damage in SiC single crystals after being sintered by hot isostatic pressing.—73-09547
Characterization of a-SiC:H films produced in a standard plasma-enhanced chemical vapor deposition system for X-ray mask application.—73-12939
Characterization of dip-coated boron nitride on silicon carbide fibers.—73-08568
Characterization of interfacial properties in SiC-zircon composites.—73-09548
Characterization of SiC whiskers through infrared absorption spectroscopy.—73-08818
Characterization of SiC-SiC whisker matrix retaining electrolyte in phosphoric acid fuel cell.—73-04064
Chemical and compositional changes induced by $N^+$ implantation in amorphous SiC films.—73-08575
Chemical vapor deposition and characterization of undoped and nitrogen-doped single-crystalline 6H-SiC.—73-12944
Chemical vapor deposition of ß-SiC by pyrolysis of MTS and effect of excess C sources.—73-09041
Chemical vapor deposition of SiC thin films for X-ray mask applications.—73-16673
Clay-graphite refractory crucibles containing variable amounts of silicon carbide.—73-00789
Coal slag corrosion and strength degradation of silicon carbide/alumina composites.—73-17249
Coating of SiC gradient carbon material with mullite film and its oxidation resistance.—73-17216
Combustion gas corrosion resistance of heat-exchange materials and refractories for glass furnaces at high temperatures: I, Silicon carbide and molybdenum silicide.—73-07199
Compaction mechanisms of ultrafine SiC powders.—73-02751
Comparison of the dynamic fatigue behavior of two monolithic SiC and an $Al_2O_3$/SiC composite.—73-17253
Comparison of the pyrolysis products of dichlorodimethylsilane in the chemical vapor deposition of silicon carbide on silica in hydrogen or argon.—73-16679
Composite flexible blanket insulation.—73-12453
Composition and microstructure of CVD-C, SiC coating on SiC fiber.—73-03128
Compressibility of SiC up to 68.4 GPa.—73-08828
Concentration distribution of SiC vapor in the crystal growth zone.—73-12953
Consolidation of [SiC] fiber materials with particulate metal aluminide alloys.—73-13915
Contribution to the problem of tensile and bending test method for SiC-fiber-reinforced glass.—73-17256
Control of silicon carbide heating elements using SCR's.—73-04069
Correlation between interface structure and mechanical properties for silicon-nitride-based nanocomposites.—73-03248
Correlation of interfacial and macroscopic toughness in SiC laminates.—73-03249
Corrosion behavior of silicon carbide ceramics in caustic alkaline solutions at high temperature.—73-13469
Corrosion behavior of sliding materials in $NH_3$-$H_2O$ solutions at high temperature.—73-03217
Crack growth behavior of $SiC_f$/SiC composite at room and high temperatures.—73-17258
Crack growth resistance of ceramic composite.—73-06350
Crack growth resistance of SiC-SiC ceramic composite materials.—73-06351
Crack-fiber interaction in SiC fiber-reinforced glass matrix composite.—73-06202
Crack-fiber interaction in SiC fiber-reinforced glass matrix composite.—73-10425
Creep anisotropy of a continuous-fiber-reinforced silicon carbide/calcium aluminosilicate composite.—73-13499
Creep behavior of SiC-fiber-reinforced hot-pressed $Si_3N_4$ composites.—73-03253
Creep deformation of whisker-reinforced alumina.—73-09563
Crystallization of grain-boundary phases in SiC ceramics through catalytic deoxygenation.—73-12457
CVD SiC/Al composites produced by a vacuum suction casting process.—73-00216
Cyclic fatigue–crack propagation in a silicon carbide whisker-reinforced alumina composite: role of load ratio.—73-09567
Damage in aligned-fiber SiC/Al quantified using a laboratory X-ray tomographic microscope.—73-00217
Dc electrical conductivity of $Si_3N_4$-SiC films prepared by plasma CVD.—73-16437
DCB methods for examining toughening in alumina reinforced with carbon-coated SiC whiskers.—73-09057
Deflocculation and casting behavior of SiC slips.—73-12968
Deformation of A 356-15% $SiC_p$ semisolid alloys during squeezing flow.—73-06765
Deformation of CVD silicon carbide monofilaments under variable mechanical loading.—73-17272
Dense SiC ceramic products.—73-02094
Dependence of mechanical properties of SiC whisker/$Si_3N_4$ composite ceramics on crystal type of $Si_3N_4$ powders.—73-17274
Deposition, characterization, and device development in diamond, silicon carbide, and gallium nitride thin films.—73-05740
Design criteria and limitations for SiC-metal and $Si_3N_4$-metal joints derived from phase diagram studies of the systems Si-C-metal and Si-N-metal.—73-03574
Destructive processes in silicon carbide refractories in a high-temperature gas flow.—73-03997
Determination of native defect concentrations and deviation from stoichiometry in silicon carbide.—73-06151
Determination of thermal stresses in multiphase ceramic materials.—73-16442
Development of high-strength, active-brazed silicon nitride and silicon carbide joints.—73-00220
Development of semigraphitized silicon carbide–carbon brick.—73-07206
Development of thermal shock resistant mullite coatings on silicon carbide.—73-08528
Diamond and silicon carbide heterojunction bipolar transistor.—73-11517
Diamond formation from the SiC-Co system under high pressure and high temperature.—73-02236
Differences in fatigue and fracture behavior of woven-mat and acrylic binder SCS-6/Ti-15-3 composites.—73-13820
Differences in the structure of amorphous hydrogenated silicon carbide layers prepared with either methane or silylmethanes.—73-08601
Diffusional crack growth and creep rupture of silicon carbide doped with alumina.—73-06373
Dispersion characteristics and slurry pressing behaviors of SiC whisker/SiC powder mixture in aqueous slurry.—73-16716
Dry and water-lubricated slip rolling of $Si_3N_4$- and SiC-based ceramics.—73-17278
Economical SiC fiber tow via CVD.—73-16719
Effect of a silicon carbide "nano-dispersion" on the mechanical properties of silicon nitride.—73-17279
Effect of additives on sintering and mechanical properties of $Si_3N_4$-bonded SiC.—73-03262

Effect of $Al_2O_3$ and SiC whisker on sintering and mechanical properties of $Si_3N_4$-bonded SiC.—73-13505
Effect of aluminum doping on thermoelectric power of sintered SiC.—73-02576
Effect of argon addition on the microstructure, texture, and phases of silicon carbide prepared by chemical vapor deposition.—73-02780
Effect of atmosphere on microstructural evolution of pressureless-sintered $Al_2O_3$/SiC composites.—73-05752
Effect of atmosphere on microstructural evolution of pressureless-sintered $Al_2O_3$/SiC composites.—73-12997
Effect of atmospheric humidity on the dynamic fracture strength of SiC abrasives.—73-06606
Effect of ball-milling time for powder mixing of the thermomechanical properties of SiC-AlN system ceramics.—73-05753
Effect of carbon addition on elevated-temperature crack growth resistance in (Mo,W)$Si_2$-SiC$_p$ composite.—73-17280
Effect of chemical composition of matrix on oxidation behavior of mullite/20 vol% SiC whisker composites.—73-03223
Effect of dopant on electrical properties of sintered SiC.—73-02578
Effect of fiber coating on mechanical properties of Nicalon fibers and Nicalon fiber/SiC matrix composites.—73-17284
Effect of heat treatment on the stress relaxation and microstructure of CVD SiC fibers.—73-09576
Effect of HIP sintering on the crystal structure and fracture behavior of α-SiC platelets embedded in $Si_3N_4$ matrix.—73-16728
Effect of HIPing on the effective thermal conductivity/diffusivity and the interfacial thermal conductance of uniaxial SiC fiber-reinforced RBSN.—73-05546
Effect of illumination on the properties of paramagnetic defects in variable-composition films of hydrogenated amorphous SiC.—73-11156
Effect of impurities and intrinsic defects on physicomechanical properties of silicon carbide single crystals.—73-17290
Effect of interlayer thickness on mechanical properties of Nicalon-fiber-reinforced SiC composites.—73-13510
Effect of internal stresses on the first stages of the cyclic deformation of an SiC$_p$/Al-6061 composite.—73-13827
Effect of isothermal exposure on SiC fibers.—73-12425
Effect of microstructure on the fracture mechanisms of SiC/Al composites obtained by dynamic compaction.—73-09446
Effect of oxygen on pyrolysis of SiC fiber synthesized from polycarbosilane.—73-05764
Effect of oxygen on pyrolysis of SiC fiber synthesized from polycarbosilane.—73-13012
Effect of processing variables on interfacial properties of an SiC-fiber-reinforced reaction-bonded $Si_3N_4$ matrix composite.—73-16738
Effect of SiC contamination in glazes: blister formation in pink glazes.—73-10830
Effect of SiC particles on age-hardening and mechanical properties of aluminum alloys.—73-09580
Effect of specimen shape on fracture toughness and effective fracture energy in SiC-SiC composite.—73-15793
Effect of starting crystallographic phase on the mechanical properties of hot-pressed SiC ceramics.—73-06390
Effect of surface coating and orienting of whiskers on mechanical properties of SiC(w)/$Si_3N_4$.—73-03272
Effect of temperature annealing on properties of α-$Si_{1-x}C_x$:H films (0<x≤1).—73-16744
Effect of water vapor on high-temperature oxidation of SiC.—73-03224
Effect of water vapor on high-temperature oxidation of SiC.—73-13473
Effect of whisker orientation on toughening behavior and cutting performance of $SiO_w$-$Al_2O_3$ composite.—73-06391
Effective electron mass anisotropy in silicon carbide.—73-16125
Effects of α-SiC versus ß-SiC starting powders on microstructure and fracture toughness of SiC sintered with $Al_2O_3$-$Y_2O_3$ additives.—73-13024
Effects of additives on the stacking fault annihilation in ß-SiC powder compacts.—73-02246
Effects of $C_3H_8$ on the chemical vapor deposition of silicon carbide in the $CH_3SiCl_3$+$H_2$ system.—73-13028
Effects of density and fiber volume on the mechanical properties of SiC matrix composites reinforced with T-300 fibers.—73-12427
Effects of exposure time and strain rate on the elevated temperature tensile strength of SiC monofilaments.—73-06394
Effects of fiber volume fraction on mechanical properties of SiC-fiber/$Si_3N_4$-matrix composites.—73-13516
Effects of fine SiC particles on the creep of MgO at high temperatures.—73-13517
Effects of kinds of sintering aids of rare-earth oxides on $Si_3N_4$ grain size and fracture toughness of SiC whisker/$Si_3N_4$ composite ceramics.—73-02806
Effects of kinds of sintering aids of rare-earth oxides on $Si_3N_4$ grain size and fracture toughness of SiC whisker/$Si_3N_4$ composite ceramics.—73-13032
Effects of metallic boride dispersion on fracture toughness and oxidation resistance in SiC ceramics.—73-03275
Effects of metallic boride dispersion on fracture toughness and oxidation resistance in SiC ceramics.—73-13518
Effects of rapid thermal annealing on both the stress and the bonding states of a-SiC:H films.—73-09108
Effects of SiC addition on the mechanical properties and sinterability of $TiB_2$-(2 mol% $Y_2O_3$-$ZrO_2$) composite.—73-13519
Effects of temperature and oxidation on the mechanical behavior of uncoated SiC-SiC composite materials.—73-06400
Efficient green-emitting SiC diodes.—73-07477
Electrical conduction mechanism in recrystallized SiC.—73-02809
Electrical conduction mechanism in recrystallized SiC.—73-12787
Electrical resistivity of α-SiC ceramics added with NiO.—73-14702
Electrically conductive high-strength dense ceramic.—73-14747
Electroluminescence emitted by *p-i-n* structures made of a-$Si_{1-x}C_x$:H.—73-01151
Electron-nuclear double resonance and electron structure of boron impurity centers in 6H-SiC.—73-04312
Electrophoretic deposition [ED] forming of SiC-TZP composites in a nonaqueous sol media.—73-13044
Elemental analysis of matrix grain boundaries in SiC whisker-reinforced $Si_3N_4$-based composites.—73-06216
Elevated-temperature cyclic fatigue of silicon carbide fiber-reinforced silicon carbide matrix composites.—73-17304
Enhancing antioxidizing ability of SiC fiber-reinforced LAS glass-ceramic via sol-gel coating technique.—73-14374
Equilibrium processes in the gas phase during silicon carbide sublimation.—73-12582
Etching investigation of $SiC_w$/$Al_2O_3$ and Incusil-ABA joints.—73-03586
Evaluation of thermal residual stresses in SiC/MLAS and SiC/SiC composites by the microindentation push-down test.—73-03285
Evaluation of whisker alignment in axisymmetric $SiC_w$-reinforced $Al_2O_3$ composite materials.—73-16766
Evaluations of residual axial stresses and interfacial friction in Nicalon fiber-reinforced macrodefect-free cement composites.—73-00085
Evidence for anelastic creep recovery in silicon carbide whisker-reinforced alumina.—73-13528
Evolution of interface microstructure in a dual-coated silicon carbide fiber-reinforced BMAS [Ba-Mg aluminosilicate] glass-ceramic composite.—73-09450
Experience with silicon carbide tiles in mass-fired refuse boilers.—73-15963
Experimental approach to the analysis of the adhesion properties of SiC coatings deposited on steel substrates.—73-10227
Experimental FET based on 4H:SiC polymorph.—73-14901
Fabrication and characterization of SiC/6061 composites.—73-06788
Fabrication and mechanical properties of carbon fiber-reinforced silicon carbide composites.—73-13529
Fabrication and mechanical properties of carbon-fiber-reinforced silicon carbide composites.—73-06413
Fabrication and microstructure of $Al_2O_3$-SiC-YAG hybrid composites prepared by particulate dispersion.—73-09125
Fabrication and properties of AlN-SiC whisker composites.—73-09126
Fabrication and some mechanical properties of SiC whisker-reinforced $Si_3N_4$ composites utilizing underwater shock pressure.—73-16770
Fabrication and some mechanical properties of SiC-whisker-reinforced $Si_3N_4$ composites utilizing underwater shock pressure.—73-05800
Fabrication of a functionally gradient material of TiC-SiC system by chemical vapor deposition.—73-02822
Fabrication of a functionally gradient material of TiC-SiC system by chemical vapor deposition.—73-13052
Fabrication of continuous fiber ceramic matrix composites via slurry routes.—73-02824
Fabrication of continuous-fiber-reinforced SiC matrix composites with gradient compositions.—73-09130
Fabrication of oriented SiC-whisker-reinforced mullite matrix composites by tape casting.—73-16775
Fabrication of SiC matrix surface composites by chemical vapor infiltration with microwave heating: temperature effects.—73-16776
Fatigue behavior of borosilicate glass-ceramic matrix, Nicalon (silicon carbide) fiber composites.—73-13530
Fatigue behavior of nonoxide ceramics at elevated temperature.—73-06414
Fatigue damage in SiC/CAS composites.—73-03293
Fatigue mechanisms in graphite/SiC composites at room and high temperature.—73-06419
Fiber matrix interaction in SiC fiber reinforced ceramic and intermetallic composites.—73-09452
Fiber-reinforced glass composite for protecting polymeric substrates.—73-00731
Fiber-reinforced silicon carbide ceramics and method of producing the same.—73-05300
Fibrous monolithic ceramics: III, Mechanical properties and oxidation behavior of the silicon carbide/boron nitride system.—73-09597
Finite element modeling of creep deformation in fiber-reinforced ceramic composites.—73-06421
Finned-tube heat exchanger.—73-02095
Formation of nanocrystalline Fe/SiC composite by mechanical alloying.—73-03589
Formation of SiC whiskers from rice husk silica–carbon black mixture: effect of preheat treatment.—73-09141
Forming of silicon carbide powder by cyclic CIP.—73-02836
Formulation for the effect of surface grinding on strength degradation of ceramics.—73-03294
Formulation for the effect of surface grinding on strength degradation of ceramics.—73-13533
Fracture and flexural characterization of monolithic SiC and $SiC_w$/SiC composites at room and elevated temperatures.—73-17324
Fracture behavior and properties of SiC whisker/$Si_3N_4$ composites.—73-17325
Fracture behavior of ceramic laminates in bending: II, Comparison of model predictions with experimental data.—73-06431
Fracture behavior of chemically-vapor-deposited SiC-coated graphite: I, Experimental results.—73-03296
Fracture behavior of CVD SiC-coated graphite: II, Conditions for the onset of multiple cracking.—73-06432
Fracture resistance of silicon-carbide-platelet-reinforced alumina composite.—73-03298
Fracture toughening mechanisms in the $SiC_w$/$Al_2O_3$ composite system.—73-06437
Fracture toughness assesssment of silicon-carbide-based ceramics and particulate-reinforced composites.—73-03299
Fracture toughness measurements on SiC/$Al_2O_3$ composite.—73-03301
Fracture toughness of ceramics in the AlN-SiC system.—73-17335
Fracture toughness of TiC-SiC composites fabricated by CVD and the mechanism of toughening.—73-03302
Fracture toughness of TiC-SiC composites fabricated by CVD and the mechanism of toughening.—73-13541
Frictional properties of SiC for several kinds of metals.—73-17338
Fully reversed bending fatigue of $Si_3N_4$/$SiC_w$ and $Si_3N_4$ in different environments.—73-17339
Fully reversed fatigue of a Ti MMC.—73-10234
Fusion of silicon carbide products with aluminum during the siliconizing (firing) process.—73-03593
Grain-boundary structure and strength of SiC bicrystals.—73-03148
Granulated product composed of silicon carbide powder and silicon carbide ceramic formed therefrom.—73-12465
Grooving on SiC ceramic surface by reaction with solid metal: I.—73-02841
Grooving on SiC ceramic surface by reaction with solid metal: II, Reaction between SiC ceramics and Ni foil.—73-02842
Grooving on SiC ceramic surface by reaction with solid metal: II, Reaction between SiC ceramics and Ni foil.—73-10235
Grooving on SiC ceramic surface by reaction with solid metal: III, Reaction product layer between SiC ceramics and Ni foil.—73-03594
Grooving on SiC ceramic surface by reaction with solid metal: III, Reaction product layer between SiC ceramics and Ni foil.—73-13842
Growth of epitaxial 3C-SiC films on (111) silicon substrates at 850°C by reactive magnetron sputtering.—73-09154
Hall effect and infrared absorption measurements on nitrogen donors in 6H-silicon carbide.—73-12808
Heat treatment and mechanical properties of aluminum alloy CW67/SiC composites.—73-09609
High-flexural-strength ceramic fiber-reinforced silicon carboxide composite.—73-03931
High-purity and high-density SiC ceramics.—73-02081
High-strength $MoSi_2$ matrix composites.—73-10236
High-strength $Si_3N_4$/SiC structural ceramics.—73-17341
High-temperature Au-SiC-6H Schottky diodes.—73-01186
High-temperature crack growth in monolithic and $SiC_w$-reinforced silicon nitride under static and cyclic loads.—73-17343
High-temperature deformation behaviors of SiC$_p$/Al-14 Fe composites.—73-06800
High-temperature elastic moduli and internal frictions of α-SiC ceramic.—73-05576
High-temperature life prediction of monolithic silicon carbide heat exchanger tubes.—73-17347
High-temperature optical probe.—73-12471
High-temperature oxidation failure of C/SiC continuous fiber ceramic matrix composites.—73-13474
High-temperature oxidation resistance of SiC whisker-reinforced AlN composite.—73-06308
High-temperature stability of $SiC_w$/ZTM composite.—73-06309
High-temperature strength and creep behavior of Carborundum alpha silicon carbide fibers.—73-09613
High-temperature strength of silicon-nitride-bonded silicon carbide for kiln furniture.—73-10734
High-temperature structural stability of chemically vapor deposited silicon carbide filaments.—73-16507
High-temperature toughening mechanism in SiC/TiC composites.—73-05267
High-temperature toughening mechanism in SiC/TiC composites.—73-13547
History and economic aspects of industrial SiC manufacture.—73-12432
Hot casting of pressureless-sintered silicon carbide ceramics—the method.—73-05846
Hot-pressed $Al_2O_3$/SiC whisker/TiC nanocomposites.—73-05847
Hot-pressed $Al_2O_3$/SiC whisker/TiC nanocomposites.—73-13548
Hot-pressing kinetics of alumina composites reinforced with SiC whiskers.—73-02852
Hot-pressing of SiC/B ultrafine composite powders and microstructure of sintered body.—73-09165
Hydroabrasive erosion characteristics of 30 vol% SiC$_p$/6061-T6-Al composite at shallow impact angles.—73-06802
Hydroboration of polymethylvinyl silane—a novel route to silicon boron carbide ceramics.—73-09166
Hydrogen bonding configurations in amorphous silicon carbon alloys and their impact on the silicon carbon stretching vibrations.—73-05415
Identification and active energies of shallow donor in cubic SiC.—73-08884
Impact strength of ceramics.—73-03310
Improved carbon coatings for silicon carbide whiskers.—73-16831
Improved mechanical properties of $Cr_3C_2$ using particulate SiC reinforcement.—73-09615

Improvement of thermal stability of SiC fiber by CVD-C, SiC coating.—73-02861
In situ-toughened silicon carbide.—73-05858
Indentation hardness and fracture in single-crystal magnesia, zirconia, and silicon carbide.—73-03314
Inexpensive method for making ceramic composites.—73-02864
Influence of density and grain size on the bending strength of Si-impregnated silicon carbide.—73-03315
Influence of ductile mode grinding on the strength of silicon-based ceramics.—73-06459
Influence of interfacial shear strength on matrix properties and crack-fiber interactions in ceramic matrix composites.—73-09620
Influence of manufacturing conditions on the characteristics of SiC ceramics with addition of BeO.—73-02869
Influence of preparation conditions on the surface roughness of SiC thin films coated on 304 stainless steel.—73-13848
Influence of SiC whisker size on the mechanical properties of reinforced alumina.—73-09621
Influence of sintering conditions on the mechanical properties of SiC whisker/$Si_3N_4$ ceramic composite.—73-05873
Influence of sintering conditions on the mechanical properties of SiC whisker/$Si_3N_4$ ceramic composite.—73-13101
Influence of starting powder characteristics on mechanical properties of SiC-particle/$Si_3N_4$ composites.—73-06462
Influence of starting powder characteristics on mechanical properties of SiC-particle/$Si_3N_4$ composites.—73-13554
Influence of the thermally induced plasticity and residual stresses on the deformation of SiC/Al composites.—73-03602
Influence of thermomechanical processing on the tensile and fatigue properties of an SiC-particle-reinforced aluminum alloy.—73-06809
Infrared sensing by semiconducting ceramic monofiber.—73-02622
Injection molding of silicon carbide seal rings.—73-04925
Inorganic fiber sinter and process for producing [the] same.—73-15997
Interface characterization by TEM, AES, and SIMS in tough SiC (ex-PCS) fiber–SiC (CVI) matrix composites with a BN interphase.—73-09470
Interface structure of $Si_3N_4$ matrix composite with nanometer-scale SiC particles.—73-06237
Interfaces in silicon carbide/graphite laminates.—73-03319
Interfacial microstructure and chemistry of SiC/BN dual-coated Nicalon fiber-reinforced glass-ceramic matrix composites.—73-09471
Interfacial stress measurements on ceramic matrix composites.—73-17364
Interfacial structure between Ag-Cu-Ti alloy and sintered SiC with various additives.—73-03609
Interfacial structure of chemical vapor infiltration carbon fiber/SiC composite.—73-06238
Interfacial structures between Ag-Cu-Ti alloy and sintered SiC with various additives.—73-13852
Interfacial studies of refractory glass-ceramic-matrix/advanced-SiC-fiber-reinforced composites.—73-17151
Interstellar SiC grains in meteorites.—73-13410
Intrinsic stress and mechanical properties of hydrogenated silicon carbide produced by plasma-enhanced chemical vapor deposition.—73-03321
Ion-laser including a silicon carbide discharge tube having a small arithmetic roughness.—73-15999
Joining of SiC using reaction-bonding methods.—73-05884
Joining of silicon carbide by chemically reduced, precipitated NiP interface layers.—73-02883
Junction field effect transistor formed in silicon carbide.—73-04212
Kinetics and mechanisms of oxidation of 2D woven C/SiC composites: I, Experiemental approach.—73-17225
Kinetics and mechanisms of oxidation of 2D woven C/SiC composites: II, Theoretical approach.—73-17226
Kinetics of carbothermal reduction synthesis of beta silicon carbide.—73-05888
Large-pressure effect on photoluminescence lines in 6H SiC:Ti crystals.—73-16529
Laser surface treatment of aluminum 2024 with SiC powder injection: microstructural study and wear behavior.—73-13861
Layer-by-layer growth of SiC at low temperatures.—73-05894
Lifetime prediction for ceramic tubular components.—73-17372
Light-emitting diodes made from SiC bombarded with fast electrons.—73-07637
Load ratio effects on the fatigue behavior of silicon carbide fiber-reinforced silicon carbide.—73-17373
Low-$NO_x$ combustor for automotive ceramic gas turbine—reliability assurance.—73-08535
Low-temperature deposition of SiC films by microwave plasma chemical vapor deposition.—73-16851
Manufacture of silicon carbide (SiC) metal oxide semiconductor (MOS) device.—73-04518
Manufacturing sintered body of silicon carbide by using SiC whiskers in a multiple heating step process.—73-02104
Material development in the $Si_3N_4$ system using glass-encapsulating HIPing: I.—73-02889
Matrix cracking in unidirectional ceramic matrix composites under quasi-static and cyclic loading.—73-06473
Measurement of silicon carbide fiber strength in composites from studies of their fracture surfaces.—73-09630
Measurement of the elemental composition of a-SiC:H films by electron spectroscopy and high-energy ion scattering spectrometry.—73-12627
Measurements of internal friction coefficient of SiC and $Al_2O_3$ powders.—73-16538
Mechanical and electrical properties of $Al_2O_3$/SiC nanocomposites.—73-05594
Mechanical and thermal properties of SiC-AlN ceramics with modulated texture.—73-17377
Mechanical and tribological properties of α-SiAlON/SiC whisker composites.—73-17378
Mechanical behavior of a 3-D braided, continuous SiC fiber-reinforced/CVI SiC matrix composite at ambient and elevated temperatures.—73-17379
Mechanical properties and microstructure in sintered and HIPed SiC particle/$Si_3N_4$ composites.—73-03326
Mechanical properties and microstructure of $Si_3N_4$ matrix composite with nanometer-scale SiC particles.—73-06245
Mechanical properties and microstructure of $Si_3N_4$ matrix composite with nanometer-scale SiC particles.—73-13562
Mechanical properties and microstructures of machinable silicon carbide.—73-03328
Mechanical properties of a laser-cut alumina matrix-silicon carbide whisker composite.—73-09632
Mechanical properties of an SiC-fiber-reinforced CVI-SiC composite.—73-03330
Mechanical properties of high thermal conductive SiC ceramics.—73-03331
Mechanical properties of hot-pressed SiC particulate-reinforced $Al_2O_3$ matrix.—73-03333
Mechanical properties of hot-pressed SiC-$TiB_2$/TiC composites synthesized in situ.—73-03334
Mechanical properties of Nextel 312 fiber-reinforced SiC matrix composites in tension.—73-17387
Mechanical properties of reaction-formed silicon carbide ceramics containing silicon and refractory disilicide phases.—73-09640
Mechanical properties of SiC films for X-ray lithography application.—73-09642
Mechanical properties of SiC whisker-reinforced β-SiAlON composites.—73-06481
Mechanical properties of SiC whisker-reinforced glass-ceramic composites: II, Effects of whisker diameter and carbon coating to whisker.—73-06482
Mechanical properties of SiC whisker-reinforced glass-ceramic composites: II, Effects of whisker diameter and carbon coating to whisker.—73-10454
Mechanical properties of SiC whisker-reinforced $TiB_2$ composites fabricated by hot-pressing.—73-17392
Mechanical properties of silicon carbide whisker-reinforced silicon nitride matrix composites.—73-06483
Mechanical properties of spinel–silicon carbide whisker composites.—73-03337
Mechanical properties of spinel–silicon carbide whisker composites.—73-13566
Mechanical properties of unidirectionally oriented SiC whisker/$Al_2O_3$ composite.—73-06484
Mechanical properties of unidirectionally oriented SiC whisker/$Al_2O_3$ composite.—73-13567
Mechanism of oxidation of Si-C-O fibers.—73-13479
Melt infiltration: a generic process for making ceramic matrix composites.—73-09206
Metal and carbide coatings of ceramic particles using chemical plating techniques.—73-13870
Metal Schottky barrier contacts to alpha 6H-SiC.—73-10251
Metal-ceramic structure with intermediate high temperature reaction barrier layer.—73-10323
Metal-oxide-semiconductor capacitor formed from thermally oxidized *n*-type 6H-SiC with the (0001)C orientation.—73-11313
Metallization of silicon carbide with chromium powder.—73-03616
Metallizing of silicon carbide ceramics with manganese vapor.—73-03617
Metallizing of silicon carbide ceramics with manganese vapor.—73-13871
Method for forming a *p-n* junction in silicon carbide.—73-16001
Method for forming a silicon carbide film.—73-05310
Method for growing a silicon carbide single crystal.—73-12483
Method for making a bipolar transistor having a silicon carbide layer.—73-04521
Method for silicon carbide production by reacting silica with hydrocarbon gas.—73-16003
Method for the preparation of silicon carbide-carbon fiber composite.—73-12490
Method of fabricating silicon carbide coatings on graphite surfaces.—73-16005
Method of fabricating silicon carbide field effect transistor.—73-15238
Method of forming silicon carbide.—73-12492
Micromechanical modeling of fiber/matrix interface effects in transversely loaded SiC/Ti-6-4 metal matrix composites.—73-00251
Microscopic mechanisms of accurate layer-by-layer growth of beta-SiC.—73-06246
Microscopic observations of wear of heat-resistant ceramics.—73-09475
Microstructural characterization of MDF cement–SiC whisker composites.—73-06247
Microstructural evolution in whisker-reinforced SiC-SiC composites.—73-09478
Microstructural influences on the creep behavior of CVD silicon carbide monofilaments.—73-09479
Microstructure and fracture behaviors at high temperatures for $Al_2O_3$-SiC nanocomposites.—73-06491
Microstructure and growth of SiC film by excimer laser chemical vapor deposition at low temperatures.—73-09209
Microstructure and mechanical properties of SiC whisker-reinforced $ZrO_2$-6 mol% $Y_2O_3$ composites.—73-13424
Microstructure and mechanical properties of SiC-AlN ceramics after phase separation treatment.—73-09483
Microstructure and mechanical properties of SiC-AlN ceramics after phase separation treatment.—73-17158
Microstructure and microchemistry of polymer-derived crystalline SiC fibers.—73-03169
Microstructure and properties of niobium diboride particulate-reinforced silicon carbide composites.—73-09485
Microstructure and sintering mechanism of $TiB_2$-$ZrO_2$-SiC composite.—73-06254
Microstructure and sintering mechanism of $TiB_2$-$ZrO_2$-SiC composite.—73-13427
Microstructure and thermal stability of coatings obtained by interaction of SiC and $B_4C$ with Cr and Ti powders.—73-13874
Microstructure development and stacking fault annihilation in ß-SiC powder compact.—73-06255
Microstructure of a Nicalon/SiC composite and fiber deformation in the composites.—73-03170
Microstructure of chemically vapor codeposited SiC-TiC-C nanocomposites.—73-13430
Microstructure of silicon carbide fiber-reinforced silicon carbide ceramic matrix composites heat-treated in vacuo and in pure oxygen.—73-03174
Microstructure-property relations in discontinuous SiC aluminum composites.—73-03621
Microstructure-property relationships in silicate-matrix composites.—73-03175
Microwave joining of ceramics, silicon nitride and silicon carbide.—73-05919
Microwave joining of dissimilar SiC ceramics.—73-05920
Model of the nonlinear mechanical behavior of 2D SiC-SiC chemical vapor infiltration composites.—73-17400
Modeling of strength in SiC/SiC composite systems.—73-17401
Modeling the stirring of Al-SiC composites.—73-06833
Monolithic crack-free Si-C-N ceramic bodies derived from polysilazane forms.—73-02897
Monolithic, fully dense silicon carbide mirror and method of manufacturing.—73-12502
Morphology and ir transmission of ß-SiC synthesized by chemical vapor deposition.—73-06262
Nano/microstructure design for improving thermoelectric characteristics of porous silicon carbide.—73-13433
Nature of point defects generated during diffusion of acceptor impurities in SiC.—73-09417
Near net shaping engineering ceramics by injection molding.—73-02899
New ceramics based on $Ti_3SiC_2$.—73-08536
New SiC-whisker-reinforced lithium aluminosilicate composite.—73-02905
Nicalon fiber-reinforced silicon carbide composites via polymer solution infiltration and chemical vapor infiltration.—73-09223
Nicalon-fiber-reinforced SiC composites via infiltration.—73-16881
Nitrogen donors in 4H silicon carbide.—73-02647
$NO_x$ sensing characteristics of SiC/ZnO heterocontact.—73-15056
Nonoxide ceramics with nanocrystalline layers made by chemical liquid deposition.—73-13154
Nucleation and crystal growth of SiC ultrafine powder.—73-06266
Numerical simulation of the tensile behavior of 2D-SiC/SiC crossply laminates.—73-06496
Optical semiconductor device.—73-11537
Optically detected EPR of a V impurity in 6H-SiC.—73-09498
Optimization of the composition and properties of plastic shapes for producing silicon carbide refractories.—73-14607
Origin of density gradients in sintered ß-silicon carbide parts.—73-16890
Overdamped lattice vibration of silicon carbide.—73-02366
Oxidation behavior of oxide/SiC whisker composites.—73-06313
Oxidation effects on Nextel-reinforced SiC.—73-17230
Oxidation kinetics of chemically vapor-deposited silicon carbide in wet oxygen.—73-06315
Oxidation kinetics of silicon carbide powder.—73-13482
Oxidation kinetics of silicon carbide powder.—73-13483
Oxidation mechanisms and kinetics of 1D-SiC/C/SiC composite materials: I, An experimental approach.—73-06317
Oxidation mechanisms and kinetics of 1D-SiC/C/SiC composite materials: II, Modeling.—73-06318
Oxidation of AlN matrix composites containing discrete SiC whiskers.—73-17232
Oxidizing kinetics of SiC kiln furniture at different temperatures.—73-10751
Pack cemented SiC coating on graphite by experimental design.—73-13488
Pack mixture composition for SiC pack cementation coating of carbonaceous substrates.—73-12504
Particulate reinforcement of a magnesium aluminosilicate glass-ceramic.—73-00677
Peculiarities of SiC crystal growth under diffusion/mechanism of vapor transfer.—73-09234
Persistent photoconductivity [PPC] in undoped a-Si:H/a-SiC:H multilayers.—73-05611
Phase separation and toughening of SiC-AlN solid-solution ceramics.—73-09236
Phosphorus diffusion in silicon carbide.—73-17092
Photoluminescence of compensated SiC-6H.—73-04439
Plasma-enhanced chemical vapor deposition process for producing an amorphous semiconductive surface coating.—73-01382
Platinum ohmic contact to *p*-type silicon carbide.—73-15240
Porous silicon carbide (SiC) semiconductor device.—73-11539

Porous silicon carbide ceramics using filled polysiloxanes.—73-12507
Post coating treatment of silicon carbide-coated carbon-carbon substrates.—73-16008
Post coating treatment of silicon carbide-coated carbon-carbon substrates.—73-16009
Power consumption in the Acheson process for producing SiC.—73-09248
Prediction of indentation-load dependence of fracture strengths from *R*-curves of toughened ceramics.—73-17413
Preparation and characterization of coated SiC whiskers.—73-09249
Preparation and mechanical properties of 3Y-TZP/SiC composites.—73-13174
Preparation and mechanical properties of SiC/BN/SiC composites using different BN coating methods.—73-09658
Preparation and properties of an SiC-fiber-reinforced glass-ceramic matrix composite.—73-00682
Preparation and properties of polycrystalline SiC-AlN solid solutions.—73-15111
Preparation of alumina-hydrate-coated SiC whisker—effect of reaction condition on the morphology of coated body.—73-17415
Preparation of alumina-hydrate-coated SiC whiskers—effect of reaction condition on the morphology of coated body.—73-09256
Preparation of C-SiC composites and its properties.—73-02946
Preparation of C/C-SiC nanomatrix composites by chemical vapor infiltration.—73-09258
Preparation of carbon/ceramic composite materials by use of raw coke: VIII, Rod shape growth of ß-SiC and effects on fracture toughness in carbon-based ceramic composites.—73-16919
Preparation of monodispersed spherical silicon carbide by the sol-gel method.—73-09266
Preparation of nanophase SiC/$Si_3N_4$, SiC/$B_4C$, and stoichiometric SiC from mixtures of a vinylic polysilane [VPS] and metal powders.—73-05977
Preparation of SiC powder by Wurtz-Fittig reaction.—73-13200
Preparation of SiC powder by Wurtz-Fitting reaction.—73-02966
Preparation of SiC ultrafine particles from $SiH_2Cl_2$ and $C_2H_4$ gas mixtures by a $CO_2$ laser.—73-02967
Preparation of SiC whisker-reinforced Al alloy composites by compocasting process.—73-03633
Preparation of SiC-$Si_3N_4$ composite fine powders from chlorosilanes by rf thermal plasma.—73-02968
Preparation of SiC-$W_2C$ nanocomposite powders by chemical vapor deposition of the $SiH_4$-$CH_4$-$WF_6$-$H_2$ system.—73-13201
Preparation of silicon carbide fiber from activated carbon fiber [ACF] and gaseous silicon monoxide.—73-13202
Preparation of substantially polycrystalline silicon carbide fibers from methylpolydisilylazanes.—73-05326
Preparation of unidirectionally reinforced carbon–SiC composite by repeated infiltration of polycarbosilane.—73-13209
Preparation of unidirectionally reinforced carbon-SiC composite by repeated infiltration of polycarbosilane.—73-05983
Presintering heat treatment, densification, and mechanical properties of silicon carbide.—73-13213
Principles of joining, operations and applications to SiC.—73-12440
Process for making silicon carbide foam.—73-02123
Process for manufacturing a voltage nonlinear resistor.—73-01065
Process for preparing silicon carbide powder for use in semiconductor equipment.—73-15970
Process for producing moldings from silicon-infiltrated silicon carbide.—73-16013
Process for producing silicon carbide platelets.—73-05329
Process for shaping ceramic composites.—73-02127
Process for the homoepitaxial growth of single-crystal silicon carbide films on silicon carbide wafers.—73-02128
Processing and characterization of monolithic molybdenum disilicide and silicon carbide fiber-reinforced $MoSi_2$ matrix composites.—73-16947
Processing and mechanical properties of laminated metal composites of Al/Al-25 vol% SiC and ultrahigh carbon steel/brass.—73-03634
Processing and mechanical properties of $Si_3N_4$-SiC whisker-TiN system composite materials.—73-16948
Processing and mechanical properties of $Si_3O_4$-SiC whisker–TiN system composite material.—73-05995
Processing and microstructure development in alumina-silicon carbide intragranular particulate composites.—73-16949
Processing and properties of CVD SiC fiber-reinforced $BaAl_2Si_2O_8$ glass-ceramic matrix composites.—73-13216
Processing effects on chemically vapor deposited SiC coatings on silicon carbide fibers.—73-13218
Processing of ceramic matrix SiC-Al composites.—73-13885
Processing of chromium silicide–silicon carbide nanostructured composite by thermal conversion of spray-dried precursor powders.—73-05999
Processing phenomena for recrystallized silicon carbide.—73-02980
Production of silicon product containing both carbon and nitrogen.—73-12514
Properties and application of dense silicon carbide.—73-02085
Properties of reaction-bonded silicon carbide depending on graphite additions.—73-09660
Properties of stoichiometric silicon carbide fiber derived from polycarbosilane.—73-17185
Protective coating with reactive interlayer on reinforcement in silicon carbide composite.—73-12515
Pulsed chemical vapor infiltration of SiC to three-dimensional carbon fiber preforms.—73-02984
Pulsed laser deposition of SiC films on fused silica and sapphire substrates.—73-07749
Pure silicon carbide fibers from polymethylsilane.—73-16963
Pyrolysis of low-oxygen SiC fiber prepared by electron-irradiation curing method.—73-16964
Pyrolytic behavior of CVD-coated SiC fibers.—73-02986
Pyrolytic behavior of CVD-coated SiC fibers.—73-12665
Quantitative determination of the stability of SiC whisker in reaction-bonded/hot-pressed $Si_3N_4$ composites by X-ray diffraction.—73-13441
Quantitative evaluation of microstructure in $Si_3N_4$/SiC platelet and particulate composites.—73-09504
Rapid thermal chemical vapor deposition growth of nanometer-thin SiC on silicon.—73-13225
Reaction bonding and mechanical properties of mullite/silicon carbide composites.—73-17419
Reaction kinetics and mechanism in Si-C and Si-C-Mo systems.—73-09293
Reaction processing and properties of SiC-to-SiC joints.—73-02989
Reaction synthesis of SiC-reinforced Ti(C,N) composites from TiC and $Si_3N_4$.—73-09294
Reaction-induced changes in interfacial and macroscopic mechanical properties of SiC-monofilament-reinforced titanium.—73-03348
Reactive deposition of diamond and Si carbide films by hydrogen plasma etching of graphite and Si in the rf plasma jet.—73-02991
Reactive ion etching [RIE] of a-SiC:H films using $CCl_4$ and $O_2$ gas mixture.—73-06015
Reactivities of carbon fibers in hot-pressed carbon-fiber-reinforced SiC ceramic composite.—73-16971
Recent trend of research and development on silicon carbide.—73-02087
Recombination processes in 6H-SiC *p-n* structures and the influence of deep centers.—73-01299
Refractory channel composition based on production waste from silicon carbide articles.—73-00854
Resistance of thermal shock of SiC kiln furniture.—73-10767
Resisting the heat.—73-04947
Rheological behavior of injection-moldable silicon powder–silicon carbide whisker formulations.—73-02997
Role of fiber coating on SiC fiber-reinforced alumina composite.—73-05631
Role of fiber coating on SiC fiber-reinforced alumina composite.—73-13585
Roles of stacking faults in the phase transformation of SiC.—73-02425
Roles of stacking faults in the phase transformation of SiC.—73-12677
RT optical bistability in hydrogenated a-$SiC_x$:H alloys.—73-16591
Scanning acoustic microscopy of SCS-6 SiC fibers in titanium matrices.—73-12191
Scanning tunneling microscopy study of carbon and hydrogen reactions with Si(111) in ultrahigh vacuum.—73-17196
Secondary particles grown on crystal surfaces of silicon carbide.—73-17197
Selection, manufacture, and application of pressureless-sintered silicon carbide and silicon nitride grinding media.—73-12442
Self-propagating high-temperature synthesis of SiC powder in pressurized $N_2$ atmosphere.—73-06032
Semiconductor device having silicon carbide grown layer on insulating layer and MOS device.—73-15243
Short-crack mechanical properties and failure mechanism of $Si_3N_4$-matrix/SiC fiber composite—correction.—73-17426
Short-crack mechanical properties and failure mechanisms of $Si_3N_4$-matrix/SiC-fiber composites.—73-13587
Si heterojunction diodes with a thin beta-SiC layer prepared with gas layer source molecular beam epitaxy.—73-04166
$Si_3N_4$-SiC composite consolidated by post-HIPing process.—73-16981
Si-Ti-C-O fiber-reinforced SiC composites produced by reaction bonding.—73-16982
SiAlON-bonded silicon carbide refractories for blast furnace.—73-00863
SiAlON-bonded silicon carbide sidewall pieces for the aluminum reduction cell.—73-10768
SiAlON-containing silicon carbide refractories.—73-10769
SiC coating on carbon block by the self-propagating high-temperature synthesis method.—73-09319
SiC fibers having low oxygen content and methods of preparation.—73-02134
SiC fibers having low oxygen content and methods of preparation.—73-12517
SiC kiln furniture materials.—73-07223
SiC sintered body.—73-05336
SiC uv photodetectors.—73-04480
SiC whisker dispersion and mechanical properties of $Al_2O_3$-SiC whisker composite.—73-13588
SiC-platelet-reinforced $Al_2O_3$ composites by free sintering of coated powders.—73-16983
SiC/C composite sheets produced from polycarbosilane/resin/binder mixtures.—73-06040
SiC/C composite sheets produced from polycarbosilane/resin/binder mixtures.—73-13252
SiC/combustion-synthesized ß′-SiAlON composite.—73-16984
Silicon carbide against silicon: a comparison in terms of physical properties, technology, and electrical performance of power devices.—73-08542
Silicon carbide and SiCAlN heterojunction bipolar transistor structures.—73-14762
Silicon carbide bodies and methods of making the same.—73-12518
Silicon carbide bodies having high toughness and fracture resistance and method of making [the] same.—73-12519
Silicon carbide diode operating at avalanche breakdown current density of 60 kA/cm$^2$.—73-12878
Silicon carbide field effect device.—73-15245
Silicon carbide filaments bearing a carbon layer and a titanium carbide or titanium boride layer.—73-02136
Silicon carbide kiln furniture with improved heat shock resistance.—73-10770
Silicon carbide light-emitting diode and a method for the same.—73-01386
Silicon carbide platelet-reinforced silicon nitride composites.—73-13253
Silicon carbide power MOSFET with floating field ring and floating field plate.—73-01387
Silicon carbide precursors and their preparation and use.—73-05337
Silicon carbide precursors.—73-12520
Silicon carbide refractory composition and products.—73-14641
Silicon carbide semiconductor device.—73-15246
Silicon carbide whisker and its application.—73-05275
Silicon carbide whisker production apparatus.—73-05012
Silicon carbide whisker-reinforced cordierite.—73-08524
Silicon carbide whiskers.—73-12298
Silicon carbide.—73-12299
Silicon carbide/SRBSN composites.—73-03194
Silicon carboxide fibers.—73-03966
Silicon-carbide-reinforced composite material.—73-02139
Silicon-carbide-reinforced reaction-bonded silicon carbide composite.—73-12525
Silicon-filled aluminum polymer precursors to SiC-AlN ceramics.—73-05339
Simple calculation of SiC polytype contents from powder X-ray diffraction peaks.—73-16303
Simulations and experiments of SiC heteroepitaxial growth on Si(001) surface.—73-13255
Sintered SiC parts.—73-02089
Sintering and mechanical properties of SiC-whisker/$Al_2O_3$ composites with two-layered structure.—73-06520
Sintering and mechanical properties of SiC-whisker/$Al_2O_3$ composites with two-layered structure.—73-13589
Sintering anisotropy in slip-cast SiC-whisker/$Si_3N_4$-powder compacts.—73-13262
Sintering behavior and consolidation process for $Al_2O_3$/SiC nanocomposites.—73-06051
Sintering behavior and consolidation process for $Al_2O_3$/SiC nanocomposites.—73-13263
Sintering of hydroxyapatite powders with SiC platelet dispersion.—73-03009
Sintering of hydroxyapatite powders with SiC platelet dispersion.—73-13267
Sintering of silicon carbide/molybdenum disilicide composites using boron oxide as an additive.—73-16997
Sintering of zircon–silicon carbide whisker composites and their mechanical properties.—73-06521
Sintering of zircon-silicon carbide whisker composites and their mechanical properties.—73-17430
Size distribution of SiC powders synthesized in hybrid plasma.—73-09330
Slidable ceramic member and method of manufacturing [the] same.—73-02140
Sliding wear of self-mated $Al_2O_3$-SiC whisker-reinforced composites at 23–1200°C.—73-03351
Sol and powder routes to alumina–silicon carbide nanocomposites.—73-17004
Sol-gel method of making silicon carbide and of protecting a substrate.—73-05343
Sol-gel silica in the healing of microcracks in SiC-coated carbon-carbon composites.—73-12444
Solid-state imaging device having silicon carbide crystal layer.—73-11052
Spectroscopic characterization of thermally treated carbon-rich $Si_{1-x}C_x$ films.—73-02439
Stability of AlN-SiC whisker composites containing sintering aids.—73-17008
Stability of strained $Si_{1-x}C_x$ random alloy layers.—73-13449
Strength degradation of SiC-coated carbon fibers.—73-09676
Strengthening mechanism in $Al_2O_3$/SiC particulate composites.—73-17435
Structure and electrical conductivity of polycrystalline silicon carbide.—73-02692
Structure, mechanical properties, and oxidation behavior of nanolayered $MoSi_2$/SiC coatings.—73-06534
Subcritical crack growth in CVI silicon carbide reinforced with Nicalon fibers: experiment and model.—73-17438
Super-heat-resistant silicon carbide fibers from polycarbosilane.—73-12528
Supersaturated solid solutions of boron in SiC by SHS.—73-09344
Surface defects in 6H-SiC wafers.—73-13369
Synthesis and characterization of group VI metal silicide–silicon carbide compositions via solid-state displacement reactions of nanosize grains of $M_2C$ and silicon.—73-06078
Synthesis and properties of $Al_2O_3$-SiC composites from alkoxides: I, Synthesis of dispersed type $Al_2O_3$-SiC composite powders.—73-09347
Synthesis and properties of $Al_2O_3$-SiC composites from alkoxides: II, Synthesis of coated $Al_2O_3$-SiC composite powders.—73-09348
Synthesis and properties of $Al_2O_3$-SiC composites from alkoxides: III, Effect of composite powder type on the

sintering characteristics and properties of $Al_2O_3$-SiC composites.—73-09349
Synthesis of β-SiC thin films for high-temperature sensors by the activated reactive evaporation process.—73-09352
Synthesis of ceramic fibers in the Si-O-C system.—73-03044
Synthesis of Si(N,C) nanostructured powders from an organometallic aerosol using a hot-wall reactor.—73-03054
Synthesis of Si-O-C fibers from rice husk carbide—explanation of formation condition.—73-03055
Synthesis of Si-O-C fibers from rice husk carbide—explanation of formation condition.—73-13310
Synthesis of SiC fine particles by gas-phase reaction under short-time microgravity.—73-06096
Synthesis of SiC from fine $SiO_2$-C mixed powders.—73-03056
Synthesis of $Ti_3SiC_2$-based materials using microwave-initiated SHS.—73-17046
Synthesis of YSZ-coated SiC particles and their sintering behavior.—73-09367
Synthesis of YSZ-coated SiC particles and their sintering behavior.—73-17049
Tape casting of SiC platelet-reinforced alumina.—73-09370
Technological state of the art of SiC.—73-15974
TEM investigation of microwave-joined Si-SiC/Si-SiC and α-SiC/Al/α-SiC.—73-00270
TEM observations of SiC-SiC composites with a carbon interphase layer annealed in air at high temperatures.—73-03205
Temperature dependence of dynamic shear modulus of a chemically vapor deposited SiC fiber: an application of inverted torsion pendulum.—73-17439
Tensile and fatigue fracture behavior and water–environment effects in an SiC-whisker/7075-aluminum composite.—73-03361
Tensile creep and creep rupture behavior of monolithic and SiC whisker-reinforced silicon nitride ceramics—correction.—73-13600
Tensile creep behavior and damage accumulation in an SiC fiber/RBSN matrix composite.—73-09685
Tensile properties of 2080/SiC/10–12w aluminum matrix composites.—73-06862
Tensile properties of 6061 Al/SiC composite manufactured by powder metallurgy.—73-03649
Tensile strength of chemical vapor deposited silicon carbide fibers.—73-06537
Tensiometry and Auger electron spectroscopy studies of the surface of plasma-deposited silicon carbide coatings.—73-13460
Theory of electronic properties of amorphous silicon-carbon alloys: effects of short-range disorders.—73-16616
Thermal and mechanical properties of $SiC_f/Al_2O_3$ composite.—73-03366
Thermal conductivities of Ti-SiC and Ti-$TiB_2$ particulate composites.—73-06864
Thermal oxidation and electrical properties of silicon carbide metal-oxide-semiconductor structures.—73-01350
Thermal plasma synthesis of SiC from rice hull (husk).—73-06117
Thermal residual stresses in SiC/Ti (0/90) laminate.—73-13902
Thermal shock behavior of SiC fiber-reinforced glasses.—73-10489
Thermal shock resistance of high thermal conductive SiC ceramics.—73-02712
Thermal stability of amorphous SiC fiber coated with oxide film.—73-05674
Thermal stability of amorphous SiC fiber coated with oxide film.—73-17056
Thermal stability of $SiN_xC_y$ films prepared by plasma CVD.—73-08776
Thermal stability of $SiN_xC_y$ films prepared by plasma CVD.—73-17212
Thermal transport in SiC fiber-SiC matrix composites.—73-08993
Thermoelastic analysis of composite CVD SiC fibers.—73-03367
Thermoelectric properties of porous β-SiC fabricated from rice hull ash.—73-08995
Thermoelectric properties of porous β-SiC fabricated from rice hull ash.—73-16638
Thermomechanical fatigue [TMF] behavior of a silicon carbide fiber-reinforced calcium aluminosilicate composite.—73-03368
Thermomechanically induced embrittlement in hot isostatically pressed $Si_3N_4$/SiC composites.—73-09686
Thermosetting copolymers, silicon-carbide-based fiber and processes for producing [the] same.—73-12531
Thickness determination of SiC-on-Si thin films by anisotropic reactive ion etching and preferential wet etching.—73-04179
TiC/SiC ceramic composite prepared by SHS/HP processing.—73-17061
Toughening behavior of SiC whisker-reinforced $Al_2O_3$ ceramic tool material and its effect on tool fracture.—73-06540
Toughening mechanism and mechanical properties of $SiC_w$/Y-TZP composites.—73-06541
Toughness enhancement by polycarbosilane coating on SiC whiskers incorporated in $Si_3N_4$ matrix composite.—73-17450
Toughness properties of a silicon carbide with an in-situ-induced heterogeneous grain structure.—73-17451
Transient liquid phase joining of reaction-bonded silicon carbide.—73-03659
Transmission electron microscopy of annealed a-$Si_{1-x}C_x$:H/Al films with different Al grain sizes.—73-09518
Transverse strength of SCS-6 silicon carbide fibers—correction.—73-06544
Transverse strength of SCS-6 silicon carbide fibers.—73-03373
Treatment of sintered SiC by fluorine.—73-06301
Treatment of sintered SiC by fluorine.—73-17214
Tribological characteristics of SiC ceramics in high-temperature and high-pressure water.—73-13607
Tribological characterization of alumina and silicon carbide under lubricated sliding.—73-17454
Ultra-high-strength refractory silicon carbide fiber and process for producing [the] same.—73-16022
Ultrasonic assessment of oxidation damage in SiC/RBSN composites.—73-17235
Ultrasonic characterization of oxidation mechanisms in Nicalon/C/SiC composites.—73-17236
Ultrasonic evaluation of silicon carbide whisker-reinforced ceramic composites.—73-08453
Ultrastructure of bulk SiC fibrils grown by VLS methods.—73-09381
Ultraviolet luminescence emitted by a single crystal of SiC-6H.—73-01361
Unexpected behavior of interfacial carbon in SiC/SiC composites during oxidation.—73-13491
Use of the ESR signal-saturation method in an experimental study of hydrogenated amorphous variable-composition SiC.—73-07855
Use of ultrasonic wave velocities to characterize $SiC_w/Al_2O_3$ composites.—73-01937
Valve disks of silicon-infiltrated silicon carbide.—73-12532
Warm pressing as a forming process for ceramics: I, Literature survey.—73-01837
Wear characteristics of $TiO_2$ coating and silicon carbide alloyed layer on Ti-6Al-4V material.—73-10297
Wear resistance of C+-implanted silicon investigated by scanning probe microscopy.—73-09698
Wettability of SiC by liquid Sn and binary Sn-Si alloys.—73-03664
Wettability of silicon carbide by liquid aluminum: the effect of free silicon in the carbide and of magnesium, silicon, and copper alloy additions to the aluminum.—73-06879
Wide-band-gap hydrogenated amorphous silicon carbide prepared from a liquid aromatic carbon source.—73-13335
X-ray mask development based on SiC membrane and W absorber.—73-17071

**silicon nitride,**
*R*-curve and fatigue behavior of gas-pressure-sintered silicon nitride.—73-06504
*R*-curve behavior of silicon nitride ceramics under a cyclic loading condition at elevated temperatures.—73-17418
α/β phase transformation of silicon nitride: homogeneous and heterogeneous nucleation.—73-16029
Abrasive wear of monolithic silicon nitride and a silicon carbide whisker-reinforced silicon nitride composite.—73-09539
Acoustic emission [AE] study of $Si_3N_4$.—73-05351
Amorphous intergranular films in silicon nitride ceramics quenched from high temperatures.—73-03119
Amorphous $Si_3N_4$ thin films deposited by dc-PCVD plasma CVD method.—73-05690
Analysis of dc-sputtered $Si_3N_4$ films using X-ray diffraction and computer simulation.—73-08548
Analysis of fracture strength of $Si_3N_4$ using Weibull's multimodal distribution.—73-03237
Anisotropies of room temperature mechanical properties of hot-pressed SiC whisker/$Si_3N_4$ composite ceramics.—73-06324
Anisotropies of room temperature mechanical properties of hot-pressed SiC whisker/$Si_3N_4$ composite ceramics.—73-13493
Annealing of silicon nitride thin films prepared by plasma-enhanced chemical vapor deposition with helium dilution.—73-12919
Anomalous behavior of semiinsulating silicon-rich amorphous silicon nitride.—73-04242
Anomalous microstructure in $Si_3N_4$ ceramics with $Al_2O_3$-$Y_2O_3$-AlN additives.—73-17108
Application of laser scattering to the detection of surface and subsurface defects in $Si_3N_4$ components.—73-15777
Application of $Si_3N_4$-bonded SiC in electric arc furnace ladle.—73-10699
Applications of silicon-nitride-based ceramics in the U.S.—73-05259
Attempt at measuring the crack extension resistance of ceramics by fracture test in bending.—73-03239
Attempt for measuring the crack extension resistance of ceramics by fracture test in bending.—73-13494
Behavior of mirrorlike region of sintered $Si_3N_4$ under rotary bending and static fatigue.—73-06328
Bending fracture strength of sintered silicon nitride disks with shoulder fillet at room temperature.—73-06330
Beneficial effects of cyclic tensile loading on fatigue resistance of an $Si_3N_4$.—73-17241
Biaxial compressive strength of silicon nitride: new data—micromechanics models.—73-06333
Binder distribution in $Si_3N_4$ ceramic green bodies studied by stray-field NMR imaging.—73-12925
Bonding of ceramic components made of reaction-bonded silicon nitride.—73-12413
Boundary film for structural ceramic materials.—73-06741
Branching phenomena in $Si_3N_4$ whiskers.—73-17110
Brittle-to-ductile transition in silicon nitride.—73-06336
Calcium concentration dependence of the intergranular film thickness in silicon nitride.—73-09435
Calculation of the electronic structure of *sp* elements in β-$Si_3N_4$ with correlation to solubility and solution effects.—73-02154
Carrier transport and storage in $Si_3N_4$ for metal-nitride-oxide-semiconductor memory applications.—73-07399
Cavity evolution during tensile creep of $Si_3N_4$.—73-06337
Ceramic heater.—73-02091
Ceramic-ceramic composite materials with improved friction and wear properties.—73-15962
Cermet or ceramic/glass composites including self-reinforced β-silicon nitride, and method of making [the] same.—73-05293
Change of fracture toughness and strength caused by thermal shock for $Si_3N_4$ with microcrack.—73-06339
Changes in fracture surface area and actual fracture energy of a carbon-fiber-reinforced silicon nitride composite during failure.—73-09546
Changes in fracture surface area and actual fracture energy of a carbon-fiber-reinforced silicon nitride composite during failure.—73-17243
Changes of YAP phase content and some properties by the annealing of $Si_3N_4$-$Al_2O_3$-$Y_2O_3$-AlN ceramic.—73-16048
Characterization of HIPed, high-purity $Si_3N_4$ grain boundaries.—73-06195
Characterization of hot-pressed silicon nitride ceramics with alkoxide-derived oxide mixtures as the sintering aid.—73-06196
Characterization of the flexural strength degradation of a commercial hot-pressed silicon nitride in a high-temperature sulfidizing environment.—73-06340
Characterization of the spatial distribution of traps in $Si_3N_4$ by field-assisted discharge of metal-nitride-oxide-semiconductor devices.—73-11104
Charge trapping instabilities in a silicon-nitride/indium-phosphide metal-insulator-semiconductor structure [studied] by the constant-capacitance method.—73-11106
Chemical and mechanical properties of sputtered silicon nitride films.—73-13496
Chemical reaction and fracture behavior of hot-pressed $Si_3N_4$-TiC composites.—73-09549
Chemical reactions in $TiB_2$/$Si_3N_4$ composites.—73-12941
Combined effect of speed and humidity on the wear and friction of silicon nitride.—73-06343
Comparative sintering study on nonconventional and commercial silicon nitride powders.—73-05716
Comparative study of existing and newly proposed models for creep deformation and life prediction of $Si_3N_4$.—73-17250
Comparison of flexure creep behavior of silicon nitride between static and cyclic loading at elevated temperature.—73-17251
Comparison of tensions and flexure to determine fatigue life prediction parameters at elevated temperatures.—73-17252
Comparison of the creep and creep rupture performance of two HIPed silicon nitride ceramics.—73-06344
Composite bearing structure.—73-12452
Composition, structure, and mechanical stresses of $SiN_x$:H films obtained in hf-discharge plasma.—73-05375
Constitution and electronic structure of Si–H and N–H bonds in amorphous $SiN_x$:H.—73-16067
Contribution of a nitrogen-related defect in the NEXAFS [near-EXAFS] spectra of thin $Si_3N_4$ films.—73-06145
Controlling the plasma chemistry of silicon nitride and oxide deposition from silane.—73-09551
Correlation between interface structure and mechanical properties for silicon-nitride-based nanocomposites.—73-03248
Correlations between properties of plasma-enhanced chemically vapor deposited silicon nitride and the deposition conditions.—73-12959
Corrosion and mechanical degradation of silicon nitride in a gas turbine environment.—73-13467
Corrosion behavior of silicon nitride ceramics in aqueous solutions: I, Effects of testing condition and various corrosive solutions.—73-03214
Corrosion behavior of silicon nitride ceramics in aqueous solutions: II, Weight loss and bending strength tested in boiling sulfuric acid.—73-03215
Corrosion behavior of silicon nitride ceramics in aqueous solutions: II, Weight loss and bending strength tested in boiling sulfuric acid.—73-13470
Corrosion behavior of silicon nitride ceramics in aqueous solutions: III, Corrosion behavior in hot sulfuric acid and microstructure of corroded layer.—73-03216
Corrosion behavior of silicon nitride ceramics in aqueous solutions: III, Corrosion behavior in hot sulfuric acid and microstructure of corroded layer.—73-13471
Corrosion of silicon nitride ceramics by nitric acid.—73-06306
Crack growth behavior of sintered silicon nitride subjected to cyclic loading.—73-06347
Crack growth resistance of ceramic composite.—73-06350
Crack propagation behavior in gas-pressure-sintered silicon nitride.—73-06353
Crack propagation behavior in gas-pressure-sintered silicon nitride.—73-13497
Crack propagation behavior of sintered silicon nitride under cyclic load at elevated temperature (effect of stress ratio).—73-17261
Crack size effect on crack propagation behavior and experimental verification of cyclic fatigue mechanism of sintered silicon nitride.—73-13498
Crack-free processing of hot-pressed silicon nitride ceramics using pulsed YAG laser.—73-05721
Crack-growth resistance of in-situ-toughened silicon nitride.—73-09556
Creep and creep rupture of an advanced silicon nitride ceramic.—73-09559
Creep and stress rupture behavior of an advanced silicon nitride: I, Experimental observations.—73-09560
Creep and stress rupture behavior of an advanced silicon nitride: II, Creep rate behavior.—73-09561
Creep and stress rupture behavior of an advanced silicon nitride: III, Stress rupture and the Monkman-Grant relationship.—73-09562
Creep behavior of SiC-fiber-reinforced hot-pressed $Si_3N_4$ composites.—73-03253

Creep behavior of silicon nitride determined from curvature and neutral axis shift measurements in flexure tests.—73-17265
Creep of silicon nitride–titanium nitride composites.—73-09564
Crystallization behavior of high-purity amorphous silicon nitride fibers.—73-16100
Crystallization of grain-boundary phases in silicon nitride with low additive contents by microwave annealing.—73-05724
Cw laser machining of hard ceramics: I, Effects of three-dimensional conduction, variable properties, and various laser parameters.—73-09054
Cw laser machining of hard ceramics: II, Effects of multiple reflections.—73-09055
Cycle and crack length dependence of crack growth characteristics in silicon nitride.—73-09566
Cyclic fatigue and fracture toughness of silicon nitride ceramics sintered with rare-earth oxides.—73-06363
Cyclic fatigue behavior of pressureless-sintered silicon nitride in rotating bending test.—73-06364
Damage resistance of in situ reinforced [ISR] silicon nitride.—73-06367
Dangling bonds in amorphous silicon nitride alloys: predictions of the free energy model [FEM].—73-06147
Dangling bonds in nanometer-sized granulet silicon nitride [studied] by electron spin resonance.—73-12570
Dc electrical conductivity of $Si_3N_4$-SiC films prepared by plasma CVD.—73-16437
Deformation and toughness of α-silicon nitride single crystals.—73-06369
Densification of plasma-deposited silicon nitride films by hydrogen dilution.—73-12971
Density of as-deposited and annealed thin silicon nitride films.—73-02566
Dependence of mechanical properties of SiC whisker/$Si_3N_4$ composite ceramics on crystal type of $Si_3N_4$ powders.—73-17274
Deposited silicon nitride with low electron trapping rates.—73-07295
Design criteria and limitations for SiC-metal and $Si_3N_4$-metal joints derived from phase diagram studies of the systems Si-C-metal and Si-N-metal.—73-03574
Design of the interface phase for obtaining thermal shock resistance in silicon nitride.—73-05263
Detection of subsurface defects in machined silicon nitride ceramics by optical scattering methods.—73-06205
Development of a high-performance $Si_3N_4$ material: using transient-liquid-phase and self-reinforcing technology.—73-16702
Development of advanced silicon nitride valves for combustion engines and some practical experience on the road.—73-05264
Development of high-performance silicon nitride ceramics and their applications.—73-05266
Development of high-strength, active-brazed silicon nitride and silicon carbide joints.—73-00220
Development of short-range repulsive potentials in aqueous, silicon nitride slurries.—73-09068
Diamond grinding of silicon nitride ceramic.—73-05742
Digital chemical vapor deposition of silicon oxide/nitride and its surface reaction study.—73-03832
Direct observation of microstructure change during densification of silicon nitride ceramics with a novel characterization method.—73-06208
Dry and water-lubricated slip rolling of $Si_3N_4$- and SiC-based ceramics.—73-17278
ECR plasma etching of silicon nitride ceramics.—73-05748
ECR plasma etching of silicon nitride ceramics.—73-16720
Effect of a silicon carbide "nano-dispersion" on the mechanical properties of silicon nitride.—73-17279
Effect of active metal coatings on the mechanical properties of silicon-nitride-based ceramics.—73-10219
Effect of additives on sintering and mechanical properties of $Si_3N_4$-bonded SiC.—73-03262
Effect of different additives on the oxidation behavior of gas-pressure-sintered silicon nitride.—73-06307
Effect of ductile-regime grinding on the strength of hot isostatically pressed silicon nitride.—73-06377
Effect of glass chemistry on the microstructure and properties of self-reinforced silicon nitride.—73-06209
Effect of grinding on strength and surface integrity of silicon nitride: I.—73-06383
Effect of grinding on strength and surface integrity of silicon nitride: II.—73-06384
Effect of HIP sintering on the crystal structure and fracture behavior of α-SiC platelets embedded in $Si_3N_4$ matrix.—73-16728
Effect of HIPing on the effective thermal conductivity/diffusivity and the interfacial thermal conductance of uniaxial SiC fiber-reinforced RBSN.—73-05546
Effect of homogeneous mixing of sintering additives by coprecipitation method on mechanical properties of pressureless-sintered $Si_3N_4$.—73-09577
Effect of humidity and cyclic loading condition on fatigue behavior of silicon nitride.—73-17288
Effect of hydrogen on hot electron energy relaxation in $SiO_2$ and $Si_3N_4$ films.—73-10937
Effect of intergranular phase on mechanical properties of $Si_3N_4$-$Si_2N_2O$ composites.—73-03268
Effect of intergranular phase on mechanical properties of $Si_3N_4$-$Si_2N_2O$ composites.—73-13509
Effect of microwave power and reactive gas ratio on the properties of silicon nitride thin films deposited by ECR PECVD.—73-13009
Effect of oxygen on the strength of reaction-bonded silicon nitride.—73-03271
Effect of powder processing on slip-casting parameters and sintering of $Si_3N_4$-$SiO_2$-$Y_2O_3$.—73-05766
Effect of processing variables on interfacial properties of an SiC-fiber-reinforced reaction-bonded $Si_3N_4$ matrix composite.—73-16738
Effect of relative humidity on repetitive impact behavior of machined silicon nitride.—73-06388
Effect of silicon surface treatments on thin silicon nitride growth.—73-05770
Effect of substrate bias on properties of silicon nitride films prepared by activated reactive evaporation.—73-13020
Effect of surface coating and orienting of whiskers on mechanical properties of SiC(w)/$Si_3N_4$.—73-03272
Effect of temperature on nitridization of silicon.—73-16745
Effect of the thermomechanical properties of the grain-boundary phase on the fracture toughness of laser-derived silicon nitride.—73-17294
Effective interfaces and Urbach slope in a-Si:H/a-$SiN_x$:H multilayers.—73-08839
Effects of crack size on crack propagation behavior and experimental verification of cyclic fatigue mechanism of sintered silicon nitride.—73-06392
Effects of crack size on fatigue behavior in silicon nitride.—73-06393
Effects of creep at room temperature in ceramics during indentation.—73-09586
Effects of decomposition reactions on the densification of $Si_3N_4$.—73-13029
Effects of fiber volume fraction on mechanical properties of SiC-fiber/$Si_3N_4$-matrix composites.—73-13516
Effects of impact angles of jet stream in the abrasive water jet cutting of $Si_3N_4$ ceramics.—73-16751
Effects of kinds of sintering aids of rare-earth oxides on $Si_3N_4$ grain size and fracture toughness of SiC whisker/$Si_3N_4$ composite ceramics.—73-02806
Effects of kinds of sintering aids of rare-earth oxides on $Si_3N_4$ grain size and fracture toughness of SiC whisker/$Si_3N_4$ composite ceramics.—73-13032
Effects of oxidation and creep damage mechanisms on creep rupture behavior in HIPed silicon nitrides.—73-17299
Effects of oxidation on intergranular phases in silicon nitride ceramics.—73-17220
Effects of prior cyclic loading on the strength of HIPed silicon nitride.—73-17300
Effects of process zone and specimen geometry on fracture toughness of silicon nitride ceramic.—73-06397
Effects of processing parameters on densification and mechanical properties of gas-pressure-sintered silicon nitride.—73-16754
Effects of thin-film deposition rates and process-induced interfacial layers on the optical properties of plasma-deposited $SiO_2$/$Si_3N_4$ Bragg reflectors.—73-05783
Effects of TiN particle size on mechanical properties of $Si_3N_4$/TiN particulate composites.—73-06401
Effects of TiN particle size on mechanical properties of $Si_3N_4$/TiN particulate composites.—73-13520
Effects of uv light on ir absorption in chemically vapor deposited a-$SiN_x$:H films.—73-05552
Efficient mechanochemical polishing for silicon nitride ceramics.—73-04913
Electrical properties of silicon nitride thin films fabricated by ECR PECVD at room temperature.—73-04087
Electrokinetic sonic analysis [ESA] of silicon nitride suspensions.—73-09113
Electron cyclotron resonance plasma chemical vapor deposition of large-area uniform silicon nitride films.—73-01154
Electron paramagnetic resonance investigation of charge trapping centers in amorphous silicon nitride films.—73-07319
Electron paramagnetic resonance measurements on activated silicon nitride powders.—73-09114
Electron trapping and chemical composition in radio frequency glow discharge a-SiN:H.—73-02813
Electronic structure of defects in amorphous silicon nitride.—73-06158
Electronic structure of silicon nitride studied by both soft X-ray spectroscopy and photoelectron spectroscopy.—73-13395
Electrostatic and steric effects in $Si_3N_4$-based suspensions.—73-09117
Elemental analysis of matrix grain boundaries in SiC whisker-reinforced $Si_3N_4$-based composites.—73-06216
Elevated temperature behavior of sintered silicon nitride under pure tension, creep, and fatigue.—73-17303
Elevated-temperature slow crack growth of silicon nitride under dynamic, static, and cyclic flexural loading.—73-17306
Ellipsometric study of rapid thermal annealed [RTA] PECVD SiN films.—73-05559
Enhancement of fracture toughness by residual stress in $Si_3N_4$ composites.—73-06404
Enhancement of fracture toughness by residual stress in $Si_3N_4$ composites.—73-13523
Environmental influences on gas pressure sintering of $Si_3N_4$.—73-09120
Environmental stability of phosphate-bonded silicon nitride ceramics.—73-12799
Etch mechanism in the reactive ion etching of silicon nitride.—73-02816
Evaluation of fatigue behavior of ceramics toughened by grain bridging mechanisms.—73-17308
Evaluation of stress intensity factor of silicon nitride with bridge indentation crack by caustic method.—73-01896
Evaluation of stress intensity factor of silicon nitride with bridge indentation crack by caustic method.—73-12135
Evaluation of tensile static, dynamic, and cyclic fatigue behavior for a HIPed silicon nitride at elevated temperatures.—73-06408
Evaluation of the actual fracture energy of the carbon fiber-reinforced silicon nitride composite by the Kr-BET adsorption technique.—73-13527
Evaluation of the actual fracture energy of the carbon-fiber-reinforced silicon nitride composite by the Kr-BET adsorption technique.—73-06409
Explosive compaction of silicon nitride powder without additives using a water pressure medium.—73-02818
Explosive compaction of silicon nitride powder without additives using a water pressure medium.—73-13051
Fabrication and properties of $Si_3N_4$ with rare-earth apatite grain-boundary phases.—73-05799
Fabrication and some mechanical properties of SiC whisker-reinforced $Si_3N_4$ composites utilizing underwater shock pressure.—73-16770
Fabrication and some mechanical properties of SiC-whisker-reinforced $Si_3N_4$ composites utilizing underwater shock pressure.—73-05800
Fabrication of silicon-nitride-based composites by impregnation with perhydropolysilazane.—73-05805
Fabrication of silicon-nitride-based composites by impregnation with perhydropolysilazane.—73-13056
Fabrication of sub-20-nm trenches in silicon nitride using $CHF_3/O_2$ reactive ion etching and oblique metallization.—73-09133
Fabrication, microstructure, and some properties of $Si_3N_4$-based nanocomposites.—73-02828
Failure modes of ceramic elements with ring-crack defects.—73-17316
Fast photoluminescence decay in a-$SiN_x$:H films.—73-05566
Fatigue behavior of nonoxide ceramics at elevated temperature.—73-06414
Fatigue behavior of sintered $Si_3N_4$ under rotary bending and static fatigue.—73-06415
Fatigue crack growth behavior of large crack in silicon nitride.—73-17319
Fatigue crack growth of silicon nitride at 1400°C: a novel fatigue-induced crack-tip bridging phenomenon.—73-06417
Finite element modeling of creep deformation in fiber-reinforced ceramic composites.—73-06421
Fluid-assisted fatigue crack growth in $Si_3N_4$.—73-17322
Formation mechanism of pores in massive $Si_3N_4$-$Al_2O_3$-MgO ceramics during sintering.—73-16786
Formation of silicon nitride by nitridation of porous silicon.—73-15991
Fracture behavior and properties of SiC whisker/$Si_3N_4$ composites.—73-17325
Fracture behavior of a silicon nitride ceramic containing a high-temperature ductile phase.—73-06428
Fracture behavior of a silicon nitride ceramic under mixed-mode fracture condition.—73-17326
Fracture behavior of a silicon nitride ceramic under mixed-mode fracture conditions.—73-06429
Fracture behavior of sintered silicon nitride under multiaxial stress states: II.—73-06434
Fracture mechanism maps: their applicability to silicon nitride.—73-17327
Fracture strength of $Si_3N_4$ [analyzed] using Weibull's multimodal distribution.—73-13535
Fracture strength of silicon nitride under biaxial stresses.—73-06436
Fracture strength of silicon nitride under biaxial stresses.—73-13536
Fracture toughness and time-dependent strength behavior of low-doped silicon nitrides for applications at 1400°C.—73-06438
Fracture toughness and transition of fracture behavior of silicon nitride at elevated temperatures.—73-13537
Fracture toughness of dense silicon nitride.—73-13539
FTIR spectroscopy of grafted surfaces: hydroxy- and chlorosilanes onto silicon nitride.—73-12591
FTIR, SIMS, and electrical characterization of $Si_3N_4$ thin films obtained from CVD assisted by in situ electrical discharge.—73-04107
Fully reversed bending fatigue of $Si_3N_4$/$SiC_w$ and $Si_3N_4$ in different environments.—73-17339
Fundamental concepts for joining $Si_3N_4$ and metals.—73-03592
Gas phase synthesis of silicon nitride.—73-13067
Gas-pressure sintering of ß-silicon nitride containing $Y_2O_3$ and $Nd_2O_3$.—73-02838
Gas-pressure sintering of ß-silicon nitride containing $Y_2O_3$ and $Nd_2O_3$.—73-13072
Gas-pressure sintering of low-purity ß-silicon nitride powder.—73-13073
Gas-pressure sintering of low-purity beta-silicon nitride powder.—73-05823
Glow plug with improved composite sintered silicon nitride ceramic heater.—73-11020
Grain growth studies of silicon nitride dispersed in an oxynitride glass.—73-00349
Grain morphology and intergranular structure of $Si_3N_4$-based ceramics formed by HIP.—73-06222
Grain size dependence of the fracture toughness of silicon nitride ceramics.—73-06446
Grain-boundary analysis of silicon nitride materials.—73-03147
Graphite/polymide tabs for high-temperature tensile tests.—73-08403
Grinding bodies from silicon nitride for fine milling of ceramic materials.—73-09152
Grinding forces and elastic recovery in ceramic materials.—73-12807
Growth and characterization of silicon nitride films produced by remote microwave plasma chemical vapor deposition.—73-02843
Growth and characterization of thin SiN films grown on Si by electron cyclotron resonance nitrogen plasma treatment.—73-09153
Growth behavior of manganese-metallized layer on silicon nitride ceramics.—73-03595

Growth of single-crystal α-$Si_3N_4$ in buried layers formed by low-rate implantation of $N^+$ ions in heated Si.—73-01180

Heat resistance of $Si_3N_4$ joined with Ni-Cr alloy interlayer.—73-00238

Heating mechanism in the electrical joining process of $Si_3N_4$ ceramics.—73-15964

Helium plasma-enhanced chemical vapor deposited oxides and nitrides: process mechanisms and applications in advanced device structure.—73-02850

High-performance ceramic tool-bit produced by microwave heating.—73-05841

High-performance of new ST-type $Si_3N_4$ ceramic inserts with nonoxide additives.—73-08532

High-resolution electron microscopy observations of grain-boundary films in silicon nitride ceramics.—73-06225

High-resolution electron microscopy of precycled samples of a sintered silicon nitride.—73-17143

High-strength $Si_3N_4$/SiC structural ceramics.—73-17341

High-strength silicon nitride sinterec body and process for producing [the] same.—73-02098

High-strength silicon nitride sintered body and process for producing [the] same.—73-15993

High-temperature active oxidation and active-to-passive transition of chemically vapor deposited silicon nitride in $N_2$-$O_2$ and Ar-$O_2$ atmospheres.—73-17221

High-temperature crack growth in monolithic and $SiC_w$-reinforced silicon nitride under static and cyclic loads.—73-17343

High-temperature failure mechanisms of sintered silicon nitride [SSN].—73-06451

High-temperature fatigue properties of silicon nitride in nitrogen atmospheres.—73-06452

High-temperature fracture mechanism of gas-pressure-sintered silicon nitride.—73-03307

High-temperature fracture mechanism of gas-pressure-sintered silicon nitride.—73-06453

High-temperature optical probe.—73-12471

High-temperature oxidation of chemically vapor deposited silicon nitride in a carbon monoxide-carbon dioxide atmosphere.—73-17222

High-temperature oxidation of $Si_3N_4$ in wet Ar.—73-13475

High-temperature properties of $Sc_2O_3$-doped $Si_3N_4$.—73-03308

High-temperature strength of fluorine-doped silicon nitride.—73-06454

High-temperature strength of silicon-nitride-bonded silicon carbide for kiln furniture.—73-10734

Homogeneity in $Si_3N_4$ ceramics [examined} by ultrasonic pulse transmission method.—73-17144

Homogeneous mixing of $Si_3N_4$ with sintering additives by coprecipitation method.—73-16820

Hot-pressing of silicon nitride containing low amounts of $Y_2O_3$ and AlN.—73-05848

Hydrogen in rf reactive magnetron-sputtered silicon nitride films.—73-05849

Identification of N dangling bonds in SiN films using X-ray absorption studies.—73-03095

Implementation of acoustophoresis for the characterization of silicon-nitride-based aqueous suspensions.—73-08406

Improvement of creep resistance of sintered silicon nitride by hot isostatic exudation of intergranular glass.—73-02858

Improving the thermal shock resistance of ceramics based on silicon nitride.—73-02082

In situ investigation of amorphous silicon/silicon nitride interfaces by infrared ellipsometry.—73-06230

Incorporation of nitrogen in $Si_3N_4$-capped silicon by cw $Ar^+$-laser melting.—73-13095

Increasing heat resistance of ceramic materials based on silicon nitride.—73-02619

Indentation flaw formation and strength response of silicon nitride ceramics at low indentation loads.—73-03313

Infiltration of reaction-bonded silicon nitride with equilibrium Y-Si-O-N melt.—73-05860

Infiltration/pyrolysis processing of fiber-reinforced silicon nitride.—73-05861

Influence of an electron beam on the energy distribution of localized states in amorphous $Si_3N_4$.—73-11269

Influence of composition and oxidation temperature on thermal conductivity of Si-Ti-O-N porous ceramics.—73-16515

Influence of different etching mechanisms on the angular dependence of silicon nitride etching.—73-09173

Influence of ductile mode grinding on the strength of silicon-based ceramics.—73-06459

Influence of hydrogen evolution from plasma-deposited silicon nitride on underlying aluminum deformations.—73-10237

Influence of microstructure on the mechanical behavior of silicon nitride ceramics.—73-06233

Influence of powder properties and green microstructure on the sintering behavior of $Si_3N_4$.—73-05870

Influence of powder properties and green microstructure on the sintering behavior of $Si_3N_4$.—73-16839

Influence of powders and processing methods on microstructure and properties of dense silicon nitride.—73-05871

Influence of silicon nitride cap on the thermal stability of strained $Al_{0.32}Ga_{0.68}As$/ $In_{0.1}Ga_{0.9}As$ high-mobility structures grown by metallorganic chemical vapor deposition.—73-07601

Influence of sintering conditions on the mechanical properties of SiC whisker/$Si_3N_4$ ceramic composite.—73-05873

Influence of sintering conditions on the mechanical properties of SiC whisker/$Si_3N_4$ ceramic composite.—73-13101

Influence of starting powder characteristics on mechanical properties of SiC-particle/$Si_3N_4$ composites.—73-06462

Influence of starting powder characteristics on mechanical properties of SiC-particle/$Si_3N_4$ composites.—73-13554

Influence of structural inhomogeneity on the conductivity and relaxation processes in a-Si:H and a-$Si_{1-x}N_x$:H.—73-01207

Influence of surface preparation prior to thermal nitridation on the electrical characteristics of silicon nitride films deposited on polycrystalline silicon films.—73-05876

Influence of variable-amplitude loading on cyclic fatigue crack growth in silicon nitride.—73-17362

Infrared absorption and X-ray photoelectron spectroscopy studies of the anodic oxidation of plasma silicon nitride.—73-02877

Injection molding of silicon nitride powders treated with coupling agents.—73-09184

Interactions in and interfacial structure of annealed Co/a-$Si_3N_4$ studied by HRTEM.—73-03605

Interface structure of $Si_3N_4$ matrix composite with nanometer-scale SiC particles.—73-06237

Interface structures and bonding strength of $Si_3N_4$/304 stainless steel joints.—73-03606

Interfacial structure of $Si_3N_4$ brazed with an Ag-Cu-Ti alloy.—73-03610

Intergranular microstructure and oxidation behavior of $Si_3N_4$ ceramics formed with $Y_2O_3$, $Al_2O_3$, and $ZrO_2$.—73-06239

Internal stresses in $Si_3N_4$-based quasi-binary composites.—73-16523

Interphases in $Si_3N_4$/Ni-Cr alloy joints.—73-03611

Interrelationship between two- and/or three-dimensional grain morphology and fracture toughness of $Si_3N_4$ ceramics.—73-03158

Interrelationship between two- and/or three-dimensional grain morphology and fracture toughness of $Si_3N_4$ ceramics.—73-13558

Intrinsic fracture energy of polycrystalline silicon nitride.—73-06467

Isolation method in a semiconductor device.—73-04517

Izod impact test for measuring the fracture energy of fiber-reinforced ceramics.—73-05059

Joining of chromized carbon steel and $Si_3N_4$.—73-13855

Joining of $Si_3N_4$ ceramics with nickel and Ni-Cr alloy laminated interlayers.—73-06811

Joint of silicon nitride and molybdenum with vanadium foil and its high-temperature strength.—73-10246

Kinetics of β-$Si_3N_4$ grain growth in $Si_3N_4$ ceramics sintered under high nitrogen pressure—comment.—73-02884

Kinetics of reaction between $Si_3N_4$ and Cr in $N_2$ atmosphere.—73-13857

Kinetics of reaction between $Si_3N_4$ and Mo.—73-13858

Kinetics of reaction of $Si_3N_4$ with Ni.—73-00247

Kinetics of reaction of $Si_3N_4$ with Ni.—73-10247

Kinetics of silicon nitride formation by gas-phase routes in the Si-C-O-N system.—73-13111

Laser machining of silicon nitride ceramics.—73-05890

Lifetime of HIPed silicon nitrides at elevated temperatures.—73-06468

Lifetime of silicon nitride limited by cavity nucleation in the intergranular glassy phase.—73-03322

Lifetime prediction for ceramics under elevated temperature with static fatigue.—73-06469

Liquid-phase sintering of a silicon-nitride-based ceramic.—73-02886

Liquid-phase sintering of silicon-nitride-reinforced celsian ceramics for advanced radomes.—73-13118

Low-hydrogen-content silicon nitride films from electron cyclotron resonance plasmas.—73-07644

Low-temperature [≥300°C] chemical vapor deposition of silicon nitride from tetrasilane and hydrogen azide.—73-05898

Low-temperature densification of silicon nitride nanoglasses.—73-16850

Low-temperature deposition of silicon nitride coatings on fibers for CMC's.—73-16852

Low-temperature silicon nitride: a promising dielectric in semiconductor technology.—73-10969

Luminescence of nanometer-sized amorphous silicon nitride solids.—73-02632

Machining of silicon nitride: experimental determination of process/property relationships.—73-05906

Making hot-pressed silicon nitride by use of low-density reaction-bonded body.—73-12478

Material development in the $Si_3N_4$ system using glass-encapsulating HIPing: I.—73-02889

Material development in the $Si_3N_4$ system using glass-encapsulating HIPing: II.—73-09197

Measurement of surface oxygen content in silicon nitride powders.—73-16210

Measurement of the electronic transfer process in nitride film on a silicon substrate via photoconductance decay.—73-12832

Mechanical and environmental factors in the cyclic and static fatigue of silicon nitride.—73-09631

Mechanical properties and microstructure in sintered and HIPed SiC particle/$Si_3N_4$ composites.—73-03326

Mechanical properties and microstructure of plasma-enhanced chemical vapor deposition silicon nitride thin films.—73-03327

Mechanical properties and microstructure of $Si_3N_4$ matrix composite with nanometer-scale SiC particles.—73-06245

Mechanical properties and microstructure of $Si_3N_4$ matrix composite with nanometer-scale SiC particles.—73-13562

Mechanical properties and NDE of a HIPed silicon nitride.—73-17380

Mechanical properties of a novel $Si_3N_4$–amorphous $Si_3N_4$ composite.—73-06479

Mechanical properties of HIPed $Si_3N_4$-based materials for high-temperature long-term applications.—73-09638

Mechanical properties of HIPed $Si_3N_4$-based materials for high-temperature long-term applications.—73-17385

Mechanical properties of $Si_3N_4$ ceramics prepared from carbon-coated powders.—73-09641

Mechanical properties of $Si_3N_4$ ceramics prepared from carbon-coated powders.—73-17391

Mechanical properties of silicon carbide whisker-reinforced silicon nitride matrix composites.—73-06483

Mechanical stress in plasma-enhanced chemical-vapor-deposited $SiO_2$ and SiN layers.—73-11310

Metalless X-ray phase-shift masks for nanolithography.—73-16864

Metallorganic surfactants as sintering aids for silicon nitride in an aqueous medium.—73-16865

Metallurgical behavior during brazing of Ni-base alloy Inconel 600 to $Si_3N_4$ with Ag71Cu27Ti2 filler metal.—73-06826

Method for manufacturing a cutting tool insert made of a silicon nitride body.—73-12485

Method for moisture sealing integrated circuits using silicon nitride spacer protection of oxide passivation edges.—73-11030

Method of fabricating a nitride capped MOSFET for integrated circuits.—73-01375

Method of forming a pattern in semiconductor device manufacturing process.—73-01377

Method of forming oxide isolation.—73-01058

Method of machining silicon nitride ceramics and silicon nitride ceramic products.—73-12493

Method of manufacturing silicon nitride film.—73-02116

Method of manufacturing silicon nitride sintered bodies.—73-02117

Method of producing a silicon nitride film and method of fabricating a semiconductor device.—73-15239

Microscopic observations of wear of heat-resistant ceramics.—73-09475

Microstructural characterization of microwave-sintered silicon nitride ceramics.—73-05913

Microstructural design by selective grain growth of β-$Si_3N_4$.—73-06249

Microstructural design of $Si_3N_4$-based ceramics.—73-05914

Microstructural features of the α→β transformation in silicon nitride at high pressures and temperatures.—73-13420

Microstructural study of mechanical properties in $Si_3N_4$ ceramics.—73-06251

Microstructure and anelastic properties of $Si_3N_4$ ceramics.—73-03166

Microstructure and chemical reaction in an $Si_3N_4$-TiC composite.—73-06252

Microstructure and grain-boundary characterization of HIPed high-purity silicon nitride.—73-09481

Microstructure and mechanical properties of the in situ β-$Si_3N_4$/α′-SiAlON composite.—73-17159

Microstructure and properties of self-reinforced silicon nitride.—73-03342

Microstructure characterization of gas-pressure-sintered β-silicon nitride containing large β-silicon nitride seeds.—73-09488

Microstructure control of silicon nitride by seeding with rodlike β-silicon nitride particles.—73-13428

Microstructure of silicon nitride ceramics and morphology of surface damage induced by round indenter.—73-17172

Microwave joining of ceramics, silicon nitride and silicon carbide.—73-05919

Microwave plasma etching of $Si_3N_4$.—73-16870

Microwave sintering of silicon nitride.—73-05925

Modeling of the process of space charge accumulation in insulator layers of MIS structures subjected to irradiation—Me-$Si_3N_4$-$SiO_2$-Si MNOS structures.—73-01249

Molybdenum-enhanced low-temperature deposition of crystalline silicon nitride.—73-12501

Monolithic crack-free Si-C-N ceramic bodies derived from polysilazane forms.—73-02897

Monotonic and cyclic rupture of a silicon nitride ceramic.—73-17403

Morphology and composition of the oxidized layer in $Si_3N_4$-based material.—73-09530

Near net shaping engineering ceramics by injection molding.—73-02899

Neutron radiography for $Si_3N_4$ fine ceramics.—73-12171

Nitride capped MOSFET for integrated circuits.—73-14756

Nondestructive evaluation of the density of silicon nitride powder compacts and sintered bodies.—73-02909

Nonoxide additives as sintering aids for $Si_3N_4$-based ceramics.—73-05934

Nonoxide ceramics with nanocrystalline layers made by chemical liquid deposition.—73-13154

Novel processing route for the fabrication of monolithic and composite silicon nitride.—73-05936

Nucleation and growth of α′-SiAlON on α-$Si_3N_4$.—73-13434

Nucleation and growth of CVD polycrystalline $Si_3N_4$ films at low temperatures.—73-05937

Optical and compositional studies of SiN thin films with conventional and synchrotron radiation ellipsometry.—73-07348

Optical properties of amorphous semiconductors.—73-01265

Optimization of silicon nitride ceramics.—73-06497

Oxidation behavior of the sintered $Si_3N_4$-$Y_2O_3$-$Al_2O_3$ system.—73-03226

Oxidation of sintered silicon nitride: I, Phase composition and microstructure.—73-03229

Oxidation of sintered silicon nitride: II, Mechanical properties.—73-13577

Oxidation resistance of the hot-pressed silicon-nitride-based materials at high temperatures.—73-13487

Paramagnetic nitrogen defects in silicon nitride.—73-06171

Partial devitrification of sintered silicon nitride during static fatigue testing.—73-06268

Particle impact damage of engineering ceramics.—73-06498

Phase relations of $Al_{2-x}Y_xO_3$-$SiO_2$-$Si_3N_4$ system (x=0.75 and 1.06) and properties of oxynitride glasses.—73-00385

Phase relationship studies of silicon nitride system—a key to materials design.—73-05451
Plasma-enhanced chemically vapor deposited $Si_3N_4$ thin films for optical waveguides.—73-13167
Polysilazane precursors for silicon nitride and resultant products.—73-12506
Possible reaction of $WF_6$ with $SiO_2$ and $Si_3N_4$ at several temperatures.—73-03184
Potential of $Si_3N_4$ for thermal shock applications.—73-05271
Predicting creep behavior of silicon nitride components using finite element techniques.—73-17411
Preparation of fiberlike silicon nitride from silicon powder.—73-13187
Preparation of nanophase SiC/$Si_3N_4$, SiC/$B_4C$, and stoichiometric SiC from mixtures of a vinylic polysilane [VPS] and metal powders.—73-05977
Preparation of rodlike ß-$Si_3N_4$ single-crystal particles.—73-16931
Preparation of $Si_3N_4$ whiskers from various natural resources.—73-16932
Preparation of SiC-$Si_3N_4$ composite fine powders from chlorosilanes by rf thermal plasma.—73-02968
Preparation of silicon nitride powder by partially nitriding in a fluidized bed and then completing nitridation in a moving bed.—73-02121
Process for fabricating gate insulating structure of a charge coupled device.—73-01064
Process for fabricating sealed semiconductor chip using silicon nitride passivation film.—73-11540
Process for shaping ceramic composites.—73-02127
Process for the elaboration of powders uniformly coated with ultrafine silicon-base particles using chemical vapor decomposition in the presence of core powders.—73-12095
Process for the preparation of silicon nitride having a small crystallite size.—73-02130
Process for the preparation of spherical amorphous silicon nitride.—73-02131
Process for the production of sintering-active $Si_3N_4$ powders.—73-05331
Processing and microstructure of postsintered reaction-bonded silicon nitride.—73-05996
Processing and properties of polymer-derived $Si_3N_4$ composites.—73-13217
Processing of complex sintered reaction-bonded silicon nitride parts by microwave heating.—73-06000
Processing, microstructure, and wear behavior of silicon nitride hot-pressed with alumina and yttria.—73-09501
Production of a sintered reaction-bonded silicon nitride insulator.—73-11048
Production of $Si_{2-x}P_xN_{2+x}(NH)_{1-x}$, where $x$=0.1 to 1.—73-12513
Production of silicon product containing both carbon and nitrogen.—73-12514
Progress in silicon nitride ceramics in Japan.—73-05272
Prolonged storage of electrons in MONOS [metal oxide–silicon nitride–dioxide semiconductor] structures.—73-06174
Properties of silicon nitride–molybdenum disilicide particulate ceramic composites.—73-03345
Properties of ultrathin amorphous silicon nitride films on III-V semiconductors.—73-04153
Properties of very low temperature plasma-deposited silicon nitride films.—73-09286
Properties of $Y_2O_3$-$Al_2O_3$-$SiO_2$ glasses as a model system of grain-boundary phase of $Si_3N_4$ ceramics: II, Leaching characteristics.—73-00537
Qualitative and quantitative evaluation of silicon nitride grain-boundary phase by cryogenic specific heat measurements.—73-08436
Quantitative analysis of microstructure of self-reinforced silicon nitride ceramics.—73-17186
Quantitative determination of the stability of SiC whisker in reaction-bonded/hot-pressed $Si_3N_4$ composites by X-ray diffraction.—73-13441
Quantitative estimation of intergranular glassy phase of silicon nitride ceramics.—73-06274
Quantitative estimation of intergranular glassy phase of silicon nitride ceramics.—73-17187
Quantitative evaluation of grain-boundary phases by cryogenic specific heat measurements.—73-03189
Quantitative evaluation of microstructure in $Si_3N_4$/SiC platelet and particulate composites.—73-09504
Quantitative powder X-ray diffractometry phase analysis of silicon nitride materials by a multiline, mean-normalized-intensity [MNI] method.—73-16284
Quasi-stoichiometric silicon nitride thin films deposited by remote plasma-enhanced chemical vapor deposition.—73-06004
R-curve behavior in a gas-pressure-sintered silicon nitride.—73-13581
Rapid heating of ultrafine $Si_3N_4$ powder compacts under controlled thermograms.—73-09290
Rapid pulsed $CO_2$ laser annealing of silicon nitride/silicon interface states.—73-06008
Reaction injection molding of silicon nitride ceramics having crystallized grain-boundary phases.—73-02132
Reaction layer of silicon nitride ceramics to metal joints using Ni-base solder.—73-00262
Reaction layer of silicon nitride ceramics to metal joints using Ni-base solder.—73-10270
Reaction sintering of ß-$Si_3N_4$/α'-SiAlON ceramics.—73-06012
Recognition of subsurface defects in machined ceramics by application of neural networks to laser scatter patterns.—73-15841
Redistribution of the liquid phase during sintering of silicon nitride.—73-16973
Reduced interface densities for remote microwave plasma silicon nitride.—73-09299
Reduction in thermal conductivity of reaction-bonded $Si_3N_4$ by addition of a binary compound: I, Fabrication and evaluation of $Al_2TiO_5$-added composite.—73-15971
Regularities of phase formation and structural evolution during hot-pressing of ultrafine powders.—73-16294
Relation between microstructure and color tone of skin layer and bulk area of silicon nitride ceramics.—73-06277
Relation between microstructure and color tone of skin layer and bulk area of silicon nitride ceramics.—73-13444
Relationship between the stress and bonding properties of amorphous $SiN_x$:H films.—73-12876
Remote plasma chemical vapor deposition of silicon nitride films.—73-09303
Removing fluorine from the surface of silicon nitride powder with chemical reagents.—73-02995
Rheological behavior of silicon nitride whiskers.—73-06022
Rheology and particle packing of chem- and phys-adsorbed, alkylated silicon nitride powders.—73-09306
Role of fluorine atoms in the oxidation-hydrolysis process of plasma-assisted chemical vapor deposition fluorinated silicon nitride film.—73-13239
Role of nitrogen in the intergranular glass phase of $Si_3N_4$ on high-temperature applications and wear.—73-12676
Role of oxidation in the time-dependent failure behavior of hot isostatically pressed silicon nitride at 1370°C.—73-03349
Role of sintering parameters on microstructure development and mechanical properties of sinter/HIP silicon nitride.—73-06026
Room temperature photoluminescence spectra of annealed PECVD silicon nitride thin films.—73-05633
Roughness effect of silicon nitride sliding on steel under boundary lubrication.—73-17423
Segregation of chromium at the interface between Ni-Cr-Si-Ti brazing filler metal and $Si_3N_4$ ceramics.—73-00265
Selection, manufacture, and application of pressureless-sintered silicon carbide and silicon nitride grinding media.—73-12442
Semiconductor device having a mechanical buffer.—73-01383
Semiconductor integrated circuit having silicon nitride provided as insulator of capacitor.—73-11051
Shock-compacted $Si_3N_4$ nanocrystalline ceramics: mechanisms of consolidation and of transition from α- to ß-form.—73-06037
Shock-yielding properties of $Si_3N_4$ ceramics: correlation with the microstructure and static mechanical strength.—73-17425
Short-crack mechanical properties and failure mechanism of $Si_3N_4$-matrix/SiC fiber composite—correction.—73-17426
Short-crack mechanical properties and failure mechanisms of $Si_3N_4$-matrix/SiC-fiber composites.—73-13587
$Si_3N_4$ ceramic cutting tool materials and their applications.—73-05273
$Si_3N_4$-SiC composite consolidated by post-HIPing process.—73-16981
$Si_3N_4$-TiN porous ceramics: I, Microstructure and electrical properties in a humid atmosphere.—73-03193
$Si_3N_4$-TiN porous ceramics: I, Microstructure and electrical properties in a humid atmosphere.—73-13446
SiAlON's and silicon nitrides: microstructural design and performance.—73-06281
$SiF_4$-$N_2$-$H_2$ plasmas for the deposition of fluorinated silicon nitride films.—73-06041
Silicon carbide platelet-reinforced silicon nitride composites.—73-13253
Silicon diimide, a process for its preparation and silicon nitride obtained therefrom.—73-05338
Silicon nitride bodies and a process for producing the same.—73-02137
Silicon nitride ceramics containing crystallized grain-boundary phases.—73-02138
Silicon nitride ceramics containing crystallized grain-boundary phases.—73-12521
Silicon nitride ceramics—alloy design.—73-06282
Silicon nitride ceramics.—73-16986
Silicon nitride containing rare-earth-silicate intergranular phases.—73-06043
Silicon nitride deposited at very low silane pressures using electron cyclotron resonance plasmas.—73-06044
Silicon nitride elaborated by a low-pressure chemical vapor deposition from $Si_2H_6$ and $NH_3$ at low temperature.—73-03002
Silicon nitride films deposited from $SiH_2Cl_2$-$NH_3$ by low-pressure chemical vapor deposition: kinetics, thermodynamics, composition, and structure.—73-08731
Silicon nitride for application as the gate dielectric in MOS devices.—73-04232
Silicon nitride formation from a silane–nitrogen electron cyclotron resonance plasma.—73-03003
Silicon nitride powder from carbothermal reaction.—73-06045
Silicon nitride sintered body and process for producing the same.—73-12522
Silicon nitride sintered body.—73-12523
Silicon nitride sintered product excellent in wear resistance.—73-16016
Silicon nitride tensile strength database from Ceramic Technology Program Processing for Reliability Project.—73-17428
Silicon nitride thin film production on Si(111).—73-03004
Silicon nitride thin films with improved properties.—73-12524
Silicon nitride.—73-12300
Silicon nitride/boron nitride composite with enhanced fracture toughness.—73-16017
Silicon nitrides and oxynitrides prepared in high-pressure plasmas.—73-03005
Silicon-nitride-based ceramics: a review.—73-15972
Silicon-nitride-based composite with improved fracture toughness.—73-05340
Silicon-nitride-inserted piston.—73-05341
Sintered reaction-bonded silicon nitride [SRBSN] by microwave [MW] heating.—73-06050
Sintering anisotropy in slip-cast SiC-whisker/$Si_3N_4$-powder compacts.—73-13262
Sintering silicon nitride.—73-05342
Sintering, properties, and applications of silicon nitride and SiAlON ceramics.—73-03014
Size effect on fatigue behavior in structural ceramics.—73-09670
Slidable ceramic member and method of manufacturing [the] same.—73-02140
Sliding friction and wear up to 600°C of high-speed steels and silicon nitrides for gas turbine bearings.—73-06854
Slip casting of silicon nitride and mechanical properties of sintered body: I, Preparation conditions of slurries of silicon nitride produced by direct nitridation and mechanical properties.—73-03017
Slip casting of silicon nitride and mechanical properties of sintered body: I, Preparation conditions of slurries of silicon nitride produced by direct nitridation and mechanical properties.—73-13273
Slip casting of silicon nitride and mechanical properties of sintered body: II, Vacuum-pressure-assisted slip casting of silicon nitride powder produced by direct nitridation.—73-03018
Slip casting of silicon nitride and mechanical properties of sintered body: II, Vacuum-pressure-assisted slip casting of silicon nitride powder produced by direct nitridation.—73-13274
Slip casting of silicon nitride and mechanical properties of sintered body: III, Preparation conditions of slurries of silicon nitride produced by imide decomposition.—73-06060
Slip casting of silicon nitride and mechanical properties of sintered body: III, Preparation conditions of slurries of silicon nitride produced by imide decomposition.—73-17001
Slip casting of silicon nitride and mechanical properties of sintered body: IV, Compositions of [$Al_2O_3$-$Y_2O_3$] sintering additives and sintering conditions.—73-17002
Slip casting of silicon nitride and mechanical properties of sintered body: IV, Compositions of sintering additives and sintering conditions.—73-09335
Solid-liquid reaction in the system $Si_3N_4$-$Y_3Al_5O_{12}$-$Y_2Si_2O_7$ under 1 MPa of nitrogen.—73-16307
Solid-liquid reactions in the system $Si_3N_4$-ß-SiAlON-$Y_3Al_5O_{12}$.—73-16308
Solid-particle erosion of in situ reinforced $Si_3N_4$.—73-06525
Solid-state bonding of $Si_3N_4$ ceramics with Fe-Cr alloy interlayers.—73-03642
Sputter deposition of precision Si/$Si_3N_4$ Bragg reflectors using multitasking interactive processing control.—73-03025
Stability of SiN thin films prepared by reactive sputtering.—73-05640
Stability of SiN thin films prepared by reactive sputtering.—73-13285
Statistical analysis of parameters affecting the measurement of particle size distribution of silicon nitride powders by sedigraph.—73-15850
Statistical analysis of the fatigue life distribution of monolithic silicon nitride.—73-06527
Statistical approach to parameter study of stress in multilayer films of phosphosilicate glass and silicon nitride.—73-03354
Status of research and development on materials for ceramic gas turbine components.—73-05277
Strength degradation of ceramics caused by residual stress around impression.—73-06529
Strength optimization through powder modification.—73-06069
Strengthening porous silicon nitride ceramics.—73-08543
Stress-enhanced oxidation of silicon nitride ceramics.—73-03231
Strong polarity and bond characterization of nanostructured silicon nitride solids.—73-05645
Structural and electrical properties of $SiN_x$:H films.—73-02690
Structural and optical properties of a-$SiN_x$:H prepared by plasma-enhanced chemical vapor deposition.—73-12882
Structural articles.—73-05344
Structural transformations in polycrystalline ß-$Si_3N_4$ at high temperatures and pressures.—73-12701
Structure of amorphous silicon nitride.—73-16334
Superplastic behavior in a high strain rate range of 6061 aluminum composites reinforced with $Si_3N_4$ whiskers or particulates.—73-03646
Synthesis of $Si_3N_4$ powder by thermal decomposition of $Si(NH)_2$.—73-06095
Synthesis of $Si_3N_4$ using residual organics trapped in the silica gel by sol-gel method.—73-03053
Synthesis of Si(N,C) nanostructured powders from an organometallic aerosol using a hot-wall reactor.—73-03054
Synthesis of silicon and silicon nitride powders by vapor-phase reactions.—73-03057
Synthesis of whisker-reinforced mullite matrix composites using colloidal processing.—73-06098
Tape casting of silicon nitride.—73-06107
TEM analysis of grain boundary in $Y_2O_3$-$Nd_2O_3$-doped silicon nitride.—73-03204
TEM analysis of grain boundary in $Y_2O_3$-$Nd_2O_3$-doped silicon nitride.—73-13458
Tensile creep and creep rupture behavior of monolithic and SiC whisker-reinforced silicon nitride ceramics—correction.—73-13600
Tensile creep and creep rupture behavior of monolithic and SiC-whisker-reinforced silicon nitride ceramics.—73-03362

Tensile creep behavior and damage accumulation in an SiC fiber/RBSN matrix composite.—73-09685
Tensile creep in an in-situ-reinforced silicon nitride.—73-17442
Texture development via grain rotation in β-silicon nitride.—73-09373
Theoretical study on silicon nitride film growth: ab initio molecular orbital calculations.—73-13321
Thermal shock behavior of silicon nitride flexure beam specimens with indentation cracks.—73-05666
Thermal stability of a-$SiN_x$:H [x≤0.4] films.—73-05673
Thermal stability of $SiN_xC_y$ films prepared by plasma CVD.—73-08776
Thermal stability of $SiN_xC_y$ films prepared by plasma CVD.—73-17212
Thermomechanically induced embrittlement in hot isostatically pressed $Si_3N_4$/SiC composites.—73-09686
Thin silicon nitride films for reduction of linewidth and proximity effects in electron-beam lithography.—73-15207
Thin $SiO_2$-$Si_3N_4$-$SiO_2$ films: Auger depth profile evaluation by means of factor analysis.—73-05519
Tip-sample interactions in atomic force microscopy: I, Modulating adhesion between silicon nitride and glass.—73-05091
Toughening mechanisms of $TiB_2/Si_3N_4$ composite.—73-06542
Toughness enhancement by polycarbosilane coating on SiC whiskers incorporated in $Si_3N_4$ matrix composite.—73-17450
Transmission electron microscopy characterization of a ceria-fluxed silicon nitride.—73-03209
Tribochemical mechanisms of $Si_3N_4$ with additives.—73-09519
Tribological characteristics of $Si_3N_4$ ceramic in high-temperature and high-pressure water.—73-06545
Trilayer lift-off metallization process using low-temperature-deposited $SiN_x$.—73-07843
Ultrasonic assessment of oxidation damage in SiC/RBSN composites.—73-17235
Utilization of an electroconductive surface layer on an $Si_3N_4$ ceramic formed by ion implantation as a crack gage and a strain gage.—73-04184
Warm pressing as a forming process for ceramics: I, Literature survey.—73-01837
Wear of media balls during the ball milling of $Si_3N_4$ powder.—73-06133
Wear of media balls during the ball milling of $Si_3N_4$ powder.—73-17456
Wear of $Si_3N_4$ ceramics by abrasive water jet.—73-09696
Wear of $Si_3N_4$ ceramics by abrasive water jet.—73-17457
Wear transition diagram for silicon nitride.—73-08544
X-ray diffraction analysis of the pyrolytic conversion of perhydropolysilazane into silicon nitride.—73-12731
$Yb_2O_3$-fluxed sintered silicon nitride: I, Microstructure characterization.—73-09522

**silicon oxynitride,**
Brillouin scattering by localized acoustic modes in silicon oxynitride–fused silica optical waveguides.—73-08816
Comparison of the density and distribution of traps generated by high-voltage stress in silicon oxide and silicon oxynitrides.—73-04066
Composition analysis of rf plasma-deposited amorphous silicon oxynitride thin films by spectroscopic phase-modulated ellipsometry.—73-05374
Fabrication and characterization of polymer-derived $Si_2N_2O$-$ZrO_2$ nanocomposite ceramics.—73-16769
In situ real-time ellipsometric study of the growth of rf plasma-deposited amorphous hydrogenated silicon oxynitride thin films.—73-05857
Inhomogeneous dielectrics grown by plasma-enhanced chemical vapor deposition.—73-10963
Nature of the hole traps in reoxidized nitrided oxide gate dielectrics.—73-07345
Oxidation kinetics of $Si_2N_2O$ ceramics.—73-06316
Preparation of dense silicon oxynitride ceramics by HIPing.—73-13186
Silicon and nitrogen dangling bond point defects in PECVD silicon oxynitride thin layers.—73-06175
Silicon nitrides and oxynitrides prepared in high-pressure plasmas.—73-03005
Silicon oxynitride films deposited by mercury photosensitization chemical vapor deposition.—73-16987
Synthesis and characterization of amorphous $Si_2N_2O$.—73-17019
Synthesis of silicon oxynitride from a polymeric precursor: I, Hydrolysis of dichloromethyl silane.—73-09363
Thermodynamic model for the hydrogen incorporation in PECVD silicon oxynitride thin layers.—73-04178
Transient viscous phase reaction sintered (TVPRS) silicon oxynitride ceramics.—73-06126

**silicon,**
1.54-μm photoluminescence of erbium-implanted hydrogenated amorphous silicon.—73-04422
Ab initio calculations of nonlinear optical properties of silicon compounds.—73-16403
Accelerated degradation mechanisms in amorphous silicon thin-film transistors.—73-04054
Adatom location on the Si(111)7×7 and Si(111)$\sqrt{3}\times\sqrt{3}$-In surfaces by the X-ray standing wave and photoemission techniques.—73-08547
Alternative doping of *p*-type amorphous silicon films using boron trifluoride.—73-01071
Aluminum impurity in $SiO_2$-Si semiconductor structures.—73-14768
Amorphous and polycrystalline silicon films deposited by electron cyclotron resonance reactive plasma deposition.—73-09015
Amorphous silicon alloys on c-Si: influence of substrate cleaning and ion bombardment on film adhesion and microstructure.—73-09016
Amorphous silicon thin-film transistors produced by atmospheric pressure CVD.—73-04058
Anisotropy of silicon etching in fluorine plasma: phenomenological model.—73-16655
Annealing-related electrical and piezoresistive properties of B- and As-implanted LPCVD silicon films.—73-05531
Apparatus for manufacturing silicon single crystals.—73-04956
Application of a high-density inductively coupled plasma reactor to polysilicon etching.—73-07381
Application of low-temperature [LT] GaAs to $GaAs_{Sb}$.—73-14777
ArF excimer laser chemical vapor deposition a-Si:H/a-$Al_2O_{1-x}$ superlattices.—73-12922
Atomic and electronic structure of B/Si(100).—73-12539
Ball-on-flat reciprocating sliding wear of single-crystal, semiconductor silicon at room temperature.—73-06327
Band-edge exciton luminescence from Si/strained $Si_{1-x}Ge_x$/Si structures.—73-08811
Blue/green light-emitting diodes and laser diodes [LD's] based on II-VI heterostructures grown on predeposited GaAs buffer layers.—73-11085
Bright visible photoluminescence in thin silicon films.—73-16416
$CaF_2$/Si interface using X-ray photoelectron spectroscopy.—73-09434
Carrier injection and scanning tunneling microscopy at the Si(111)-2×*1 surface.—73-04259*
Carrier lifetime and material study in intrinsically gettered silicon wafers for high precipite density.—73-04260
Changes in the electronic properties of Si-$SiO_2$ system due to laser irradiation.—73-01093
Characteristics of gate electrode for $WSi_2$/CVD-Si/$SiO_2$.—73-07286
Characteristics of graded-gap bipolar transistors on the basis of semiconductor structure of $Ge_xSi_{1-x}$.—73-01096
Characterization of GaAs on Si using polarized laser light.—73-07406
Characterization of point defect generation at silicon surfaces using gold diffusion.—73-09392
Characterization of $Si_{1-x}Ge_x$/Si(100) heterostructures by photoluminescence and admittance spectroscopy.—73-07409
Characterization of Si-$SiO_2$ interface states: comparison between different charge pumping and capacitance techniques.—73-07410
Characterization of the B/Si surface electronic structures.—73-09438
Characterization of the degradation processes in $SiO_2$-Si structure by means of electrolyte-insulating-semiconductor systems.—73-05025
Characterization of the pyrolytic conversion of polysilsesquioxanes to silicon oxycarbides.—73-16049
Characterization of undoped multiple quantum well structures.—73-11105
Charge-carrier lifetime in Si wafers.—73-14806
Chemical etching of silicon (100) by hydrogen.—73-16671
Classification of dislocation-related luminescence lines on silicon.—73-17073
Compositional and electronic properties of chemical-vapor-deposited $Y_2O_3$ thin film–Si(100) interfaces.—73-13384
Conducting changes in Ni films on Si(111) following compound formation during annealing.—73-07421
Correlation of electrical, structural, and optical properties of erbium in silicon.—73-04277
Creation of deep gap states in Si during $Cl_2$ or HBr plasma etch exposure.—73-07426
Deep three-dimensional microstructure fabrication for infrared binary optics.—73-07434
Deep trench plasma etching of single-crystal silicon using $SF_6/O_2$ gas mixtures.—73-07435
Deep-level transient spectroscopy and admittance spectroscopy of $Si_{1-x}Ge_xSi$ grown by gas-source molecular beam epitaxy.—73-11131
Defects in III-V materials and the accommodation of strain in layered semiconductors.—73-09398
Degradation of CrSi(W)-O resistive films.—73-07293
Deposition and characterization of polysilicon films deposited by rapid thermal processing.—73-09062
Determination of oxygen concentration in heavily doped silicon.—73-12128
Determination of porous silicon film parameters by polarized light reflectance measurements.—73-15788
Determination of thermal stresses in multiphase ceramic materials.—73-16442
Diffusion of sodium cations in high silicon xerogels and gel-glass.—73-00325
Dimensional change characteristics of ceramics produced by simultaneous nitriding of Si and Ti powders and its application to adiabatic engine parts.—73-05743
Dimensional change characteristics of ceramics produced by simultaneous nitriding of Si and Ti powders and its application to adiabatic engine parts.—73-12989
Direct bonding of quartz crystal onto silicon.—73-12990
Direct observation of individual nanometer-sized light-emitting structures on porous silicon surfaces.—73-09443
Dissipative tunneling in two-state systems at the Si/$SiO_2$ interface.—73-11144
Dissolution mechanism of oxide precipitates in Czochralski silicon degenerately doped with boron during high-temperature annealing [800° and 1050°C].—73-06153
Dynamic effects of coherent epitaxial strain and surface stability: Ge on Si(100).—73-07456
Dynamics of switching in Si and GaAs *p-i-n* diodes.—73-07458
Effect of annealing on the surface and interface properties of indium oxide–silicon structures.—73-09445
Effect of carbon on thermal oxidation of silicon and electrical properties of $SiO_2$-Si structures.—73-05545
Effect of dead space in gain and noise in Si and GaAs avalanche photodiodes.—73-01133
Effect of epitaxial realignment on the leakage behavior of arsenic-implanted, as-deposited polycrystalline Si–on–single-crystal Si diodes.—73-04288
Effect of hydrogen dilution on the growth of hydrogenated amorphous silicon studied by in situ phase-modulated ellipsometry.—73-06210
Effect of implant temperature and beam flux on damage accumulation and Si activation of Si-implanted InP.—73-07464
Effect of Si delta doping and growth temperature on the *I*(*V*) characteristics of molecular beam epitaxially grown GaAs/(AlGa)As resonant tunneling devices.—73-11162
Effect of solid-solution composition on defect formation in $Ge_xSi_{1-x}$/Si heterostructures obtained by MBE.—73-17077
Effects of hydrogen and temperature on the kinetics of the fluidized-bed nitridation of silicon.—73-05780
Effects of light and electrical stress on asymmetric a-Si TFT [thin-film transistor].—73-05550
Effects of oxygen doping on properties of microcrystalline silicon film grown using rapid thermal chemical vapor deposition [RTCVD].—73-16466
Effects of predeposition HF/$NH_4F$ treatments on the electrical properties of $SiO_2$/Si structures formed by low-temperature plasma-assisted oxidation and deposition processes.—73-05551
Effects of thermal nitridation on the radiation hardness of the $SiO_2$/Si interface.—73-08841
Electric subbands in Si-delta-doped GaAs grown by MOCVD.—73-01141
Electrical characteristics of diodes fabricated in selective Si/$Si_{1-x}Ge_x$ epitaxial layers.—73-14866
Electroluminescence and photoluminescence from microporous silicon *p-n* junctions.—73-07489
Electroluminescent performance of porous silicon.—73-16484
Electron microscopy and energy loss study of low-temperature plasma-deposited oxide on a CZ-grown Si substrate.—73-06212
Electron spin resonance study of diamondlike nuclei produced in an Si surface layer by high-dose C ion doping.—73-06157
Electronic structure of Si doped by rare-earth $Yb^{3+}$.—73-04314
Elemental and structural state of the surface layer of silicon and formation of dielectric coatings on it after reactive ion etching.—73-14705
Elevated-temperature oxidation and etching of the Si(111) 7×7 *surface observed with scanning tunneling microscopy.—73-09449*
Ellipsometry investigation of nucleation and growth of electron cyclotron resonance [ECR] plasma deposited silicon films.—73-07502
Enhanced etching of Si(100) by neutral chlorine beams with kinetic energies up to 6 eV.—73-04318
Enhancement of Hall mobility in coupled delta-doped layers grown by molecular beam epitaxy.—73-11196
Epitaxial growth of α-$FeSi_2$ on Si(111) at low temperature.—73-16137
Epitaxial layers Si:(Sn,Yb) produced by the crystallization from the melt solution on the basis of Sn.—73-04322
Er doping in silicon by pulsed laser irradiation.—73-04324
Er luminescence in Si—a critical balance between optical activity and pumping efficiency.—73-04325
$Er^{3+}$-doped silicon prepared by laser doping.—73-04326
Etching of Si with $Cl_2$ using an electron cyclotron resonance source.—73-07511
Etching rate characterization of $SiO_2$ and Si using ion energy flux and atomic fluorine density in a $CF_4/O_2$/Ar electron cyclotron resonance plasma.—73-09121
Experimental and theoretical determination of gate-to-emitter stray capacitances of field emitters.—73-11206
Experimental investigation of N-MOS inversion layers in the electric quantum limit.—73-14902
Experimental measurement of the optical absorption coefficient of the multicrystalline *p*-type solar-grade silicon.—73-07522
Fabrication of *n*-channel metal-oxide-semiconductor field effect transistors with 0.2-μm gate lengths in 500-Å thin-film silicon on sapphire.—73-14905
Fabrication of a lateral *p-i-n* photodiode in an Si/($Si_{0.9}Ge_{0.2}$/Si) superlattice/Si/sapphire structure.—73-11207
Fabrication of encapsulated silicon vacuum field emission transistors and diodes.—73-14907
Fabrication of gated silicon field emission cathodes for vacuum microelectronics and electron-beam applications.—73-11208
Fabrication of waveguides using low-temperature plasma processing techniques.—73-07526
Factors influencing Si segregation and its effect on the two-dimensional electron gas mobility in inverted GaAs/*n*-AlGaAs heterostructures.—73-14915
Fast growth of thin gate dielectrics by thermal oxidation of Si in $N_2O$ gas ambient with low concentration of $NF_3$ addition.—73-07324
Feasibility study of silicon doping of hydroxyapatite.—73-16780
Finite size effects and short-range crystalline order in Si and $SiO_2$ studied by X-ray absorption fine structure spectroscopy.—73-06917
Fluorinated gate oxide films utilized in polysilicon thin-film transistors.—73-04103
Formation and oxidation of silicon in container glass melts.—73-10535
Formation of silicon nitride by nitridation of porous silicon.—73-15991
Fracture toughness of single-crystal silicon at high temperatures.—73-13540

Full microscopic treatment of the optical response of the Si(100) 2×1 surface.—73-14932
Gate technology for 89-GHz vertical doping engineered Si metal-oxide-semiconductor field effect transistor.—73-14939
Generation mechanisms of paramagnetic centers by gamma-ray irradiation at and near the $Si/SiO_2$ interface.—73-07545
Gettering in Czochralski-grown single-crystal silicon wafer.—73-04345
Growth and microstructural study of radio frequency magnetron sputtered MgO films on silicon.—73-03150
Growth kinetics and reaction mechanism of silicon chemical vapor deposition from silane.—73-02844
Growth kinetics of Si hemispherical grains on clean amorphous Si surfaces.—73-14947
Growth of Er-doped Si films by electron cyclotron resonance [ECR] plasma-enhanced chemical vapor deposition.—73-04351
Growth of plasma-generated particles and behavior of particle clouds during sputtering of silicon and silicon dioxide.—73-09156
Growth of thin-film silicon on glass substrates from Zn-based solutions.—73-05835
Growth of zinc blende-GaN and ß-SiC-coated (001)Si by molecular beam epitaxy using a radio-frequency plasma discharge, nitrogen-free radical source.—73-13084
Heat treatment method for silicon- and carbon-containing ceramic fibers and fibers of the same kind with a laminated structure.—73-01856
High concentrations of erbium in crystal silicon by thermal or ion-beam-induced epitaxy of erbium-implanted amorphous silicon.—73-04354
High-channel-mobility a-Si:H thin-film transistors [TFT's] with oxide/nitride dielectrics.—73-04109
High-resolution reactive ion etching of SiGe alloys.—73-11246
High-resolution X-ray photoemission spectroscopy studies of thin $SiO_2$ and $Si/SiO_2$ interfaces.—73-12595
Highly conductive silicon films via plasma-enhanced chemical vapor deposition at low temperatures.—73-09161
Hydrogen-terminated Si(100) surfaces investigated by reflectance anisotropy spectroscopy.—73-14971
Ic compatible processing of Si:Er for optoelectronics.—73-04359
Identification of strained Si layers at Si-$SiO_2$ interfaces and clean Si surfaces by nonlinear optical spectroscopy.—73-16171
In situ infrared measurements of film and gas properties during the plasma deposition of amorphous hydrogenated silicon.—73-05855
In situ internal reflection infrared study of aqueous hydrofluoric acid and ultraviolet/ozone-treated silicon(100) surfaces.—73-05056
In situ investigation by ir ellipsometry of the growth and interfaces of amorphous silicon and related materials.—73-13402
In situ investigation of amorphous silicon/silicon nitride interfaces by infrared ellipsometry.—73-06230
In situ investigation of temperature- and bias-dependent effects on the oxide growth of Si and Ge in electron cyclotron resonance.—73-05856
In situ spectroscopic ellipsometry studies of hydrogen ion bombardment of crystalline silicon.—73-07584
In situ transmission electron microscopy measurements of the electrical and structural properties of strained layer GeSi/Si *p-n* junctions.—73-07586
Incorporation of boron into uhv/CVD-grown germanium-silicon epitaxial layers.—73-14977
Increases in photovoltage of "indium tin oxide/silicon oxide/mat-textured *n*-silicon" junction solar cells by silicon preoxidation and annealing processes.—73-12813
Influence of device structure and growth conditions on the tunneling characteristics of $Si/Si_{1-x}Ge_x$ double barrier structures.—73-11270
Influence of dislocations on dark current of multicrystalline silicon $n^+$-$p$ junction.—73-16516
Influence of dislocations on photovoltaic properties of multicrystalline silicon solar cells.—73-16517
Influence of the interface-state density on the electron mobility in silicon inversion layers.—73-11274
Infrared spectroscopy of semiconductor surfaces: H-terminated silicon surfaces[—review].—73-07604
Initial stages of epitaxial growth of silicon on Si(100)-2×1.—73-01214
Initial stages of heterojunction formation: Si on GaAs(100).—73-01215
Integrated circuit fabrication process to reduce critical dimension loss during etching.—73-04211
Interaction of atomic hydrogen with ion-bombardment-induced defects at $Si/SiO_2$ interfaces.—73-04121
Interaction of nickel with silicon and phosphorus.—73-12605
Interaction of titanium with single-crystal silicon during rapid electron beam heating.—73-00243
Interactions of zirconium (hafnium) with silicon and phosphorus.—73-16184
Interface of the polycrystalline silicon contacted diode formed with a stacked amorphous silicon film.—73-14996
Interface structure of the 1 monolayer (2×1)-Si/GaAs(001) system by X-ray photoelectron diffraction [XPD].—73-11281
Interfacial layer formation of the $Al_2O_3/Si$ structures grown by low-pressure metallorganic chemical vapor deposition.—73-09187
Interfacial point defects in heavily implanted silicon germanium alloys.—73-09413
Interpretation of deep levels in Si-GaAs crystals observed by photoinduced current transient spectroscopy.—73-04375
Ir study of plasma-nitrided thermal $SiO_2$ and pure silicon.—73-05427
Iron-related levels in *n*-type silicon studied by Hall effect and DLTS measurements.—73-15002
Irradiation effects of synchrotron radiation on silicon epitaxial growth using a disilane molecular beam epitaxy.—73-13107
Kinetics of Si oxidation and structure of oxide films of thickness <50 Å.—73-07629
Laser-induced degradation of the photoluminescence intensity of porous silicon.—73-15009
Local modification of HF-treated silicon(100) surface and its characterization by scanning tunneling microscopy and spectroscopy.—73-11293
Long-term durability of mullite-coated silicon-based ceramics.—73-17227
Low-dielectric-constant interlayer insulation for multilevel metallization.—73-04129
Low-energy electron microscopy of semiconductor surfaces.—73-01232
Low-temperature cleaning processes for Si molecular beam epitaxy.—73-13120
Low-temperature crystallization and patterning of amorphous silicon films on electrically insulating substrates.—73-11527
Low-temperature formation of device-quality $SiO_2/Si$ interfaces by a two-step plasma-assisted oxidation/deposition process.—73-09194
Low-temperature nitridation of silicon by direct ammonia nitridation in a molecular beam epitaxy reactor.—73-11299
Low-temperature plasma-assisted oxidation and thin-film deposition processes for forming device-quality $SiO_2/Si$ and composite dielectric-$SiO_2/Si$ heterostructures.—73-10968
Luminescence from $Si_{1-x}Ge_x/Si$ quantum wells grown by Si molecular beam epitaxy.—73-11304
Luminescence studies of confined excitons in pseudomorphic Si/SiGe quantum wells grown by solid-source molecular beam epitaxy [SSMBE].—73-11305
Magnetism and electron transport properties of mixed valence $CeMn_{2-x}Si_{2+x}$ crystals [$(0.1 \le x \le 0.25)$].—73-16533
Magnetization of Si:P across the metal-insulator transition.—73-07654
Masking technique for depositing gallium arsenide on silicon.—73-04519
Measurements of critical point energies in the conduction band structure of $Si_{1-x}Ge_x$.—73-08664
Mechanical characteristics of aluminum thin films on silicon and gallium arsenide.—73-10249
Mechanisms of low-temperature epitaxial silicon growth using ArF excimer laser photochemical vapor deposition from disilane.—73-13132
Melt infiltration: a generic process for making ceramic matrix composites.—73-09206
Metastable phase transition of the alloy $(GaAs)_{1-x}Si_x$ and its electronic properties.—73-04402
Method and apparatus for producing silicon single crystal.—73-02106
Microstructural and electrical characterization of ion-beam-sputtered polysilicon films for microelectronic applications.—73-11315
Microstructural examination of extended crystal defects in silicon selective epitaxial growth [SEG].—73-17155
Microstructure and room temperature mechanical properties of spray-atomized and codeposited Al-12 wt% Si MMC's.—73-03620
Microwave nitridation of silicon compacts utilizing a temperature gradient.—73-05921
Minute strain fields due to vacancy-type defects in a rapidly cooled Czochralski-grown silicon crystal.—73-17087
Modification of heterojunction band offsets at III-V/IV/III-V interfaces.—73-11320
Molecular beam epitaxy and migration-enhanced epitaxy growth modes of GaAs on pseudomorphic Si films grown on GaAs(100) substrates.—73-07679
Monocrystal dislocationless Si:Ge, grown from the melt with Gd impurity.—73-04411
Monolayer coverage dependence for the surface photovoltage of Si(100)/Na.—73-07682
Morphological and electrical modifications in silicon submitted to high-intensity laser irradiation.—73-11339
Nanocomposite Si/C/N powder production by laser-aerosol interaction.—73-09219
Nanodisperse CrSi(O, N) thin films—conductivity, thermopower, and applications.—73-02646
Nanostructural characterization of silicon oxycarbide glasses and glass-ceramics.—73-14047
New isotropic defect in as-oxidized thermal (111)$Si/SiO_2$ revealed by ESR.—73-13359
New metastable phases in a Pd/amorphous Si bilayer after annealing.—73-08678
Nitriding of silicon.—73-09224
Nondestructive depth profiling of silicon ion implantation induced damage in silicon(100) substrates.—73-15059
One-eV 1.2-defect photoluminescence [PL] peak in heavily planar-doped *n*-type GaAs grown by molecular beam epitaxy.—73-11356
Optical absorption in porous silicon of high porosity.—73-12844
Optical direct and indirect excitation of $Er^{3+}$ ions in silicon.—73-04428
Optimization of the polycrystalline silicon-on-silicon dioxide characterization using spectroscopic ellipsometry.—73-15828
Ordering in silicon and germanium mullites.—73-03181
Oxidation of silicon in plasma afterglows: new model of oxide growth including recombination of diffusing O atoms.—73-03227
Oxidation of silicon in rf plasma measured by rapid in situ during process ellipsometry.—73-06319
Oxidation of silicon using [TCA] trichloroethane-$O_2$ and HCl-$O_2$ mixtures.—73-02915
Oxidation of silicon with a hot oxygen beam.—73-05940
Oxygen-enhanced 1.54-μm photoluminescence of $Er^{3+}$ in silicon.—73-04433
Pattern dependence of selectivity in low-pressure selective epitaxial silicon growth.—73-15083
Performance of polycrystalline silicon thin-film transistors [TFT's] with double-layer gate dielectric.—73-05610
Phase behavior and conductivity of $Li_2SiS_3$.—73-02371
Phase equilibria in the Si-C-N-O system and the kinetic analysis of silicon carbide whisker growth.—73-08692
Phase equilibria in the system Cd-Si-Se and the properties of the compound $Cd_4SiSe_6$.—73-02379
Phase inversions in Al-Si-Mg gels. Influence of Ti, Ce, and Zr additions.—73-02385
Photoelectron holography of Si(100)-[2×1] and other surface and thin-film structures.—73-07717
Photoenhanced chemical vapor deposition: system design consideration.—73-16898
Photoluminescence [PL] properties of strained molecular beam epitaxy $Si_{1-x}Ge_x/Si$ multiquantum wells [MQW's].—73-11381
Photoluminescence from pseudomorphic $Si_{1-x}Ge_x$ quantum wells grown by molecular beam epitaxy: variation of the band gap with high pressure.—73-07726
Photoluminescence of a degenerate electron gas in GaAs:Si films grown by the method of MBE.—73-11385
Photoluminescence study of $Si_{1-x}Ge_x/Si$ heterostructures grown by molecular beam epitaxy and ultrahigh vacuum chemical vapor deposition.—73-11388
Photostimulated evaporation of $SiO_2$ and $Si_3N_4$ films by synchrotron radiation and its application for low-temperature cleaning of Si surfaces.—73-02921
Photovoltaic properties of reactive thermal evaporated indium oxide (IO)/silicon junctions.—73-04785
Physically based phenomenological model using Boltzmann-Matano analysis for boron diffusion from polycrystalline Si into single-crystal Si.—73-13361
Point defect structures and energetics in Si using an empirical potential.—73-06172
Point-defect–flux-stimulated solid phase recrystallization of amorphous silicon and structure modification in ion-implanted layers.—73-06173
Polycrystalline silicon thin-film transistor.—73-11538
Polysilicon and SIMOX characterization using spectroscopic ellipsometry.—73-04150
Preparation and characterization of radio-frequency-sputtered $Ba_2Si_2TiO_8$ thin films.—73-07911
Preparation of fiberlike silicon nitride from silicon powder.—73-13187
Preparation of microcrystalline Si (μC-Si) thin films by remote plasma-enhanced chemical vapor deposition.—73-02954
Preparation of oxynitride silicon glasses. Nitridation of functional silica xerogels.—73-10583
Preparation of Si thin films by spontaneous oxidation reaction of silane with fluorine.—73-15115
Process for antioxidation protection of a material of which at least a surface is made of a ceramic formed from a silicon compound, and a material obtained by said process.—73-16010
Process for producing moldings from silicon-infiltrated silicon carbide.—73-16013
Production of silicon powder by square-wave modulated rf silane plasma.—73-06002
Properties of polysilicon films annealed by a rapid thermal annealing process.—73-12871
Properties of $YBa_2Cu_3O_x$ doped with Si.—73-11880
$p_{total}$-$T$-$x$ phase diagram of the system Si-Te.—73-02370
Quantitative kinetic analysis of silicon nitridation.—73-09287
Rapid pulsed $CO_2$ laser annealing of silicon nitride/silicon interface states.—73-06008
Rapid thermal chemical vapor deposition growth of nanometer-thin SiC on silicon.—73-13225
Reaction of $NH_4F/HF$ solutions on Si(100) and Si(111) surfaces.—73-04465
Reactive ion etching of crystalline silicon using $NF_3$ diluted with $H_2$.—73-07762
Real-time determination of the direction of wafer temperature change by spatially resolved infrared laser interferometric thermometry.—73-15838
Real-time ellipsometry [study] of the growth of amorphous and microcrystalline silicon thin films combining glow discharge decomposition and uv light irradiation.—73-17191
Relationship between stress and dangling bond generation at the (111)$Si/SiO_2$ interface.—73-15145
Relative sensitivity factors for positive atomic and molecular ions sputtered from Si and GaAs.—73-01303
Reoxidation of silicon substrates during the sputter deposition of oxide thin films.—73-06020
Rheological behavior of injection-moldable silicon powder–silicon carbide whisker formulations.—73-02997
Role of substrate temperature and in-chamber annealing in H–Si bonding configurations in sputtered a-Si:H.—73-06027
Scanning tunneling microscope tip-sample interactions: atomic modification of Si and nanometer Si Schottky diodes.—73-07782
Scanning tunneling microscopy of one-dimensional periodic corrugated silicon surfaces.—73-03191
Second harmonic generation [SHG] in $Si-SiO_2$ heterostructures formed by chemical, thermal, and plasma-assisted oxidation and deposition processes.—73-06029
Selective and uniform high rate etching of polysilicon in a magnetically confined microwave discharge.—73-13247

Semiconductor devices having an improved gate.—73-04534
Sequential deposition of $SiO_2$ and poly-Si in isolation trenches.—73-06034
Si incorporation during molecular beam epitaxy growth of GaAs and preferential attachment of Si atoms at misorientation steps.—73-07796
Si(100) and Ge(100) core-level shifts: a reevaluation.—73-07797
Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: I, The organic/inorganic transition.—73-09314
Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: II, Effect of oxygen curing on properties of ex-PCSZ monofilaments.—73-09315
Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: III, Effect of pyrolysis conditions on the nature and properties of oxygen-cured derived monofilaments.—73-09316
Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: IV, Oxygen-free model monofilaments.—73-09317
Si-C-N ceramics with a high microstructural stability elaborated from the pyrolysis of new polycarbosilazane precursors: V, Oxidation kinetics of model filaments.—73-09318
Si-C-O system: II, Isobaric evolution of the system.—73-16302
Si-Ge strained layer heterostructures: device possibilities and process limitations.—73-04479
Si/SiGe heterostructures and devices.—73-15161
Silicon (2*p*) surface core-level line shape of Si(111)-B.—73-02431
Silicon boron nitride ceramic and precursor compounds, a process for their preparation and their use.—73-02135
Silicon carbide against silicon: a comparison in terms of physical properties, technology, and electrical performance of power devices.—73-08542
Silicon nitride for amorphous silicon thin-film transistors [TFT's].—73-04167
Silicon oxycarbides via sol-gel route: characterization of the pyrolysis process.—73-10596
Silicon spikes and impurity accumulation at interrupted growth interfaces during molecular beam epitaxy.—73-11445
Sintering property of green compacts of Si and TiC mixed powders in nitrogen.—73-03013
Slidable ceramic member and method of manufacturing [the] same.—73-16019
*s*-polarization photoemission extended X-ray absorption fine structure study of clean and adsorbate-covered Si(100) 2×1 surface.—73-08727
Sputter deposition of precision $Si/Si_3N_4$ Bragg reflectors using multitasking interactive processing control.—73-03025
Sputter-deposited silicon films.—73-15175
Status of two-dimensional Si/SiGe heterostructures.—73-07810
STM study of mechanochemically prepared Si(111) substrates: an extended set of vicinal surfaces.—73-09511
STM study of the Si(001)-(2×1) and GaAs(001)-(2×4) surfaces.—73-15180
Stress compensation techniques in thin layers applied to silicon micromachining.—73-06070
Structural analysis of $Ge_xSi_{1-x}$/Si layers by remote plasma-enhanced chemical vapor deposition on Si(100).—73-15181
Structural and electrical properties of low-pressure plasma-sprayed silicon-based materials.—73-16318
Structural characterization of low-temperature epi-silicon grown on {100} and {111}Si substrates using ultrahigh resolution cross-sectional TEM.—73-06287
Structural characterization of silicon carbonitride ceramics from polymeric precursors using nuclear magnetic resonance.—73-05491
Structural evaluation of Mo/Si multilayers based on diffraction theory.—73-05492
Structural investigation of YAM-type yttrium silicon oxynitride by $^{15}N$ magic angle spinning nuclear magnetic resonance.—73-12699
Structural mechanisms of phase transformations of Si(Ge)I-III: I, Silicon.—73-16324
Structure and properties correlation dependence of titanium and silicon coatings obtained by sol-gel processing.—73-14103
Structures with Sb δ-layers obtained by Si-MBE.—73-06294
Sublattice orientation dilemma: a reflection high-energy electron diffraction and X-ray photoelectron diffraction study of GaAs growth on vicinal Si(001) surfaces.—73-07818
Surface morphology of molecular beam epitaxially grown $Si_{1-x}Ge_x$ layers on (100) and (110)Si.—73-09514
Surface roughness and optical properties of high-quality Si epitaxial layers.—73-17205
Synthesis and properties of SAPO-5 molecular sieves. Silicon incorporation into the framework.—73-12712
Synthesis of silicon and silicon nitride powders by vapor-phase reactions.—73-03057
Synthesis of silicon oxycarbide through the sol-gel process.—73-09362
Temperature dependence of the dielectric function of silicon using in situ spectroscopic ellipsometry.—73-16613
Temperature- and composition-dependent structures of $Si_xGe_{1-x}$/Si and $Si_xGe_{1-x}$/Ge superlattices.—73-08772
Ternary silicon–rare-earth nitrides and process for their preparation.—73-12529
Theory of the Si(100) surface reconstruction at finite temperatures: Bragg-Williams-type approximation.—73-05511
Thermoelectric properties and microstructure of Fe-Si-O thin films prepared by ICB [ionized cluster beam] method.—73-02714
Thermoelectric properties and microstructure of Fe-Si-O thin films prepared by ICB method.—73-12899
Thin buried oxide in oxygen-implanted silicon.—73-07840
Three-level charge pumping on submicronic MOS transistors.—73-01355
Threshold phenomena in nonlinear currents upon metallization of Si(001).—73-16641
Time-resolved spectroscopy of photoluminescence in hydrogenated amorphous silicon.—73-02716
Transient response of amorphous CdSe and glow-discharge amorphous Si to mode-locked laser pulses.—73-11486
Transport mechanism in semiconducting glassy silicon vanadates.—73-09424
Tunneling in Al–silicon oxynitride–Si structures.—73-07372
Tunneling spectroscopy on compensating surface defects induced by Si doping of molecular beam epitaxially grown GaAs(001).—73-07845
Ultrahigh vacuum microscopy of the Si(111) boron $\sqrt{3}X\sqrt{3}R30°$ surface.—73-06302
Use of a silicon strip doping source in chemical beam epitaxy.—73-15222
Very narrow SiGe/Si quantum wells deposited by low-temperature atmospheric pressure chemical vapor deposition.—73-11505
Virtual interface method for in situ ellipsometry of films grown on unknown substrates.—73-09385
X-ray absorption fine structure studies of buried Ge-Si interfaces.—73-01364
X-ray photoelectron spectroscopy study of low-energy $CF^+$ ion interactions with silicon.—73-08793
X-ray study of silicon distortion on deposition of diamondlike films.—73-05524

**silicon-on-insulator materials (SOI),**
Characterization of silicon-on-insulator multilayers using ex situ spectroscopic ellipsometry and in situ monochromatic ellipsometry during plasma etching.—73-14804
Fabrication of extremely thin [<1000 Å] silicon-on-insulator [SOI] for fully depleted CMOS applications.—73-14908
Fabrication of ultrathin [silicon-on-insulator] SOI by SIMOX wafer bonding (SWB).—73-07525
Preparation of thin silicon-on-insulator films by low-energy oxygen ion implantation.—73-10984
Spectroellipsometry characterization of directly bonded silicon-on-insulator structures.—73-15170

**silicones,**
Prevention of cracking in self-leveling flooring material (SL) by adding silicone.—73-13765

**sillenite,**
Crystal structure and morphology of epitaxial layers of germanium sillenite deposited by cathode reactive sputtering.—73-02181
Determination of the mobility and transport properties of photocarriers in $Bi_{12}GeO_{20}$ by the time-of-flight technique.—73-09399
Growth and characterization of $Bi_{12}(Si_{1-x}Ti_x)O_{20}$ mixed crystals.—73-05572
Low-temperature photochromic response of bismuth silicon oxide.—73-02628
Low-temperature photochromic response of gallium-doped bismuth germanium oxide.—73-02629
Normal vibrations of atomic groups in sillenite lattice: I, $O_{11}Bi_3$ and $O_{12}Bi_3$ groups.—73-02361
Normal vibrations of atomic groups in sillenite lattice: II, $Me(O_3Bi_3)_4$ groups.—73-02362
Photochromic absorption in molybdenum-doped sillenites $Bi_{12}GeO_{20}$.—73-12857
Structure of sillenites and atomic mechanisms of ismorphous substitutions in them.—73-16338
Temperature dependence of the photorefractive effect in undoped $Bi_{12}GeO_{20}$.—73-08978

**sillimanite,**
Energetics of interaction between oxygen vacancies in sillimanite: a model for the mullite structure.—73-02263
Experimental study using sillimanite to fabricate mullite ceramics.—73-16768
Formation of pressing cracks of sillimanite compacts and its mechanical analysis.—73-09140
Measurement of compressibility curve of sillimanite powders and choice of pressing pressure.—73-13129

**silos,**
Criteria for evaluation of silo design codes.—73-12020
Examples of up-to-date silo design.—73-01780
New type of silo extractor for bulk materials with poor flow properties.—73-15739

**siloxanes,**
Black glass-ceramic from rapid pyrolysis in oxygen-containing atmospheres.—73-03905
Growth, composition, and structure of plasma-deposited siloxane and silazane.—73-16811
Hydridosiloxanes as precursors to ceramic products.—73-02099
Hydridosiloxanes as precursors to ceramic products.—73-15994
Pyrolysis of titanium metal-filled poly(siloxane) preceramic polymers: effect of atmosphere on the chemistry of titanium transformation.—73-16966
Self-curing ceramicizable polysiloxanes.—73-12516
Structural investigation of sol-gel-derived hybrid siloxane-oxide materials using $^{29}Si$ MAS-NMR spectroscopy.—73-05493
Synthesis and characterization of siloxane-titania materials.—73-13292

**silver oxide,**
Fast ion transport in the new mixed system $(CuI)_x[(Ag_2O)_2\text{-}(V_2O_5)]_{100-x}$ $(40\leq x\leq 80)$.—73-09406
Glass formation and conductivity of the AgI-$AgO_{0.5}$-$TeO_2$ system.—73-00491
Growth of $YBa_2Cu_3O_y$ single crystals from a mixture of $YBa_2Cu_3O_y$ and $Ag_2O$.—73-01566
Silver-toughened alumina ceramics.—73-06853

**silver,**
Ac conductivity and dielectric relaxation studies in AgI-based fast ion-conducting glasses.—73-00929
Ac field-induced silver injection into soda lime silicate glasses.—73-00931
Adsorption and $^{129}Xe$ NMR of xenon in silver-exchanged Y zeolites: application to the location of silver cations.—73-08803
Ag addition to $YBa_2Cu_3O_{7-x}$ films prepared using electrophoretic deposition.—73-15383
Annealing of ion-implanted silver colloids in glass.—73-10495
Anomalous voltage drop on the *V-I* characteristics of Bi(2223)/Ag-sheathed tapes.—73-15392
Ceramic substrate having wiring of silver series.—73-10306
Characteristics of the bulk made of the Ag-coated powders of Bi systems.—73-01500
Characterization of radiative surface modes and anisotropy in $Ag/SiO_2$ multilayers, by visible and ir ellipsometry.—73-13378
Coefficients of friction of YBCO-YBCO and YBCO-Ag ball-on-flat couples.—73-12755
Contact resistance and *I-V* characteristics in an Ag-doped Bi-Sr-Ca-Cu-O superconductor.—73-01510
Coupled exciton-plasmon polaritons at semiconductor-metal interface.—73-01113
Critical current of $Ag/YBa_2Cu_3O_{7-\delta}$ random bulk composites.—73-11712
Crystallization of $AgTi_2(PO_4)_3$ and related compounds close to ambient conditions.—73-05723
Degrees of freedom and ionic mobility in silver chalcogenide glasses.—73-00318
Dielectric losses in glasses of the Ag-Ge-Se system.—73-00448
Diffusion of silver into glasses of the silver-arsenic-selenium-tellurium system.—73-00324
Diffusion penetration of silver from electrodes into PZT ceramics.—73-13346
Disorder and thermal motion of Ag in $Ag_{0.6}NbS_2$.—73-00949
Distribution of silver concentration in surface layer of Simax glass.—73-06907
Effect of axial compression on optical activity of silver thiogallate.—73-16453
Effect of gamma irradiation on silver diffusion in $YBa_2Cu_3O_{7-y}$.—73-15426
Effect of gamma-irradiation on pure and Ag-doped YBCO superconductor.—73-15427
Effect of MG [mechanical grinding] on the critical current density and global pinning force of $YBa_2Cu_3O_y$-Ag composite superconductor.—73-15429
Effect of microstructure on the hardness and fracture toughness of $YBa_2Cu_3O_{7-y}$/Ag composites.—73-03270
Effect of processing parameters in the chemical vapor deposition of $YBa_2Cu_3O_{7-\delta}$ thin films on polycrystalline silver.—73-08037
Effect of silver addition to the bismuth-lead-strontium-calcium-copper-oxygen superconductor: enhancement in critical current density.—73-08039
Efficient incorporation of silver to improve superconducting fibers.—73-11952
Electrical and dielectric studies on AgBr-$ZrO_2$ composites.—73-16471
Electrical conductivity and Seebeck coefficient of smithite under pressure above 20 GPA.—73-16477
Electrical properties and dc degradation characteristics of silver-doped ZnO varistors.—73-01144
Electroless silver plating of oxide particles in aqueous solution.—73-10224
Excess conductivity studies in pure and Ag-doped 85-K phase in Bi-Sr-Ca-Cu-O system.—73-04719
Fabrication of Bi (2223)/Ag tapes.—73-11758
Fabrication of quantum dot structures using aerosol deposition and plasma techniques.—73-05804
Fabrication of $YBa_2Cu_3O_{7-x}$ thick films on Ag substrate by gas deposition using ultrafine powders.—73-01549
Gamma irradiation and heat treatment of ion-exchanged silver-containing glasses.—73-10379
Glass formation in systems based on AgX (X=Cl, Br, or I).—73-10541
High *Q*-factor triplate resonator with an inner conductor of melted silver.—73-10954
Improved microwave performance of Ag-doped $Y_1Ba_2Cu_3O_{7-\delta}$ thin-film microstrip resonators.—73-01571
Improvement of $J_c$ of Ag-sheathed Bi-2212 tapes using melt-growth technique under reduced oxygen partial pressure [0.01 atm].—73-11796
Influence of Ag doping, composition, and structure in $J_c$ of Ag-sheathed Bi-2212 tapes.—73-15513
Influence of electrical and magnetic fields on the excess current in HTSC–normal metal point contacts.—73-08105
Influence of silver base on $J_c$ measurement of oxide superconductors.—73-04744
Infrared spectroscopy and Raman spectroscopy evidences of silver replacement into Cu(1) site in $YBa_2Cu_4O_8$.—73-15518
Kinetics of colloid formation of silver in multichromic glasses.—73-14415
Kinetics of dissolution of $AgAsS_2$ glass in acid oxidizing media.—73-00363
Kinetics of silver staining in $Na_2O$-CaO-$SiO_2$ glass.—73-00650

Magnetic suspension, critical current, and morphology in $YBa_2Cu_3O_{7-x}$-silver composites.—73-11823
Mechanical and superconducting properties of an Ag-sheathed Bi-Pb-Sr-Ca-Cu-O tape.—73-04769
Mechanical properties of (Bi,Pb)-Sr-Ca-Cu-O/Ag superconducting composite.—73-03329
Metallic Ag addition effects on $Y_1Ba_2Cu_3O_{7-x}$ superconducting thick films.—73-11829
Microstructure of pressureless-sintered silver-toughened alumina: an in situ TEM study.—73-03173
Molecular beam epitaxy in situ grown Ag/GaAs Schottky diodes.—73-11334
Oxide superconducting materials at JFCC—sample preparation by floating melting zone method and their microstructural analysis.—73-11857
Phase transition and optical properties of thin films of $Ag_2CdI_4$ superionics.—73-02390
Photoinduced currents in superionic conductor $RbAg_4I_5$.—73-14723
Potential measurements using mixed ionic electronic conductors as probes.—73-01011
Preparation and characterization of interface morphologies of silver-sheathed superconducting Bi-Sr-Ca-Cu-O ribbons.—73-08172
Preparation and optical study of zeolite-AgI inclusion complexes.—73-08709
Preparation of Ag-YBaCuO composite tape with starting material produced by codecomposition method.—73-11870
Preparation of an Ag-doped Bi-Sr-Ca-Cu-O bulk sample by the floating zone method.—73-01637
Prolate silver particles in glass surfaces.—73-14482
Quantum size effects in photoemission from Ag islands on GaAs(110).—73-15131
Question of silver pairing in the new structurally resolved two-dimensional phase $Ag_2MnP_2S_6$.—73-02412
Resistive transition of Bi(2223) silver-clamped thick film.—73-11892
Reversible redox behavior between silver cations and metal particles in hydrated Ag-Y zeolites.—73-13236
Role of the silver intermediate layer in the $YBa_2Cu_3O_{7-x}$/Ag/$In_2O_3$/Si system.—73-11894
Silver chemical coating on ceramics.—73-00266
Silver coating on carbon and SiC fibers.—73-10275
Silver diffusion in lead zirconate titanate.—73-17100
Silver ionic conduction depending on atmosphere in ZnO films.—73-01025
Silver paste sintering method for bonding ceramic surfaces.—73-10349
Silver-alumina solid-state bonding: influence of the work hardening of the metal.—73-03640
Silver-containing surface layer in Simax glass.—73-10276
Silver-glass die attach paste.—73-00763
Sintering of electrically conductive silver–glass paste for thick-film devices.—73-10989
Slow fading photochromic glass.—73-03967
Structural features and diffusive motion of copper ions in $Ag_2Se$-$Cu_2Se$ superionic conductor alloys from NMR data.—73-17101
Structural study on AgI-$Ag_2O$-$CrO_3$ glass.—73-00412
Superconducting proximity effect in $YBa_2Cu_3O_{7-\delta}$-Ag-Pb junctions.—73-08222
Superplastic forming of $YBa_2Cu_3O_{7-x}$ ceramic superconductors with or without silver addition.—73-12005
Synthesis and properties of Ag-$YBa_2Cu_3O_{7-x}$ composite superconductor by mist-pyrolysis method.—73-01683
Synthesis and properties of Ag-$YBa_2Cu_3O_{7-x}$ composite superconductor by mist-pyrolysis method.—73-11924
Techniques for texturing ceramic superconductors from an amorphous precursor.—73-11931
Temperature-dependent point-contact characteristics of $YBa_2Cu_3O_x$-Ag.—73-08250
Thermal conductivity of $YBa_2Cu_{3-x}Ag_xO_{7-\delta}$.—73-08985
Toughening alumina ceramic with silver inclusions.—73-03658
Transformation-range viscosities and thermal properties of AgI-based superionic glasses.—73-14301
Transport critical current properties of $Bi_2Sr_2CaCu_2O_x$/Ag tapes.—73-04822
Variable temperature $^{127}I$ MAS NMR of ß-AgI: sensitivity of the $^{127}I$ MAS linewidth to $Ag^+$ diffusion.—73-06183

**SIMOX,**
Characterization of interface defects in oxygen-implanted silicon films.—73-06142
Fabrication of ultrathin [silicon-on-insulator] SOI by SIMOX wafer bonding (SWB).—73-07525

**single crystals,**
Alternating current susceptibility of $Bi_2Sr_2CaCu_2O_x$ single crystal in dc magnetic field up to 4 T.—73-11684
Apparatus for growing a GaAs single crystal by pulling from GaAs melt.—73-01370
Apparatus for manufacturing silicon single crystals.—73-04956
Atomic resolution scanning tunneling spectroscopic studies of $Bi_2Sr_2CaCu_2O_x$ single crystals.—73-05361
Bulk growth of single-crystal cubic silicon carbide by vacuum sublimation method.—73-16660
Calculation of the temperature profiles in GaAs single crystals grown in a thin molten layer by the Kyropoulos method with liquid encapsulation.—73-14791
Cation distribution and magnetization of $BaFe_{12-2x}Co_xSn_xO_{19}$ (x=0.9, 1.28) single crystals.—73-11646
Changes in the light-scattering diagram of undoped GaAs single crystals due to electron bombardment.—73-14795
Cleavage of ceramic and mineral single crystals.—73-06342
Crystal habits of corundum single crystals grown in cryolite flux.—73-02179
Crystal structural studies of thermal decomposition process of $PbMg_{1/3}Nb_{2/3}O_3$ single crystal into pyrochlore-type compound.—73-16080
Differential scanning calorimetry study of $Sm_{1-x}Gd_xS$ single crystals.—73-16110
Effect of impurities and intrinsic defects on physicomechanical properties of silicon carbide single crystals.—73-17290
Electron localization on the surface of particles of mechanically fractured lithium fluoride crystals.—73-05390
Electron scattering by $Bi_2Sr_2CaCu_2O_x$ single crystals.—73-15451
Evidence for flux-lattice melting and a dimensional crossover in single-crystal $Bi_{2.15}Sr_{1.85}CaCu_2O_{8+\delta}$ from muon spin rotation studies.—73-11751
Fabrication of barium titanate single crystals by solid-state grain growth.—73-09128
Fast vapor growth of cadmium telluride single crystals.—73-11210
Fine structure of ir reflection spectra of $YBa_2Cu_3O_{6+z}$ single crystals.—73-08080
Fracture toughness of single-crystal silicon at high temperatures.—73-13540
Growth and single-crystal structure of a high-pressure phase of molybdenum trioxide: $MoO_3$-II.—73-02280
Growth of $NdAl_3(BO_3)_4$ single crystal for miniature solid-state laser.—73-10548
Hexatic vortex glass [observed] in [4%] Al-doped $YBa_2Cu_3O_{7-x}$ single crystals.—73-15498
Irreversibility line [IL] in $Bi_2Sr_2CaCu_2O_8$ single crystals.—73-15523
Kinetic characteristics of the cadmium telluride single-crystal chemical polishing process in a bromine-hydrobromic acid solution.—73-15005
Making crystal filaments from extruded rods.—73-13127
Mechanical characteristics of zirconia monocrystals for structural applications.—73-03325
Method and apparatus for producing silicon single crystal.—73-02106
Method for growing a silicon carbide single crystal.—73-12483
Method for pulling up semiconductor single crystal.—73-11529
New aspects of the mixed states from six-terminal measurements on $Bi_2Sr_2CaCu_2O_x$ single crystals.—73-08142
Optical and magnetooptical properties of $HgCr_2X_4$ (X=S, Se) single crystals.—73-16552
Optical damage resistance and crystal quality of $LiNbO_3$ single crystals with various [Li]/[Nb] ratios.—73-11592
Oxygen tracer diffusion in lanthanum-doped single-crystal strontium titanate.—73-17090
Parametric excitation of magnetoelastic waves in single crystals of $CoCO_3$ and $FeBO_3$.—73-05608
Phase decomposition and superconductivity in $Bi_2Sr_2CaCu_2O_x$ single crystals.—73-11860
Photoinduced magnetic anisotropy in yttrium iron garnet single crystals.—73-15358
Portuguese-Spanish collaboration on $LiNbO_3$.—73-07909
Preparation of fine single-crystalline particles of ferroxplana, $Ba_3Co_2Fe_{12}O_{22}$, from crystallization of glass.—73-09262
Radiation-stimulated change in the surface of corundum single crystals and optical functions in the vacuum ultraviolet region.—73-05625
Rutherford backscattering and channeling studies of cleaved, polished, and annealed MgO(100) single crystals.—73-05475
Temperature control and measurement for diamond single crystal in ultrahigh vacuum.—73-17053
Thermal conductivity and phonon mean free path length in calcium-gallium-germanium garnet single crystals [at 5–300 K].—73-16619

**sinter forging,**
Sinter forging of nanocrystalline $TiO_2$.—73-06048

**sinter/sintering,**
Activating the sintering process of the ceramic bodies based on loess-like loamy clays.—73-00585
Autostresses induced by point defects in sintering phenomena: effect on mass transport and sintering stress.—73-09389
Ceramic articles and methods for preparing ceramic articles and for sintering.—73-12345
Ceramic guide pin.—73-05201
Comparative sintering study on nonconventional and commercial silicon nitride powders.—73-05716
Computational modeling and parametric study of sintering of alumina.—73-09047
Computer simulation of a sintered filter.—73-16684
Continuous in-line debinding and sintering of aluminum nitride parts.—73-02753
Corundum ceramics with low sintering temperatures.—73-12960
Development of high-performance silicon nitride ceramics and their applications.—73-05266
Distribution analysis of sinter additives in ceramic powders using scanning electron microscopy and quantitative image analysis.—73-09073
Driving force and the process of mass transport in the solid-state sintering.—73-16718
Effect of heating rate on the shrinkage of isothermal sintering.—73-05760
Effect of hydrostatic treatment of greenware and sintering profiles on the properties of ceramics in the tialite-mullite-corundum system.—73-16731
Effect of mechanical activation of basic refractories and mixes on sintering.—73-14587
Effect of sintering atmosphere on magnetic aftereffect in polycrystalline yttrium iron garnet samples.—73-04605
Effect of $SiO_2$ and $P_2O_5$ on the MgO-$Al_2O_3$-$SiO_2$ system glass-ceramics produced by sintering.—73-00616
Effects of powder processing on the characterization of magnesia derived from alkoxide precursors: II, Compaction and sintering behavior.—73-09106
Environmental influences on gas pressure sintering of $Si_3N_4$.—73-09120
Evaluation of parameters and form of kinetic equation of the sintering process.—73-16765
Experimental validation of numerical simulations of the microwave sintering process.—73-05796
Fabrication of dense ß, ß´´-alumina ceramics by reaction sintering.—73-05802
Factors controlling the sintering of ceramic particulate composites: II, Coated inclusion particles.—73-13057
Gas pressure sintering of $SiC_p$-$TiC_p$ composites.—73-13068
Gas-pressure sintering of ß-silicon nitride containing $Y_2O_3$ and $Nd_2O_3$.—73-13072
Influence of oxide additives, firing temperature, and dispersing media on sintered $Al_2O_3$.—73-05869
Influence of powder properties and green microstructure on the sintering behavior of $Si_3N_4$.—73-05870
Influence of powder properties and green microstructure on the sintering behavior of $Si_3N_4$.—73-16839
Initial-stage sintering of ß-alumina.—73-17149
Intensification of sintering of ceramic mass based on loess loams.—73-02879
Investigating sintering of magnesia obtained by chemical beneficiation.—73-02881
Layered metal intermetallic composites formed by reaction sintering.—73-05896
Liquid-phase sintering of a silicon-nitride-based ceramic.—73-02886
Method and apparatus for radio-frequency ceramic sintering.—73-04983
Method for producing an elongated sintered article.—73-04989
Method of producing high-temperature parts by way of low-temperature sintering.—73-12387
Method of producing sintered ceramic body.—73-04999
Method of sintering [ceramic] materials with microwave radiation.—73-15772
Microwave sintering of calcium strontium zirconium phosphate [CSZP] ceramics.—73-05922
Microwave sintering of large alumina bodies.—73-05924
Microwave sintering of Ni-Zn ferrites.—73-04627
Microwave sintering of silicon nitride.—73-05925
Microwave sintering of $ZrO_2$-12 mol% $CeO_2$.—73-05926
Microwave sintering.—73-05927
Mixed sintered glasses: I, Properties of the mixed sintered glasses based on ternary mixtures of powdered polydispersive glasses.—73-00517
Paradigm or paradox: Kuczynski's model of sintering.—73-03403
Plasma-activated sintering [PAS] combined with resistance heating provides new method for densifying powdered metals and ceramics in minutes.—73-05951
Pressureless sintering of aluminum nitride in the presence of yttrium-containing additives: relationships between microstructure, thermal conductivity, and oxygen content.—73-13214
Process for microwave sintering boron carbide.—73-05328
Process for the production of sintered material based on alpha-aluminum oxide, especially for abrasives.—73-00004
Processing of complex sintered reaction-bonded silicon nitride parts by microwave heating.—73-06000
Processing of high-purity mullite after reaction sintering with kaolin–alumina mixture.—73-06271
Rapid-rate sintering of anatase-type $TiO_2$ by microwave heating.—73-09292
Rapid-rate sintering of ZnO by microwave heating.—73-06010
Rapid-rate sintering of ZnO microwave heating.—73-13226
RCS [rate-controlled sintering]—taking the mystery out of densification profiles.—73-15837
Reaction sintering of cubic boron nitride using volatile catalysts.—73-02990
Recent developments in iron ore sintering: II, Research studies on sintering and sinter quality.—73-06847
Recent developments in iron ore sintering: III, Granulation and strand feeding.—73-06848
Recent developments in iron ore sintering: IV, The sintering process.—73-06849
Role of sintering parameters on microstructure development and mechanical properties of sinter/HIP silicon nitride.—73-06026
Semiconducting barium titanate ceramics prepared by boron-containing liquid-phase sintering.—73-04477
Simulation of the viscous sintering of coated particles.—73-16988
Sinterability of $TiB_2$ ceramics containing Cr and C as the sintering aids.—73-13256
Sintered SiC parts.—73-02089
Sintering aid.—73-05013
Sintering and characterization of fully dense aluminum nitride ceramics.—73-09323
Sintering and microstructure of $Sr_{0.6}Ba_{0.4}Nb_2O_6$ [SBN:60] ceramics.—73-13447
Sintering behavior of aluminum oxides derived from aluminum hydroxides with various morphologies.—73-09324
Sintering behavior of glass in two geometric configurations.—73-14493
Sintering behavior of polycarbosilanes as polymer base for SiC materials.—73-09325
Sintering behavior of ultrafine ceramic particles.—73-06054
Sintering characterization of alumina powders by hot-pressing after cold cyclic compaction—densification, grain growth, and fracture toughness.—73-09326
Sintering mechanism of Western Australian pisolitic limonite.—73-09327
Sintering of alumina green sheet with $TiO_2$ and $Cr_2O_3$ in reducing atmosphere.—73-16995
Sintering of ceramic bodies containing glass.—73-00924
Sintering of coated powders: I, Silica–yttria system.—73-06058

Sintering of pre-mullite powder obtained by chemical processing.—73-03010
Sintering of $SrSiO_3$ ceramic and its dielectric property.—73-03011
Sintering of $YBa_2Cu_3O_x$ superconducting ceramics produced by carboxylate pyrolysis.—73-15621
Sintering of $ZrO_2$-toughened mullite ceramic and its microstructure.—73-03012
Sintering silicon nitride.—73-05342
Sintering study of calcium aluminate-II.—73-13269
Slip casting of silicon nitride and mechanical properties of sintered body: IV, Compositions of sintering additives and sintering conditions.—73-09335
Statistical treatment of the sintering defect model and ceramic morphology development.—73-09341
Termination sintering in multilayer ceramic capacitors: microstructural interpretation.—73-01036
Transient viscous phase reaction sintered (TVPRS) silicon oxynitride ceramics.—73-06126

**size,**
Future of the transistor.—73-07540
Influence of specimen size on compressive strength and elastic modulus of high-performance concrete.—73-06678
Methods of plotting curves for sedimentation in centrifugal fields.—73-08415
Prognosis of optimal size of filler in enamel slips.—73-00260
Selecting an effective size-reduction system.—73-01830
Size effect in fracture of ceramic-ceramic composite materials.—73-06522

**slags,**
Alkali-activated slag cementitious material for drilling operation.—73-13675
Alkali-activated slag–cement-based radioactive waste forms.—73-00019
Application of coal slag in outer wall tiles.—73-10792
Blended cements containing granulated slags from ferrochrome production.—73-13683
Catalytic decontamination of electrothermophosphorus slag.—73-15921
Cement without clinker using calcium-adding liquid slag.—73-06634
Ceramics made of slag obtained in aluminothermic reduction of niobium.—73-02007
Chemical activating of metallurgical slag in the conditions of granulating.—73-06637
Chemical resistance of facing plates based on alkali-silicate fluorine-containing slag.—73-06889
Comparison of the microstructure and performance of alkali-slag and portland cement pastes.—73-13693
Complement and synergism of fly ash, granulated basic slag, and silica powder.—73-09861
Composition, structure, and activity of liquid slag from coal-fired cyclone furnaces.—73-08495
Development of bricks using fluidized bed slag and their production.—73-06646
Devitrifying cupola slag for use in abrasive products.—73-09766
Dissolution of MgO in CaO-"FeO"-$CaF_2$-$SiO_2$ slags under static conditions.—73-09525
Effect of $Cr_2O_3$, $ZrO_2$, $P_2O_5$, and $TiO_2$ nucleators on crystallization of glass-ceramics from antimony-bearing slag.—73-10521
Effect of slag composition on wear of alumina-spinel castable for steel ladle.—73-14588
Electron probe microanalysis of gasifier slag cement pastes.—73-09943
Fabrication of dark brown ceramic pigment and its coloring properties.—73-09131
High-strength alkali-steel–iron-slag binder.—73-13729
Hydration of alkali-slag cements at 150°.—73-00104
Influence of degree of hydration of slag on slag cements.—73-13738
Influence of slag content on the microstructure, permeability, and mechanical properties of concrete: I, Microstructural studies and basic mechanical properties.—73-03488
Influence of slag content on the microstructure, permeability, and mechanical properties of concrete: II, Technical properties and theoretical considerations.—73-06677
Instant-chilled steel slag aggregate in concrete—strength-related properties.—73-00127
Interaction of CaO-FeO-$SiO_2$ slags with partially stabilized zirconia.—73-04009
Manufacture of manganese-iron slag cement with low content of clinker.—73-10032
Metallurgical slags as blending materials for cement manufacture.—73-06686
New type of pressed fly ash products.—73-10068
Penetration of $Al_2O_3$- and $CaF_2$-containing secondary refining slags into magnesia-dolomite refractories.—73-14609
Properties and structure of cementing materials from gypsum and fluidized furnace slag.—73-06703
Reaction between chrome ore and slag.—73-00846
Reactive products and mineral phase for FKJ [fly ash slag alkali] cementitious material.—73-13659
Selection of stimulation agents for alkali-slag cement.—73-13774
Silicomanganese slag as a glass-melting accelerator.—73-07171
Suitability of GGBFS [ground granulated blast-furnace slag] as a cement replacement for concrete in hot arid climates.—73-03542
Synthesis of brown ceramic pigments from mineral slag containing staining oxides.—73-10902
Synthesis of ZnO-CoO-$Cr_2O_3$-$Fe_2O_3$-based chocolate color ceramic pigment and its coloration properties.—73-14669
Thermal conductivity, thermal diffusivity, and specific heat of slags containing iron oxides.—73-16623
Use of stainless steel slag in concrete.—73-03555
Use of water-granulated chrome slag as fine aggregate for concretes.—73-10187
Viscosity of molten $Na_2O$-$B_2O_3$ slags.—73-09008

**slip casting,**
Casting with plaster molds.—73-08325
Ceramic slip casting technique.—73-04964
Characteristic concentrations of ceramic slips in slip-casting technology.—73-12016
Characterization of cake structure and rheology via pressureless slip casting.—73-09037
Computer-integrated finishing of slip-cast ceramics by industrial robots.—73-01768
Deflocculation and casting behavior of SiC slips.—73-12968
Development of computer simulation method for slip casting process.—73-16703
Effect of some factors on centrifugal casting of oxide ceramics.—73-12026
Fabrication of high-strength Y-TZP components by slip casting.—73-02825
Improved casting slip properties with extended particle size distribution and change in deflocculation.—73-08344
Improved casting slip properties.—73-15730
Mold release agent for ceramic molds used in ceramic slip-casting processes.—73-12089
Nonaqueous composition for slip casting or cold forming refractory material into solid shapes.—73-01873
Optimizing the production process of ceramic products according to the slip casting technology.—73-01808
Physical nature of the slip casting process in porous molds.—73-01809
Process-tolerant manufacturing: an optimization strategy for processing advanced ceramics.—73-09276
Production of ceramic port liners for piston engines by slip casting.—73-12181
Real-time monitoring of cake thickness during slip casting.—73-15749
Slip cast machinable hydroxyapatite ceramics.—73-03016
Slip casting method.—73-05014
Slip casting of alumina using porous alumina mold.—73-09331
Slip casting of alumina using porous alumina mold.—73-16998
Slip casting of continuous functionally gradient material.—73-09332
Slip casting of continuous functionally gradient material.—73-16999
Slip casting of low-soda alumina: I, Preparation conditions of slurry.—73-09333
Slip casting of low-soda alumina: II, Vacuum-pressure-assisted slip casting and mechanical properties of sintered body.—73-09334
Slip casting of silicon nitride and mechanical properties of sintered body: I, Preparation conditions of slurries of silicon nitride produced by direct nitridation and mechanical properties.—73-03017
Slip casting of silicon nitride and mechanical properties of sintered body: I, Preparation conditions of slurries of silicon nitride produced by direct nitridation and mechanical properties.—73-13273
Slip casting of silicon nitride and mechanical properties of sintered body: II, Vacuum-pressure-assisted slip casting of silicon nitride powder produced by direct nitridation.—73-03018
Slip casting of silicon nitride and mechanical properties of sintered body: II, Vacuum-pressure-assisted slip casting of silicon nitride powder produced by direct nitridation.—73-13274
Slip casting of silicon nitride and mechanical properties of sintered body: III, Preparation conditions of slurries of silicon nitride produced by imide decomposition.—73-06060
Slip casting of silicon nitride and mechanical properties of sintered body: III, Preparation conditions of slurries of silicon nitride produced by imide decomposition.—73-17001
Slip-cast glass-silica materials.—73-00701

**slips,**
Approach to property fluctuation of slips for sanitary porcelain.—73-07235
Correlation of slip property with additives.—73-08330
Effects from electrolyte concentration and temperature on the effective viscosity of a slip emulsion.—73-02801
Factors influencing fluidity of hot injection molding slips.—73-12028
Flotation reagent as a clay substitute in enamel slips.—73-00234
Increasing the stability of enamel slips for composite coatings.—73-06807
Optimization of an alumina slip for pressure filtration.—73-16888
Pore sizes and filtration rates from two alumina slips.—73-13168
Predicting the optimum sizes of fillers in enamel slips.—73-00256
Redeveloping a sanitary ware formula for optimum performance.—73-07269
Relaxation properties of enamel slips.—73-06851
Structure evolution in thermoplastic slips based on aluminum nitride.—73-17014

**slurries,**
Alumina slurry.—73-16654
Boron slurry as a magnesia raw material.—73-10704
Carboxylic acids as dispersants for alumina slurries.—73-09029
Densification and dilution of black talc slurry.—73-16694
Development of short-range repulsive potentials in aqueous, silicon nitride slurries.—73-09068
Dispersion characteristics and slurry pressing behaviors of SiC whisker/SiC powder mixture in aqueous slurry.—73-16716
Effect of added organics on the fluidity of alumina slurry for doctor blade method.—73-12996
Influence of interparticle forces on the rheological behavior of pressure-consolidated alumina particle slurries.—73-05868
Kinetics optimization of uv-curable aqueous slurries for applications in ceramic processing.—73-16848
Mechanism for the thinning effect of diluents on cement raw slurry.—73-10036
Method of forming molded body.—73-12086
Numerical flow simulation of viscoplastic slurries and design criteria for a tape casting unit.—73-05938
Oscillating rheometer measurements on oilfield cement slurries.—73-00157
Rheological characteristics of aqueous alumina slurry for tape casting.—73-16974
Rheological properties of hydroxypropyl guar (HPG) slurries.—73-06023
Rheological studies on slurry materials—on the hardening and softening properties of suspending materials.—73-16975
Slurry composition and sintered part prepared therefrom.—73-12404
Surface segregation of PVA during drying of a PVA–water–$Al_2O_3$ slurry.—73-13290
System for spraying ceramic slurries onto surfaces in contact with molten metals.—73-12097
Use of Lagrangian statistics to describe slurry transport.—73-15759
Viscosity and yield stress of alumina slurries containing large concentrations of electrolyte.—73-06132

**smectites,**
Compositional end members and thermodynamic components of illite and dioctahedral aluminous smectite solid solutions.—73-12556
Mesoporous materials produced from novel trioctahedral Ni smectite.—73-05910
Mesoporous materials produced from novel trioctahedral Ni smectite.—73-13133
Properties and characterization of $Al_2O_3$ and $SiO_2$-$TiO_2$ pillared saponite.—73-12664

**soda ash,**
Soda ash picture in the United States.—73-12301

**soda,**
Phase equilibria in the system $Na_2O$-$B_2O_3$-$Ga_2O_3$ at 600°C.—73-02382
Phases in the $Na_2O$-$GeO_2$ system.—73-08698
Relation between third-order optical nonlinearity and structure of $Na_2O$-$GeO_2$ glasses.—73-06964

**soda-lime,**
Antireflection coating on soda-lime glass formed by dipping in water-soluble alkali silicates.—73-14321
Characterization of reactive ion etching of glass and its applications in integrated optics.—73-00593
Effect of the batch redox number and melting temperature on the redox equilibria in soda-lime industrial glass.—73-00617
Electric field distribution and near-surface modification in soda-lime glass submitted to a dc potential.—73-07023
European pressed glass, 1986 to 1990.—73-06568
Fracture and subcritical growth characteristics of indented cracks in soda-lime glass.—73-10442
Hydrolytic resistance of the surface of soda-lime glass coated with silica layer.—73-03792
Hydrolytic resistance of the surface of soda-lime glass coated with silica layer.—73-14002
Metal oxide and titanium oxynitride coatings on soda-lime glass.—73-14035
Microsheet glass in solar concentrators.—73-06829
New interpretation of the ir reflectance spectra of $SiO_2$-rich films on soda-lime glass.—73-03744
Physical properties of $Na_2O$-$SiO_2$ glasses: correlations derived using a network theory model developed for nonlinear hydrocarbon polymers.—73-06953
Prolate silver particles in glass surfaces.—73-14482
Reliability of strength testing for glass by the relation between sample size and strength data.—73-14273
$SiO_2$ coating and soda-lime glass formed by sol-gel method.—73-03885
Spectrophotometric determination of ferrous iron and sulfides in industrial hollow soda-lime glass.—73-14086
Strengthening and toughening of soda-lime glass by a reinforced coating.—73-14500

**soda-lime-silica,**
Absorption and emission spectra of Ag-containing soda-lime-silica glasses.—73-14129
Ac field-induced silver injection into soda lime silicate glasses.—73-00931
Alkali passivation mechanism of sol-gel-derived $TiO_2$-$SiO_2$ films coated on soda-lime-silica glass substrates.—73-00304
Alkali passivation mechanism of sol-gel-derived $TiO_2$-$SiO_2$ films coated on soda-lime-silica glass substrates.—73-10355
Bioactive glasses.—73-03709
Bubble generation at glass/refractory interfaces: a review of fundamental mechanisms and practical considerations.—73-10705
Determination of the fatigue parameters of soda-lime-silicate glass in measurement of strength by different methods.—73-00447
Effect of shock waves on fracture in tempered glass.—73-00463
Effect of wolfram tailing as new flux on melting of soda-lime-silicate glass.—73-14365
Effects of particle size and [1 wt%] additions of $Na_2SO_4$ and $NaNO_3$ on the reactions in soda-lime-silica glass batches.—73-10524

Electrical conductivity of field-assisted ion-exchanged glass with molten $PbCl_2$ salt.—73-14170
Enthalpy relaxation in thin glass fibers.—73-10438
Extinction coefficient of the cupric ion and the cuprous-cupric equilibrium in soda-lime-silica glasses.—73-13985
Gamma irradiation and heat treatment of ion-exchanged silver-containing glasses.—73-10379
Generation of secondary cracks in tempered soda-lime-silica glass.—73-03790
Generation of secondary cracks in tempered soda-lime-silica glass.—73-14193
In situ radial crack initiation at hardness indentations in strengthened soda-lime-silica glass.—73-14205
Influence of different $Al_2O_3$-containing batch materials on melting, fining, and properties of soda-lime-silica glass.—73-07145
Iron-oxide-doped alkali-lime-silica glasses: I, EPR investigations.—73-06931
Iron-oxide-doped alkali-lime-silica glasses: II, Voltammetric studies.—73-06932
Loading rate effects during indentation and impact on glass with small spheres.—73-14216
Molten glass corrosion resistance of immersed combustion-heating tube materials in soda-lime-silicate glass.—73-10744
Optical doping of soda-lime-silicate glass with erbium by ion implantation.—73-06949
Optical properties at high temperature of molten soda-lime-silica glasses containing iron oxide.—73-14243
Oscillations in the dissolution kinetics of silica glass in tris-buffered aqueous media.—73-00383
Oxygen-ion activity and its influence on redox equilibria in a ternary soda-lime-silica glass system.—73-10390
Role of water content in the phase separation of soda-lime-silicate glasses: rate of phase separation.—73-06966
Spectrophotometric analysis of ferrous, ferric, and total iron content in soda-lime-silica glass.—73-03758
Spectroscopic evidence of octahedral iron(III) in soda-lime silicate glasses.—73-10401
Strengthening of soda-lime-silica glass by gel-derived coatings.—73-14502
Strengthening of soda-lime-silica glass by sol-gel- and melt-derived coatings.—73-00707
Surface layer properties of soda-lime-silicate glass with various water contents.—73-14287
Surface-chemical study on stress corrosion of glass in aqueous solutions: II, Influence of alkali metal ions.—73-00419
Temperature dependence of indentation cracking in soda-lime-silicate glass.—73-10488
Ultraviolet absorbing, green-tinted glass.—73-00764
Viscosity, configurational energy, and structural relaxation of a silica-soda-lime glass.—73-14311

**sodalites,**
Dynamics of hydrogen-containing groups in structure of hydrosodalite.—73-02241
Ionic conductivity of (Ag, Na) nitrite sodalites.—73-04124
Synthesis and characterization of mixed ZnSe/GaP semiconductor species included in the sodalite structure.—73-15196

**sodium chloride,**
Accelerated testing of cements in brines.—73-03432
Analysis of the microwave sintering effect in NaCl using molecular dynamics simulations.—73-05691
Effect of sodium chloride on chlorination of a mixture of bismuth(III) sulfide and iron(III) oxide.—73-12576
New sodium fluxing agents for ceramics.—73-01989

**sodium oxide,**
Effect of additions of oxides of calcium, magnesium, and aluminum on the crystallization of aegirine in glasses of the $Na_2O$-$Fe_2O_3$-$SiO_2$ system.—73-00613
Gel formation and drying characteristics in the $Na_2O$-$ZrO_2$-$SiO_2$ system.—73-02839
Gel formation and drying characteristics in the $Na_2O$-$ZrO_2$-$SiO_2$ system.—73-10540
Gel region and gelation behavior of alkoxide solutions in the $B_2O_3$-$Na_2O$ system.—73-05824
Gel region and gelation behavior of alkoxide solutions in the $B_2O_3$-$Na_2O$ system.—73-16801
Gelation on solid surfaces in water-free $Na_2O$-$ZrO_2$-$SiO_2$ sols.—73-16802
Thermal stability of gels and glass-forming regions in the $B_2O_3$-$Na_2O$-$Al_2O_3$ system.—73-12896
Transformation–range viscosity and thermal property of sodium silicate glasses.—73-14300
Use in the glass industry of some chemical industry byproducts containing $Na_2O$ and CaO.—73-14524
Use of oxygen probes in the study of thermodynamic properties of the system $Na_2O$-$SiO_2$ and the effect of electron conductivity of solid electrolyte on emf of the concentration cell.—73-12727
Viscosity of molten $Na_2O$-$B_2O_3$ slags.—73-09008
XPS measurements on glass surfaces.—73-00429

**sodium sulfate,**
Sulfate as a selective redox buffer for borosilicate melts.—73-10409

**sodium,**
Anionic conductivity in $Na_{0.5-x}R_{0.5+x}F_{2+2x}$ (R=Dy–La, Y; $x$=0.1) single crystals with fluorite-type structure.—73-16030
Anomalous expansion of sodium triborate melt and its effect on glass properties.—73-06996
Antiferromagnetic correlations in $Na_xWO_3$ of superconducting compositions.—73-07988
Crystal structure and phase transitions in $NaTh_2(PO_4)_3$.—73-16081
Crystal structure of $Na^{[7]2}Zn^{[6]2}[P_2{}^{[4]}O_8(OH)]^{x/4}$.—*73-02200*
Crystal structure of $Na_xTi_3O_4$ with $0.5 \le x \le 0.57$.—73-02201
Currents of thermostimulated depolarization and internal friction in sodium silicate glasses.—73-00316
Development of $Na^+$ superionic conductors using new rare-earth silicophosphate materials by means of glass-ceramic processing.—73-14689
Diffusion of sodium cations in high silicon xerogels and gel-glass.—73-00325
Distribution of $Na^+$ ions in corrosive layer of silicate glasses.—73-03720
Effect of antimony oxide on phase separation in sodium borosilicate glass.—73-00329
Effect of antimony oxide on phase separation in sodium borosilicate glass.—73-00330
Effect of microstructure on thermal expansion of $MZr_2P_3O_{12}$ (M=Na, K, Rb).—73-05547
Effect of rare-earth ions on the phase transition of $Na_2SO_4$ crystals.—73-02245
Effect of the two-stage thermal treatment of two-phase sodium borosilicate glasses on the structure of the porous glass obtained thereby.—73-00334
Effect of uv irradiation on luminescence of sodium borate glasses activated by indium.—73-00468
Effect of water on the volatilization of sodium borate melts.—73-14364
Elastic properties of sodium lithium niobate piezoelectric ceramics at low temperatures.—73-04547
Electrical and magnetic properties of sodium solid solutions in lanthanum manganites.—73-01458
Electronic properties of $Na_{0.33}V_2O_5$ bronze obtained by the sol-gel process.—73-02608
Electronic structure in NiO(100) with adsorbed Na.—73-05391
Electroplastic effect in polarized ferroelectric $NaNO_2$ crystals.—73-01408
$Eu^{3+}$-ion probe spectroscopy in $Na_5YSiO_4$ at low temperatures.—73-08619
Ferroelectricity in barium sodium tantalate [BNT], $Ba_2NaTa_5O_{15}$.—73-07890
Formation of "Na-sepiolite" fibers by hydrothermal treatment of Na-fluor-taeniolite and Na-fluor-tetra-silicic mica.—73-05812
Formation of a profile of refractive index of sodium silicate glass upon electrodiffusion treatment in a melt of potassium nitrate.—73-00486
Formation of self-pumped phase conjugation in a Cu-doped KNSBN crystal.—73-08628
Geometric and electronic structures of Na/GaAs.—73-06220
Growth and some properties of $Na_{0.5-x}R_{0.5+x}F_{2+2x}$ single crystals (R=Y, Dy–Ln; $x$=0.1 and 0.15) with fluorite structure.—73-16501
Growth of sodium clusters on the surface of Na ß´´-alumina crystals induced by electron bombardment.—73-09157
High-thermal-expansion $NaAlSiO_4$ ceramics.—73-13089
Hopping conduction in $NaBi(MoO_4)_2$ crystals.—73-02617
Insertion reactions of sodium in $V_6O_{13}$ single crystals from a solid polymeric electrolyte.—73-00980
Interaction of sodium cyclotriphosphate with aluminum.—73-12607
Internal friction and oxygen diffusion in $x Na_2O(1-x)B_2O_3{\cdot}2SiO_2$ glasses: II, Oxygen diffusion.—73-10384
Internal friction and oxygen diffusion in $x Na_2O(1-x)B_2O_3{\cdot}2SiO_2$ glasses: I, Internal friction.—73-10385
Kinetic peculiarity of isothermal particle growth of dispersed phase in phase-separated sodium borosilicate glass.—73-14023
Lanthanide ion exchange in sodium ß-alumina.—73-05428
Light transmission of porous plates obtained from two-phase sodium borosilicate glasses of various structures.—73-00509
Local structures in $Na_4Nb(PO_4)_3$ glass and crystal: $^{31}P$ MAS NMR studies.—73-03159
Model of atomic structure of $Na_7Lu_{13}F_{46}$.—73-16218
Modified zeolite beta method of preparation.—73-05235
Molecular dynamics simulation of the trivalent europium ion doped in silica and sodium disilicate glasses.—73-00374
Monolayer coverage dependence for the surface photovoltage of Si(100)/Na.—73-07682
Mossbauer spectroscopic study of densified sodium borate glasses containing iron.—73-10389
$Na_{2+x}Nb_xP_4O_{26}$: a novel niobium phosphate bronze isotopic of the $m$=3 member of the $MPTB_p$ family.—73-02340
$Na^+$ coordination in sodium diborate and triborate glasses by X-ray diffraction.—73-06939
Nanostructure assemblies and guest-host interactions in sodium zeolite-Y [studied] using $^{23}Na$ double-rotation NMR.—73-05070
NaOH production from ceramic electrolytic cell.—73-11040
Nature of double refraction of microporous glasses.—73-00519
New modifications of tetrafluorolutetiate of sodium, $NaLuF_4$.—73-12640
Nonexponential fluorescence decay and multiphonon relaxation of the $^4F_{3/2}$ level of $Nd^{3+}$ in sodium ß´´-alumina.—73-02648
Nonstoichiometry and the long-range cation ordering in crystals of $(Na_{1/2}Bi_{1/2})TiO_3$.—73-16232
Optical absorption spectra of sodium clusters incorporated into zeolite LTA.—73-16238
Oriented color centers formed upon anisotropic action of optical irradiation on sodium silicate glass.—73-14061
Overlayer-induced valence states, and evidence for charge transfer in Na/GaP(110) and Na/GaAs(110): a comparative photoemission [PE] study.—73-11370
Peculiarities in the kinetics of isothermal growth of particle size of the dispersed phase in liquifying sodium borosilicate glass.—73-00384
Phase equilibria in the system $CePO_4$-$Na_3PO_4$.—73-02381
Phase separation in sodium borosilicate glass with additions of the oxides $ZrO_2$ and CaO.—73-00386
Phase separation in sodium borosilicate glass with $ZrO_2$ and CaO additives.—73-00387
Phase separation of halogen-containing sodium borosilicate glasses.—73-00388
Phase separation of halogen-containing sodium borosilicate glasses.—73-10392
Phase transition in $NaTiO_2$: a candidate for $S$=1/2 triangular Heisenberg antiferromagnet.—73-05456
Preparation and crystal structure of $Na_3SbO(PO_4)_2$.—73-02399
Preparation of $Na_{1-x}Ti_{2+x}Al_{5-x}O_{12}$ ($x$=0.2) fiber by precursor method.—73-02959
Preparation of $Na_{1-x}Ti_{2+x}Al_{5-x}O_{12}$ [NTAO] whiskers by calcining with excess $Na_2O$.—73-02960
Preparation of pyrochlore-type $Na_{0.39}Bi_{3.47}O_7$ containing $Bi^{5+}$ by low-temperature hydrothermal reaction.—73-08712
Preparation of quantum-size CdS-doped $Na_2O$-$B_2O_3$-$SiO_2$ glasses with high nonlinearity.—73-10584
Process for producing crystalline sodium silicates having a layered structure.—73-02062
Process for the preparation of sodium silicates.—73-05151
Profile of the index of refraction of sodium silicate glass in electrodiffusion treatment in potassium nitrate melt.—73-00534
Properties of self-pumped phase conjugation in Co-doped potassium sodium strontium barium niobate (KNSBN:Co).—73-12872
Raman study of sodium borosilicate glass containing cobalt oxide.—73-00393
Refinement of structure of $(Na,Li)_2V_2O_6$ at 293, 600, and 800 K.—73-16292
Refinement of structure of natural sodium phosphate.—73-16293
Row of defects in acceptor doping of PbTe-type semiconductors with group I elements.—73-07781
Sintering studies of NZP materials.—73-09328
Specific features of structure and properties of $Na_3Cr_2(PO_4)_3$ crystals.—73-02437
Spectroscopy of the simplest intrinsic defects in γ-irradiated NaF crystals.—73-03112
Stable three-frequency quasi-periodicity in conductivity oscillations of BSN crystals.—73-16600
Structural features of the superionic phase transition in $Na_3Fe_2(PO_4)_3$.—73-08750
Structural model of $NaYb_2F_7$ fluoritelike phase.—73-02449
Structural refinements on a sodium ß-aluminogallate crystal and a parent $Nd^{3+}$-exchanged crystal.—73-02452
Structure of color centers in $SrF_2$:Na crystals studied by optically induced dichroism.—73-02464
Structure of sodium borosilicate glass with additions of cobalt oxide studied by Raman spectroscopy.—73-00417
Structure of the sol-gel-derived sodium germanate glass—comparison with the melt-derived glass.—73-14113
Superconductivity in the $(YBa_2Cu_3)_{1-y}Na_yO_{7-\delta}$ system.—73-08228
Superconductivity in Y-Ba-Na-Cu-O.—73-08229
Surface modification of sodium aluminosilicate glasses using microwave energy: II.—73-03891
Surface segregation in sodium germanate glass containing cobalt.—73-00418
Synthesis and crystal structure of $NaTi_8O_{13}$.—73-02483
Synthesis and magnetic property of $NaFe_3V_9O_{19}$.—73-02487
Synthesis and properties of the cuprates of cesium and sodium.—73-02488
Synthesis of a new compound $NaGaTi_5O_{12}$.—73-06086
Thermal expansion of sodium borosilicate glasses.—73-00561
Thermal expansion of sodium borosilicate glasses.—73-00562
Thermodynamic properties of melts of sodium metasilicate according to data from the method of molecular dynamics.—73-00565
Thermostimulated depolarization currents and internal friction in sodium silicate glasses.—73-00421
Thermostimulated luminescence of CsI:Na crystals with different contents of the activator in the region of destruction of $Na^0$ centers.—73-02715
Trends in local optical basicity in sodium borate glasses and relation to ionic mobility.—73-10492
Twinning-induced emission phenomena in $NaNO_2$ crystals.—73-16388
Viscosity of sodium borosilicate glasses in the glass transition range.—73-00576
Viscosity of sodium borosilicate glasses in the vitrification range.—73-00577
X-ray diffraction study of $NaNbO_3$ single crystals in electric field.—73-16393
X-ray study of acentral modification of $Na_{4+x}FeP_2O_{8+x}F_{1-x}$.—73-02546

**soils,**
Advanced technology for the vitrification of contaminated soils.—73-09699
Choice of optimum compositions of soil-concrete mixtures.—73-00039
Effects of surface heterogeneity on ion adsorption by metal oxides and by soils.—73-16468
Moisture diffusion in soil–cement mixtures and compacted lean concrete.—73-00145
Rapid immunoassay field screening methods for the detection of PCB's, pentachlorophenol, and petroleum fuels in soil.—73-12183

**sol-gel,**
$^{29}Si$ NMR study of the hydrolysis and condensation of EPOXS [an epoxysilane] sol-gel solution.—73-14082
$^{31}P$ NMR study of the sol-gel process in the $SiO_2$-$P_2O_5$ system.—73-14065
Amorphous sol-gel insulating films.—73-04057
Ceramic binder and use thereof.—73-04961
Ceramic composites by the sol-gel method—a review.—73-09031

Ceramic materials, method of preparing the same, and hydrogenation and oxidation processes using the same.—73-05202
Ceramic membranes from sol-gel technology.—73-12936
Changes in physical properties and structure of sol-gel-derived $SiO_2$ films in an environment of high temperature and high humidity.—73-14142
Characteristics of cordierite-$ZrO_2$ composites fabricated by the multiphase sol-gel route.—73-06193
Characterization of sol-gel-derived coatings on optical fibers.—73-12940
Colored interference layers with high calorimetric purity prepared by sol-gel method.—73-03779
Cracking behavior of sol-gel films.—73-02756
Decreasing lead exposure from lead crystal by sol-gel coating.—73-00606
Device effects of various Zr/Ti ratios of PZT thin films prepared by sol-gel method.—73-11560
Dielectric and ferroelectric properties of $BaTiO_3$ thin films grown by the sol-gel process.—73-11561
Dielectric and piezoelectric properties of sol-gel-derived barium titanate ceramics.—73-16443
Doped sol-gel glasses for obtaining chemical interactions.—73-10625
Doped sol-gel glasses for obtaining chemical interactions.—73-10626
Elaboration and thermal stability of (alumina, aluminosilicate/iron, cobalt, nickel) magnetic nanocomposites prepared through a sol-gel route.—73-11653
Electrical and optical properties of chemically derived ferroelectric films.—73-11571
EPR investigation of sol-gel processes: I, $Mn^{2+}$ spin label–a simple structural relaxation model.—73-10371
EPR spectroscopy on sol-gel glasses.—73-10372
Experiences in use of industrial byproduct sludge for cement manufacture by sol-gel technology.—73-09957
Fabrication of hydroxyapatite sheet by a sol-gel method and its ion-exchange characteristics.—73-13055
Fabrication of undoped $PbTiO_3$ ceramics via sol-gel processing.—73-05806
Fabrication of zirconia fibers from sol-gel process.—73-02827
Fast sol-gel preparation of glasses.—73-03917
Ferroelectric PLZT thin films prepared by sol-gel route.—73-11576
Fibers from gels.—73-13059
Formation of CdS crystals in small-sized CdS-doped glasses prepared by the sol-gel process.—73-00630
Formation of $Nb_2O_5$ thin films by sol-gel technique and analysis of their crystalline phases and dielectric characteristics.—73-08872
Formation process of $SnO_2$ thin films by sol-gel method.—73-05817
Formation process of $SnO_2$ thin films by sol-gel method.—73-16795
Glass and ceramic thin films deposited by an ultrasonically assisted sol-gel technique.—73-13075
High-temperature superconducting BSCCO thin films from sol-gel process and properties.—73-11786
Immobilization of yeast cells in porous silica carrier with sol-gel process.—73-10551
Inorganic-organic sol-gel processing for glasses and nanocomposites.—73-03852
Ion migration in thin sol-gel silica coatings.—73-14020
Laser processing of sol-gel coatings.—73-10559
Local repairing of lining glass layers by the alumina powder composite sol-gel method.—73-13863
Magnetic properties of glass-metal nanocomposites prepared by the sol-gel route and hot-pressing.—73-11662
Manufacture of vitreous silica product via sol-gel process using a polymer additive.—73-00738
Mechanical strength of optical fibers coated by thin oxide layers prepared by sol-gel method.—73-03800
Method of preparing silica glass.—73-00748
Microscopic characterization of sol-gel-processed cordierite.—73-13417
Mullite and alumina–silica matrices for composites by modified sol-gel processing.—73-09218
Nanostructural control of sol-gel-derived porous alumina via modification of sol.—73-02898
Optical properties of sol-gel-based multilayer antireflective films on glass.—73-14246
Optical studies of $SiO_2$, $TiO_2$, and $SiO_2$-$TiO_2$ coatings prepared by the sol-gel process.—73-03807
Photoconductivity of PbO-doped borosilicate glass prepared by the sol-gel process.—73-10469
Photonic materials by the sol-gel process.—73-02920
Preparation and properties of calcium aluminate compositions via sol-gel processing: effects of precursors.—73-14469
Preparation and properties of $TiO_2$ films by complexing agent-assisted sol-gel method.—73-02935
Preparation and properties of $TiO_2$ films by complexing agent-assisted sol-gel method.—73-13178
Preparation and thermal expansion behavior of pollucite powders by sol-gel processing.—73-02940
Preparation by a sol-gel process of borosilicate glasses containing microcrystals of tellurium and zinc telluride.—73-14473
Preparation of $Al_2O_3$-$TiO_2$ coatings by sol-gel method and their nitridation.—73-03868
Preparation of amorphous silica powder by sol-gel methods.—73-03870
Preparation of cordierite ceramics by the sol-gel process and their properties.—73-16921
Preparation of glass-ceramics in $Li_2O$-$Al_2O_3$-$TiO_2$-$SiO_2$ system by sol-gel technique: I, Preparation of porous monolithic gel in $Li_2O$-$Al_2O_3$-$TiO_2$-$SiO_2$ system by sol-gel method.—73-10580
Preparation of mullite fiber by sol-gel method.—73-02958
Preparation of nickel oxide films by sol-gel process.—73-05978
Preparation of nickel oxide films by sol-gel process.—73-16927
Preparation of PbS quantum dot materials by the sol-gel process.—73-03873
Preparation of PZT thin films by sol-gel process and properties.—73-01428
Preparation of $SiO_2$-$M_xO_y$ thin films and gels by sol-gel method using silicic acid and metal halides.—73-13203
Preparation of spherical powders of hydroxyapatite by sol-gel process.—73-13205
Preparation of $SrTiO_3$ films by the sol-gel method.—73-02971
Preparation of $SrTiO_3$ films by the sol-gel method.—73-13206
Preparation of yttria-stabilized zirconia thin films by a sol-gel procedure using alkoxide precursors.—73-02977
Preparing densified low-porosity titania sol-gel forms.—73-05240
Principles and applications of sol-gel method: network formation and phase separation processes.—73-07164
Raman spectra of sol-gel-derived tungsten oxides.—73-02414
Recent advances in the sol-gel mechanisms of silica and $SiO_2$-$M_xO_y$ (M=Ca and Al) glassy systems in nontraditional solvents.—73-14077
Repair of glass by sol-gel coating using either conventional or microwave heating.—73-03884
Review of sol-gel thin-film formation.—73-13237
Sinterability of sol-gel-derived magnesia powders.—73-09322
Sintered sol-gel alumina abrasive filaments.—73-00005
Sintering and properties of $MgTi_4(PO_4)_6$ prepared by sol-gel process.—73-13260
$SiO_2$ coating and soda-lime glass formed by sol-gel method.—73-03885
$SiO_2$ thin films deposited by a new sol-gel technique.—73-10600
Sol-gel coating products.—73-14494
Sol-gel formation of silica-zirconia glasses.—73-10602
Sol-gel glasses and composites for optics and optoelectronics.—73-03886
Sol-gel method for preparation of specific properties of coatings on alumina alloys with anodic oxidation.—73-03887
Sol-gel method of making multicomponent glass.—73-03968
Sol-gel method of making silicon carbide and of protecting a substrate.—73-05343
Sol-gel method—application conditions and possibilities.—73-03888
Sol-gel optics.—73-06061
Sol-gel optics.—73-13277
Sol-gel preparation of ferroelectric films through metal alkoxides.—73-15287
Sol-gel preparation of M-Sb oxides from $Sb(OBu^n)_3$-M-acetate precursors with M=Mn, Co, Ni.—73-06063
Sol-gel preparation of silica or silicate-$Me_xO_y$ coatings on metal substrates.—73-13899
Sol-gel preparation of YIG ($Y_3Fe_5O_{12}$) thin film showing optomagnetic effect.—73-11673
Sol-gel process for forming a germania-doped silica glass rod.—73-03969
Sol-gel process of making gradient-index glass.—73-10665
Sol-gel process study by multinuclear NMR spectroscopy.—73-03757
Sol-gel processing and crystallization of lithium tetragermanate.—73-03020
Sol-gel processing of an entirely new family of mixed valence glasses.—73-10604
Sol-gel processing of fiber-reinforced ceramic shapes.—73-03021
Sol-gel processing of Nb-doped Pb(Zr, Ti)$O_3$ thin films for ferroelectric memory applications.—73-11615
Sol-gel synthesis of $B_2O_3$-doped anorthite and its characteristics.—73-03023
Sol-gel synthesis of $B_2O_3$-doped anorthite and its characteristics.—73-13280
Sol-gel synthesis of barium titanate powders of various compositions.—73-13281
Sol-gel synthesis of high-quality heavy-metal fluoride glasses.—73-00703
Sol-gel synthesis of metal nanocomposites.—73-14496
Sol-gel synthesis of silica gel disk as applied to supports of organic molecules with optical functions.—73-07174
Sol-gel synthesis of strontium titanate powders of various compositions.—73-09337
Sol-gel thin film formation.—73-03195
Sol-gel transition in ceramic systems [studied] by high-resolution refractometry.—73-03024
Sol-gel ultra-low-expansion glass.—73-14497
Sol-gel: principles and applications.—73-13283
Structural characterization and phase developed of sol-gel-derived mullite and its precursors.—73-10403
Structural evolution of sol-gel solutions and thin films by means of X-ray diffraction methods.—73-14092
Surface treatment of glass by sol-gel technique.—73-07179
Synthesis of composite polycrystalline $Ba_2YCu_3O_{7-y}$ superconductor by the sol-gel method.—73-04817
Synthesis of composite polycrystalline $Ba_2YCu_3O_{7-y}$ superconductor by the sol-gel method.—73-11925
Synthesis of organically modified glasses by sol-gel techniques.—73-14510
Thermochemical basis for structural variations and defect formation in sol-gel-derived glasses.—73-14119
Thick sol-gel coating preparation by generation in situ metallic particles.—73-14521
Ultrafine alumina powders via a sol-emulsion-gel method.—73-13329
Zinc solid sources for $A^{III}B^{V}$ semiconductors via the sol-gel route.—73-15234

**solar cells,**
Development of high-quantum-efficiency, lattice-mismatched, 1-eV GaInAs solar cells.—73-07444
Effects of heat treatment in $H_2$-$N_2$ atmosphere on the performance of screen-printed CdS/CdTe solar cells.—73-01139
Influence of dislocations on photovoltaic properties of multicrystalline silicon solar cells.—73-16517
Influence of growth and microstructure of electrodeposited cadmium telluride films on the properties of *n*-CdS/*p*-CdTe thin-film solar cells.—73-11272
Metal:*p*-*n*-CdTe Schottky barrier solar cell: photoelectrochemical generation of a shallow *p*-type region in *n*-CdTe.—73-07670
Properties of indium tin oxide films prepared by the electron beam evaporation method in relation to characteristics of indium tin oxide/silicon oxide/silicon junction solar cells.—73-12869
**solar collectors,**
Optical properties of $In_2O_3$-coated cover glass for solar collectors.—73-10466
**solders/soldering,**
Evaluation and simulation of thermal shock behavior by liquid solder quenching.—73-05560
Microanalysis of a copper-to-graphite solder bond.—73-00250
Physics of the main soldering methods and analysis of their influence on the bond quality of the realized multilayer capacitors.—73-01010
**solid oxide fuel cell,**
Effect of YSZ addition to solid oxide fuel cell electrodes on electrical performance.—73-00953
Electrochemical vapor deposition of stabilized zirconia and interconnection materials for solid oxide fuel cells.—73-05786
Fabrication of a planar solid oxide fuel cell by tape casting and cofiring method.—73-10947
Fabrication of a planar solid oxide fuel cell by tape-casting and cofiring method.—73-00969
Fabrication of YSZ/NiO-YSZ two-layer ceramics for tubular SOFC by multilayer slurry casting process.—73-05807
Fabrication of YSZ/NiO-YSZ two-layer ceramics for tubular SOFC by multilayer slurry casting process.—73-16778
Ionic conductors for solid oxide fuel cells.—73-01055
Process for producing solid oxide fuel cells.—73-11046
Solid electrolyte fuel cells.—73-04234
Solid oxide fuel cell development.—73-10991
Solid oxide fuel electrodes and process for producing the same.—73-04235
Solid oxide fuel electrodes and process for producing.—73-14763
Strontium-doped La(Cr, Mn)$O_3$ for solid oxide fuel cells [SOFC's].—73-01027
**solid solutions,**
Activity of NiO in (Ni,Mg)O solid solutions.—73-16027
Calculation of nonstoichiometry of ternary solid solutions of $GaAs_{1-x}P_x$.—73-01089
Character of interatomic exchange interactions in solid solutions of $Mg(Mn_xAl_{1-x})_2O_4$.—73-12547
Composition dependence of the radiation stability of the luminescence emitted by solid solutions of III-V compounds.—73-11117
Crystal structure and hydration reactivity of ß-$Ca_2SiO_4$ solid solutions.—73-09877
Defect solid solution $Na_{7/6}(Fe_{7/6-x}^{III})(Ti_{8/6-2x}^{IV}Sb_x^{V})$.—73-03084
Effective ionic radius of $Y^{3+}$ determined from lattice parameters of fluorite-type $HfO_2$ and $ZrO_2$ solid solutions.—73-05387
Electrokinetic characteristics of Pb(Ti,Zr)$O_3$ and its oxide constituents.—73-09112
Fine texture and hydration reactivity of ß-$Ca_2SiO_4$ solid solutions.—73-09962
Handbook on Characterization Techniques for the Solid-Solution Interface.—73-06604
Mechanical grinding and reforming process of the Bi-2201 phase: II, Comparing the various Bi-2201 solid solutions.—73-15551
Modified envelope method for obtaining optical properties of weakly absorbing thin films and its application to thin films of Pb(Zr,Ti)$O_3$ solid solutions.—73-08421
Orthosilicate compositions in CaO-SrO-BaO-$SiO_2$ system and their water reactivity.—73-10075
Phase change of new products of $CaSO_4$-$SrSO_4$-$H_2O$ system.—73-00162
Phase relation and electric properties of $Pb(Mg_{1/3}Ta_{2/3})O_3$-$PbTiO_3$-$PbZrO_3$ ceramics.—73-08947
Prediction of solid solution formation in glass.—73-06955
Solid solutions in CdTe-MnTe-MgTe system.—73-16306
$Sr_{1-x}Ca_xCuO_2$ [SCCO] solid solution in Bi(Pb)-Sr-Ca-Cu-O superconductors.—73-08204
Sulfate-bearing solid solution of calcium aluminates and ferrites.—73-13783
Synthesis and characterization of mixed ZnSe/GaP semiconductor species included in the sodalite structure.—73-15196
Synthesis of solid solutions of the $Pb(Mg_{1/3}Ta_{2/3})O_3$-$Pb(Yb_{1/2}Ta_{1/2})O_3$ system having no compositional fluctuation.—73-09364
Tetrahedral-site occupancies in sodium aluminum-gallium feldspar solid solutions $[Na(Al_{1-x}Ga_x)Si_3O_8]$.—73-02520
**solid state,**
Driving force and the process of mass transport in the solid-state sintering.—73-16718
**solidification,**
Controlling the solidification process of baddeleyite-corundum products.—73-03995
Ordinary-portland-cement-based solidification of toxic wastes: the role of OPC reviewed.—73-03512
Solidification process modeling: status and barriers.—73-09338

**solids,**
$^{19}F/^{29}Si$ CP MAS NMR study of microporous solids synthesized in fluoride medium.—73-08400
Anharmonism of the vibrations of the quasi-lattice and a model of fluctuation holes in glassy solids and melts.—73-00305
Experimental study of the thermophysical properties of solids.—73-08869
Fractal reaction in solids—reaction functions reconsidered.—73-05818
Fractal reaction in solids—reaction functions reconsidered.—73-17080
Frictional behavior of extremely smooth and hard solids.—73-09607
Internal friction and modulus of nano-$ZrO_2$ solids.—73-12822
Low-frequency Raman scattering and nanostructure of vitreous solids.—73-14030
Mechanically induced reactivity of solids.—73-13131
New theory of dielectric breakdown of solid dielectrics.—73-10977
Predictive modeling of liquids spreading on solid surfaces.—73-10470
Solute drag on grain boundary in ionic solids—the space charge effect.—73-03111
True contact area on caryatid boundary of solid bodies.—73-17105

**solitons,**
Polariton solitons in semiconductors.—73-15105

**sols,**
Application of silica-sol investment to dental castable ceramics.—73-16657
Formation of iron oxide films from stabilized magnetite sols—magnetic liquids.—73-04614
Process for preparing zirconia sols and/or zirconia forms.—73-02061
Rheology of alumina sols.—73-13238
Synthesis and investigation of aluminum oxide sols on the basis of commercial aluminum hydroxide.—73-17020
Ultrastructural evolution during gelation of $TiO_2$-$SiO_2$ sols.—73-10413
Zirconia sol and method for production thereof.—73-02080
Zirconia sol, method for production thereof, porous ceramic-producing slurry, and porous ceramic product obtained by use thereof.—73-12408

**solubility,**
Chemical agents for reducing solubility of silica in 1*N* sodium hydroxide.—73-09849
Isomorphic miscibility of the metavanadates of manganese, cadmium, and nickel.—73-12617
Solubility of $Ca(OH)_2$ and $CaSO_4{\cdot}2H_2O$ in the liquid phase from hardened cement paste.—73-10157
Zinc oxide solubility in KOH aqueous solutions studied at 400–500°C and pressure of 0.5–2 kbar.—73-16650

**solutions,**
Forces between alumina surfaces in salt solutions: non-DLVO forces and the implications for colloidal processing.—73-05809
Sliding friction and wear of ceramics in neutral, acid, and basic aqueous solutions.—73-06523
Solution of MgO, CaO, and $TiO_2$ in $\alpha$-$Al_2O_3$.—73-05481

**solvents,**
Effect of mixed solvent on the formation of monodispersed $Al_2O_3$ powders by hydrolysis of aluminum sec-butoxide.—73-05763
Fusibility diagrams of the multicomponent systems with neutral solvent (on the pattern of the system Pb-In-Ga-As-Sb).—73-12594
Influence of alcoholic solvents on the formation of monodispersed particles by hydrolysis of zirconium tetra-*n*-butoxide.—73-05862
Solvent dependence of tetramethoxysilane hydrolytic products on electron structure and reactivity.—73-06065

**sorbents,**
Hot gas, regenerative, supported $H_2S$ sorbents.—73-05219

**sorption,**
Comparative study of sorptional capacity of silica-containing phases of various nature in respect to protein.—73-16422
Frequency-response analysis of sorption in zeolite crystals with finite intracrystal reversible mass exchange.—73-09407
Sorption in energetically heterogeneous model silica systems.—73-16596
Sorption kinetics in zeolite crystals with finite intracrystal mass exchange: isothermal systems.—73-12880

**space charge,**
Further study of dc space charge field in [KTN] $KTa_{1-x}Nb_xO_3$:Cu crystals.—73-08874
Solute drag on grain boundary in ionic solids—the space charge effect.—73-03111

**space groups,**
Program package for obtaining unit-cell constants and possible space groups from X-ray powder diffraction data.—73-05080
Program package for obtaining unit-cell constants and possible space groups from X-ray powder diffraction data.—73-17499

**spacecraft,**
Advanced carbon-carbon for space radiators.—73-12409
Development of carbon-carbon composites for primary structure and thermal protection system of space vehicles.—73-05265
FEM analysis of SACC-II truss and component parts.—73-12431

**spalling,**
Thermal spalling and resistance to slag attack in porous high-alumina ceramic (according to pore size).—73-12895

**spark plugs,**
Spark plug insulator and a method of sintering.—73-11053

**specific heat,**
Critical behavior of specific heat in ferroelectric $K_2ZnCl_4$ and $(NH_4)_2BeF_4$ at normal-incommensurate phase transition.—73-07875
Electronic specific heat of $YBa_2Cu_3O_{6+x}$ from 1.8 to 300 K.—73-15453
Low-temperature specific heat and thermal conductivity of glasses.—73-14219
Specific heat of $TlInS_{1.8}Se_{0.2}$ in temperature range of 60–300 K.—73-16309

**spectra,**
Anisotropic optical spectra of $\alpha$-$Al_2O_3$ single crystals in the vacuum ultraviolet region: I, Spectra of absorption tail and reflectivity.—73-02551
Dynamic spectral study of CdS in room temperature thermooptical nonlinearity.—73-11150
Effect of *d*-elements on the spectral characteristics of thin films.—73-00450
Electroconducting gap and the sharp 1-eV structure in angle-resolved photoelectron spectra in $YBa_2Cu_3O_{7-\delta}$ crystals.—73-08051
Energy spectrum of chalcogen vacancies in ion-implanted PbS.—73-11195
EPR, ir, and magnetic susceptibility studies of $xCr_2O_3(1-x)(2B_2O_3{\cdot}Li_2O)$ glasses.—73-06913
Far-infrared reflection spectra of dielectric ceramics for microwave applications.—73-04101
Far-ir transmission spectra of $Hg_{1-x-y}Cd_xMn_yTe$.—73-16146
Infrared absorption bands of Cu–O stretching vibration in $YBa_2Cu_3O_{7-\delta}$.—73-15517
Infrared absorption spectra of nano-alumina.—73-05422
Infrared spectra of quartz glass in the 20–1100°C temperature range.—73-00352
Infrared spectra of quartz glass in the temperature interval 20–1100°C.—73-00353
Interpretation of the X-ray emission spectra of a-$SiO_x$.—73-02306
Lattice vibration spectra: LIX, Single-crystal infrared and Raman studies of spinel-type oxides.—73-02317
Manifestation of irregularity and inhomogeneity in spectra of scattered light.—73-14032
Microbridge spectrum of CuO.—73-16216
Normal and polarized absorption spectra of the Cr:$Mg_2SiO_4$ crystal.—73-05441
Photoinduced changes in the absorption spectrum of superconducting $YBa_2Cu_3O_{7-\delta}$ films in the 1.5–3 eV region.—73-08165
Polarized vuv spectra of $KTiOPO_4$ crystals.—73-02672
Possible role of neutral oxygen in the formation of electron spectrum in high-$T_c$ superconductors.—73-08169
Role of charge transfer in formation of X-ray and X-ray photoelectron spectra of Cu(II) compounds.—73-05474
Shape resonance in the X-ray absorption spectra of hexagonal boron nitride crystal.—73-02428
Spectral characteristics of $Ga_2Se_3$ at millimeter and submillimeter wavelengths.—73-04487
Spectral remote sensing of the dynamic temperature distribution in glass plates.—73-07076
Theoretic interpretation of characteristic electron energy loss spectra in ZnO.—73-16369
Vibrational and vibronic spectra of fluoride- and nitride-activated phosphate glasses.—73-00423
Vibrational spectra and effective ionic charges in $AgAsS_2$ and $TlAsS_2$ crystals.—73-07858
Vibrational spectra and the nature of thermal broadening of light absorption bands in $YBa_2Cu_3O_{7-x}$.—73-08274

**spectrochemical analysis,**
Comminution device for X-ray spectrochemical analyses.—73-12118

**spectrometers/spectrometry,**
American Vacuum Society Recommended Practice: recommended practice for the calibration of mass spectrometers for partial pressure analysis.—73-05018
Photoion detection with a wide dynamic range using a quadrupole mass spectrometer for nonresonant multiphoton ionization of sputtered neutrals.—73-15830

**spectrophotometers/spectrophotometry,**
Spectrophotometric method for the determination of hafnium and aluminum in zirconia and zircon sand after separation of zirconium with the tri-*n*-butyl phosphate.—73-05087

**spectroscopy,**
Application of NMR spectroscopy in the study of glass structures: II.—73-01884
Atomic layer epitaxy on (001)GaAs: real-time spectroscopy.—73-07387
Automated mass spectrometer for analysis of gas bubbles in glass.—73-08376
Characterization of surfactant and polymer aggregates at the ceramic solid-solution interface using in situ spectroscopic techniques.—73-08378
Comparison between BIS and Ti *K*-XAS for $TiO_2$: experimental and theoretical study.—73-16059
Density of states and hot electron effects in ballistic electron emission spectroscopy.—73-06203
Fastest real-time spectroscopic ellipsometry [RTSE]: applications and limitations for in situ and quality control.—73-15798
First results of microspectroscopy from a scanning photoemission microscope with a submicron probe size.—73-07530
Infrared reflection spectra of HgCdMnTe multicomponent solid solutions.—73-14990
Infrared spectroscopy of semiconductor surfaces: H-terminated silicon surfaces[—review].—73-07604
Infrared spectroscopy of wide composition range $xNa_2S+(1-x)B_2S_3$ glasses.—73-00354
Limits of complex impedance spectroscopy in ionic conductor thin-film measurements.—73-05062
Molecular beam epitaxy flux transient monitoring and correction using in situ reflection mass spectrometry [REMS].—73-11332
Optical absorption spectroscopy on $ThO_2$: analysis of oxidizing and reducing anneals and gamma and uv radiation on both flux-grown and arc-fused single crystals.—73-08680
Optical spectroscopy of $MgGa_2O_4$:$Co^{2+}$.—73-12643
Point-contact spectroscopy on oxygen-deficient $YBa_2Cu_3O_{7-\delta}$ single crystals.—73-08167
Quantitative and sensitive profiling of dopants and impurities in semiconductors using sputter-initiated resonance ionization spectroscopy [SIRIS].—73-07752
Reflectance anisotropy spectroscopy [RAS]: a new method for semiconductor surface chemistry investigation.—73-15842
Role of infrared spectroscopy in the ceramic industry.—73-12190
Spectroscopic ellipsometry [SE]: a new tool for on-line quality control.—73-12198
Spectroscopy of intracenter transitions and excitons in $TlGaS_2$-$Nd_2S_3$ crystals.—73-01318
Surface charge spectroscopy—a novel surface science technique for measuring surface state distributions on semiconductors.—73-12200

**spheres,**
Crystal structures of spheres, $NaSbGeO_5$, $NaTaGeO_5$, and $LiTaSiO_5$.—73-16098

**spheres,**
Diffusion-controlled growth or dissolution of spheres with variable temperature.—73-09401
Fluidity of spherical cement.—73-09966
Fracture of brittle spheres under compression and impact loading: I, Elastic stress distributions.—73-08873
Fracture of brittle spheres under compression and impact loading: II, Results for lead glass and sapphire spheres.—73-09600
Micro-Shirasuballoons (hollow glass microspheres) from the milled Shirasu refined by hydrothermal treatment.—73-00662
Preparation of monodispersed spherical silicon carbide by the sol-gel method.—73-09266
Preparation of monosized spherical titania fine particles by controlled hydrolysis of titanium tetraethoxide in ethanol.—73-09267
Process for the preparation of spherical amorphous silicon nitride.—73-02131
Sol-gel-derived alumina microspheres.—73-17006
Transient temperature behavior of a sphere heated by microwaves.—73-06125

**spin glass,**
Preparation and analysis of the SOG films.—73-13580
Rapid thermal annealing [RTA] of spin-on-glass [SOG] films.—73-03881
Spin-glass behavior of the system $CoFe_{2-x}Ga_xO_4$.—73-05486
Spin-glass $Sr_3FeNbO_8$ [investigated] by extended X-ray absorption fine structure and Mossbauer spectroscopy.—73-05487
Thermoremanent magnetization of Fe-Ge andalusite spin glass.—73-15372

**spin,**
EPR investigation of sol-gel processes: I, $Mn^{2+}$ spin label–a simple structural relaxation model.—73-10371
Exciton spin dynamics in GaAs heterostructures.—73-07518
Incommensurate spin density wave in metallic $V_{2-y}O_3$.—73-16514
Influence of the spin gap on the normal state transport in $YBa_2Cu_4O_8$.—73-15516
Measurement of spin-lattice relaxation times at millikelvin temperatures.—73-08663
Spin-age effects in the resistivity of copper oxide superconductors.—73-11904
Sudden appearance of an unusual spin density wave at the metal-insulator transition in the perovskite $RNiO_3$ (R=Pr, Nd).—73-16605
Temperature-induced spin reversal in *n*-GaAs.—73-01347

**spinels,**
Alumina-spinel castable refractories for steel teeming ladle.—73-14567
Composition and cation–vacancy distribution of cation-deficient Mn/Fe spinel oxides.—73-02169
Composition of spinel clinker for teeming ladle casting materials.—73-14580
Compositions of alumina–magnesia spinel synthesized from natural raw materials.—73-10708
Crack face bridging tractions in monolithic spinel.—73-06346
Decomposition of iron spinel under low oxygen partial pressure.—73-02226
Development of rebonded brick of electrically fused high-purity periclase–magnesia alumina (MA) spinel.—73-07205
Effect of stoichiometry of magnesium aluminum spinel on possibility of hole localization.—73-16123
Effects of additives on magnesia alumina spinel bricks.—73-07208
Effects of spinel on the formation process of nonohmic ZnO ceramics.—73-04295
Elasticity of single-crystal $MgAl_2O_4$ spinel up to 1273 K by Brillouin spectroscopy.—73-08512
Formation of precipitated-complex spinel in magnesia-chrome refractories and its characteristics.—73-10729
Further development of magnesia spinel bricks with their own specific properties for lining the transition and sintering zones of rotary cement kilns.—73-04005
Lattice vibration spectra: LIX, Single-crystal infrared and Raman studies of spinel-type oxides.—73-02317
Magnetic structure and exchange interactions in $Fe_{1-x}Cu_xCr_2S_4$ spinels.—73-15345
Mechanical properties of spinel–silicon carbide whisker composites.—73-03337
Mechanical properties of spinel–silicon carbide whisker composites.—73-13566

Microstructure and electrical properties of $MgAl_2O_4$ and $MgFe_2O_4$ spinel porous compacts for use in humidity sensors.—73-08918
Nonmagnetic losses of acoustic waves in polycrystalline yttrium iron garnet and nickel cobalt spinel.—73-15352
Periclase-spinel products containing fused spinel made from bauxite and periclase.—73-10752
Physicochemical bases for predicting the synthesis of oxides with a spinel structure with prescribed properties.—73-02393
Preparation and characterization of thermistors with negative temperature coefficient $Ni_xMn_{3-x}O_4$ ($1 \geq x \geq 0.56$), from formate precursors.—73-04449
Producing spherical powders of alumina–magnesia spinel using high-frequency heating in a cold crucible.—73-12058
Refractory characteristics of spinels with various MgO contents.—73-00855
Synthesis and structural characterization of defect spinels in the lithium manganese oxide system.—73-07364
Test results of alumina-spinel castable for steel ladle.—73-14628
Thermal stability, crystallographic, and electrical properties in undoped and Ba-doped Cu-Ni manganite spinels.—73-05676
Use of luminescence of $Mn^{2+}$ and $Cr^{3+}$ in probing the disordering process in $MgAl_2O_4$ spinels.—73-05683

**spodumene,**
Application test of spodumene in glazes.—73-10796
Assessment of spodumene in ceramic bodies.—73-04042
Effect of CaO addition on crystallization processes of $Li_2O$-$Al_2O_3$-$SiO_2$-$TiO_2$ glasses.—73-10366
Heat expansion of spodumene porcelain.—73-10852
Microstructural control of LAS ceramics: II, Influence of $Li_2O$-$4B_2O_3$ frit addition on the microstructure and thermal expansion of ß-spodumene.—73-03163
Microstructural control of LAS ceramics: III, Influence of $Li_2O$-$4B_2O_3$ frit addition on the microstructure and thermal expansion of ß-spodumene made from kaolinite.—73-06248
Phase charge of spodumene and its function to reduce sintering shrinkage.—73-12652
Preparation and characterization of ß-spodumene powders by sol-gel process.—73-16907
Preparation of ß-spodumene ceramic powders from metal alkoxides.—73-09251
Spodumene porcelain bodies with low thermal expansion.—73-10899
Thermal expansion data: XVI, Complex oxides with stuffed derivatives of silica structures and topaz.—73-12891

**spray drying,**
Applying spray drying to ceramics.—73-04901
Coating an oxide powder by spray drying.—73-05207
Construction of a new type of spray dryer and its application to synthesis of YBaCuO-type superconductors.—73-04686
Deformation of spray-dried granules under uniaxial loading.—73-05034
Deformation of spray-dried granules under uniaxial loading.—73-12969
Preparation of BaHfO using a spray-drying method.—73-05968
Spray drying of metal alkoxide sol for strontium titanate ceramics.—73-06067

**spray pyrolysis,**
Ceramic powder synthesis by spray pyrolysis [SP].—73-02737
Photoconducting $TiO_2$ prepared by spray pyrolysis using $TiCl_4$.—73-09238
Preparation and characterization of iron(III) oxide films by a novel spray pyrolysis method.—73-02932
Preparation of $Al_2O_3$ powders from various aluminum salts by the spray pyrolysis method.—73-09253
Properties of calcium metaphosphate and calcium diphosphate powders prepared by spray pyrolysis technique.—73-00172
Sinterability of ß-calcium orthophosphate powder prepared by spray pyrolysis.—73-06049
Synthesis of starting powders for ceramics by spray-pyrolysis technique.—73-12066
Y-TZP fine powder preparation by ultrasonic spray pyrolysis.—73-09386

**spraying apparatus,**
Economics of arc vs plasma spray for aircraft components.—73-08332
Progress report—Hobart/Tafa's Model 9000 arc spray system.—73-08359
System for spraying ceramic slurries onto surfaces in contact with molten metals.—73-12097

**spraying,**
Ceramic sprayed coatings and their applications.—73-12320
Jet spraying for refractory linings in USTK units.—73-00829

**sputtering,**
Advanced layer systems and coating techniques for large-area glass coatings by means of high-rate sputtering.—73-07106
Computational model of reactive sputtering.—73-09046
Crystal structure and gas sensing property of tin oxide films sputtered in $N_2/O_2$ atmosphere.—73-11129
Deposition rates in direct current diode sputtering.—73-05739
Diamond synthesis by sputtering.—73-16709
Emission line intensities in an rf sputtering glow discharge system.—73-05788
Formation of thin CdS films by laser sputtering.—73-01168
Growth of high-$T_c$ $YBa_2Cu_3O_x$ films with an off-axis sputtering configuration.—73-08091
Heat-treatable sputter-coated glass.—73-00735
Influence of manufacturing process of indium tin oxide sputtering targets on sputtering behavior.—73-13097
Low-pressure and -temperature deposition of transparent conductive indium tin oxide (ITO) films by the face target sputtering (FTS) process.—73-05897
Modeling of time-dependent process changes and hysteresis in Ti-$O_2$ reactive sputtering.—73-09214
Phase formation in sputter-deposited metal (V, Nb, Zr, Y,) oxides: relationship to metal, metal-oxygen, and oxygen flux.—73-09235
Plasma sputter deposition systems: plasma generation, basic physics, and characterization.—73-04940
Proposition of a novel reactive sputter deposition system for synthesizing multicomponent materials.—73-04945
Reactive sputtering model applied to AlN.—73-02993
Reactive sputtering using two reactive gases, experiments and computer modeling.—73-09296
Serial cosputtering of mixed Al/Zr and $Al_2O_3/ZrO_2$ films.—73-10274
Sputter deposition of yttrium oxides.—73-09340
Sputtering of GaAs(001) by $Ar^+$ ions with energies of 1–9 keV.—73-04488
Technology and application of filamentless rf ion sources in ion beam sputter deposition.—73-04950
Ti/TiN reactive sputtering: plasma emission, X-ray diffraction, and modeling.—73-00271
Transport of sputtered species in plasma sputter deposition systems.—73-06127
Use of the ion-beam current as a process control in the reactive sputtering of zirconium oxide.—73-09384

**stability,**
Construction and operation of fuel cells based on the solid electrolyte $BaCeO_3$:Gd.—73-00944
Effect of the microstructural features on the stability of aluminum titanate.—73-03139
Effects of melting parameters on the roof stability in a high-load electric steel-melting furnace.—73-00811
High strength, flexible ceramic materials with volumetric and shape stability on heating and cooling.—73-02014
In situ observations of unstable and stable crack propagation and *R*-curve behavior in thermally loaded disks.—73-06455
Multistability and chaos at parametrically excited spherical modes in a yttrium iron garnet sphere.—73-04630
Phase stability of chemically derived enstatite ($MgSiO_3$) powders.—73-16261
Protective atmosphere composition and surface water stability of silicate glass.—73-00692
Stability diagram for the system $YBa_2Cu_3O_{7-x}$.—73-04808
Stability of cermet coatings and their dependence on the distribution of elements.—73-00267
Stability of clay suspensions—effect of pH and polyethylenimine.—73-03027
Stability of ettringite.—73-06719
Stability of molybdenum disilicide in combustion gas environments.—73-09538
Stability of PZT piezoelectric ceramics under vibration level change.—73-15288
Stability of the properties of ceramics based on partially stabilized zirconia.—73-09672
Stability range and $T_c$ variation of superconducting $Bi_{1.92}Sr_{1.89}Ca_{0.04}Cu_2O_x$.—73-08206
Thermal stability of $Fe_{79-x}M_xB_{18}Si_3$ (M=Co, Cr) glasses.—73-14297
Thermal stability of phases in $Si_3N_4$-(-$SiO_2$)-AlN-$Y_2O_3$ system.—73-16373
Thermodynamic stability of 34 compounds of the Y-Ba-Cu-O system.—73-05516

**stabilization,**
Controlling chaos in a thin circular yttrium iron garnet film.—73-04594
Depletion stabilization/flocculation strategy for fiber-particle microcomposites.—73-09061
Further investigation of the stabilization of ß-cristobalite.—73-05407
Modeling and simulation of the oxidative stabilization process of pitch-based carbon fibers.—73-13480
Stability of metastable tetragonal zirconia.—73-02442
Stabilization of high-temperature modification of zirconium dioxide.—73-03028

**stacking faults,**
Calculated stacking-fault energies in α-$Al_2O_3$.—73-08559
Roles of stacking faults in the phase transformation of SiC.—73-02425
Roles of stacking faults in the phase transformation of SiC.—73-12677

**staining,**
Designing with Speckle-Stains.—73-06614

**standards,**
Advantages of using an ISO 9000 certified supplier.—73-17460
Ceramic activities in Vamas [Versailles Project on Advanced Materials and Standards].—73-06560
Development and characterization of the Defense Waste Processing Facility (DWPF) Environmental Assessment (EA) glass standard reference material (U).—73-08293
Development of precision and bias statements for testing drilled cores in accordance with ASTM C-42.—73-09890
Ensuring accuracy and traceability of weighing instruments.—73-05045
European (EN) and World (ISO) standards—comparison with ASTM standards.—73-13618
European standards for building lime products.—73-09948
How the ISO 9000 quality standards program works.—73-17487
Importance of precision statements in developing performance standards for cement.—73-09997
Improved interpretation of thermal spray coating bond strength data from ASTM Standard C633-79.—73-09720
International development of standards for cements.—73-10018
Is there life after ISO 9000.—73-09724
ISO 9000: insight into the certification process.—73-09725
Look at ISO 9000.—73-09726
Method for auditing suppliers' quality systems.—73-17494
New cement standard in Australia—its implication and further development.—73-10062
PEI method gains ground.—73-15829
Portland cement specifications: performance, prescription, and prediction.—73-10087
Practical pointers for implementing an ISO 9000 quality system.—73-09740
Precision statement of ASTM C 457 practice for microscopic determination of air-void content and other parameters of the air-void system in hardened concrete.—73-06697
Proposal for an international quality standard for cullet.—73-01993
Special features of cement standards in China.—73-10160
Standardizing test methods for composite materials.—73-15849
Technical standards and [the] ceramic industry.—73-17506
Time is now: planning for the Clean Air Act (CAA).—73-09752
Using existing documentation to comply with ISO 9000 standards.—73-17512
Why performance standards for hydraulic cement.—73-10192
Will the proposed ISO ceramic tile standards meet consumer expectations.—73-07280

**stannates,**
Characterization and properties of YBCO samples containing metastannate inclusion.—73-07996
Dielectric properties of oxide-doped $Ba(Ti,Sn)O_3$ ceramics prepared from ultrafine powder.—73-16447
Optical properties of transparent and conductive $Cd_2SnO_4$ films.—73-08934
Structure of lead(II) tetrafluorostannate(II) prepared by hydrothermal synthesis.—73-05502

**statistical process control,**
Approach and realizations in the domain of quality assurance.—73-03380
Key factors in obtaining maximum results from statistical process control.—73-15732
Precontrol: implementation and effect on washer parameters.—73-13882
Process centering—the Taguchi loss function.—73-15745
Short run SQC (statistical quality control) charting methods for monitoring laboratory repeatability.—73-12194
Statistical process control: beyond chart keeping.—73-15756
Using SPC for the dry pressing of beryllia parts.—73-04183

**steam,**
Practical approach of the use of dry steam injection in clay processing.—73-04941

**steel,**
Chloride-induced corrosion of reinforcing steel.—73-03443
Comparative study of plasma nitriding behavior of a type 316 stainless steel and a microalloyed steel.—73-06757
Controlling the composition of the heat-insulating mixtures used for teeming steels.—73-00792
Deformed steel fiber-cementitious matrix bond under impact.—73-00055
Enameling of titanium-stabilized steel.—73-03585
Erosion of an aligned alumina-stainless steel composite.—73-06782
Fatigue crack growth behavior of alumina plasma-sprayed stainless steel.—73-03588
High-speed sliding of $Al_2O_3$ pins against an En-24 steel disk.—73-06449
Impact strength of glass coatings on prealuminized steel.—73-00240
Initial steps of corrosion in the steel/$Ca(OH)_2$+$Cl^-$ system—the role of heterogeneities on the steel surface and oxygen supply.—73-03492
Interface structures and bonding strength of $Si_3N_4$/304 stainless steel joints.—73-03606
Interfaces in a system of chromium oxide–duplex steel.—73-03608
Kinetics of growth of plasma-nitrided layers on a titanium-modified stainless steel.—73-06813
Prealloyed high-vanadium, cold work tool steel particles and methods for producing the same.—73-00293
Steel corrosion in concretes deteriorated by chlorides and sulfates: electrochemical study using impedance spectrometry and "Stepping Down the Current" method.—73-03540
Testing of magnesia-spinellide refractories for gas-oxygen refining of corrosion-resistant steels.—73-00876
Vitreous or porcelain enamel and enameling steels.—73-03663
Wear mechanisms of silicon nitride, partially stabilized zirconia, and alumina in unlubricated sliding against steel.—73-06550

**steelmaking,**
Progress in application technology of refractories to steel industry.—73-04013
Recent steelmaking technology in Japan.—73-00850
Service of refractories in steelmaking plants.—73-00860

**stoichiometry,**
Stoichiometry of fluorotopaz and of mullite made from fluorotopaz.—73-08744

**stones,**
More ceramics and natural stone at Cevisama.—73-17495

**stoneware,**
Application of green stock of opalescent glazes to household stoneware.—73-10793
Ceramic composition for the production of the top layer of two-layered stoneware tiles.—73-10911
Corrosion resistance in cast-stone materials.—73-03219
Corrosion resistance of stone cast materials.—73-03220
Corrosion resistance of stone castings.—73-03221
Corrosion stability of cast stone.—73-03222

Development of stoneware wall and floor tiles once-fired at low temperature.—73-14651
European ceramics and the elusive "Cittie of Raleigh."—73-06615
High whiteness opalescent glaze for once-fired stoneware.—73-10853
Influence of the structure of stone casting materials on bending strength.—73-03318
Microstructure of Yixing red stoneware and its permeability.—73-14663
Opalescent glaze of raw material for stoneware.—73-10873
Producing cast stone sheets to close size tolerances.—73-01820
Radiation resistance in cast-stone materials.—73-02678

**storage,**
Raw material stockpiling techniques.—73-12294
Storage of additives for cement production at the Marker Cement Works, Harburg [Germany].—73-13780

**strain,**
Critical appraisal of limiting strain rates for compression testing of ceramics in split Hopkinson pressure bar [SHPB].—73-06361
Elastic and plastic contributions to X-ray line broadening of InGaAsP/InP heterostructures.—73-11175
Electronic properties of strained heterostructures.—73-07498
Influence of internal strain on the charge distribution and superconducting transition temperature in $Ba_2YCu_3O_x$.—73-01575
Laser speckle microstrain measurements on small-diameter fibers.—73-15810
Measurement of local lattice strain through convergent-beam electron diffraction.—73-05435
Method of estimating the limiting strain in cast refractories on crystallization and annealing.—73-01912
Minute strain fields due to vacancy-type defects in a rapidly cooled Czochralski-grown silicon crystal.—73-17087
New apparatus for measuring the ultimate strain of thin films.—73-05071
Principle and application of the Senarmont method—application technology of glass strain viewers: IV.—73-01925
Stress and strain in glass industry—application technology of strain viewers: V.—73-00549
Ultrahigh strain ceramics with multiple field-induced phase transitions.—73-15299

**strength,**
Analysis for strength degradation of indented specimens due to thermal shock.—73-05528
Analysis of fracture strength of $Si_3N_4$ using Weibull's multimodal distribution.—73-03237
Application to field construction work of extremely early strength method and accuracy detection of materials control of concrete.—73-09821
Bend strength versus tensile strength of fiber-reinforced ceramics.—73-06329
Bending fracture strength of sintered silicon nitride disks with shoulder fillet at room temperature.—73-06330
Bending strength and microstructure of commercial porcelains for tablewares.—73-03974
Bending strength changes of fiber-dispersed porous $ZrO_2$ ceramics during repeating thermal shock tests.—73-06332
Biaxial compressive strength of silicon nitride: new data—micromechanics models.—73-06333
Bonding strength of alumina joint bonded under the alternating stress.—73-06335
Breaking down the barriers for ceramic matrix composites (CMC's).—73-02003
Calculation of the dynamic bending strength of glass measured by impact.—73-00436
Cement strength and concrete strength—an apparition or a dichotomty.—73-09839
Comparison of the electrical and mechanical strengths of conventional and flux-sintered barium-titanate-based dielectrics.—73-00939
Compressive strengths of hydraulic cements produced in the United States.—73-06640
Correlations between strength and acoustic properties in yttria-stabilized zirconia polycrystals.—73-03250
Crushing strength determination of individual granules.—73-12962
Development of compressive strength and porosity of some regulated set cements (RSCS) both made from rotary-kiln and laboratory-oven clinker hydrated at 20° *and* 5°C.—*73-03451*
Development trends in advanced ceramics.—73-02009
Die pressing test for the estimation of agglomerate strength.—73-05039
Discreteness of high-strength state of glass.—73-14158
Effect of consolidating condition on compressive strength of concrete.—73-09902
Effect of defects and grain size on strength of mullite ceramics.—73-06376
Effect of edge defects on strength of plate glass subject to lateral bending.—73-00454
Effect of hot extrusion, other constituents, and temperature on the strength and fracture of polycrystalline MgO.—73-03266
Effect of production parameters on strength and manufacture of plate glass.—73-00615
Effect of production parameters on the variation of strength values for commercial porcelain.—73-00905
Effect of specimen number on the determination of the characteristic strength and Weibull modulus of ceramics—an experimental study.—73-15792
Effects of ceramic microstructural character on machining direction–strength anisotropy.—73-05777
Effects of exposure time and strain rate on the elevated temperature tensile strength of SiC monofilaments.—73-06394
Effects of transition zone microstructure on bond strength of aggregate–portland cement paste interfaces.—73-03461
Enamel–metal bonding strength with different firing cycles.—73-00227
Evaluation of cylinder size and capping method in compression strength testing of concrete.—73-09951
Evaluation of fiber strength characteristics on the basis of the fiber fragmentation test.—73-17309
Evaluation of strength testing results of wall bricks.—73-10679
Evaluation of tests for measuring the strength of ceramic tubes.—73-17310
Forecasting working life for glass components under persistent fluctuating loads.—73-00483
Formulation for the effect of surface grinding on strength degradation of ceramics.—73-03294
Fracture strength of $Si_3N_4$ [analyzed] using Weibull's multimodal distribution.—73-13535
Fracture strength of silicon nitride under biaxial stresses.—73-06436
Fracture strength of silicon nitride under biaxial stresses.—73-13536
Fracture strength testing of δ-alumina fibers with variable diameters and lengths.—73-09601
Glass edge quality and strength.—73-00490
High-strength porcelain.—73-10854
High-temperature failure mechanisms of sintered silicon nitride [SSN].—73-06451
High-temperature strength of $TiB_2$ ceramics.—73-17349
How to prevent strength reduction of concrete due to large size coarse aggregate by means of chemical admixture in 60-cm lifts.—73-09984
Impact strength of ceramics.—73-03310
Improved interpretation of thermal spray coating bond strength data from ASTM Standard C633-79.—73-09720
Improvement of mechanical strength of porcelain bodies by fine grinding of raw materials.—73-10858
Increasing the strength and specific impact strength of glass-ceramics by combined strengthening methods.—73-00644
Influence of condensed silica fume on the concrete strength.—73-00114
Influence of density and grain size on the bending strength of Si-impregnated silicon carbide.—73-03315
Influence of environment on strength of ceramics.—73-03316
Influence of shaping method on the strength of ceramics.—73-09177
Influence of structural defects on the strength of glass optical fibers.—73-10448
Influence of the age of concrete on the strength and rigidity of beams.—73-00125
Influence of the structure of stone casting materials on bending strength.—73-03318
Interrupted concrete curing.—73-00129
Measurement of interface strength by the modified laser spallation technique: II, Application to metal/ceramic interfaces.—73-09629
Micromechanics-based strength prediction methodology for notched metal-matrix composites.—73-03341
Nucleation and pozzolanic factors in strength development of class F fly ash concrete.—73-00152
Predicting the shock [impact] strength of targets made of brittle materials.—73-06502
Prediction of compressive strengths of mortars made with portland cement–blast-furnace slag–fly ash blends.—73-00168
Presentation of two-dimensional property function for ceramic floor tiles.—73-10885
Probabilistic methods for ceramic component design and implications for standards.—73-17417
Relationship between bending strength and tensile strength.—73-09663
Relationship between Weibull moduli for tensile and bonding fracture strength of brittle solids (the case of a three-parameter Weibull distribution).—73-13583
Reliability factors in ceramic/metal joining.—73-00264
Role of grain size in strength variability of alumina.—73-13586
Sheet glass strength in relation to production parameters.—73-00700
Special and new cements.—73-10159
Strength analysis of ceramics under mechanical and thermal loading.—73-06528
Strength and fracture of glass.—73-14281
Strength and microstructure of electrodischarge-machined titanium diboride.—73-09675
Strength and toughness of reinforced chemically bonded ceramics [CBC's].—73-10164
Strength development in hardened cement paste: examination of some empirical equations.—73-06722
Strength development of concrete cured at low temperature.—73-00193
Strength development of lime mortar and cement mortar including pozzolana with different finenesses.—73-10167
Strength increase of concrete over time.—73-13781
Strength levels of flat glasses.—73-07078
Strength of ceramic structural parts under multiaxial loading.—73-13594
Strength of glass under a prolonged load.—73-00547
Strength of thin 2-D carbon-carbon composite as a function of reinforcement fabric thickness and fiber type.—73-13595
Strength optimization through powder modification.—73-06069
Strength properties of basalt fibers.—73-00548
Strength variability in brittle materials with stabilizing and destabilizing resistance fields.—73-06530
Strength versus gauge length in ceramic matrix composites.—73-09677
Tensile strength of a fiber-reinforced ceramic.—73-03363
Tensile strength of a water-setting (hydration-hardening) zirconium-dioxide-based concrete in the 300–2300 K range.—73-00197
Tensile strength of dried gel-cast green bodies.—73-17444
Testing high-strength concrete compressive strength.—73-13788
Testing the hot-temperature strength of ceramic pins.—73-03365
Thermal proof test of ceramics.—73-05090
Time-dependent strength degradation and reliability of an alumina ceramic subjected to biaxial flexure.—73-17447
Transverse strength of SCS-6 silicon carbide fibers—correction.—73-06544
Transverse strength of SCS-6 silicon carbide fibers.—73-03373
Ultimate strengths of fiber-reinforced ceramics and metals.—73-03374
Ultimate tensile strength of metal and ceramic matrix composites.—73-06547

**strengthening,**
Developing methods and a technology for strengthening glass-ceramics for design purposes.—73-00610
Fast strengthening glass lenses.—73-03918
How and why of chemically strengthened glass.—73-07139
Increasing the strength and specific impact strength of glass-ceramics by combined strengthening methods.—73-00644
Obtaining cordierite glass-ceramics suitable for strengthening.—73-00673
Statistical aspects of the thermal shock damage and the quench strengthening of ceramics.—73-05642
Strengthening glass-ceramics.—73-00706
Strengthening porous silicon nitride ceramics.—73-08543
Toughening and strengthening of ceramics reinforced by dilatant transformations and ductile particles.—73-03370

**stress,**
Algorithm for determining instantaneous and residual quenching stresses.—73-00433
Application of weight function method for crack analysis in thermal stress fields.—73-06325
Aspects of residual thermal stresses in continuous-fiber-reinforced ceramic matrix composites.—73-08810
Autostresses induced by point defects in sintering phenomena: effect on mass transport and sintering stress.—73-09389
Bose-Einstein condensation of paraexcitons in stressed $Cu_2O$.—73-16415
Comparison of stress measurement techniques.—73-15781
Determination of the residual stresses in a vitreous enamel by indentation.—73-06766
Dynamics of thermal stresses in certain optical materials during contact heating on one side.—73-05542
Effect of mechanical stress and electric field on the morphotropic tetragonal and rhombohedral phase boundary in PZT system: thermodynamic consideration.—73-16118
Effect of residual stress due to Knoop indentation on subcritical crack growth [SCG] behavior in ceramics.—73-06389
Effect of uniaxial stress on the superconducting transition in $YBa_2Cu_3O_7$.—73-08041
Elastic stress fields caused by sliding microindentation of brittle materials.—73-06402
Evaluation of stress intensity factor of silicon nitride with bridge indentation crack by caustic method.—73-01896
Evaluation of stress intensity factor of silicon nitride with bridge indentation crack by caustic method.—73-12135
Evaluation of thermal residual stresses in SiC/MLAS and SiC/SiC composites by the microindentation push-down test.—73-03285
Evaluations of residual axial stresses and interfacial friction in Nicalon fiber-reinforced macrodefect-free cement composites.—73-00085
Experimental measurement of residual stress field around a sharp indentation in glass.—73-05046
Geometry effects for stress intensity factor of sandwich specimen for measuring interfacial fracture toughness.—73-05050
High stress–low stress type low cycle fatigue of an HTGR graphite.—73-13545
High-pressure HVOF [high-velocity oxy-fuel]—an update.—73-08341
Identification of hydration reactions through stress induced by volume change: II, $C_4AF$ systems.—73-03481
Identification of hydration reactions through stresses induced by volume change: I, $C_3A$ systems.—73-00108
Improvement of service life of ladle shroud.—73-00823
In situ measurements of film stress in AlN sputtered onto moving substrates.—73-01906
Inclusion of the nonlinearities of the physical contents in an algorithm for calculation of quenching stresses.—73-08885
Influence of temperature and time on stresses in congealed concrete under thermal cycling.—73-00124
Inner stress induced by Cu metal precipitation at grain boundaries in low-temperature-fired Ni-Zn-Cu ferrite.—73-14711
Internal stresses in yttrium aluminum garnet crystals grown by horizontal directed crystallization technique.—73-02624
Interpretation of stresses in the glass-bonded ferrites by Vickers indentation method.—73-13557
Intrinsic stress in sputter-deposited thin films.—73-13105
Measurement of intrinsic stresses during growth of aluminum nitride thin films by reactive sputter deposition.—73-09200
Measurement of residual stresses in machined ceramics using the indentation technique.—73-06475
Measurement of residual stresses in sapphire fiber composites using optical fluorescence.—73-06476
Measurement of stress distribution in locally tempered glass cups.—73-10451

Mechanism of delamination of thin films under thermal and residual compressive stresses.—73-13569
Method for measuring temperature-dependent stress and thermal expansion of coatings.—73-15818
Microcracking stress and transverse properties of hybrid ceramic matrix composites.—73-17398
Modeling of the intrinsic stress in PVD coatings.—73-05930
Multiaxial equivalent of stressed volume.—73-17404
Numerical modeling of residual stresses in graded ceramic-metal joints.—73-03630
Origin of *F* spots and stress sensitivity in lanthanum lead zirconate titanate.—73-11593
Piezospectroscopic determination of residual stresses in polycrystalline alumina.—73-05614
Precision measurements of stress-birefringence in glass.—73-14255
*R*-curve and compliance change upon renotching.—73-03347
Reduction of residual stress on bonding interface for dissimilar materials.—73-03638
Relationship between microstructure and residual stress in $YBa_2Cu_3O_{7-x}$.—73-01648
Residual stress analysis in glass specimens of complicated shape using integrated photoelasticity.—73-14275
Residual stress and the stress-optic effect in mixed crystals of $K(D_xH_{1-x})_2PO_4$.—73-05627
Residual stress characteristics of functionally gradient materials.—73-03639
Residual stress characteristics of functionally gradient materials.—73-10272
Residual stress in glass layer coated on ceramic substrate.—73-05628
Residual stresses in polycrystalline diamond compacts.—73-13584
Significance of nonlinear stress-strain and *R*-curve behavior of thermal shock of ceramics.—73-06519
Simple model for the formation of compressive stress in thin films by ion bombardment.—73-06046
$SiO_2$ film stress—thickness dependence, nonplanar oxidation, and fluorine-related effects.—73-02688
Statistical approach to parameter study of stress in multilayer films of phosphosilicate glass and silicon nitride.—73-03354
Strength degradation of ceramics caused by residual stress around impression.—73-06529
Stress and strain in glass industry—application technology of strain viewers: V.—73-00549
Stress prediction and measurement in chemical toughening.—73-00404
Stress relaxation in refractories during different modes of loading.—73-00869
Stressed and strained condition of the checkerwork, lining, and shell of a blast-furnace hot-blast stove with poured checkerwork.—73-00870
Stressed enamel for easy breaking ampoules.—73-03761
Stresses in multilayer combinations of sputter-deposited coatings of Ni, Ti, TiC+Ni, and $TiB_2$+Ni on coated carbon steel substrates.—73-00269
Surface stress measurement of thermally tempered float glasses.—73-14508
Texture and residual macrostress of Ti-N coatings.—73-05649
Theoretical experimental method for evaluating the limiting stressed state of cast-melted refractories on crystallization and annealing.—73-00879
Thermal stress analysis on the refractories at the bottom part of top and bottom blowing BOF (basic oxygen furnace).—73-14630
Thermal stresses by joining different glasses depending on cooling rate.—73-00564
Thermal stresses in materials with temperature-dependent properties.—73-05677
Thermally induced micromechanical stresses in ceramic/ceramic composites.—73-05678
Thermodynamic equilibria in two-phase, elastically stressed ionic crystals.—73-12721
Three-dimensional finite element analysis of thin-film stresses using ALGOR personal-computer-based software.—73-01934
Transient flat-band voltage shifts following high-voltage stressing of thin oxides.—73-04181
Uniaxial stress behavior of Y-TZP.—73-16644

**strontium barium niobate,**
Effect of structural changes in complex perovskites on the temperature coefficient of the relative permittivity.—73-07307
Formation of self-pumped phase conjugation in a Cu-doped KNSBN crystal.—73-08628
Properties of self-pumped phase conjugation in Co-doped potassium sodium strontium barium niobate (KNSBN:Co).—73-12872
Radiationless transition of $Eu^{3+}$ excited state $^5D_0$ in SBN crystals.—73-12666
Raman spectrum of $Sr_{0.61}Ba_{0.39}Nb_2O_6$.—73-01429
Sintering and microstructure of $Sr_{0.6}Ba_{0.4}Nb_2O_6$ [SBN:60] ceramics.—73-13447

**strontium oxide,**
Coprecipitation of two insoluble products of chemical reactions.—73-16689
Epitaxial growth of MgO thin films on silicon by dual ion beam sputtering [DIBS].—73-02815
Exploring the feasibility of producing $CeO_2$-SrO-based solid electrolytes.—73-00968
Magnetooptical properties of $Cd_{1-x}Mn_xSe$ microcrystallites in $SiO_2$ glass prepared by rf sputtering.—73-02641
Phase equilibria and crystal chemistry in portions of the system SrO-CaO-1/2$Bi_2O_3$-CuO: V, The system SrO-CaO-1/2$Bi_2O_3$.—73-16248
Photochromic glasses in the system SrO-ZnO-$Al_2O_3$.—73-03750
$Sr_3U_{11}O_{36}$: crystal structure and thermal stability.—73-02440

**strontium titanate,**
Characterization of insulating boundary layers of BL [barrier layer] capacitors.—73-07287
Cleaning the surface of $SrTiO_3$(100) and $LaAlO_3$(100) under moderate temperature condition by Bi adsorption/desorption treatment.—73-02747
Comparative study of the electronic structure of titanium dioxide and strontium titanate.—73-05537
Conduction mechanism and defect structure of acceptor- and donor-doped $SrTiO_3$.—73-03082
Conduction properties of grain boundary in $SrTiO_3$-$Bi_2O_3$ capacitors.—73-00940
Conduction properties of grain boundary in $SrTiO_3$-$Bi_2O_3$ capacitors.—73-10926
Critical behavior of $SrTiO_3$ near the 105-K phase transition.—73-16072
Defect structure of strontium titanate thin films.—73-09395
Dielectric properties and defect structure of $Sr_{1-x}La_xTiO_3$ ceramics.—73-04076
Dielectric relaxations in $SrTiO_3$ doped with $La_2O_3$ and $MnO_2$ at low temperatures.—73-16448
Doping in low-temperature-sintered $SrTiO_3$ GBBL [grain boundary barrier layers] capacitors.—73-04079
Effect of heat treatment on the $SrTiO_3$ thin films prepared by radio-frequency magnetron sputtering.—73-13006
Effect of sintering atmosphere on interface migration of niobium-doped strontium titanate during infiltration of oxide melts.—73-10938
Effect of substrate temperature on the orientations of radio-frequency-sputtered $Ba_2Si_2TiO_8$ thin films.—73-16743
Effects of crystallization on structural and dielectric properties of thin amorphous films of $(1-x)BaTiO_3$-$xSrTiO_3$ ($x$=0–0.5, 1).—73-02591
Electron cyclotron resonance plasma-assisted radio-frequency-sputtered strontium titanate thin films.—73-13043
Filling dependence of electronic properties on the verge of metal-Mott-insulator transition in $Sr_{1-x}La_xTiO_3$.—73-16498
Formation of strontium metatitanate in the system $SrCO_3$+$TiO_2$, SrO+$TiO_2$+$H_2O$.—73-16793
Fourier transform Raman spectroscopy of superconducting $YBa_2Cu_3O_{7-\delta}$ films on strontium titanate and magnesium oxide substrates.—73-15484
Growth of strontium titanate thin films of controlled thickness by the hydrothermal-electrochemical method.—73-16810
Hydrothermal strontium titanate films on titanium: an XPS and AES depth-profiling study.—73-10959
Identification of the interface between $SrTiO_3$(001) substrate and a $Bi_2Sr_2CaCu_2$ superconducting thin film.—73-08099
In situ observation of growing surface of oxide films by reflection high-energy electron diffraction beam-excited Auger electron spectroscopy.—73-17146
Initial growth of epitaxial (001)$SrTiO_3$ film deposited in situ on (001)YBaCuO/(100)MgO.—73-15519
Isothermal capacitance transient spectroscopy of grain-boundary interfacial states in Bi-doped $SrTiO_3$ ceramics.—73-07331
Kinetics of nonequilibrium carriers and luminescence in $SrTiO_3$ under three-photon laser radiation absorption.—73-16527
Local symmetry of hydrogen in cubic and tetragonal $SrTiO_3$ and $KTaO_3$:Li determined by polarized Raman scattering.—73-08657
Low-temperature preparation of $SrTiO_3$ thin films.—73-13122
Oxide superconducting device.—73-04860
Oxygen tracer diffusion in lanthanum-doped single-crystal strontium titanate.—73-17090
Oxygen-deficient $SrTiO_{3-x}$, $x$=0.28, 0.17, and 0.08: crystal growth, crystal structure, and magnetic and transport properties.—73-02369
Positron annihilation study of $SrTiO_3$-based ceramics.—73-03108
Preliminary consideration of the growth behavior of $CeO_2$, $SrTiO_3$, and $SrVO_3$ films on Si substrate.—73-05955
Preparation of $SrTiO_3$ films by the sol-gel method.—73-02971
Preparation of $SrTiO_3$ films by the sol-gel method.—73-13206
Radiation- and thermally induced defects in $SrTiO_3$.—73-16583
Reaction kinetics and grain growth behavior in $BaTiO_3$-$SrTiO_3$-$CaTiO_3$ ceramics.—73-17189
Reflection high-energy electron diffraction intensity monitored homoepitaxial growth of $SrTiO_3$ buffer layer by pulsed laser deposition.—73-06017
Single-crystal $SrTiO_3$ produced by the method of metallorganic decomposition.—73-09321
Size effect of electrocaloric cooling in strontium-titanate-based structure.—73-16595
Sol-gel synthesis of strontium titanate powders of various compositions.—73-09337
Spray drying of metal alkoxide sol for strontium titanate ceramics.—73-06067
Structural and electrical characteristics of $SrTiO_3$ thin films for dynamic random access memory applications.—73-07359
Structural properties of rf-magnetron-sputtered $Ba_{1-x}Sr_xTiO_3$ thin film.—73-13451
Structural, optical, and dielectric properties of sol-gel-derived $SrTiO_3$ thin films.—73-08972
Surface structure of $SrTiO_3$(001) with various surface treatments.—73-16348
Tetrahedrally coordinated $Cr^{5+}$ in $SrTiO_3$.—73-05510
Unit cell parameter of annealed strontium titanate single crystals.—73-02533
VDR [voltage-dependent resistor] effect in Bi-diffused $SrTiO_3$-based ceramics.—73-11504
$YBa_2Cu_3O_7$ growth on metal substrates with $SrTiO_3$ buffer layer by metallorganic chemical vapor deposition.—73-11944

**strontium,**
Barium strontium titanate photorefractive device and method for making the same.—73-11631
Characterization of the defect structure of polycrystalline Sr-ß-alumina ceramics using high-resolution transmission electron microscopy.—73-06143
Chemical and electrical properties of Yb-doped strontium cerates in coal combustion atmospheres.—73-02560
Chemical pressure and other effects on strontium substitution in $YBa_2Cu_3O_{6.8}$.—73-01507
Coated metal article.—73-03676
Cofiring of semiconducting (Ba,Sr)$TiO_3$ and (Ba,Pb)$TiO_3$ ceramics.—73-14809
Composition dependence of carrier concentration and conductivity in $(Ba_{1-x}Sr_x)PbO_{3-\delta}$ system.—73-08827
Crystal structure and magnetic properties of orthorhombic $Sr_2VO_4$ with tetrahedral vanadium(IV).—73-02180
Crystal structure of $Bi_2Sr_2CuO_6$: a structure based on periodic crystallographic shear planes in the "2201" structure.—73-08587
Crystal structure of high-pressure $SrB_2O_4$(IV).—73-02195
Crystal structure of $Sr_3Y_2Ge_3O_{12}$.—73-02213
Crystal structure of $SrCuV_2O_7$ and structural family $SrMV_2O_7$ (M=Cu, Zn, Mg, Sr).—73-16095
Dielectric properties and microstructural behavior of B-site calcium-doped barium titanate ceramics.—73-02570
Dielectric properties of Ni-doped (Ba, Sr)$TiO_3$ ceramics at very low frequencies.—73-04078
Effect of oxidizer addition for synthesis of Sr-Ca-Cu-O superconductor.—73-08034
Effect of oxidizer addition for synthesis of Sr-Ca-Cu-O superconductors.—73-15430
Effect of various dopants on the dielectric properties of barium strontium titanate.—73-04081
Effects of CaO and $SiO_2$ addition on microstructure and intrinsic coercivity [iHc] of sintered Sr ferrite.—73-01456
Electrical properties and film structures of $(Ba_xSr_{1-x})TiO_3$ [BST] thin films by rf sputtering.—73-04085
Electrical properties of $Sr_{1-x}La_xTiO_3$ ($0\le x\le 0.1$) single crystals grown by the floating zone method.—73-02603
Electron spin resonance in $Sr_{0.6}Ca_{0.4}CuO_2$.—73-11746
Electronic structure of $SrVO_3$.—73-16135
Energetics of $La_{2-x}Sr_xCuO_{4-y}$ solid solutions ($0\le x\le 1$).—73-02264
Evolution of microstructure and V-shaped positive temperature coefficient of resistivity of $(Pb_{0.6}Sr_{0.4})TiO_3$ materials.—73-07513
Ferromagnetic *p-d* exchange in $Zn_{1-x}Sr_xSe$ diluted magnetic semiconductor.—73-15326
Formation of oriented conductive $SrVO_{3-x}$ (SVO) films on Si(100) substrates by evaporation in low-pressure hydrogen.—73-04105
Grain-boundary properties of oxygen hot isostatically pressed barium strontium titanate with positive temperature coefficient of resistivity.—73-01175
Hot-pressing and high-temperature mechanical properties of $BaAl_2Si_2O_8$ (BAS) and $SrAl_2Si_2O_8$ (SAS).—73-09614
Incommensurable modulated structure in $YSr_2Cu_{2.5}B_{0.5}O_y$.—73-04742
Ionic conduction in partially ion-exchanged Sr ß-alumina; $Sr_{1-x}Na_{2x}MgAl_{10}O_{17}$.—73-00985
Large volume contraction accompanies the low-temperature to high-temperature phase transition of zeolite Sr-rho.—73-02314
Luminescence of Cu(I) in strontium tetraborate.—73-02631
Magnetic properties and domain structure of strontium ferrite particles.—73-04620
Measurement of charge transport parameter of photorefractive crystal barium strontium titanate ($Ba_{1-x}Sr_xTiO_3$, BST).—73-02642
Measurement of intensity-dependent absorption coefficient and transport parameter $\sigma\mu\tau$ in BST.—73-01240
Mossbauer spectroscopic studies of glass-ceramics with hexagonal barium and strontium ferrites.—73-00669
Mossbauer study of $^{57}$Fe-doped $La_{2-x}Sr_xCuO_4$: local magnetic properties in the semiconducting, superconducting, and normal metallic regions of the phase diagram.—73-08671
Neutron diffraction study of nonstoichiometric phase $La_{0.85}Sr_{0.15}F_{2.85}$.—73-02346
New homologous series $Sr_{n-1}Cu_{n+1}O_{2n}$ [$n$=3,5..] found in the SrO-CuO system treated under high pressure [6 GPa at 1373–1573 K].—73-02351
New reduced ternary titanates from borate fluxes.—73-02353
Optical conductivity of $La_{2-x}Sr_xCuO_4$ and soft electronic modes.—73-16554
Oxide ion conduction in highly electronic conductors based on $SrMnO_{3-\delta}$.—73-01004
Oxygen content, microstructure, and $T_c$ variation of $La_{1.84}Sr_{0.16}CuO_y$.—73-15574
Phase separation and finite size scaling in $La_{2-x}Sr_xCuO_{4+\delta}$ ($0\le x,\ \delta\le 0.03$).—73-15578
Phase transformations in $SrAl_2Si_2O_8$ glass.—73-14069
Phase transition from antiferromagnetic [AF] insulator to ferromagnetic metal in $La_{2-x}Sr_xCoO_4$—magnetization and NMR studies.—73-08696
Photorefractivity and related properties of $Ba_{0.984}Sr_{0.016}TiO_3$.—73-16567
Polymerized complex synthesis and post-$O_2$ HIP treatment of $YBa_{2-x}Sr_xCu_4O_y$ superconductors.—73-01630
Polytypic study on a new layered perovskite vanadate $Sr_4V_2O_{10-x}$.—73-03183
Preparation and electrical properties of bismuth strontium dimanganese hexoxide [$BiSrMn_2O_6$].—73-15110
Preparation of (Ca, Sr)$CuO_2$ under various oxygen partial pressures and substitution of elements.—73-15592

Preparation of $(La_{1-x}Sr_x)_2MnO_4$ with the $K_2NiF_4$ structure and its electrical properties.—73-11400
Preparation of oxygen excess $SrLaFeO_{4+\delta}$ and its electrical and magnetic properties.—73-11670
Preparation of Sr ferrite magnets by the new annealing–remilling process.—73-07972
Preparation of Sr ferrite magnets by the new annealing–remilling process.—73-15361
Principles involved in the formation of solid solutions of glass-ceramics in the strontium-barium system.—73-09275
Protonic conduction in the single crystals of Y-doped $SrZrO_3$.—73-04157
Raman spectroscopy of PTC $(Ba_{1-x}Sr_x)TiO_3$ ceramics.—73-05469
Single crystals of new Ruddlesden-Popper phases $(SrLa)_3V_2O_7$ and $Sr_4V_3O_{9.7}$: preparation, crystal structure, and electrical resistivity.—73-02432
Sintering of $SrSiO_3$ ceramic and its dielectric property.—73-03011
Solid defect structure and catalytic activity of perovskite-type catalysts $La_{1-x}Sr_xNiO_{3-\lambda}$ and $La_{1-1.333x}Th_xNiO_{3-\lambda}$.—73-08732
$Sr_6Nd_4Cu_6O_{17}$: an intergrowth of the 123-phase and rock-salt-type structure.—73-02441
Strontium.—73-12302
Structural peculiarities of two layered cuprates, $NdSrCuO_{3.5}$ and $Nd_{1.8}Sr_{1.2}Cu_2O_{6-\delta}$.—73-02450
Structure and magnetic properties of $Sr_2FeO_4$ and $Sr_3Fe_2O_7$ studied by powder neutron diffraction and Mossbauer spectroscopy.—73-15368
Structure of color centers in $SrF_2$:Na crystals studied by optically induced dichroism.—73-02464
Superconductivity in the infinite layered $Sr_{1-x}La_xCuO_2$ and preparation of $CaCuO_2$ by sol-gel method.—73-01678
Superconductivity, spin gaps, and Luttinger liquids in a class of cuprates.—73-08232
Synthesis and crystal structure of ß-$SrV_2O_6$.—73-02478
Synthesis and structure of $Sr_2FeO_4$.—73-02493
Synthesis and structure refinement of $SrT_xV_{6-x}O_{11}$ (T=Ti, Cr, and Fe).—73-02496
Synthesis, by triethylammonium oxalate coprecipitation, and superconducting properties of $Y(Ba_{1-x}Sr_x)_2Cu_4O_8$ [0≤x≤0.5].—73-01687
Synthesis, structure, and properties of the orthoborate $SrCu_3(BO_3)_2$.—73-02508
System $Bi_2O_3$-SrO-CuO—73-11929
Systematic evolution of temperature-dependent resistivity in $La_{2-x}Sr_xCuO_4$.—73-08243
Thermal conductivity and thermal properties of the substituted strontium hexagallate, $SrGa_{11}Mg_{0.5}Zr_{0.5}O_{19}$, in the temperature range 5–300 K.—73-02705
Thermal expansion and electrical conductivity of yttria-substituted lanthanum strontium manganites.—73-16626
Thermal expansion properties of A-site-deficient $La(Sr)CrO_3$.—73-08988
Thermal expansion properties of A-site-deficient $La(Sr)CrO_3$.—73-16630
Transport properties of $SrCuO_2$ thin films with artificially modulated structures.—73-15373
V-shape characteristics of $(Pb_{0.6}Sr_{0.4})TiO_3$ ceramics.—73-11499
X-ray analysis of $SrCaCu_3O_x$ phase.—73-11941

**structural clay products,**
Successful kilns for structural ceramics.—73-08488

**structural materials,**
Advanced structural and functional ceramics.—73-05257
Application of engineering ceramics to the mechanical parts.—73-12314
Ceramic Transactions, Volume 35: Structural Ceramics Joining II.—73-17518
Ceramic Transactions, Volume 42: Silicon-Based Structural Ceramics.—73-17522
Creep damage mechanisms in structural ceramics.—73-06357
Fatigue behavior of structural ceramics.—73-06416
First International Conference on Advanced Synthesis of Engineered Structural Materials.—73-16783
How can we improve the (mechanical) reliability of ceramic components.—73-12326
Intelligent processing of ceramic powders and slurries.—73-16845
Intelligent structural ceramics.—73-05172
Intelligent structural metallic materials.—73-03604
Materials for structural and functional components in fission and fusion nuclear power reactors.—73-08300
Microstructure, *R*-curve behavior, and reliability of structural ceramics.—73-09651
New design concept of structural ceramics—ceramic nanocomposites.—73-02900
New nanocomposite structural ceramics.—73-05933
Plasma etching of structural ceramics for microstructural analysis.—73-12177
Preceramic polysilazanes for structural applications.—73-15969
Properties of structural oxide ceramics made from mechanically ground powders.—73-16961
Rapid prototyping of structural ceramic parts by laminated object manufacturing.—73-15748
Results of round robin exercise on the fractography of advanced structural ceramics.—73-17194
Size effect on fatigue behavior in structural ceramics.—73-17431
Stress-relaxation tests used to determine the elevated temperature creep parameters of structural ceramics.—73-06532
Theta approach to creep of structural ceramics.—73-13606
U.S. Bureau of Mines—open industry briefing on engineered materials research.—73-17510

**structure,**
Acoustic emission investigations of structural changes in tungsten carbide metal-ceramics during thermal and radiation treatment and hydrogenation.—73-06735
Anomalous doublet peaks in the current spectra of a *p-n* structure, which are linked with one type of deep states.—73-11070
Application of NMR spectroscopy in the study of glass structures: II.—73-01884
Approach to the optimum structure of tunnel kiln roof.—73-10701
Bonding, structure, and properties of metal/ceramic interfaces.—73-00211
Boron nitride.—73-12261
Cation distribution investigation of the system $Li_{0.5}Fe_xGa_{2.5-x}O_4$ by X-rays, electrical conductivity, and Mossbauer studies.—73-16045
Cluster models of bulk, surface, and impurity structure in α-$Al_2O_3$.—73-05370
Compositional and molecular character of the calcium silicate hydrates formed in the paste hydration of $3CaO·SiO_2$.—73-06639
Computer simulation of the atomic structure of twin boundaries in HTS $YBa_2Cu_3O_7$.—73-08009
Computer simulation of the structure of ZSM-18.—73-12557
Connection between the thermal capacity and the structure of alkali borate systems in the glassy, crystalline, and liquid states.—73-00442
Control of the internal structure of electromelted blocks by ultrasonic test on transmission.—73-12121
Crack patterns: generalized Laplacian structures.—73-06352
Description of molecular distortions: VI, Spectra-structure correlations in orthophosphate compounds.—73-10360
Determination of superlattice structural parameters by means of far- and mid-ir reflectivity.—73-04281
Development of methods and the technology of hardening glass-ceramics for structural use.—73-00611
Differences in the structure of amorphous hydrogenated silicon carbide layers prepared with either methane or silylmethanes.—73-08601
Dissipative process accompanying fracture.—73-06374
Dissipative structure and its application to ceramic research.—73-10827
Effect of compaction pressure on the internal structure of sintered alumina.—73-05756
Effect of compaction pressure on the internal structure of sintered alumina.—73-13001
Effect of thermal cycling processes on the structure and properties of heat-resistant ceramics.—73-02590
Enhancement of photopleochroism in *n-p*-CdSiAs$_{2-n}$-$In_2O_3$ structures.—73-04320
EXAFS study of ternary $ZrF_4$-$BaF_2$-$NdF_3$ glasses.—73-00339
Fabrication of superconducting $YBa_2Cu_3O_{7-\delta}$ submicron structures.—73-11761
Features of the structural state of iron in a glass synthesized in a beam of accelerated electrons.—73-00628
First-principles studies on structural properties of ß-cristobalite.—73-16154
Garnet with uvarovite content in chrome diopside decomposition structures.—73-05408
Glass networks via semiempirical quantum chemical methods.—73-01901
Glass Science, Second Edition.—73-17529
Improving structure of annular kilns.—73-08473
Incommensurate modulation in $Na_6\{Fe_2[PO_4]_4(O,F)_2\}$ structure at 623 K.—73-16172
Influence of glass manufacturing process on glass structure.—73-00646
Influence of slip casting and dry pressing on structure evolution of alumina compacts.—73-05874
Influence of the structure of cement stone with admixtures of microsilica and superplasticizers on concrete properties.—73-14598
Inhomogeneities in glass structure: clusters or channels.—73-14012
Ionicity dependence of surface bond lengths on the (110) cleavage faces of isoelectronic zinc blende structure compound semiconductors: GaP, ZnS, and CuCl.—73-08649
Ir spectroscopic study of glass structures by the method of recording the second derivative.—73-14021
Ir spectroscopy characterization of various types of structural irregularities in pyrolytic boron nitride.—73-12616
Lessons from biology for materials scientists.—73-06242
Light transmission of porous plates obtained from two-phase sodium borosilicate glasses of various structures.—73-00509
Local structure of ß´-SiAlON's: an EXAFS study.—73-02321
Long-range interactions, long-range order, and a devil's staircase in $YBa_2Cu_3O_x$.—73-01587
Materials Interfaces: Atomic-Level Structure and Properties.—73-06605
Materials Science Monographs, Volume 80: Structure and Properties of Ceramics.—73-17532
Mathematical model of cationic order in structures of band and layered silicates.—73-02325
Mechanism of high-speed switching in GaAs structures with deep centers.—73-07665
Medium-range structure of glasses: comparison of Raman and diffraction measurements.—73-14034
Modern ideas concerning chemical structure of glasses.—73-14041
Molecular structure and nucleation in silicate glasses.—73-00376
New developments at laboratory for silicate materials and structures.—73-16878
NMR studies of thermal effects on glass structure.—73-14053
Novel aspects of the structure of glasses.—73-14056
Oxides of the type $TlSr_2Cu_{1-x}M_xO_5$ (M=Fe, Co) having the 121 structure.—73-02367
Oxygen vacancy ordering and the incommensurate structure of mullite.—73-16243
Photoinduced effects and real structure of yttrium-aluminum garnet crystals.—73-02665
Polish glass industry heads for privatization.—73-13634
Quartz ceramic structures for chemistry.—73-16287
Refractory concretes of a new generation: relationship between their composition, structure, and properties.—73-14614
Relation between zeolite framework structure and vibrational spectra.—73-06278
Removal and transfer of material in laser-assisted physical vapor deposition of ceramics.—73-13235
Screening of the field in *p-i-n* structures made of GaAs and subjected to a voltage-causing carrier depletion.—73-01310
Sedimentary structure in gray kaolin of Georgia.—73-12296
Short- and medium-range order in the structure of glass.—73-14081
Short-range structure of zirconia xerogel and aerogel, determined by wide angle X-ray scattering.—73-05476
Stabilized tetragonal zirconium oxide as a support for catalysts: evolution of the texture and structure on calcination in static air.—73-02444
Structurability of special glasses by means of microtechnique.—73-14087
Structural and electrical characterization of $YBa_2Cu_3O_{7-x}$ thin films grown on different substrates.—73-01664
Structural change and magnetic properties of $Y_2BaNi_{1-x}Zn_xO_5$ oxides.—73-03197
Structural characterization and ion conductivity of $MCa_2NaNb_4O_{13}$ (M=Rb, Na) with four units of perovskite layer.—73-16321
Structural characterization of photochemically grown silicon dioxide films by ellipsometry and infrared studies.—73-03198
Structural characterization of silicon carbonitride ceramics from polymeric precursors using nuclear magnetic resonance.—73-05491
Structural correlations in porous silica: molecular dynamics simulation on a parallel computer.—73-14283
Structural features of the PYRORAPID short rotary kiln.—73-01971
Structural investigation of sol-gel-derived hybrid siloxane-oxide materials using $^{29}Si$ MAS-NMR spectroscopy.—73-05493
Structural investigation of yttrium aluminosilicate glasses using $^{29}Si$ and $^{27}Al$ magic angle spinning nuclear magnetic resonance.—73-00408
Structural model and hydraulic activity of granulated cinder in electric factories.—73-00194
Structural properties of $BaTiO_3$ thin films on Si grown by metallorganic chemical vapor deposition.—73-01668
Structural properties of $Y_2O_3$-stabilized $ZrO_2$ films deposited by reactive thermal coevaporation.—73-08754
Structural properties of ZnSe films grown by migration-enhanced epitaxy.—73-01323
Structural refinement using high-resolution powder X-ray diffraction data of $Ca_{0.5}Ti_2P_3O_{12}$, a low thermal expansion material.—73-05495
Structural relaxation of glass BK7 during the development of refraction index gradients by Na/K exchange at $T \leq T_g$.—73-00550
Structural relaxations in alkali silicate systems by Brillouin light scattering.—73-00551
Structural transformations in polycrystalline ß-$Si_3N_4$ at high temperatures and pressures.—73-12701
Structure analysis of ß´´-alumina in syntaxy with ß-alumina by two-stage powder XRD.—73-08756
Structure and dynamics of solid-state ionics.—73-04174
Structure and electric properties of $(Ba_{1-x}Pb_x)TiO_3$ ceramics.—73-05497
Structure of calcareous gunite coatings of the converter linings.—73-00872
Structure of glass: problems and prospects.—73-14110
Structure of interdomain and interphase boundaries in 1-2-3 crystals.—73-01671
Structure of metal-nonmetal clusters.—73-17202
Structure of new perovskite-related compounds, $LiCuM_3O_9$ (M=Nb, Ta).—73-05503
Structure of sillenites and atomic mechanisms of ismorphous substitutions in them.—73-16338
Structure of tungsten oxide $WO_{2.625}(W_{32}O_{84})$.—73-12706
Structure order-disorder and dielectric response in perovskite-related SrO-$Fe_2O_3$-$Nb_2O_5$ system: the oxygen-deficient composition $Sr(Fe_{1-x}Nb_x)O_{2.5+x}$, (x=0.17, 0.25, 0.5).—73-08760
Structure refinements with a new version of the Rietveld refinement program RIETAN.—73-15851
Structures and properties of electron-beam-evaporated indium tin oxide films as studied by X-ray photoelectron spectroscopy and work-function measurements.—73-02470
Structures obtained by mechanical fragmentation of glass plates.—73-10487
Subsurface growth of silicide structures in silicon.—73-15190
Surface structure of $SrTiO_3$(001) with various surface treatments.—73-16348
Temperature formation of structural defects in the interface of GaAs Schottky barrier.—73-11478
Thermo-emf in semiconducting structures of lead chalcogenides under irradiation of short laser pulses.—73-04498
Time dependence of the structural changes occurring in $NH_4$-Y zeolite on dealumination: a preliminary study using energy-dispersive X-ray diffraction.—73-08783
Ultrasonic measurement of surface and subsurface structure in ceramics.—73-05094
View on a structure of amorphous glassy materials.—73-14123

Vortex structure driven by magnetic interactions near a sawtooth twin boundary in $YBa_2Cu_3O_{7-\delta}$.—73-08276
X-ray absorption studies of Ge and Ga environments in $BaO-Ga_2O_3-GeO_2$ glasses.—73-06989
X-ray fluorescent analysis of oxide compounds with the langasite structure.—73-08460
X-ray studies of the $YBa_2Cu_3O_{6+x}$ superstructures in the range of $0.4(3)\leq x\leq 0.73(3)$.—73-01704

**substitution,**
Aluminum substitution in the glass system $0.33[(1-x)P_2S_5{\cdot}xAl_2S_3]{\cdot}0.67Li_2S$ $[0\leq x\leq 0.5]$.—73-00935
Appearance of competing magnetic anisotropy in nonmagnetic substitutions of 3*d* ions in [rare-earth] orthoferrites.—73-01449
Calcium silicate hydrates as clay substitute in porcelain enamel suspensions.—73-10200
Changes in swelling characteristics and structure of Na fluorine micas with Ga and Al substitutions.—73-02157
Dielectric ceramic of the $Ba_{1-x}M^*{}_xTi_{1-x}M^{**}{}_xO_3$ type.—73-10931
Dielectric properties of (Ba, Sr)O-(Sm, La)$_2O_3$-$TiO_2$ ceramics at microwave frequencies.—73-02572
Effect of the substitution of Cu(I) by dopants on oxygen content and superconductivity in Y(123).—73-01533
Exchange stiffness and nonuniform exchange constant in films of Ga,Sc-substituted yttrium iron garnet.—73-15322
FTIR and Raman spectra of pure and Al-, B-, Ti-, and Fe-substituted silicalites: stretching-mode region.—73-12589
Gallium and germanium substitutions in celsian.—73-16161
Influence of Fe substitution by R ions in an Ni-Zn ferrite.—73-15329
Preferential crystallographic site substitution and oxygen migration in $Bi_2(Sr, Ca, La)_3Cu_2O_8$, $Bi_2(Sr, Ca, Yb)_3Cu_2O_8$ related to rare-earth ion size.—73-03109
Properties of $BaO-R_2O_3-Ga_2O_3-GeO_2$ (R=Y, Al, La, and Gd) glasses.—73-03809
Relationship between isomorphic substitutions and swelling in montmorillonites.—73-16586
Rubberized concrete behavior.—73-10144
Schemes of isomorphous heterovalent cation substitutions in fluoride solid solutions with fluorite structure.—73-02426
Site preference for $Zn^{2+}$ and $Ge^{4+}$ in mixed ferrite $Zn_xGe_{1-x}Fe_2O_4$.—73-04651
Structure and properties of oxyanion derivatives of 123 cuprate superconductors: effect of substitution of carbonate and nitrate ions in the Cu(I) position of $YBaSrCu_3O_{7-\delta}$.—73-11907
Substitution effect of Sn and/or Ca elements in $YBa_2Cu_3O_{7-\delta}$ superconducting ceramics.—73-11911
Substitution effects of Fe and Zn for Cu in $YBa_2(Cu_{1-x}M_x)_4O_8$.—73-11912
Substitution of wet fly ash for sand in mortars or concretes.—73-10170
Synthesis and characteristics of $Al^{3+}$-substituted tobermorite by alkoxide method.—73-03035
Systematic substitutions in ZBLA and ZBLAN glasses.—73-07083
Theory of cation substitution effect in ionic conductors.—73-01037
$Zr^{4+}$ and $Ti^{4+}$ substitution in gallium garnets.—73-12741

**substrates,**
AlN powders for electronic substrates: relations between properties and synthesis.—73-00934
Aluminum nitride substrate and method for producing [the] same.—73-04187
Article comprising regions of high-thermal-conductivity diamond on substrates.—73-05285
Carbon diffusion in uncoated and titanium nitride coated iron substrates during microwave plasma-assisted chemical vapor deposition of diamond.—73-12928
Ceramic substrate blower motor resistor array.—73-11006
Ceramic substrate having wiring of silver series.—73-10306
Circuit units, substrates therefor, and method of making.—73-11009
Composite GaAs-on-quartz substrate for integration of millimeter-wave passive and active device circuitry.—73-11514
Composite substrate and process for producing the same.—73-04194
Cordierite substrates.—73-12358
Development of a power electronics multichip module on synthetic diamond substrates.—73-04072
Development of as-fired aluminum nitride substrates with smooth surface and high thermal conductivity.—73-14687
Distributed constant circuit board using ceramic substrate material.—73-01050
Effect of substrate on optical characteristics of polarizationally isotropic coatings.—73-02588
Glass substrate for a semiconductor device and method for making [the] same.—73-11019
Glass-fiber-forming composition, glass fibers obtained from the composition, and substrate for circuit board including the glass fibers as reinforcing material.—73-10632
Growth of semiconductor heterostructures on patterned substrates: defect reduction and nanostructures.—73-14952
Hybrid package glass-ceramic substrate for the hybrid package, and composition for the glass-ceramic substrate.—73-11021
Hybrid substrate.—73-01054
Impact of different X-ray mask substrate materials on optical alignment.—73-16830
Kinetics of wetting and spreading of Cu-Ti alloys on alumina and glassy carbon substrates.—73-03613
Laminated diamond substrate.—73-02100
Low-permittivity ceramic dielectrics.—73-10967
Low-temperature firing ceramic substrates for ic package.—73-00992
Material for nonmagnetic oxide substrate and magnetic head.—73-12374
Materials for multilayer interconnection substrates.—73-00993
MCM-D substrate fabrication cost model: comparing dry etch, wet etch, and photosensitive dielectrics.—73-04131
Metallization of diamond substrates for multichip module applications.—73-04137
Method for fabricating a ceramic multilayer substrate.—73-04216
Method for forming a *p-n* junction in silicon carbide.—73-16001
Method for forming a metallurgical interconnection layer package for a multilayer ceramic substrate.—73-11028
Method for forming grain-boundary junction devices using high-$T_c$ superconductors.—73-11963
Method for obtaining via patterns in ceramic sheets.—73-11031
Method of fabricating glass substrate for disk.—73-00744
Method of forming recessed patterns in insulating substrates.—73-01059
Method of manufacturing ceramic circuit board.—73-01060
Method of optimally operating a computer numerical control milling machine to mill optimal high density interconnect substrates.—73-04997
Method of protecting aluminum nitride circuit substrates during electroless plating using a surface oxidation treatment.—73-11037
Method of wet coating a ceramic substrate with a liquid suspension of metallic particles and binder applying similar dry metallic particles onto the wet surface, then drying and heat treating the article.—73-13920
Method to calculate substrate temperature during intermittent radiant heating in vacuum.—73-05067
Monolithic gallium arsenide phased array using integrated gold post interconnects.—73-04527
Multilayer ceramic substrate with capped vias.—73-11038
Multilayer ceramic substrate with graded vias.—73-04223
Multilayered ceramic substrate and method of manufacturing the same.—73-04224
Near-to-surface layers of semiconductor substrates studied by X-ray diffraction and electrophysical technique.—73-15822
New polishing technology to turn functional material-clad glass substrate into high-precision thin film and its application.—73-14439
Nonmagnetic substrate material and floating-type magnetic head.—73-12390
Nucleation and growth of diamond on Si, Cu, and Au substrates.—73-03180
Pinned ceramic chip carrier.—73-11042
Polishing of substrates.—73-12054
Process for making metallized vias in diamonds substrates.—73-14759
Process for manufacturing a ceramic wiring substrate having a low dielectric constant.—73-11044
Process for manufacturing ceramic multilayer substrate.—73-11045
Process for producing ceramic sintered body having metallized via hole.—73-14760
Prognosis for MCM-L.—73-06587
Recent development and the outlook for electronic ceramics: surge in electronic materials continues: I.—73-13640
Regional competitive analysis of the global MCM industry infrastructure.—73-06588
Resistor element [including insulating ceramic substrate].—73-14761
Science and technology in composite materials—multilayer (ceramic) substrate.—73-04162
Semiconductor substrate temperature measurement by diffuse reflectance spectroscopy [DRS] in molecular beam epitaxy.—73-12193
Substrate of single crystal of oxide, superconductive device using said substrate, and method of producing said superconductive device.—73-01738
Surface and interface ordering on non-(100)-oriented GaAs substrates.—73-07821
Surface modification of materials produced by dynamic ion mixing.—73-10281
Surface processing of glass substrates for flat displays.—73-03892
Surface reflector with oxide undercoat.—73-10352
Thick-film paste compositions for use with an aluminum nitride substrate.—73-10416
Toughened glass-ceramic substrates for semiconductor devices subjected to oxidizing atmospheres during sintering.—73-11056
Use of diamond substrates for implementing 3-D MCM's [multichip modules].—73-04182
Via paste compositions and use thereof to form conductive vias in circuitized ceramic substrates.—73-11057
Wettability and interfacial reaction between molten iron and zirconia substrates.—73-00275

**sulfates,**
Behavior of monosulfate in seawater and effects of adding amino acid.—73-09829
Calculation of effective interaction constant between $BX_4$ tetrahedra in crystals of $K_2SO_4$ type.—73-16040
Crystal growth of compounds of Zn, Co, and Li sulfates with carbamide.—73-16079
Crystal structure of $(NH_4)_3Zr_2F_9SO_4{\cdot}2H_2O$ and its potassium analog.—73-02186
Crystal structure of $C_4A_3\bar{S}$ [tetracalcium trialuminate sulfate].—73-13700
Crystal structure of $K_3ZrOH(SO_4)_3{\cdot}2H_2O$.—*73-02197*
Crystal structure of new natural sulfatocarbonate, $Na_{25}BaTR_2(CO_3)_{11}(HCO_3)_4(SO_4)_2F_2Cl$.—73-16088
Defect-induced smoothing of the superionic phase transition in $Cs_{1-x}M_xHSO_4$ protonic conductors: I, Potassium substitution.—73-03086
Defect-induced smoothing of the superionic phase transition in $Cs_{1-x}M_xHSO_4$ protonic conductors: II, Lithium substitution.—73-03087
Defect-induced smoothing of the superionic phase transition in $Cs_{1-x}M_xHSO_4$ protonic conductors: III, Rubidium substitution.—73-03088
Effect of bituminous emulsions on the sulfate resistance of cement pastes.—73-00071
Effect of calcium fluorosulfosilicate on formation of calcium silicate.—73-09899
Effect of chloride and sulfate ions on reinforcement corrosion.—73-03454
Effect of rare-earth ions on the phase transition of $Na_2SO_4$ crystals.—73-02245
Effect of $SO_3$ on mineral formation and properties of clinkers.—73-09918
Effect of sulfate on the reaction of $3CaO{\cdot}SiO_2$ formation in presence of clinker melt and its appearance in clinker.—73-06650
Effect of sulfate on the reaction of $C_3S$ [tricalcium silicate] formation.—73-09919
Electron paramagnetic resonance and optical absorption spectra of $Cu^{2+}$ ions in alkali cadmium borosulfate glasses.—73-10369
EPR and optical absorption spectra of $Cr^{3+}$ ion-doped alkali zinc borosulfate glasses.—73-06911
Evaluation of physicochemical and hydration characteristics of supersulfated cement.—73-13720
Growth mechanism and properties of sectorlike magnesium hydroxide sulfate hydrate.—73-17142
High-resolution transmission electron microscopy study of microstructures of initially hydrated calcium aluminosulfate.—73-00101
High-temperature superconductor comprising barium sulfate, strontium sulfate or mixtures thereof, and a process for its preparation.—73-11957
Influence of binder type on sulfate resistance.—73-10004
Influence of $SO_3$ in $C_2A_xF_{1-x}$-$C_{11}A_7CaF_2$-$C_2S$ system on formation of $C_{11}A_7CaF_2$.—73-10012
Influence of the parameter "specific surface" in the qualification as high, or not, sulfate resistance of a portland cement.—73-13741
Ionic conductivity and phase transitions in the $Li_2SO_4$-$Li_2WO_4$ system and their relation to ion transport mechanism.—73-03098
Ionic conductivity of solid solutions of $\alpha$-$Li_2SO_4$ with $Li_2WO_4$: strong evidence for the paddle wheel mechanism of ion transport.—73-00988
Magnesium sulfate attack on portland cement paste: II, Chemical and mineralogical analyses.—73-10030
Mechanism of ettringite and monosulfate formation.—73-10039
Mechanism of sulfate expansion: I, Thermodynamic principle of crystallization pressure.—73-10040
Mechanisms at the mixed sulfoaluminate formation in the $CaO-Al_2O_3-(Sr,Ba)SO_4$ systems.—73-13754
Microstructural and microanalytical studies of sulfate attack: I, Ordinary portland cement paste.—73-10047
Microstructural study of the effect produced by magnesium sulfate on plain and silica-fume-bearing portland cement mortars.—73-06688
Model study on degassing of sulfate-refined glass melts.—73-14432
Phase change of new products of $CaSO_4$-$SrSO_4$-$H_2O$ system.—73-00162
Phase transitions and ionic conductivity of the lithium sulfate–lithium phosphate system.—73-02391
Photon-grated hole burning in $BaSO_4$:$Sm^{2+}$ crystals.—73-12658
Properties of cement containing calcium ferrite sulfate.—73-10109
Properties of residue compounds obtained from $H_2SO_4$–carbon-fiber-intercalated compound.—73-16578
Quick setting and hardening mechanism of $C_4A_3(SO_3)$.—73-10123
Rf microwave dielectric relaxation and conductivity in $Cs_{1-x}M_xHSO_4$ disordered protonic conductors.—73-01021
Solubility properties of ternary and quaternary compounds in the $CaO-Al_2O_3-SO_3-H_2O$ system.—73-00190
Stability of calcium sulfoaluminate hydrates in water solutions with various pH values.—73-00192
Structural aspects of protonic conductivity.—73-16320
Sulfate reactions in concrete—microstructural and chemical aspects.—73-10171
Sulfate utilization in float glass production.—73-07177
Sulfate-bearing solid solution of calcium aluminates and ferrites.—73-13783
Synthesis and properties of low-energy cements based on $C_4A_3\bar{S}$ [tetracalcium trialuminate sulfate].—73-13785
Thermodynamic investigation of the $CaO-Al_2O_3-CaSO_4-H_2O$ system at 25°C and the influence of $Na_2O$.—73-03546
Thermodynamic investigation of the $CaO-Al_2O_3-CaSO_4-H_2O$ system at 50°C and 85°C.—73-10181

**sulfides,**
Acoustic emission in symmetric-incommensurate-commensurate phase transformations [PT].—73-01069
Aluminum substitution in the glass system $0.33[(1-x)P_2S_5{\cdot}xAl_2S_3]{\cdot}0.67Li_2S$ $[0\leq x\leq 0.5]$.—73-00935
Anisotropy of the photoconductivity of GeS single crystals.—73-11066
Chemical analysis of electroluminescent SrS:Ce films.—73-16051
Chemical and electrochemical treatments of GaAs with $Na_2S$ and $(NH_4)_2S$ solutions: a surface chemical study.—73-07413
Chemical vapor deposition of novel electronic materials from carbon disulfide.—73-11111
Chemically deposited $Bi_2S_3$-$Cu_xS$ solar control coatings.—73-04065
Chemistry of S/GaAs and metal/S/GaAs systems.—73-04270

Chromium ion luminescence in semiconducting spinel $CdIn_2S_4$:Cr.—73-14807
Classical-to-quantum crossover in CDW creep at low temperatures.—73-17248
Crystal structure of $KInS_2$-I.—73-02198
Crystal structures of $I_2$-*MrIV-VI4 [I*=Cu, Ag; IV=Si, Ge, Sn; and VI=S, Se, Te] compounds.—73-02221
Crystallographic and magnetic properties of $Fe_{0.5}Cu_{0.5}Cr_2Se_xS_{4-x}$.—73-08592
Davydov multiplets in the vibrational spectra and effective ionic charges in $TlInS_2$ and $TlGaSe_2$ crystals.—73-14823
Development of fracture-resistant, multilayer films for precision ball bearings.—73-06768
Dielectric anomaly in layered $TlInS_2$ crystal at transition to incommensurate phase.—73-16444
Dielectric relaxation in $TlInS_2$ crystals with admixtures.—73-04545
Differential scanning calorimetry study of $Sm_{1-x}Gd_xS$ single crystals.—73-16110
Disorder and thermal motion of Ag in $Ag_{0.6}NbS_2$.—73-00949
Dynamic domain structure of ferroelectric-semiconductor $Sn_2P_2S_6$.—73-14846
Effect of annealing on the properties of conductivity and diffusional mass transport in $As_2S_3$ films photodoped with silver.—73-00451
Effects of microstructure on photoluminescence of SrS:$Eu^{2+}$,$Sm^{3+}$ thin films.—73-04293
Electrical conductivity and Seebeck coefficient of smithite under pressure above 20 GPA.—73-16477
Electrical properties of layered MnGaInS$_4$ single crystals.—73-14868
Electrical resistivity and Seebeck coefficient of ytterbium monosulfide under ultrahigh pressure up to 20 GPa.—73-16480
Electrochemical reduction and oxidation of 2H-$MoS_2$ and 3R-$MoS_2$ in propylene carbonate.—73-14703
Electron microscopy study of incommensurate intergrowth structures "$MTS_3$."—73-06214
Electronic properties and carrier spectrum parameters of titanium disulfide intercalated by silver.—73-16488
Electrophoretic deposition of pure $MoS_2$ dry film lubricant coatings.—73-09115
Exciton, intracenter, and structure-defect transitions in quasi-2-D $TlGaS_2$:$Nd_2S_3$ crystals.—73-01161
Features of electroconductivity of films of $As_2S_3$ photoalloyed with silver.—73-14918
$FePS_3$ and $NiPS_3$ production and electrical conductivity.—73-14924
Fibers for energy power delivery and chemical sensors.—73-14187
Formation of $Cu_xS$ films through a chemical bath deposition process.—73-07535
Friction and wear of self-lubricating composites at temperatures to 450°C in vacuum.—73-06443
Gigantic lattices and gigantic noncrystalline clusters in glasses.—73-06921
Green photoemission of $\alpha$-$Ga_2S_3$ crystals.—73-01177
Growth kinetics study of $CdTe_xS_{1-x}$ quantum dots in a borosilicate glass.—73-14948
Infrared spectroscopy of wide composition range $x$$Na_2S$+(1−$x$)$B_2S_3$ glasses.—73-00354
Injection and thermostimulated currents in $MnIn_2S_4$ single crystals.—73-08890
Interactions in the systems BaS-$Ln_2S_3$ (Ln=La, Nd).—73-02298
Interactions in the systems ZnS-$Sm_2S_3$ and Zn-$Sm_2S_3$.—73-02299
Ionic conduction in the $B_2S_3$-$Li_2S$ glass system.—73-00986
Isostructural phase transition in semiconducting $CdIn_2S_4$ spinel.—73-15003
Isothermal and thermally activated currents in $CaGa_2S_4$:Eu single crystals.—73-01225
Kinetics of dissolution of $AgAsS_2$ glass in acid oxidizing media.—73-00363
Lattice dynamics of lithium-intercalated $MoS_2$.—73-02315
Low-temperature phase transitions in $TlGaS_2$ layer crystals.—73-15024
Luminescence of $Nd^{3+}$ ions from levels $^2K_{13/2}$+$^2G_{9/2}$+$^4G_{7/2}$ in sulfide glasses.—73-14220
Magnetic properties and exchange interactions in disordered $Fe_xMn_{1-x}S$ system.—73-01469
Magnetic properties of layered $Li_xTiS_2$ compounds.—73-01470
Magnetic structure and exchange interactions in $Fe_{1-x}Cu_xCr_2S_4$ spinels.—73-15345
Mathematical description of hydrogen partial pressure effect on the kinetics of reduction of phosphogypsum to calcium sulfide.—73-10033
Mechanism for the flow of the current in thin-film single-crystal $p$-$n$ junctions based on PbS.—73-11312
Melting, processing, and color control of zinc sulfide glasses.—73-07149
Metal-insulator transitions in $BaCo_{1-x}Ni_xS_{2-y}$.—73-15039
Metal-semiconductor transition in $Cr_{1-x}S$ ($x$≤0.12).—73-15040
Metallic hole conduction in CuS.—73-02327
Method for producing a scintillator ceramic.—73-12378
Micromechanics of $MoS_2$ lubrication.—73-06490
Microstructure and tribology of $MoS_x$ films modified by ion beam bombardment.—73-09487
Misfit layer compounds $(MS)_nTS_2$ (M=Sn, Pb, Bi, rare-earth metals; T=Nb, Ta, Ti, V, Cr; 1.08≤$n$≤1.23): structures and physical properties.—73-05436
MOCVD of polycrystalline tetragonal InS thin films.—73-07675
Nanomaterials: tin(IV) sulfide endo- and exosemiconductors.—73-04413
Ni-implanted vitreous electrolyte $AgAsS_2$: ESR, ionic, and electronic conductivity.—73-01001
Nonlinearity and photostructural changes in glassy $As_2S_3$ thin films.—73-14237
Optical reflectivity spectra of incommensurate layer compounds, $(CeS)_{1.2}NbS_2$ and $(CeS)_{0.6}NbS_2$.—73-08936
Phase behavior and conductivity of $Li_2SiS_3$.—73-02371
Phase transitions in $TlGaS_2$ layered crystal.—73-16267
Phase transitions sequence in ß-$TlInS_2$ layered crystal.—73-16268
Photoelectric properties induced by microinhomogeneities and macroinhomogeneities in epitaxial $Pb_{1-x}Sn_xS$ films and structures made from them.—73-07714
Photoemission of Ag-, Cu-, and Ge-doped $\alpha$-$Ga_2S_3$ crystals.—73-04437
Photoluminescence of sulfide phosphors with the $MB_2S_4$ composition.—73-01282
Physical properties of a new barium niobium sulfide, $BaNb_2S_5$.—73-02668
Polycrystalline $Bi_2S_3$ thin films prepared by reactive evaporation.—73-04446
Preparation and characterization of Mn-doped sprayed $p$-$CuInS_2$ films.—73-07742
Preparation and crystal structures of new barium zirconium sulfides, $Ba_3ZrS_4$ and $Ba_3Zr_2S_7$.—73-02400
Preparation of amorphous $NiPS_3$ by a sol-gel-type method.—73-03869
Preparation of CdSSe-ZnS superlattices, SrS, and CdSSe-SrS superlattice by hot wall epitaxy, and applications to electroluminescent devices.—73-04452
Pyroelectric properties of $TlInS_2$ single crystal in temperature range of 1.5–100 K.—73-16580
Question of silver pairing in the new structurally resolved two-dimensional phase $Ag_2MnP_2S_6$.—73-02412
Raman and ir vibrational spectra of $TlGaS_2$.—73-07760
Raman scattering spectra of and phase transitions in $AgAsS_2$ under pressure.—73-01296
Reactions during preparation and sliding of sintered Fe-Mo-S wear-resistant materials.—73-05470
Redox reactions proceeding during the hardening process of sulfide-containing cement.—73-10132
Role of vacancies in the magnetic and magnetooptic properties of Tb-doped EuO and EuS films.—73-04646
SnS-$SnO_2$ conversion of chemically deposited SnS thin films.—73-09336
Special features of electrophysical characteristics of thin PbS films with a low concentration of an oxidant.—73-04486
Spectroscopy of intracenter transitions and excitons in $TlGaS_2$-$Nd_2S_3$ crystals.—73-01318
Stacking faults in hexagonal and rhombohedral $MoS_2$ crystals produced by mechanical operation in relation to lubrication.—73-08741
Structural phase transitions of the quasi-two-dimensional metal $(K_{1-x}Rb_x)_3Cu_8S_6$: X-ray scattering studies.—73-08753
Sulfide passivation of $A^3B^5$ semiconductors: model description and experiment.—73-15191
Sulfide passivation of III-V semiconductors: kinetics of the photoelectrochemical reaction.—73-11465
Sulfide passivation of InAs surface.—73-07820
Sulfur self-diffusion coefficients in $In_2S_3$, $CdIn_2S_4$, and $AgIn_5S_8$ single crystals.—73-17102
Synthesis and characterization of the new quaternary two-dimensional materials $KCu_2NbQ_4$ (Q=Se, S).—73-02477
Synthesis of $MoS_2$ thin film by chemical vapor deposition method and discharge characteristics as a cathode of the lithium secondary battery.—73-01032
System $Ho_2S_3$-$In_2S_3$.—73-12715
System ZnS-$Dy_2S_3$.—73-02513
Ternary system InS-$As_2S_3$-$As_2Te_3$.—73-16364
Thermal and electrical properties of new glasses in the binary system $Li_2S$-$As_2S_3$.—73-08983
Thio sol-gel process for the synthesis of titanium disulfide.—73-09377
Time-of-flight secondary ion mass spectrometry study of $P_2S_5$/$(NH_4)_2S$-treated and ultraviolet/ozone-treated GaAs.—73-15212
Transformation of the vibrational spectrum and structure of glasses after quenching.—73-03771
Two-photon absorption of ps laser pulses in layered GeS.—73-11493
Type inversion of sulfide-treated $p$-InP.—73-01358
Utilization of Raman spectroscopy in tribochemistry studies.—73-08456
Vacuum ($10^{-9}$ torr) friction apparatus for determining friction and endurance life of $MoS_x$ films.—73-08457
Valence band structure of $CuInS_2$ by soft X-ray spectroscopy.—73-04507
Vibrational spectra and effective ionic charges in $AgAsS_2$ and $TlAsS_2$ crystals.—73-07858
Wear of reflected materials and composites sliding against $MoS_2$ films.—73-09695
X-ray photoelectron and Auger electron spectroscopy study of ultraviolet/ozone oxidized, $P_2S_5$/$(NH_4)_2S$-treated GaAs(100) surfaces.—73-06184
X-ray study of the cation distribution in $Cu_2Se$, $Cu_{1.8}Se$, and $Cu_{1.8}S$; analysis by the maximum entropy method.—73-02547

**sulfoselenides,**
Specific heat of $TlInS_{1.8}Se_{0.2}$ in temperature range of 60–300 K.—73-16309

**sulfur oxides,**
Comparative study of $SO_2$ adsorption on metal oxides.—73-16057
Effect of $SO_2$ and $CO_2$ on cement paste.—73-00077
Effect of storage conditions on handling and $SO_2$ reactivity of $Ca(OH)_2$-based sorbents.—73-00078
Fossil plant $SO_2$ control: FGD [flue gas desulfurization] materials guidelines and software.—73-09716
Interactions in the system $Fe_2O_3$-$SO_2$-$Cl_2$ investigated by the mass spectrometric method.—73-16181
$SO_3$ content of portland and blended cements: porosity and behavior of the resultant mortars.—73-13779
$SO_x$ control compositions.—73-12405
Sorption kinetics of $SO_2$ from combustion flue gases at low temperatures.—73-00191
Surface charge density and acidic characteristics of $SO_4^{2-}$/$Al_2O_3$.—73-16607
Texture of $SO_3$-rich portland cement clinkers.—73-03544

**sulfur,**
Characterization of S incorporation in $GaAs_{1-x}S_x$ by ir spectroscopy.—73-06197
Chemical composition and microstructures of sulfoaluminate cement clinker.—73-09851
Chemical interaction in melts of the glassy systems $(A_2S_3)_{1-x}(P_2S_5)_x$ (A=As, Sb).—73-00307
Determining the refractive index and absorption coefficient of Ag-photodoped amorphous As-S films.—73-14153
DX-like center in bulk GaSb:S.—73-04285
Electron state of a surface in InP modified by treatment in sulfur vapor.—73-07494
Electronic state of the surface of InP modified by treatment in S vapor.—73-01157
Fabrication of novel self-aligned MISFET's on InP by S interface engineering technique.—73-07523
Hydration of Sr- and Ba-bearing sulfoaluminates in the presence of sulfates.—73-06666
Influence of sulfiding on the state of the surface and photoelectric properties of InP and GaAs.—73-01208
Influence of the absorption edge on dispersion nonlinearity of $CdS_xSe_{1-x}$ microcrystals in glasses and its appearance in self-diffraction experiments.—73-14986
Mechanisms at the formation of some unitary strontium and barium sulfoaluminates.—73-16212
Microbial mediated attack on portland cement concrete by elemental sulfur.—73-10044
Percolation theory and concentrated phase transition of ε-γ type in $GaS_xSe_{1-x}$ solid solutions.—73-16244
Phase development in the system Gd-Cr-S.—73-02374
Physicochemical characteristics of cement produced using sulfur-bearing fuels in the black meal process for cement manufacture.—73-13760
Sulfur polymer concrete for high corrosion resistance.—73-10172
Superconductivity of $La_{2-x}Sr_xCuO_4$ with high strontium concentration by sulfur doping.—73-08230
Tensimetric determination of the limits of the homogeneity region of the compound $Cd_4GeS_6$.—73-03207
Thermooptic properties of glasses of the system Ge-As-S.—73-00566
Vacuum ultraviolet photoelectron spectroscopy study of the interaction of molecular sulfur with the GaAs(100) surface.—73-07856
X-ray spectral analysis of sulfur in the technology of hollow glass microspheres.—73-06990

**sulfuric acid,**
Corrosion behavior of silicon nitride ceramics in aqueous solutions: II, Weight loss and bending strength tested in boiling sulfuric acid.—73-03215
Corrosion behavior of silicon nitride ceramics in aqueous solutions: III, Corrosion behavior in hot sulfuric acid and microstructure of corroded layer.—73-03216

**superconducting quantum interference device (SQUID),**
Effect of thermal noise on the characteristics of a high-$T_c$ superconducting quantum interference device.—73-04546
Experimental determination of the superconducting pairing state of YBCO from phase coherence of YBCO-Pb de SQUID's.—73-15463
Fabrication of dc superconducting quantum interference devices with hybrid structure of polycrystalline $Y_1Ba_2Cu_3O_x$ films and epitaxial $Y_1Ba_2Cu_3O_x$ films.—73-15468
Inductance mode characteristics of a ceramic $YBa_2Cu_3O_{7-x}$ radio-frequency superconducting quantum interference device at 77 K.—73-08104
Possibility of determining type of Josephson junctions from its noise characteristics.—73-15584
Properties of $YBa_2Cu_3O_{7-y}$ large washer SQUID.—73-15603
SQUID picovoltametry of single-crystal $Bi_2Sr_2CaCu_2O_{8+\delta}$: an observation of the crossover from high-temperature Arrhenius to low-temperature vortex glass behavior.—73-08203
Thin-film BiPbSrCaCuO dc SQUID's operating at liquid nitrogen temperature.—73-11936

**superconductivity,**
Competition between structural and superconducting transition in (LaNd)-Sr-Cu-O.—73-04682
Crystallization of metastable phases and superconductivity in amorphous GaSb.—73-14820
Effect of Li doping on the superconducting properties of $EuBa_2Cu_3O_7$ by ac susceptibility measurement and Li NMR.—73-04703
Equipment for contactless determination of the superconducting transition of ceramic specimens.—73-11750
Field dependence of the magnetic ordering of Cu in $Ru_2CuO_4$ (R=Nd,Sm).—73-05568
Fluctuation effects in the vicinity of the second critical field in high-$T_c$ superconductors.—73-01554
High-$T_c$ superconductivity as consequence of overlap nondegenerate and plane bands.—73-15501
High-temperature superconductivity in $BaPb_{1-x}Bi_xO_3$ system.—73-15503
High-temperature superconductivity—current status, our theoretical and experimental work.—73-11788
Magnetic flux-drag forces for high-$T_c$ superconductors.—73-01594
Magnetism in the insulating parents of the high-$T_c$ superconductors: well or ill understood.—73-04764
Nonlinear electromagnetic field response of high-$T_c$ superconducting microparticle composites.—73-08149
Phonon-free superconductivity of cubic monocarbides and mononitrides.—73-16272

Possible mechanism for high-$T_c$ superconductivity.—73-04787
Present and future applications of superconductivity.—73-08180
Spatial variation of the critical current density of the high-$T_c$ superconducting thin films.—73-11902
Specific heat of copperless oxide $Ba_{0.6}K_{0.4}BiO_3$ superconductor.—73-15624
Stimulation of superconductivity in metal oxide layered superconductors.—73-01663
Superconductivity and antiferromagnetic ordering in $(Gd,R)_{1.85}Ce_{0.15}CuO_4$ with R=Pr and Sm.—73-04812
Superconductivity at 12 K in $YNi_2B$ system.—73-15637
Superconductivity at 77 K in $(Pb,Cu)Sr_2(Ca,Y)Cu_2O_7$ by postannealing.—73-04813
Superconductivity of doped $La_2CuO_4$.—73-04814
Superconductors with quasi-localized pairs: bismuthates and $A^{IV}B^{VI}$ semiconductors doped by $III^B$ metals.—73-01681
Suppression of superconductivity in $Er_{1-x}Ca_xBa_2Cu_3O_y$ by hole doping and pair breaking.—73-15640
Temperature and doping dependence of the magnetic susceptibility in the cuprates.—73-05648
Ten Years of Superconductivity: 1980-1990—73-17539

**superconductors,**

3-D correlation in high-$T_c$ copper oxides.—73-08259
$^{63}Cu$ nuclear spin-lattice relaxation study for low-temperature structural transition in $(La_{1-x}Ba_x)_2CuO_4$ around $x$=0.06.—73-08595
Activation energy and pinning potential in Bi-based tapes.—73-11682
Activity and diffusivity of oxygen in liquid Ag-$YbBa_2Cu_3$ and $TlBa_2Ca_2Cu_3$ alloys.—73-11683
Alloy for HTSC composite conductors made of Au-Ag-Pd.—73-04829
Analytical methods for high-temperature superconducting materials.—73-11686
Anderson localization is not the reason for the variation of high-$T_c$ superconductivity.—73-11687
Annealing effects on $(Ln, Ce)_2CuO_4$ system.—73-15388
Anomalous $x$ dependence of $T_c$ and possibility of low-temperature structural phase transition in $La_{2-x}Sr_xCu_{0.99}M_{0.01}O_4$ (M=Ni, Zn, Ga).—73-11690
Anomalous isotope effects due to linear energy-dependent electronic density of states in high-$T_c$ superconductors.—73-04673
Anomalous temperature dependence of $H_{c2}$ in Bi-Sr-Cu-O.—73-15391
Anomalous thermoelectric power of $Bi_{1.6}Pb_{0.5}Sr_{1.9-y}La_yCu_{1.05}O_z$.—73-02553
Apparatus comprising a ceramic superconductive body and method for producing such a body.—73-04830
Application of high-$T_c$ oxide superconductor (HTSC) to high-field magnet at 4.2 K.—73-07990
Applications of ceramic superconductors in electronics.—73-07991
Atomic layer and unit-cell layer growth of superconducting thin films by laser molecular beam epitaxy.—73-11691
Atomic ordering in an infinite-layer compound $Sr_{0.85}Nd_{0.15}CuO_2$ studied by transmission electron microscopy.—73-15394
Atomically layered growth and properties of high-temperature superconducting single-crystal films and superlattices.—73-07992
$Bi_2O_3$-$Sb_2O_3$ binary system.—73-11694
Bipolaron model of high-$T_c$ superconductivity: a discussion of overdoping.—73-11696
Bismuth-containing superconducting material and process for producing it.—73-04831
Bose-glass–vortex-glass phase transition and dynamic scaling for high-$T_c$ $Nd_{2-x}Ce_xCuO_4$ thin films.—73-08815
Calculation of $F^+$ centers in the $CuO_2$ plane of HTSC.—73-15395
Calculation of variations of magnetic peak fields of high-$T_c$ superconductors.—73-04677
Can Anderson-Luttinger liquid theory be considered relevant to cuprate superconductors.—73-01498
Ceramic oxide supeconductive composite material.—73-04832
Ceramic superconductor wire and method of manufacturing the same.—73-11947
Characterization of a radio-frequency plasma source for molecular beam epitaxial growth of high-$T_c$ superconductor films.—73-07997
Characterization of single crystals of high-$T_c$ superconductor $La_{2-x}Sr_xCuO_4$.—73-11701
Charge dynamics across the $CuO_2$ planes in $La_{2-x}Sr_xCuO_4$.—73-07998
Charge transfer investigation: X-ray photoelectron spectroscopy on superconducting $Tl_2Ca_2Ba_2Cu_3O_{10}$.—73-01503
Chemical control of high-$T_c$ superconductivity: metal-superconductor-insulator transition in $(Tl_{1-y}Pb_y)Sr_2(Ca_{1-y}Y_y)Cu_2O_7$.—73-11702
Chemistry of electron-doped $Ln_{2-x}Ce_xCuO_4$ superconductors.—73-11703
Collective magnetic excitations of $Ho^{3+}$ ions in grain-aligned $HoBa_2Cu_3O_7$.—73-04681
Combined electronic-nuclear magnetic ordering of the $Ho^{3+}$ ions and magnetic stacking faults in the high-$T_c$ superconductor $HoBa_2Cu_3O_7$.—73-08002
Comparative infrared spectroscopic study of electronic superconductors of the type $Ln_{2-x}M_x^{IV}CuO_{4-y}$.—73-08003
Comparative study between $(RE_{1-x}Pr_x)Ba_2Cu_3O_{7-\delta}$ with $x$=0 or 0.3.—73-08004
Comparison of transport properties between Tl-(1223) and Tl-(2223) phases of Tl-Ba-Ca-Cu-O systems.—73-15401
Composites of magnetic fluid with high-$T_c$ superconducting particles.—73-08007
Compositional phase separation in $La_{2-x}Ba_xCuO_y$ near the optimum composition for superconductivity.—73-08008
Compound oxide high-temperature superconducting material and a method for preparing [the] same.—73-11948
Computational study of hole species in models of the cuprate superconductors.—73-15403
Conduction electron spin resonance in the $Nd_{1.85}Ce_{0.15}CuO_{4-\gamma}$ superconductor.—73-04685
Connection between high-temperature superconductors and superconductor precursors.—73-15675
Contaminant diffusion barrier for a ceramic oxide superconductor coating on a substrate.—73-11949
Copper and oxygen isotope effects in $La_{2-x}Sr_xCuO_4$.—73-15405
Critical current density and resistivity measurements for long patterned lines in $Tl_2Ba_2CaCu_2O_8$ thin films.—73-08011
Critical currents of ceramic superconductors induced by pulsed magnetic fields.—73-11713
CrTlSrCaCuO and related superconducting systems.—73-04833
Cryoconducting superconducting composites.—73-01513
Crystal chemistry of copper-based oxide superconductors and related compounds—an approach to the material design.—73-04689
Crystal growth of Tl-based cuprate superconductors.—73-11716
Crystal structure of the new metallic copper oxide, $La_2Sr_6Cu_8O_{18-\delta}$.—73-08013
Cu $K_\beta/K_\alpha$ intensity ratios of some Cu compounds and high-$T_c$ superconducting cuprates.—73-15407
Cu(I) content in high-temperature superconducting materials [determined] using neocuproine.—73-15408
Decrease of the homogeneous width of the $Tm^{3+}$ electron energy levels in $TmBa_2Cu_3O_{6+x}$ at the superconducting transition.—73-08014
Dense high-temperature ceramic oxide superconductors.—73-04834
Dense melt-based ceramic superconductors.—73-11951
Dependence of lattice parameters and $T_c$ on the hole concentration determined by precise measurement of the oxygen content of $M_xLa_{2-x}CuO_{4-y}$ (M=Ba, Sr, Ca).—73-01517
Dependence of the temperature of transition in the superconducting state on the degree of metallicity of chemical bonds.—73-02230
Depth-sensitive visualization of irradiation-induced columnar defects in the layered superconductor 2H-$NbSe_2$ via scanning probe microscopy.—73-08017
Determination of high-frequency pseudosurface mode velocity in high-$T_c$ superconducting $RBa_2Cu_3O_{7-y}$ (R=Tm, Er, Ho, Dy, Gd, Eu, Sm, Nd, Pr) single crystals by Mandelstamm-Brillouin light scattering spectra.—73-01520
Determination of the oxygen content in superconducting and related cuprates using temperature-programmed reduction.—73-01521
Diamagnetic shielding and Meissner effect in the high-$T_c$ superconductor $Sr_{0.2}La_{1.8}CuO_4$.—73-15417
Disappearance of superconductivity in overdoped $La_{2-x}Sr_xCuO_4$ at structural phase boundary.—73-08021
Disorder-induced flicker noise in high-$T_c$ rf superconducting quantum magnetometers.—73-01524
Doping dependence of local magnetic moments and antiferromagnetism in high-$T_c$ superconductors: asymmetry between electron and hole doping.—73-04696
Doping-, pressure-, and temperature-dependence of Hall coefficients in high-$T_c$ cuprates.—73-11727
Double-layer Hubbard model: off-diagonal long-range order in the nodeless $d$-wave channel.—73-04697
$DyBa_2Cu_3O_{7-x}$ superconducting thin films with (103) and (013) orientations grown on (001)MgO MBE.—73-04698
Dynamic spin properties of $La_{1.98}Sr_{0.02}CuO_4$.—73-08026
Effect of [irradiation] by subthreshold energy electrons on microwave absorption and luminescence of copper-free $Ba_{1-x}K_xBiO_3$ superconductors.—73-15424
Effect of addition of chromium(VI) oxide on the formation of Tl-Sr-Ca-Cu-O 1212 phase.—73-04699
Effect of electromagnetic radiation on alternating current losses in high-$T_c$ superconductors.—73-08030
Effect of oxidizer addition for synthesis of Sr-Ca-Cu-O superconductor.—73-08034
Effect of oxidizer addition for synthesis of Sr-Ca-Cu-O superconductors.—73-15430
Effect of site-selective substitution in bulk superconducting $Tl_2Ba_2CaCu_2O_8$ [Tl-2212].—73-11736
Effects of F doping and Cl doping on formation and superconductivity of the 1212-type phase $TlSr_2CaCu_2O_{7-}$.—73-04709
Effects of heat-treatment condition and Gd substitution on $Nd_{1.85}Ce_{0.15}CuO_{4-y}$ superconductivity.—73-08045
Effects of oxidation and air exposure on $Rb_xBa_{1-x}BiO_3$ superconducting thin films.—73-01535
Effects of substitution of Fe for Cu in $La_{1.85}Sr_{0.15}CuO_{4-\delta}$ polycrystalline samples.—73-08048
Efficient incorporation of silver to improve superconducting fibers.—73-11952
Electric field effect in a superconducting film device.—73-15448
Electric field gradient at copper nuclei in oxides.—73-02250
Electric-field gradient of Cu sites and distribution of the conductivity electrons in $Nd_{1.85}Ce_{0.15}CuO_4$ superconductor.—73-16128
Electrical responses of Ln-Ba-Cu-O (Ln=Eu, Y), Ba-K-Bi-O, and Ba-Pb-Bi-O superconducting thin films to pulsed infrared radiation.—73-15449
Electrochemical intercalation of alkali metals into superconducting oxide phases.—73-11743
Electrochemical oxidation and superconductivity of the system $La_{2-x}A_xCuO_{4+c}$ (A=Cd, Pb).—73-15450
Electromagnetic shielding characteristics of polymer/superconductor composites.—73-11744
Electron spin resonance in $Sr_{0.6}Ca_{0.4}CuO_2$.—73-11746
Electronic structure and chemical bond of (Y, La, Sc)-BaCu(O, F) superconductors [studied] by quantum chemistry.—73-04714
Electronic structure, insulators, metal transition, and superconductivity in high-$T_c$ and related systems.—73-11747
Electronic transitions of Ho in $Pb_2Sr_2HoCu_3O_8$ observed by inelastic neutron scattering.—73-04715
Elementary excitations in the metallic $CuO_2$ planes of high-$T_c$ systems.—73-08056
Energy gap, susceptibility, and damping in superconducting cuprates.—73-15457
Energy spectrum of the quasi-particle of $Tl_2Ba_2CaCu_2O_8$ under coexistence of interlayer pairing and intralayer pairing.—73-08060
Enhancement of the superconducting transition temperature of $TlSr_2CaCu_2O_7$ by yttrium and vanadium substitutions.—73-01545
Epitaxial heterojunctions of oxide semiconductors and metals on high-temperature superconductors.—73-11522
Epitaxy of high-$T_c$ superconducting films on (001)silicon surface.—73-11953
Etching of nanoscale structures on high-temperature superconductors.—73-11954
Evidence for scaling invariance and universality of the irreversibility line of high-temperature superconductors.—73-08067
Evidence of superconductivity at 30 K in $Pr_2CuO_{4-x}F_x$.—73-04717
Experimental study of $T_c$ measurement system for high-$T_c$ superconductor controlled automatically by microcomputer.—73-11754
Exploring the SC [superconductor] industry from within.—73-15464
Explosive treatment of SHS products (high-temperature superconductors).—73-15465
Extended high-temperature superconducting fiber channels based on the sol-gel method and effects of thermophysics of glass fiber forming.—73-15466
Fabrication method of superconductive thin film transistor.—73-15676
Fabrication of $Ba_{1-x}K_xBiO_3$ superconductors prepared by the plasma-arc melting and rapid quenching method.—73-11757
Fabrication of high-$T_c$ superconductors using ozone-assisted molecular beam epitaxy.—73-08074
Fabrication of sintered oxide superconducting wires by a powder-in-tube method.—73-01706
Features of the electronic structure of high-temperature superconducting yttrium ceramics.—73-04723
Film/substrate thermal boundary resistance for Er-Ba-Cu-O high-$T_c$ thin films.—73-11764
Fine structure of $I$-$V$ characteristics and microwave response of high-$T_c$ films on insulating substrates.—73-01553
Fluorination of $La_2NiO_4$ and $La_2CuO_{4+\delta}$.—73-08081
Fluorine-doped high-$T_c$ cuprate $TlSr_2CaCu_2O_{7-}$.—73-15474
Flux trapping in superconducting thin films in weak magnetic fields.—73-11766
Flux-flop in high-temperature superconducting crystals with columnar defects.—73-04727
Formation of a superconducting $YbBa_2Cu_3O_x$ phase on an insulating $Yb_2BaCuO_5$ substrate prepared by the PMQ method.—73-11768
Fourier transform Raman spectroscopy of superconducting $YBa_2Cu_3O_{7-\delta}$ films on strontium titanate and magnesium oxide substrates.—73-15484
Free-standing oxide superconducting articles.—73-04835
Frequency dependence of surface resistivity of [superconducting] films: low-frequency electromagnetic losses.—73-15486
Gold/high-temperature superconductor interface: metallicity of the near surface region and a search for the proximity effect.—73-01560
Growth of $GdBa_2Cu_3O_7$ superconducting thin films on (100)$SrTiO_3$ single-crystal substrates at various substrate temperatures.—73-11777
Growth of $GdBa_2Cu_3O_7$ superconducting thin films on nonlattice-matched MgO substrate.—73-11778
Have we known the mechanisms of high-temperature superconductivity for a long time.—73-11780
Heat capacity data of doped $NdBa_2Cu_3O_{7-}$.—73-04731
Heteroepitaxy of high-$T_c$ superconducting Tl-Ba-Ca-Cu-O films on metal-coated substrates.—73-11781
High critical temperature superconducting wire with radially grown crystallites.—73-04836
High-$T_c$ copper-oxide superconductors comprising Tl-Sr-Ca-Cu-O.—73-11955
High-$T_c$ cuprates as 2-D quantum antiferromagnets.—73-08093
High-$T_c$ superconducting device with weak link between two superconducting electrodes.—73-01707
High-$T_c$ superconducting film.—73-11956
High-$T_c$ superconducting lead assembly in a cryostat dual penetration for refrigerated superconductive magnets.—73-04837
High-$T_c$ superconducting oxides.—73-01708
High-pressure studies on superconducting materials.—73-11784
High-pressure synthesis of $HgBa_2Ca_2Cu_3O_{8-x}$ superconductor with $T_c$>130 K.—73-15502
High-pressure synthesis of Mo-containing 1212 and 1222 compounds, (Cu, Mo)$Sr_2YCu_2O_z$ and (Cu, Mo)$Sr_2(Y, Ce)_2Cu_2O_z$.—73-11785
High-temperature superconducting ceramics.—73-11787
High-temperature superconducting thin-film-based devices.—73-04735
High-temperature superconductivity: magnets and applications of naval interest.—73-11789

High-temperature superconductor comprising barium sulfate, strontium sulfate or mixtures thereof, and a process for its preparation.—73-11957

High-temperature superconductor system comprising $Tl_2Ba_2CuO_6$.—73-04838

Higher harmonic susceptibilities of Ho ceramic superconductors.—73-01570

Hole concentration and critical temperature in $Tl_{2-x}Ba_{2-y}CuO_{6-x}$.—73-11790

Hole frustration contribution to the magnetic susceptibility of $CuO_2$ layers in high-temperature superconductors.—73-08097

Hypersound studies of the electron-doped $Ln_{2-x}CeCuO_4$ and hole-doped $La_{2-x}M_xCuO_4$ high-$T_c$ single crystals.—73-11792

Impedance of superconductors with random inhomogeneities.—73-04737

Implications of the nuclear quadruple frequency in high-$T_c$ cuprates.—73-08100

In situ growth of Tl-containing oxide superconducting films.—73-15680

In-field logarithmic relaxation of microwave absorption in superconducting $Tl_2Ba_2Ca_2Cu_3O_{10}$ and flux pinning properties.—73-04740

Incommensurabilities in high-$T_c$ superconducting oxides.—73-04741

Incommensurable modulated structure in $YSr_2Cu_{2.5}B_{0.5}O_y$.—73-04742

Influence of defects on relaxation in high-$T_c$ superconductors.—73-04743

Influence of silver base on $J_c$ measurement of oxide superconductors.—73-04744

Infrared anomaly in $(La_{1-x}Sr_x)_2NiO_{4+\delta}$.—73-08110

Initial stages of InAs deposition on $SrF_2$-coated $EuBa_2Cu_3O_{7-y}$ thin-film superconductors.—73-11808

Internal explosion in laser ablation of superconducting targets.—73-11810

Ionic model of some aspects of Cu NQR spectra in superconducting oxides.—73-01583

Irreversibility lines of 1223-phase superconductor of Tl system.—73-11811

Irreversible phenomena in the absorption of electromagnetic field in HTSC plates.—73-08117

$J_c$ in ceramic HTS.—73-08118

Laminated film.—73-04839

Laser ablation method for forming oxide superconducting films.—73-11958

Laser ablation method for forming oxide superconducting thin films using a homogenized laser beam.—73-04840

Laser ablation method of preparing oxide superconducting films on elongated substrates.—73-01709

Laser ablation process for preparing oxide superconducting thin films.—73-15681

Laser deposition of HTSC films: expansion of the laser plasma, deposition of particles, formation of the crystal structure, and superconducting properties of films.—73-04753

Laser evaporation method for forming high-$T_c$ superconducting films.—73-04841

Laser evaporation method for preparing a superconducting oxide thin film.—73-04842

Laser-assisted CVD process forming oxide superconducting films.—73-11959

Lattice instabilities in cuprate superconductors: a possible limiting mechanism for $T_c$.—73-08122

Layered copper oxides $(R_{1+x}Ce_{2-x})Sr_2Cu_2(M_{1-y}Cu_y)O_{11}$ wherein R is a rare-earth element and M is one or both of Pb and Tl.—73-04843

Levitation pressure and stiffness of a high-$T_c$ superconducting bearing in field-cooling process.—73-01586

Low-energy excitations in superconducting $La_{1.86}Sr_{0.14}CuO_4$.—73-15537

Low-energy spin fluctuations in $La_{2-x}Sr_xCu_{1-y}Zn_yO_4$ ($x$=0.14, $y$=0.012).—73-01591

Low-field microwave absorption of $Nd_{1.85}Ce_{0.15}CuO_{4-y}$ superconducting system.—73-08124

Low-temperature fluctuations of vortices in layered superconductors.—73-15540

M-Tl-Ba-Cu-O high-temperature superconductors wherein M is selected from the group consisting of Ti, Zr, and Hf.—73-11960

Magnetic dynamics of superconducting $La_{1.86}Sr_{0.14}CuO_4$.—73-08126

Magnetic flux quantization in the repulsive electron correlation model for high-$T_c$ cuprate superconductivity.—73-08127

Magnetic order of Cu moments in $La_{2-x}Ba_xCuO_4$ around $x$=0.12 observed by positive muon spin rotation.—73-11821

Magnetic properties of extended $t$-$J$ model: I, Static properties.—73-02639

Magnetic relaxation of positive muon spin in $HoBa_2Cu_3O_{7-\delta}$ and $Ho_{0.5}Y_{0.5}Ba_2Cu_3O_{7-\delta}$ compounds.—73-15545

Magnetic resonance and magnetic ordering in the oxygen-deficient $RBa_2Cu_3O_x$ superconductors.—73-04762

Magnetism and high-$T_c$ superconductors.—73-01596

Many-body effects in X-ray photoemission and high-$T_c$ superconductivity of cuprate superconductors.—73-11826

Materials for superconducting electronics: in situ growth of $PrGaO_3$ thin films by metallorganic chemical vapor deposition.—73-07338

Measurement of trapped flux distribution in a high-$T_c$ superconductor using a flux-gate magnetometer.—73-04767

Mechanism of introduction of yttrium ions into barium cuprates, $Ba_2Cu_3O_y$.—73-01602

Metal-insulator transition in doped bismuthate superconductors.—73-08132

Metallorganic chemical-vapor-deposition-derived lead- and bismuth-doped high-$T_c$ superconducting Tl-Ba-Ca-Cu-O films.—73-11831

Method and apparatus for forming high-critical-temperature superconducting layers on flat and/or elongated substrates.—73-11962

Method for forming a Bi-containing superconducting oxide film on a substrate with a buffer layer of $Bi_2O_3$.—73-04844

Method for forming aligned superconducting Bi-Sr-Ca-Cu-O.—73-04845

Method for forming an oxide superconducting material.—73-15683

Method for forming electrode for electrical connections to oxide superconductor.—73-01710

Method for forming grain-boundary junction devices using high-$T_c$ superconductors.—73-11963

Method for forming internally helixed high-temperature superconductor assembly.—73-01711

Method for forming Josephson break junctions.—73-15684

Method for forming superconducting ceramic elongated body.—73-04846

Method for joining parts of ceramic high-temperature superconductor material.—73-01712

Method for manufacturing an oxide superconducting circuit board by printing.—73-11965

Method for manufacturing an oxide superconductor thin film.—73-11966

Method for manufacturing oxide superconducting article.—73-01713

Method for manufacturing superconducting ceramic elongated body.—73-01714

Method for producing oxide superconducting composite wire.—73-11968

Method for producing strain tolerant multifilamentary oxide superconducting wire.—73-15685

Method for separating superconductor powder from nonsuperconductive powder.—73-04847

Method for the formation of high-temperature superconductors.—73-04848

Method for the production of a structured composite with high-temperature superconductor material.—73-11969

Method of coating superconductors with inorganic insulation.—73-02050

Method of fabricating superconducting ceramic pipe.—73-04849

Method of fabricating thallium-containing ceramic superconductors.—73-15686

Method of forming a superconducting oxide layer by MOCVD.—73-11970

Method of forming an oxide superconductor/semiconductor junction.—73-04851

Method of forming oxide superconductor patterns.—73-01715

Method of forming shaped superconductor materials by electrophoretic deposition of superconductor particulate coated with fusible binder.—73-01716

Method of forming smooth, uniform thallium-based superconducting films.—73-11971

Method of forming superconducting circuit.—73-01717

Method of making high-$T_c$ superconductor material, and article produced by the method.—73-01718

Method of manufacturing a component of the tape or filament kind out of a material based on a superconducting oxide having a high critical temperature, and a component obtained thereby.—73-11972

Method of manufacturing a superconducting oxide pattern by laser sublimation.—73-01719

Method of manufacturing a superconductive cable.—73-15687

Method of manufacturing an oxide superconductor/metal laminate.—73-01720

Method of manufacturing oxide superconducting materials.—73-04852

Method of manufacturing oxide superconducting wire.—73-11974

Method of preparing bismuth oxide superconductor comprising heating under a reduced pressure.—73-01721

Method of preparing oxide superconducting films by laser ablation.—73-11976

Method of preparing oxide superconducting wire.—73-01722

Method of preparing Pb-Sr-Ca-Ln-Cu-O metal oxide superconductor.—73-01723

Method of producing a composite oxide superconductive wire.—73-04853

Method of producing oxide superconductor.—73-11977

Method of producing superconducting ceramic wire having protective metal coating thereon.—73-01724

Method of shaping superconducting oxide material.—73-04854

Methods for producing $Tl_2Ca_2Ba_2Cu_3$ oxide superconductors.—73-11979

Microelectronic superconducting crossover and coil.—73-11980

Microelectronic superconducting device with multilayer contact.—73-04855

Microscopic structure and flux pinning effect in the $Sm_xBa_{1-x}CuO_y$ system.—73-01604

Microwave detection of a superconducting infrared sensor.—73-11981

Microwave studies in high-temperature superconductors.—73-11836

Modulated structures in high-$T_c$ superconductors: an electron microscopy study.—73-04775

Modulation structures and new type of twin boundary in Bi-Sr-Cu-O system doped with Ba.—73-11840

Molten salt synthesis of anisotropic powders.—73-04857

Monitoring of photodeposited superconductive films.—73-11841

Multicritical phase diagram and random field effects in superconducting bismuthates.—73-15560

Muon spin rotation study of the correlation between $T_c$ and $n_s/m^*$ in overdoped $Tl_2Ba_2CuO_6$.—73-15561

N-type oxide superconductor represented by the formula $Nd_x(Ce_yL_{1-y})_2CuO_{4-\delta}$ (L=La, Mg, or a mixture of alkaline earth elements).—73-01725

Neutron spectroscopic evidence for cluster formation and percolative superconductivity in $ErBa_2Cu_3O_x$.—73-15564

Neutron spectroscopy of the crystalline electric field (CEF) in high-$T_c$ $YbBa_2Cu_3O_7$.—73-08141

Neutron structural studies of superconducting $Bi_2Sr_2CuO_{6+\delta}$ and $Bi_{2-x}Pb_xSr_{1.8}La_{0.2}CuO_{6+\delta}$ ($x$=0 and 0.2).—73-15565

New oxide superconductors containing carbonate groups.—73-01612

New quadruple perovskite $Gd_2Ba_2Ti_2Cu_2O_{11}$: a potential superconducting parent phase.—73-08144

New quadruple perovskites $Ln_2Ba_2Ti_xSn_{2-x}Cu_2O_{11}$ ($0 \le x \le 2$): controlling copper-oxygen distances in potential superconducting parent phases.—73-08145

NMR evidence for common magnetic behavior in double layered superconducting cuprates.—73-08146

Nonresonant microwave absorption in granulated superconductors.—73-01617

Nonspecular reflector with diffusely reflecting superconductor and protection coating.—73-11982

Novel magnetic applications of high-$T_c$ bulk superconductors: lenses for electron beams.—73-11848

NQR study of local structure and cooling-rate-dependent superconductivity in $La_2CuO_{4+\delta}$.—73-04779

Nuclear track method for neutron-induced radionuclide mapping with applications to uranium distributions in superconductors.—73-08152

Open architecture iron core electromagnet for MRI using superconductive winding.—73-04859

Optical properties of superconducting copper oxides and related compounds.—73-05606

Optical properties of the Y-Ba cuprates: mainly a band structure point of view.—73-11850

Optimization of superconducting tunnel-junction-based X-ray detectors.—73-11852

Optimum preparation of bulk $Tl_2Ba_2CaCu_2O_{8-\delta}$ (2212) high-temperature superconductor.—73-11854

Origins of the anomalous doping effects of the Hall constants of $La_{2-x}Sr_xCuO_4$ and $Nd_{2-x}Ce_xCuO_{4-\delta}$.—73-08155

Out-of-plane orbital characters of intrinsic and doped holes in $La_{2-x}Sr_xCuO_4$.—73-08156

Oxide superconducting compositions containing antimony.—73-01623

Oxide superconducting device having uniform oxygen concentration.—73-01726

Oxide superconducting device.—73-04860

Oxide superconducting material and process for producing the same.—73-11984

Oxide superconductor and manufacturing method thereof via HIP and controlling the oxygen partial pressure.—73-15689

Oxide superconductor and process for preparation thereof.—73-04861

Oxide superconductor and process for producing the same.—73-11985

Oxide superconductor composition and a process for the production thereof.—73-15690

Oxide superconductor comprising $BaBO_3$ (where B is Zr, Sn, Ce, or Ti).—73-01728

Oxide superconductor having the formula $Pb_\alpha(M_{1-x-y}Ce_xSr_y)_4Cu_{3-\alpha}O_z$ where M is at least one rare-earth element.—73-04862

Oxide superconductor lamination.—73-11986

Oxide superconductor, superconducting wire and coil using the same, and method of production thereof.—73-15691

Oxide superconductors.—73-11987

Oxyanion derivatives of cuprate superconductors: superconducting thallium cuprate oxysulfate $Tl_{0.5}Pb_{0.5}Sr_4Cu_2(SO_4)O_y$.—73-15573

Oxygen dependence of the magnetic order of Nd in $NdBa_2Cu_3O_{6+x}$.—73-04782

Oxygen dope in bismuth- and lead-substituted lanthanum copper oxides by electrochemical and oxygen-HIP methods.—73-08157

Parametric resonance in suspension of superconducting particles.—73-15354

Passivation of thin-film oxide superconductors.—73-04863

Percolation model of high-$T_c$ superconductors.—73-15577

Permanent magnets of high-$T_c$ superconductors.—73-04784

Phase equilibrium in the $SrCO_3$-$Bi_2O_3$-CuO pseudoternary system.—73-16252

Plasma-enhanced CVD of oxide superconducting films by utilizing a magnetic field.—73-04864

Point defect modeling of $La_2CuO_4$-based superconductors.—73-04786

Polymerized complex synthesis of superconductors and their properties.—73-01632

Possibilities of symbolic description and systematic derivation of high-$T_c$ superconductor-like structures.—73-01633

Possible role of neutral oxygen in the formation of electron spectrum in high-$T_c$ superconductors.—73-08169

Possible superconductivity and microstructural investigation in $Y_{1-x}Ca_xSrCu_{2.6}Fe_{0.4}O_{6+z}$ ($x$=0, 0.1).—73-01635

Pr substitution effect on $T_c$ of $YbBa_2Cu_3O_{7-\delta}$.—73-08170

Preformed superconductive devices.—73-11867

Preparation and characterization of Tl-Ba-Ca-Cu-O superconducting films by spray pyrolysis and Tl-diffusion technique.—73-04788

Preparation and properties of high-$T_c$ $GdBa_2Cu_3O_{7-y}$ superconducting ceramics obtained from gadolinium nitrate.—73-11868

Preparation and superconductivity of the T*-type $(PrGd_{0.8}A_{0.2})CuO_z$ compounds (A=Ca, Sr).—73-15589

Preparation and T*-type characterization of superconductor in the Pr-Gd-A-Cu-O system (A=Ca, Sr).—73-08174

Preparation and transport properties of $TlBa_2Ca_2Cu_3O_x$ thin films by metallorganic deposition [MOD].—73-15591
Preparation of (Ca, Sr)$CuO_2$ under various oxygen partial pressures and substitution of elements.—73-15592
Preparation of infinite layer of $Ca_{1-x}Sr_xCuO_2$ filaments by solution spinning method under ambient pressure.—73-15596
Preparation of superconductors of near-single-phase $Tl_2Ba_2Ca_2Cu_3O_{10}$.—73-08179
Preparation of Tl-1223 superconductor and its silver-sheathed tape.—73-15599
Preparation of $TlBa_2Ca_2Cu_3O_{9-\delta}$ high-$T_c$ thin films by laser ablation in combination with thermal evaporation of thallium oxide.—73-11872
Pressure effect, anisotropic transport properties, and irreversibility line of $Pb_2Sr_2Y_{1-x}Ca_xCu_3O_8$ crystals.—73-04794
Process for depositing a different thin film on an oxide superconductor.—73-01729
Process for making oxide superconducting films by pulsed excimer laser ablation.—73-11640
Process for making superconducting Tl-Pb-Sr-Ca-Cu oxide films.—73-04865
Process for making superconductor powder.—73-11989
Process for making superconductor Tl-Pb-Sr-Ca-Cu-O films.—73-04866
Process for making superconductors and their precursors.—73-11990
Process for patterning layered thin films including a superconductor.—73-15692
Process for preparing *a*-axis-oriented superconducting oxide thin films.—73-01730
Process for preparing a superconducting thin film of compound oxide.—73-04867
Process for preparing oxide powders and superconducting oxides.—73-11991
Process for preparing superconducting junction of oxide superconductor.—73-11992
Process for preparing superconductors and compositions useful therein.—73-04868
Process for producing a superconducting thin film at relatively low temperature.—73-01734
Process for producing an oxide superconductor from alkoxides.—73-11994
Process for producing bismuth-based oxide superconducting films.—73-11996
Process for producing molded bodies from precursors of high-temperature superconductors.—73-15693
Process for producing molded bodies from precursors of oxidic high-temperature superconductors.—73-04869
Process for producing sintered ceramic wire.—73-12093
Process for producing superconducting wires.—73-11997
Processes of magnetron dusting of films of yttrium-barium ceramics of composition 123, 247, and 124.—73-11875
Processing of the Tl-Ca-Ba-Cu-O high-$T_c$ phase via the sol-gel route.—73-11878
Production of oxide superconducting films by laser sputtering using $N_{22}$.—73-01737
Production of oxide superconducting films by multilayer deposition.—73-04870
Proximity effects of a thin film of unconventional superconductor in contact with a magnetic substrate.—73-11881
Pulsed laser deposition of oxide superconducting thin films.—73-11882
Pulsed-laser-deposited metal-oxide-based superconductor, semiconductor, and dielectric heterostructures and superlattices.—73-04796
Quasi-particle decay effects in the superconducting density of states: evidence for *d*-wave pairing in the cuprates.—73-15607
Radiation detector using a bulk high-$T_c$ superconductor.—73-04871
Reactive coevaporation of DyBaCuO superconducting films: the segregation of bulk impurities on annealed MgO(100) substrates.—73-08185
Reactor vessel for manufacture of superconducting films.—73-11998
Recent progress in high-$T_c$ superconductor research: unique and novel metallic state in doped $CuO_2$ plane.—73-15609
Relationship between microstructure and optical properties in high-$T_c$ superconductors.—73-11890
Resistance in high-temperature superconductors.—73-04801
Resistive transitions and the origin of the *n* value in superconductors with a Gaussian critical current distribution.—73-08189
Resistive upper critical field in $Tl_2Ba_2CuO_6$ at low temperatures and high magnetic fields.—73-15612
Resistivity measurements of $HgBa_2Ca_2Cu_3O_{8+\delta}$ [1223] and $HgBa_2Ca_3Cu_4O_{10+\delta}$ [1234] superconductors under high pressure.—73-11893
Resonant X-ray emission spectroscopy in $La_2CuO_4$ and CuO.—73-01651
Resonating valence bond state and high-$T_c$ superconductivity—a mean field theory.—73-15613
Response function of nonideal Bose gas of bipolarons.—73-01652
Review of the critical current densities and magnetic irreversibilities in high-$T_c$ superconductors.—73-08191
Rotational vortex-flux properties of $Ba_{0.575}K_{0.425}BiO_3$.—73-04802
Scanning Hall-probe microscopy of a vortex and field fluctuations in $La_{1.85}Sr_{0.15}CuO_4$ films.—73-08194
Scanning tunneling microscopy of defect structures and growth spirals in bulk single crystals of the high-$T_c$ superconductor $Pb_2Sr_2(Y, Ca)Cu_3O_{8+\delta}$.—73-01654
Second harmonic generation as a sensitive technique for estimation $H_{c1}$ of high-$T_c$ materials.—73-01655
SNS heterojunctions with new combinations of materials.—73-11899
Soft X-ray Cu*L* spectra and copper-oxygen bond covalency in high-$T_c$ superconductors.—73-08199
Spin bags, polarons, and impurity potentials in $La_{2-x}Sr_xCuO_4$ from first principles.—73-08202
Spin excitations of the extended *t-J* model: neutron scattering.—73-08735
Spin susceptibility in $La_{2-x}Sr_xCuO_4$ system from underdoped to overdoped regimes.—73-15626
Spin wave scattering by magnetic vortex lattice in high-$T_c$ superconductor-ferrite film structure.—73-15627
Spin-lattice relaxation of $^{63}Cu$ in high-$T_c$ related antiferromagnetic Cu oxides.—73-04806
Stability of superconducting $La_{1.8}Sr_{0.2}CaCu_2O_6$ with respect to oxygen partial pressure.—73-08205
Statistical theory of X-ray diffraction by one-dimensional randomly disordered $TlBa_2Ca_2Cu_3O_9/TlBa_2Ca_2Cu_3O_{10}$ superconducting thin films.—73-11905
STM study of distortion and instability of inclined flux-line-lattice structures in the anisotropic superconductor 2H-$NbSe_2$.—73-08743
Strain and proximity effect in $(La,Sr)_2CuO_4$-based superconducting superlattices.—73-15630
Structural origin of holes in the Tl-O single rock-salt layer superconductor $TlSrRCuO_5$ (R=La, Nd).—73-01667
Structure and superconducting properties of the $Tl_{1-\delta}CaBa_2Cu_2O_7$ and $Tl_{1-\delta}Y_{1-x}Ca_xBa_2Cu_2O_7$ series.—73-11908
Structure phase transitions in $CsDy(MO_4)_2$.—73-08761
Substitution effects on the thermoelectric power of $La_{2-x}Sr_xCu_{1-y}M_yO_4$ (M=Zn and Ni) and $YBa_2Cu_{3-y}Zn_yO_{7-\delta}$.—73-02697
Substrate of single crystal of oxide, superconductive device using said substrate, and method of producing said superconductive device.—73-01738
Summary on the modified Pechini method to prepare high-purity ceramic superconducting powders.—73-04810
Superconducting $Ba_{1-x}K_xBiO_3$ thin films and junctions.—73-11913
Superconducting ceramic composition comprising (Pb,Cd)-Sr(Y,Q)-Cu-O, wherein Q is Ca or Sr.—73-15694
Superconducting ceramics.—73-01673
Superconducting circuit elements with metallic substrate and method for manufacturing the same.—73-04872
Superconducting coil bearings for rotor load.—73-04873
Superconducting composite with multilayer patterns and multiple buffer layers.—73-04874
Superconducting conductor.—73-11999
Superconducting correlations and ion dynamics in metal-oxide compounds.—73-08217
Superconducting detector and method of making [the] same.—73-04875
Superconducting device composed of oxide superconductor material.—73-01739
Superconducting device having an extremely thin superconducting channel formed of oxide superconductor material.—73-01740
Superconducting device with c-axis orientation perpendicular to current flow.—73-15695
Superconducting films on microwave dielectric substrates.—73-11915
Superconducting lead on integrated circuit.—73-12000
Superconducting magnetic levitation apparatus.—73-12001
Superconducting material comprising $Rb_xCs_yC_{60}$.—73-12002
Superconducting material.—73-04877
Superconducting metal oxide $(Tl,Bi)_1Sr_2Ca_2Cu_3O_x$.—73-04878
Superconducting properties of $HoBa_2Cu_3O_7/SrTiO_3/HoBa_2Cu_3O_7$ heterostructures.—73-01676
Superconducting properties of $La_{2-x}Sr_xCuO_4$ within the framework of the phonon-mediated pairing mechanism.—73-08220
Superconducting properties of $Tl_{1-x}Pb_xCaSr_2Cu_2O_7$: role of Pb and oxygen stoichiometry.—73-08221
Superconducting receivers in radio astronomy.—73-15636
Superconducting $Sr_{0.875}Nd_{0.125}CuO_{2-\delta}$ thin films.—73-08223
Superconducting state of $GdBa_2Cu_3O_{6+\delta}$ single crystals ($\delta$=0.56; 0.75).—73-08224
Superconducting thin film and wire on a smooth substrate.—73-04879
Superconducting thin films with fullerenes and method of making.—73-15696
Superconducting $TlSr_2(Ca,Cr)Cu_2O_7$ thin films with critical current density up to $10^6$ A/cm$^2$.—73-08225
Superconductive alloys having bifurcated critical current density and method of preparation.—73-12003
Superconductive articles including cerium oxide layer.—73-04880
Superconductive ceramic wire and method for making [the] same.—73-04881
Superconductive ceramic wire and method for producing the same.—73-04882
Superconductive coplanar-waveguide filters.—73-11917
Superconductive device and method for demonstrating autorotation.—73-04883
Superconductive La-Sr cuprate stability in NaF hydrothermal solutions at high temperature and pressure.—73-01677
Superconductive logic device.—73-12004
Superconductive optoelectronic device with the basic substance $C_2O$ of superconductive-conjugate photoconductivity.—73-01741
Superconductive switching element with semiconductor channel.—73-04884
Superconductive tube for magnetic shielding and manufacturing method therefor.—73-04885
Superconductivity in Pb-based 1212 cuprates: evidence for underdoping from thermoelectric power.—73-15639
Superconductivity in the infinite layered $Sr_{1-x}La_xCuO_2$ and preparation of $CaCuO_2$ by sol-gel method.—73-01678
Superconductivity in transparent Sn-doped $In_2O_3$ films.—73-01679
Superconductivity of $La_{2-x}Nd_xCuO_{4+\delta}$ prepared under high oxygen pressure: suppression of the phase separation seen in $La_2CuO_{4+\delta}$.—73-01680
Superconductivity of $La_{2-x}Sr_xCuO_4$ with high strontium concentration by sulfur doping.—73-08230
Superconductivity of $NbSr_2Nd_{2-x}Ce_xCu_2O_{10-\delta}$ [$0.3\leq x\leq 0.7$].—73-04815
Superconductivity, spin gaps, and Luttinger liquids in a class of cuprates.—73-08232
Superconductor structure.—73-01743
Suppression of superconductivity in the $Er_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$ system.—73-15641
Surface and bulk analysis of metallorganic chemical-vapor-deposition-derived superconducting $Tl_2Ba_2Ca_2Cu_3O_x$ thin films by Auger electron spectroscopy.—73-11920
Surface impedance measurements of superconducting (NbTi)N films by a ring microstrip resonator technique.—73-01682
Suspension of high-$T_c$ superconducting particles: properties in alternating magnetic field.—73-08236
Synthesis and characterization of Ba ß-diketonate complexes for chemical vapor deposition of thin-film superconductors.—73-15644
Synthesis of infinite layered superconductor under high pressure.—73-01684
Synthesis of new copper oxide superconductors at high oxygen pressure.—73-11926
Synthesis of superconducting epitaxial films of $Ba_{1-x}K_xBiO_3$ [x=0.4] by laser ablation.—73-11927
Synthesis of the cuprates of lanthanum and yttrium under the conditions of high pressures and temperatures.—73-01685
Synthesis of Tl-Ba-Ca-Cu-O high-temperature superconductors from Ba-Ca-Cu-O precursors.—73-15646
Synthesis of Tl-base high-$T_c$ superconducting oxides through a diffusion process.—73-15647
TEM characterization of high-$T_c$ superconductive multilayered thin films.—73-01688
Temperature dependence of Hall coefficient in high-$T_c$ oxides.—73-11932
Temperature dependence of point-contact spectra for $Ag:Nd_{1.85}Ce_{0.15}CuO_{4-\delta}$.—73-08246
Tensor of crystalline electric field gradient at copper sites in $RBa_2Cu_3O_7$ lattices [R=Nd, Gd, Y, Yb]. Sternheimer's coefficient of $Cu^{2+}$ centers.—73-15650
Textured, polycrystalline, superconducting ceramic compositions and method of preparation.—73-04886
Theory and practice in the prediction of new materials.—73-09750
Theory for lateral stability and magnetic stiffness in a high-$T_c$ superconductor–magnet levitation system.—73-08251
Thermal expansion mismatch and intergrowth types in the system $La_{2-y}Nd_yCuO_4$.—73-01690
Thermally sprayed lead-containing thick layers.—73-04887
Thermoelectric power of high-$T_c$ superconductors: superconducting fluctuations and the marginal Fermi-liquid hypothesis.—73-15655
Thermoelectric power of $Pr_{2-y}Ce_yCuO_{4-\delta}$ [$0.13<y<0.17$] superconductors with various contents of Ce.—73-16636
Thermomagnetic effect in inhomogeneous superconducting films.—73-15657
Thermopower of superconducting $GdBa_2Cu_3O_7$ thin films.—73-07924
Thickness dependence of electrodynamic properties of TlCaBaCuO thin films.—73-08258
Thin films of $(RE)Ba_2Cu_3O_7$ [RE=Y, Pr, Eu, Gd, Ho] epitaxially grown in situ by excimer laser ablation: structural and superconducting behavior.—73-01693
Three methods of describing the structure of superconducting and nonsuperconducting phases with perovskite-like structure.—73-02526
*T*(II)–*O*-*T*(II) structural transition and superconductivity in the Sr-based 123 compounds $YSr_2Cu_{2.8}Mo_{0.1}W_{0.1}O_y$.—73-11930
$Tl_2Ba_{2-x}Sr_xCuO_6$: a system exhibiting a compositionally controlled superconductor–metal transition.—73-01695
Toward a unified magnetic phase diagram of the cuprate superconductors.—73-15659
Transfer-integral expansion for the *d-p* model of the $CuO_2$ plane—ground state of the undoped system.—73-01696
Transformation of acoustic waves on superconductor layer in piezocrystals.—73-01440
Transport and magnetic properties of polycrystalline $Nd_{1.85}Ce_{0.15}CuO_{4-\gamma}$ under applied magnetic fields.—73-04821
Transport properties near superconducting-nonsuperconducting phase boundary in $CaLaBaCu_3O_x$.—73-15660
Tunneling into BiSrCuO superconductor up to the critical magnetic field.—73-08265
Tunneling observation of phonon structures in $La_{1.85}Sr_{0.15}CuO_4$.—73-08268
Two symmetry modifications of $DyBa_2Cu_3O_x$ single crystals.—73-08271
Ultraviolet photoluminescence [UVPL] of high-$T_c$ superconductors.—73-01701
Universal relationship between $T_c$ and hole content in *p*-type cuprate superconductors.—73-15662
Using multiple small-angle neutron scattering technique to study porosity parameters of high-$T_c$ ceramics.—73-15663
Valency of copper in 123 oxides.—73-04825
Variable range hopping in $Pr_{1-x}Ca_xBa_2Cu_3O_{7-\delta}$.—73-08273
Weak-link characteristics and transport properties of Tl-1223 tape-shaped wire.—73-15666
X-ray analysis of $SrCaCu_3O_x$ phase.—73-11941
Y-Ba-Cu-O superconductive substance.—73-01744

$YBa_2Cu_3O_{7-y}$-type oxide superconductive material containing dispersed $Y_2BaCuO_5$ phase and having high critical current density.—73-12007

**superlattices,**
- $\Gamma$-$X_z$ mixing in GaAs/AlAs superlattices of type II.—73-01172
- ArF excimer laser chemical vapor deposition a-Si:H/a-$Al_2O_{1-x}$ superlattices.—73-12922
- Atomic layer epitaxy [ALE] of CdTe-ZnTe and CdTe-MnTe superlattices.—73-04245
- Band engineering of high band gap semiconductors by superlattices.—73-04251
- Band structure and disorder effects on electron localization in semiconductor superlattices.—73-04254
- Band structure of superlattices of semiconductors with degenerate valence band.—73-04255
- CoO-NiO superlattices: interlayer interactions and exchange anisotropy with $Ni_{81}Fe_{19}$.—73-04595
- Correlation of room temperature photoluminescence to structural properties of ZnSSe/ZnSe superlattices grown by metallorganic vapor phase epitaxy.—73-11123
- Cyclotron resonance in $(GaAs)_n(InAs)_m$ superlattices.—73-07431
- Determination of modulation wavelengths in nanoscale electrodeposited superlattices using the scanning tunneling microscope.—73-06206
- Determination of superlattice structural parameters by means of far- and mid-ir reflectivity.—73-04281
- Dielectric function of GaAs/AlAs superlattices grown on GaAs substrates with different orientation.—73-14833
- Direct measurement of heavy-hole exciton transport in type-II GaAs/AlAs superlattices.—73-11142
- Dislocations in an AlGaAs/GaAs superlattice.—73-04283
- Effect of interface roughness on nonlinear vertical transport in GaAs/AlAs superlattices.—73-07466
- Effect of strain on confined optic phonons of highly strained InAs/InP superlattices.—73-11163
- Effects of the substrate misorientation on the excitonic transition properties in GaAs/AlGaAs superlattices.—73-07476
- Electric and magnetic field induced dimensionality reduction in InGaAs-GaAs superlattices.—73-07479
- Electron $g$ factor of quantum wells and superlattices.—73-01153
- Electron minibands in $(GaAs)_n(AlAs)_m$ superlattices with even and odd $M$.—73-14880
- Epilayer-induced structural transition to bcc Co during epitaxial growth of Co/Fe superlattices.—73-16136
- EuTe/PbTe superlattices: MBE growth and optical characterization.—73-04332
- Exchange cleavage of excitonic levels in type-I and type-II superlattices.—73-11201
- Exciton transport and localization in type-II GaAs/AlAs superlattices.—73-11204
- Fabrication of organic-inorganic pseudo-superlattice and its electrical behavior.—73-16774
- Femtosecond scattering dynamics in magnetic semiconductor spin superlattices.—73-14923
- Finite superlattice with the embedded quantum well.—73-07529
- Folded acoustic phonons [observed] by Raman scattering in amorphous chalcogenide superlattices.—73-08625
- Growth mechanism of $(InAs)_m(GaAs)_n$ strained short-period superlattices grown by molecular beam epitaxy.—73-11229
- High excitation effects in type II GaAs/AlAs superlattices.—73-01184
- High-$T_c$ superconductor $Bi_2Sr_2CaCu_2O_x$ as a superconducting superlattice.—73-08094
- $In_xGa_{1-x}N/In_yGa_{1-y}N$ superlattices grown on GaN films.—73-07588
- Interface roughness from $\Gamma$ and $\chi$ luminescence in type II GaAs/AlAs superlattices with composition gradient.—73-01220
- Interface sharpness during the initial stages of growth of thin, short-period III-V superlattices.—73-04372
- Interface strain in organometallic vapor phase epitaxy grown InGaAs/InP superlattices.—73-04373
- Interfacial reaction of MgO/$TiO_x$ superlattice thin films.—73-05424
- Lateral transport in GaAs-(Al,Ga)As superlattices investigated by transient grating measurements.—73-01229
- Low threading dislocation density GaAs on Si(100) with InGaAs/GaAs strained-layer superlattice grown by migration-enhanced epitaxy.—73-15017
- Low-pressure MOVPE [LP-MOVPE] growth of ZnSe, ZnTe, and ZnSe/ZnTe strained-layer superlattices.—73-04385
- Magnetic field enhancement of Raman scattering on folded acoustic phonons in GaAs-AlGaAs superlattice.—73-07648
- Magnetic generation of electrons and holes in semimetallic HgTe-CdTe superlattices.—73-07649
- Magnetic-field-induced saddle points in GaAs/AlAs short period superlattices.—73-07653
- Migration-enhanced epitaxial growth of GaAs on Si using $(GaAs)_{1-x}(Si_2)_x$/GaAs strained-layer superlattice buffer layers.—73-11316
- Miniband formation at finite electric fields in a graded-gap superlattice.—73-07672
- Model calculations of optical properties for disordered GaAs/AlAs superlattices.—73-04409
- Modulated ellipsometry for characterization of multiple quantum wells [MQW's] and superlattices.—73-15821
- Molecular beam epitaxial growth and optical analysis of InAs/AlSb strained-layer superlattices.—73-11324
- Molecular beam epitaxy of PbTe/EuTe superlattices and their structural investigation by X-ray diffraction using reciprocal space mapping.—73-11336
- Noncompensated GaAs sawtooth doping superlattices: a self-consistent band structure.—73-01258
- Optical absorption of ZnSe-ZnTe strained-layer superlattices.—73-01263
- Optically detected magnetic resonance excitons and carriers in pseudodirect GaAs/AlGaAs superlattices.—73-15075
- Photoluminescence of superlattices in GaAs δ-doped with C.—73-07728
- Photoluminescence of ZnSe/ZnMnSe superlattices under hydrostatic pressure.—73-07729
- Plasmon-phonon coupling in GaAs-AlAs superlattices.—73-01285
- Preparation of CdSSe-ZnS superlattices, SrS, and CdSSe-SrS superlattice by hot wall epitaxy, and applications to electroluminescent devices.—73-04452
- Pressure-induced resonant Raman scattering in an $In_xGa_{1-x}As$/GaAs strained-layer superlattice.—73-11403
- Propagation of antiferromagnetic order across paramagnetic layers in CoO/NiO superlattices.—73-04641
- Properties of (211)B HgCd-CdTe superlattices grown by photon-assisted molecular beam epitaxy.—73-07746
- Raman scattering by plasmons in Fibonacci superlattices.—73-05464
- Real-space imaging of nanoscale electrodeposited ceramic superlattices in the scanning tunneling microscope.—73-06275
- Resonance Raman scattering in Cd/Te/CdMnTe superlattice under magnetic field.—73-04470
- Space group and phonon symmetry of $(RE1Ba_2Cu_3O_7)_m(RE2Ba_2Cu_3O_7)_n$ superlattices.—73-05482
- Space group symmetry of the conduction band minimum in very short period GaAs/AlAs superlattices.—73-07802
- Superhard nanocomposite of nitride superlattices by opposed-cathode unbalanced magnetron sputtering.—73-06071
- Surface polaritons due to the folded optical phonons in GaAs/AlAs superlattices.—73-01336
- Temperature dependence of Raman scattering by acoustic phonons in a superlattice GaAs/AlGaAs in strong magnetic fields.—73-01343
- Temperature- and composition-dependent structures of $Si_xGe_{1-x}$/Si and $Si_xGe_{1-x}$/Ge superlattices.—73-08772
- Theory of Zn-enhanced disordering in GaAs/AlAs superlattices.—73-07836
- Time-resolved photoluminescence studies of perpendicular transport in CdTe/$Cd_{1-x}Mn_xTe$ short-period superlattices.—73-11484
- Transmission of the bipolar electromagnetic field through thin semiconductor film with a superlattice.—73-15215
- Transport phenomena in spaced doped GaAs/$Al_xGa_{1-x}As$ superlattices.—73-11487
- Wide-bandwidth low-noise InGaAsP-InAlAs superlattice avalanche photodiode with a flip-chip structure for wavelengths of 1.3 and 1.55 μm.—73-15229
- X-ray characterization of (Zn, Cd)Te/CdTe strained layer superlattices.—73-01366

**superplastic,**
- Development of superplastic functional ceramics through grain refinement.—73-01399
- Enhancement of tensile ductility in nanograin superplastic ceramics through control of interface chemistry.—73-03280
- Model for interface reaction control in superplastic deformation of nonstoichiometric ceramics.—73-09652
- Processing nanocrystalline ceramics for applications in superplasticity.—73-09279
- Superplastic diffusion bonding in ceramics.—73-13289
- Superplastic forming of SiAlON ceramics.—73-17015
- Superplastic SiAlON—a bird's eye view of silicon nitride ceramics.—73-05278
- Superplastic-like flow in ceramics: recent developments and potential applications.—73-08525
- Superplasticity in advanced materials.—73-16606
- Superplasticity in ceramic and metal matrix composites and the role of grain size, segregation, interfaces, and second phase morphology.—73-09680
- Superplasticity in ceramics and ceramic composites, and high strain rate superplasticity in metal matrix composites.—73-03647
- Superplasticity in fine-grained ceramics and ceramic composites: current understanding and future prospects.—73-09681
- Superplasticity of ceramic materials.—73-12332

**superplasticizers,**
- Calorimetry, rheology, and compressive strength of superplasticized cement pastes.—73-06630
- Characteristics of fresh superplasticized concrete for vibrating compaction.—73-09846
- Degradation of cement superplasticizers in a high alkaline solution.—73-03449
- Determination of sulfonated naphthalene formaldehyde superplasticizer in cement: a new spectrofluorimetric method and assessment of the uv method.—73-09884
- Effect of commercial plasticizers on $Cl^-$ ion partitioning in OPC mortar and its implications for the corrosion of steel embedded in concrete.—73-09901
- Influence of superplasticizer on aqueous phase composition in the $CaO-Al_2O_3-SO_3-H_2O$ system.—73-10013
- Influence of superplasticizer on fluidity of fresh cement paste with different clinker phase composition.—73-10014
- Production performance and utilization of a special superplasticized cement.—73-06702
- Rapid measurement method for superplasticizer (development of the odor concentration meter for concrete).—73-10127
- Use of superplasticizers in palm kernel shell aggregate concrete.—73-00203

**surface acoustic waves,**
- Experimental determination of the surface acoustic wave properties of new fine-grain piezoelectric ceramics.—73-11572
- Mandelshtam-Brillouin light scattering spectrum study of pseudosurface acoustic wave propagation in (110)- and (111)-cut PbTe crystals.—73-15036
- Operating characteristics of SAW gas detectors.—73-04423
- Quasi-horizontally polarized quasi-bulk surface acoustic waves in piezoelectric crystals.—73-15284
- Sensitivity of surface acoustic wave velocity in lithium niobate to electric field or biasing stress.—73-07919
- Surface acoustic wave device.—73-11548
- Surface acoustic wave element.—73-11642
- Surface-acoustic-wave devices with low sensitivity to mechanical and thermoelastic stresses.—73-13599
- Velocity measurements for surface acoustic waves on $Bi_{12}SiO_{20}$ substrates.—73-04577

**surface area,**
- Advances in measurement of surface area by gas adsorption.—73-01881
- Comparison of surface areas calculated from nitrogen adsorption and mercury porosimetry.—73-08384
- Determination of specific surface area by the laser diffraction technique: comparison with the Blaine [air] permeability method.—73-00058
- Effects of the leachate pH and the ratio of glass surface area to leachant volume [SA/V] on glass reactions.—73-10368
- Kinetics of $CeO_2$ surface area reduction in a mixture of HCl, $H_2O$, and $O_2$.—73-13414
- Measurements of hydrophobic and hydrophilic surface sites by flow microcalorimetry.—73-16537
- Structure of fully hydrated portland cement and tricalcium silicate pastes: III, Specific surface area and permeability.—73-00195
- Thermodynamics and kinetics of surface area changes of faceted particles.—73-16379

**surface energy,**
- Nature of the surface charge of kaolinite.—73-16547
- Surface charge spectroscopy—a novel surface science technique for measuring surface state distributions on semiconductors.—73-12200
- Surface coulomb energy and proton coulomb potentials of pyrophyllite {010}, {110}, {100}, and {130} edges.—73-12883
- Understanding surface activity of oxides from oxide-metal interface formation.—73-10294

**surface force,**
- Interpretation of force curves in force microscopy.—73-15809
- Surface properties of clay laponite using pyrene as a photophysical probe molecule: II, Photoinduced electron transfer.—73-16608
- Surface-free energy components of α-alumina from thin-layer wicking.—73-16609

**surface,**
- α-$Al_2O_3$ (0001) surfaces: atomic and electronic structures.—73-05349
- Abrasive grain size and glass surface finish.—73-00584
- Absorbed cations and water film thickness on the kaolinitic clay surface.—73-16651
- Acid/base properties of oxide, oxide glass, and glass-ceramic surfaces.—73-02549
- Ammonia and water as probes for the surface reactivity of covalent solids: cristobalite and SiC.—73-08372
- Analysis of GaAs(100) surfaces prepared with various wet and in situ sample treatments.—73-07378
- Application of electroless plating on ceramics.—73-13799
- Atom-resolved imaging and spectroscopy on the GaAs(001) surface using tunneling microscopy.—73-07385
- Atomic layer epitaxy controlled by surface superstructures in SiC.—73-06189
- Automated surface profilometer.—73-12111
- Carrier injection and scanning tunneling microscopy at the Si(111)-2×1 surface.—73-04259
- Ceramic surface reactions and carbon retention during nonoxidative binder removal: $Al_2O_3$/poly(methyl methacrylate) at 20–700°C.—73-16666
- Changes in surface structure of sputtered glasses [observed] by AFM upon water absorption.—73-13933
- Characteristics and special features of the conductivity of surface δ-doped layers in GaAs with a variable density of 2-D electrons.—73-01095
- Characterization of GaAs(100) surfaces by AES and LEED.—73-01100
- Characterization of glass surfaces and coatings using the proton milliprobe.—73-15780
- Characterization of III-V materials by optical interferometry.—73-14802
- Characterization of ion-beam-induced surface modification of diamond films by real-time spectroscopic ellipsometry.—73-02743
- Characterization of new materials by surface-sensitive techniques.—73-01890
- Characterization of point defect generation at silicon surfaces using gold diffusion.—73-09392
- Characterization of surface topography of glass substrates for LCD by atomic force microscope.—73-07001
- Cleanability of work surfaces in contact with food.—73-10204
- Comparison of some instruments for measuring mirrorlike surfaces.—73-05030
- Complex admittance of surface oxide on metastable niobium superfine particles.—73-05538
- Contactless electromodulation investigations of surface/interface electric fields in semiconductor microstructures.—73-11118
- Dealkalization of container glass surface.—73-00317
- Determination of lead and copper content in surface layers of electrochemically colored glass.—73-00319
- Determination of surface silanol group on silicate glasses using static SIMS.—73-00320
- Direct observation of individual nanometer-sized light-emitting structures on porous silicon surfaces.—73-09443

Discovery of glass surface through analytical techniques.—73-15790
Dislocation slipping, a new technique to produce steplike surfaces compatible with quantum confinement sizes.—73-07450
Dislocation slipping, a new technique to produce steplike surfaces compatible with quantum confinement sizes.—73-14839
Dramatic work function variations of molecular beam epitaxially grown GaAs(100) surfaces.—73-07454
Durable, low-surface-energy treatments.—73-12424
Effect of composition of the protective atmosphere on the adhesion properties of the surface of silicate glass.—73-03786
Effect of gas-flame treatment on the structure and properties of the surface of doped quartz glass.—73-00614
Effect of laser treatment on the structure and optical properties of the surface of polished quartz glass.—73-00460
Effect of residual glassy phase in a bioactive glass-ceramic on the formation of its surface apatite layer in vitro.—73-00332
Effect of surface reemission on the surface roughness of film growth in low-pressure chemical vapor deposition.—73-05773
Effect of $TiO_2$ on ceramic acidity and basicity.—73-13022
Efficient and precision grinding technique for ceramics with electrolytic in-process dressing (ELID).—73-04912
Efficient mechanochemical polishing for silicon nitride ceramics.—73-04913
Electrolytic surface modification of float glass [at 600–950°C] using molten metal electrodes.—73-00621
Electron channeling pattern [ECP] of ceramic platelets.—73-17129
Electron-beam surface modification: state of the art (review).—73-10225
Electronic properties of $(NH_4)_2S$-passivated InP(100) surfaces.—73-07497
Electrophysical processes on the surface of mechanically and irradiation excited $YBa_2Cu_3O_{7-x}$ superconductors.—73-01541
Emission infrared spectroscopy for in situ analysis of the OMVPE growth surface.—73-15796
Energetics of As dimers on GaAs(001) As-rich surfaces.—73-14886
Energetics of GaAs(100)-(2×4) and -(4×2) reconstructions.—73-14887
Energy loss and charge exchange studies of cleaved $YBa_2Cu_3O_{7-\delta}$ single-crystal surfaces.—73-15458
EPR study of the interaction of the ZnO surface with air and air-reducing gas mixtures.—73-08617
Examination of the surface of sparkling wine bottle cullet by means of ESCA, SEM, and EDS.—73-00340
Experimental low-energy photoelectron diffraction study of the InP(110) surface.—73-01163
Fabrication of current-carrying surface layers on piezoceramics of lead zirconate titanate.—73-01410
Failure analysis of glazes and bodies using electron microscopy.—73-01898
Fermi-level inhomogeneities on the GaAs(110) surface imaged with a photoelectron microscope.—73-07528
Flux-creep crossover and relaxation over surface barriers in $Bi_2Sr_2CaCu_2O_8$ crystals.—73-08871
Formation of surface layers of ceramics during grinding and sharpening.—73-06607
Fracture toughness by the surface crack in flexure (SCF) method.—73-17332
Fracture toughness by the surface crack in flexure (SCF) method: results of the VAMAS round robin.—73-17333
FTIR characterization of an AlN surface.—73-13399
FTIR spectroscopy of grafted surfaces: hydroxy- and chlorosilanes onto silicon nitride.—73-12591
Functional coatings on glass surfaces by the sol-gel process.—73-14387
GaAs surface control during metallorganic vapor phase epitaxy by reflectance anisotropy spectroscopy [RAS].—73-11217
GaAs surface stabilization by vacuum anneal with SiO.—73-04108
Geometric and electronic structure of the ZnO(000$\bar{1}$) surface.—73-03146
Glass surfaces at the nanometer scale [observed] using atomic force microscopy.—73-00348
Grooving on SiC ceramic surface by reaction with solid metal: I.—73-02841
Grooving on SiC ceramic surface by reaction with solid metal: III, Reaction product layer between SiC ceramics and Ni foil.—73-13842
Growth of GaAs-AlAs quantum clusters on non-(100)-oriented faceted GaAs surfaces by MBE.—73-07554
Highly efficient finishing of ceramics by helical scan grinding.—73-05843
Hubbard correlations and charge transfer at the GaAs(110) surface with alkali adsorbates.—73-14968
Hydrogen-terminated Si(100) surfaces investigated by reflectance anisotropy spectroscopy.—73-14971
Improvement of concrete quality by making dense surface layer of concrete using permeable sheets.—73-09998
In situ characterization of InP surfaces after low energy hydrogen ion cleaning.—73-07578
In situ ellipsometry and reflectometry during etching of patterned surfaces: experiments and simulations.—73-07580
In situ internal reflection infrared study of aqueous hydrofluoric acid and ultraviolet/ozone-treated silicon(100) surfaces.—73-05056
In situ observation of atomic movement at surface by scanning tunneling microscope—high-temperature STM.—73-05418
Influence of heat treatment regime on property variations of surface layers of ion-exchanged glasses.—73-14007
Influence of monomolecular steps on the first-order structure transition of an InAs(001) surface.—73-14984
Ir investigation of the surface species obtained by chemisorption [of] acetylene (ethyne), $C_2H_2$, and $C_2D_2$ on high-area ZnO.—73-16188
Ir spectroscopic study of $H_2O$ influence on $SO_2$ adsorption on $TiO_2$ surface.—73-13412
Ir study of some surface properties of boehmite ($\gamma$-$AlO_2H$).—73-08652
Kinetic model of vapor-deposited thin-film condensation: nucleation stage.—73-05887
Lapping and polishing process to achieve high-quality alumina surfaces for applications in device fabrication.—73-13113
Laser surface modification of $Al_2O_3$-based ceramics.—73-09190
Local modification of HF-treated silicon(100) surface and its characterization by scanning tunneling microscopy and spectroscopy.—73-11293
Low-energy electron microscopy of semiconductor surfaces.—73-01232
Machining ceramic materials for dental restorations.—73-05903
Magnetic abrasive finishing of WC-Co curved surfaces.—73-05907
Magnetic flux distribution over the surface of a superconducting $YBa_2Cu_3O_x$ single crystal measured by ESR.—73-04760
Measurement of residual stresses in machined ceramics using the indentation technique.—73-06475
Metal ion implantation for large-scale surface modification.—73-08351
Method for determining saturated surface dry state of fine aggregate.—73-10043
Method of minutely roughening substrate surface by etching.—73-00747
Modification of a plate glass surface under conditions of a molten tin bath.—73-07053
Modification of surfaces with new excimer uv sources.—73-13141
Modification of the pore structure and surface properties of controlled pore glasses.—73-00668
Momentum-space images of surface dimers on GaAs(100)-(2×4) by high-energy Auger and X-ray photoelectron diffraction.—73-07681
Nanohardness measurements of float glass surfaces.—73-14230
Nanometric surface metrology at the National Physical Laboratory.—73-05069
New developments in spectroellipsometry: the challenge of surfaces.—73-15823
Obtaining current-carrying surface layers on the piezoceramics based on lead zirconate titanate.—73-01003
Optical interferometry of surfaces.—73-01923
Oxide surface layer on fine iron particles.—73-08687
Phosphate coatings for metal surfaces.—73-00291
Photoemission study of diamond (100) surface.—73-08700
Photostimulated evaporation of $SiO_2$ and $Si_3N_4$ films by synchrotron radiation and its application for low-temperature cleaning of Si surfaces.—73-02921
Precision metrology for studying thin films and surfaces.—73-13440
Pregrowth treatment dependence of surface morphology for GaAs grown on exactly oriented (111)A substrates by molecular beam epitaxy.—73-04448
Preparation of electrochemically treated glass for metallization.—73-00683
Reaching consensus and closure on key questions, a history of success, and failure of GaAs surfaces and interfaces at the Proceedings of the Physics and Chemistry of Semiconductor Interfaces.—73-11412
Reaction of $NH_4F$/HF solutions on Si(100) and Si(111) surfaces.—73-04465
Relationship between crystallization and surface characteristics in MgO-BaO-$SiO_2$-$B_2O_3$ glass.—73-00395
Relaxation of GaAs surface band bending by atomic layer passivation.—73-11417
Relaxation of residual deformations in the surface layers of silicate glasses.—73-00696
Role of ionicity in the determination of surface atomic geometries: GaP, ZnS, and CuCl(110) surfaces.—73-11424
Scanning tunneling microscope study of GaAs(001) surfaces grown by migration-enhanced epitaxy [MEE].—73-11430
Scanning tunneling microscopy of doping and compositional III-V homo- and heterostructures.—73-11431
Scanning tunneling microscopy of flat and vicinal molecular beam epitaxy grown GaAs(001)-(2×4) surfaces: the effect of growth rate.—73-11432
Scanning tunneling microscopy of one-dimensional periodic corrugated silicon surfaces.—73-03191
Scanning tunneling microscopy study of molecular beam epitaxial growth of GaAs on GaAs(001).—73-11435
Silicon (2*p*) surface core-level line shape of Si(111)-B.—73-02431
Spectroscopic investigation of structural reorganization of surface layers of quartz glass under the action of ion implantation.—73-00400
Spectroscopic studies of the structural reorganization of the surface layer of vitreous silica after ion implantation.—73-00402
*s*-polarization photoemission extended X-ray absorption fine structure study of clean and adsorbate-covered Si(100) 2×1 surface.—73-08727
State of the surface of glass treated by water suspension of sawdust.—73-03760
State of the surface of glass treated with an aqueous suspension of wood flour.—73-07176
STM investigation of the surface of GaAs passivated in aqueous solution of $Na_2S$.—73-01320
STM study of mechanochemically prepared Si(111) substrates: an extended set of vicinal surfaces.—73-09511
Structure and energetics of alumina surfaces calculated from first principles.—73-05498
Structure of the $\alpha$-$Al_2O_3$(1100) surfaces.—73-16339
Structure of the surface sites of $\delta$-$Al_2O_3$ as determined by HREM, computer modeling, and ir spectroscopy of adsorbed CO.—73-13452
Surface activity of calcined kaolins having different degrees of crystallinity.—73-02699
Surface bonding of ceramic bodies.—73-00297
Surface characterization of ultrasonic machined ceramics with diamond-impregnated sonotrode.—73-06075
Surface characterization.—73-08447
Surface crystallization kinetics of float glass.—73-14507
Surface crystallization of glass in an atmosphere of carbon dioxide.—73-14117
Surface effects in photochemistry: an in situ cylindrical internal reflection-Fourier transform infrared investigation of the effect of ring substituents on chemisorption onto $TiO_2$ ceramic membranes.—73-16346
Surface effects on the properties of cadmium selenide quantum dots.—73-04492
Surface finishing by turning of coatings made from NiCrBSi-type self-fluxing alloys.—73-09346
Surface models for $\gamma$-$Al_2O_3$ from molecular dynamics simulations.—73-12707
Surface modification in a 2.45-GHz microwave field.—73-14118
Surface modification methodologies for polycrystalline alumina: effects on morphology and frictional coefficients.—73-17204
Surface modification of ceramic materials using excimer lasers.—73-17016
Surface morphology of atomic layer deposited magnesia.—73-13455
Surface processing of glass substrates for flat displays.—73-03892
Surface property and strength of ground alumina ceramics.—73-09682
Surface reconstruction, steps, and ordering in semiconductor alloys grown from vapor phase.—73-07825
Surface roughness of plasma-treated mica.—73-17206
Surface science at atmospheric pressure: reconstruction on (001)GaAs in organometallic chemical vapor deposition.—73-11468
Surface sites on spinel-type and corundum-type metal oxide powders.—73-08763
Surface structure [observation] by ultrahigh vacuum scanning electron microscopy.—73-06295
Surface tension of glass melts measured by the capillary rise method.—73-14288
Surface topographical variation of single-crystalline diamond grown in Co-$H_2$ plasma.—73-03203
Surface treatment of glass and ceramics using XeCl excimer laser radiation.—73-07178
Surface treatment of graphite for monolithic refractories.—73-00874
Surface-activated bonding [SAB]—an approach to joining at room temperature.—73-03648
Temperature-dependent chemical and electronic structure of reconstructed GaAs(100) surfaces.—73-07831
Theory of the Si(100) surface reconstruction at finite temperatures: Bragg-Williams-type approximation.—73-05511
Transmission ion channeling facility for structural studies of monolayer films on clean semiconductor surfaces.—73-07842
Treating surfaces to obtain narrow band thermal emission.—73-13903
Tribological performance investigation of steels after various surface treatments, solid lubricant deposition and ceramic coatings.—73-13904
Tribological performance of plasma-treated and -coated surfaces.—73-10293
Twenty years of semiconductor surface and interface structure determination and prediction: the role of the annual conferences on the physics and chemistry of semiconductor interfaces.—73-11491
Ultrahigh vacuum microscopy of the Si(111) boron $\sqrt{3}X\sqrt{3}R30^\circ$ surface.—73-06302
Unoccupied Shockley surface state on a carbon-deficient TiC(110) surface.—73-16389
Ways of estimating surface concrete hydrophobization.—73-00206
Wear resistance of diffusion-treated surfaces.—73-06877
Wetting dynamics studies on silica surfaces of varied hydrophobicity.—73-14312
Work function, electron affinity, and band bending at decapped GaAs(100) surfaces.—73-07862

**surfactants,**
Effects of surfactants on the tribological properties of a $Cr_2O_3$ coating.—73-06399
Photodegradation of surfactants: II, $\zeta$-potential measurements in the photocatalytic oxidation of surfactants in aqueous $TiO_2$ dispersions.—73-08950
Role of surfactants in concrete and ceramic fields.—73-00186
Surfactant-mediated [SM] molecular beam epitaxy of strained layer semiconductor heterostructures.—73-15195
Use of surfactants in processing abrasive pigments.—73-02074
Using surfactants to control ultrafine $ZrO_2$ powder aggregation in drying and firing processes.—73-13333

**susceptibility,**
Low-frequency and low-magnetic-field effects on the alternating current volume susceptibility of cuprate superconductors.—73-11817
**suspensions,**
Characteristic concentrations of ceramic slips in slip-casting technology.—73-12016
Colloidal suspensions for the preparation of ceramics by a freeze-casting route.—73-12948
Concentrated glaze suspensions.—73-14648
Determination of particle properties from electroacoustic measurements.—73-08390
Diffusion measurements in ceramic-polymer suspensions.—73-09072
Dissolution of sparingly soluble inorganic compound in aqueous suspension containing ion-exchanged resin: VII, Calorimetric measurement of dissolution of portland cement and its related compounds.—73-06648
Dynamic viscoelastic measurements of suspension for the drying process in tape casting.—73-05747
Dynamic viscoelastic measurements of suspension for the drying process in tape casting.—73-12994
Effect of functionalities of binders on rheological behavior of alumina suspensions and properties of green sheets.—73-09077
Electrokinetic and rheological properties of magnesia suspensions.—73-02811
Electrokinetic sonic analysis [ESA] of silicon nitride suspensions.—73-09113
Electrostatic and steric effects in $Si_3N_4$-based suspensions.—73-09117
Fabrication of engineering ceramics by injection molding a suspension with optimum powder properties: I, Processing and microstructure.—73-09132
Fractionation of suspensions using synchronized ultrasonics and flow fields.—73-05048
Generalized program to calculate interparticle interactions in a variety of suspension conditions.—73-09147
Implementation of acoustophoresis for the characterization of silicon-nitride-based aqueous suspensions.—73-08406
Improving heat transfer between gas and solid in suspended state—a new material sealing and dispersion device.—73-12147
Mechanism on stability of α-alumina suspensions.—73-09202
Osmotic consolidation of suspensions and gels.—73-16891
Pouring of ceramic suspensions into porous molds.—73-12055
Predictive Process Control of Crowded Particulate Suspensions Applied to Ceramic Manufacturing.—73-17535
Properties of suspensions of electrocorundum and materials based on it.—73-01017
Properties of suspensions of electrocorundum and materials based on it.—73-03346
Rheological and technological properties of corundum-zirconia suspensions.—73-02996
Rheological properties of hydroxypropyl guar (HPG) slurries.—73-06023
Setting of spheres in clay suspensions.—73-13251
Settling behavior of iron oxide suspensions.—73-06035
Stability of clay suspensions—effect of pH and polyethylenimine.—73-03027
Surface chemistry and rheology of $ZrO_2$ suspensions containing polyacrylate: effects of molecular weight [MW] and $ZrO_2$ surface area.—73-09345
Texturing of platelike ceramics by colloidal processing.—73-13320
Use of a heated sprue in the injection molding of large ceramic sections.—73-15859
**switching,**
Active and passive *Q*-switching of a 2.79-μm Er:Cr:YSGG laser.—73-12742
Computer simulation for the design of high-performance, high-$T_c$ superconducting thin-film switches.—73-15404
Effects of ferroelectric switching on the dielectric and ferroelectric properties in lead zirconate titanate ceramics and their modeling.—73-07882
Electrical switching of two-phase ZnO-$PrCoO_3$ threshold switching materials.—73-03140
Electrooptic switching structure on III-V semiconductors using the coherent coupling of radiation modes.—73-14884
InP digital optical switch: key element for guided-wave photonic switching.—73-14994
Kinetics of nanosecond electrical "conditioning" of switching devices made of noncrystalline $Ge_xTe_{1-x}$ films.—73-01227
Modeling of nonlinear absorption and refraction in quantum well structures for all-optical switching.—73-15043
Nanosecond switching in submicron sandwich structures based on amorphous $Ge_xTe_{1-x}$ films.—73-04414
Size effect of nanosecond switching in submicron coplanar structures based on amorphous semiconductors.—73-04483
Transverse structures in resonatorless absorptive switching in bulk ZnSe.—73-01357
**Synroc,**
Freudenbergite: a possible Synroc phase for sodium-bearing high-level waste.—73-12009
**synthesis,**
*o´*-ß´ SiAlON ceramics.—73-09226
Adequate reporting of zeolite synthesis in the literature.—73-09010
Aluminum nitride: review of synthesis methods.—73-12410
Application of metal alkoxides in the synthesis of oxides.—73-11554
Carbothermal synthesis of aluminum nitride at elevated nitrogen pressures: I, Effect of process parameters on conversion rate.—73-09027
Carbothermal synthesis of aluminum nitride at elevated nitrogen pressures: II, Effect of process parameters on particle size and morphology.—73-09028
Carbothermal synthesis of aluminum nitride using sucrose.—73-16663
Ce-Pr pigment synthesis mechanism and its coloring characteristics.—73-10805
Citrate-gel syntheses in the Y(O)-Ba(O)-Cu(O) system.—73-05708
Completion of the alkali metal titanium(III) pyrophosphate series: synthesis and structure of $A'TiP_2O_7$ (A'=K, Rb, Cs).—73-02167
CVD synthesis and thermoelectric properties of boron carbide.—73-02760
Developments in the synthesis of advanced ceramic powders.—73-16707
Diamond synthesis via a low-pressure solid-state source process.—73-09069
Dispersion of magadiite particles.—73-02240
Effect of mixed solvent on the formation of monodispersed $Al_2O_3$ powders by hydrolysis of aluminum sec-butoxide [$ABu^s$].—73-16732
Effect of polynuclear complex content on the synthesis of aluminum nitride from aluminum polynuclear complex.—73-13014
Effect of pretreatment in a fluidized bed upon diamond synthesis of particles by chemical vapor deposition.—73-09089
Effect of stabilizing agents on synthesis of monodispersed $Al_2O_3$ powders by hydrolysis of aluminum sec-butoxide.—73-02796
Effect of stabilizing agents on synthesis of monodispersed $Al_2O_3$ powders by hydrolysis of aluminum sec-butoxide.—73-13019
Emerging technologies for the in situ production of MMC's.—73-06780
First International Conference on Advanced Synthesis of Engineered Structural Materials.—73-16783
Formation of mullite from hydrothermally processed sols: an X-ray powder diffraction and magic angle spinning NMR investigation.—73-08627
Gas phase synthesis of silicon nitride.—73-13067
Graphite, synthetic.—73-12278
High resolution electron microscopy structural study of tungsten oxide synthesized under high pressure.—73-16166
High-pressure synthesis of "periodic compound" and its optical and electrical properties.—73-16816
Hydrothermal synthesis of magadiite and kenyaite.—73-02855
Hydroxyapatite synthesis by wet-direct and hydrothermal synthesis.—73-09167
Low-pressure diamond synthesis for electronic applications.—73-07335
Low-temperature synthesis of $Ba(Mg_{1/3}Ta_{2/3})O_3$ perovskite by the metal alkoxide method.—73-16855
Materials synthesis on the basis of ultrafine refractory compound powders.—73-13128
Mechanosynthesis of nanophase materials.—73-09205
Microwave preparation of zeolite Y and ZSM-5.—73-09210
New type of artificial diamonds and the physical-chemical fundamentals of their creation.—73-12437
Physicochemical characteristics of the hydroxopolymer method of synthesizing glass batches of multicomponent compositions.—73-00679
Polymerized complex synthesis of a pure 93-K $Y_2Ba_4Cu_7O_{15-\delta}$ superconductor without the need of high oxygen pressure and additive catalysts.—73-01631
Possibility of synthesis of photochromic glasses for the core of an optical fiber.—73-00390
Preparation of monodispersed $BaTiO_3$ powders by hydrolysis of Ba/Ti bimetallic alkoxide.—73-13194
Processing and characterization of precursor hydronium ß/ß´´-alumina ceramics.—73-09277
Processing maps for the micropyretic synthesis of structural composites and intermetallics.—73-05997
Properties and Growth of Diamond.—73-17536
Properties of aluminum nitride powder synthesized by low-pressure chemical vapor deposition [LPCVD].—73-09283
Proposal for a mechanism of nucleation in zeolite synthesis.—73-06003
Reaction process of Bi-Sr-Ca-Cu-O system and the formation mechanism of 2212 superconducting phase.—73-04798
Relationship between structure, synthesis temperature, and thermal expansion of cordierite.—73-09301
Relative effectiveness of some tertiary alkanolamines in the synthesis of large-crystal zeolite NaA.—73-09302
Role of hydrogen and oxygen in diamond synthesis using carbon dioxide–methane gas mixtures.—73-13240
SiAlON-containing material based on the Ovruch quartzite, aluminum powder, and coke.—73-12443
Silicate species formed by dissolution of (2-hydroxyethyl)trimethylammonium silicate in water and in methanol.—73-12681
Silicon nitride.—73-12300
Solid-state reaction for the formation of $Pb(Zn_{1/3}Nb_{2/3})O_3$.—73-05480
Structural stability and mechanochemical activity of titanium nitride prepared by mechanical alloying [MA].—73-09343
Syntheses of the perovskite $La_2CuTiO_6$ by the ceramic oxide precursors and sol-gel methods and study of the structure and Cu-Ti distribution by X-ray and neutron diffraction.—73-17017
Synthesis and characterization of $Sr_2Ce_2Ti_5O_{16}$ in the system $SrO-CeO_2-TiO_2$.—73-12710
Synthesis and characterization of zinc sulfide thin films by pyrolysis and application of thin-film electroluminescence.—73-01341
Synthesis and intercalation chemistry of $K[Ca_2(Ca,Sr)_{n-3}Nb_3Ti_{n-3}O_{3n+1}]$ ($n$=4, 5).—73-02486
Synthesis and ionic conductivity of nanophase $Ca_{1-x}La_xF_{2+x}$.—73-04176
Synthesis and optical properties of ß´´-alumina single crystals doped with divalent lanthanide ions.—73-13295
Synthesis and physical properties of antimonides of $Me_3Sb_5O_{12}$ group (Me=In, Sc, La, Pr, Tb, Yb).—73-17022
Synthesis and physical-chemical investigation of La-M-Ga garnets (M=Sc, In, Lu).—73-16352
Synthesis and properties of nanophase materials.—73-13298
Synthesis and thermal changes of calcium phenylphosphate and calcium phenylphosphate.—73-13301
Synthesis and thermal changes of calcium phenylphosphate and calcium phenylphosphonate.—73-05507
Synthesis and thermal property of sodium diimidocyclotriphosphate.—73-12884
Synthesis and X-ray structural analysis by the Rietveld method of orthorhombic hafnia.—73-02498
Synthesis in a nontransferred arc thermal plasma cyclone reactor.—73-06084
Synthesis of ß-$Ca_2SiO_4$.—73-17026
Synthesis of ß-SiC thin films for high-temperature sensors by the activated reactive evaporation process.—73-09352
Synthesis of AlN by direct nitridation of Al alloys.—73-17029
Synthesis of AlN powder from $Al_2(SO_4)_3{\cdot}18H_2O$: II, Deoxidation effect.—73-03041
Synthesis of beta-alumina from aluminum hydroxide and oxyhydroxide precursors.—73-03043
Synthesis of calcium-deficient tobermorite under atmospheric pressure and its $CO_2$ adsorption ability.—73-17034
Synthesis of ceramic powders from metal alkoxides.—73-03045
Synthesis of compositionally regulated hydroxyapatite from $Ca(OH)_2$ and $H_3PO_4$.—73-17036
Synthesis of cubic boron nitride using Mg and pure or M´-doped $Li_3N$, $Ca_3N_2$, and $Mg_3N_2$ with M´=Al, B, Si, Ti.—73-09354
Synthesis of ferroelectric perovskites through aqueous-solution techniques.—73-15289
Synthesis of fine-particle titanates by the pyrolysis of oxalate precursors.—73-06089
Synthesis of high-purity $YBa_2Cu_3O_{7-d}$ superconductors by polymerized complex method.—73-15645
Synthesis of high-purity $YBa_2Cu_3O_{7-\delta}$ superconductors by polymerized complex method.—73-08239
Synthesis of hydroxyapatite by an oxidative decomposition method of calcium chelate.—73-03047
Synthesis of hydroxyapatite by an oxidative decomposition method of calcium chelate.—73-13304
Synthesis of $La_{1-x}Sr_xMnO_3$ at different sintering temperatures.—73-09358
Synthesis of metal hydrous oxide particles by multiphase electrodispersion.—73-13306
Synthesis of microporous silica-gel particles in W/O emulsion and an application to high-performance liquid chromatography.—73-00710
Synthesis of mullite from fly ash and alumina powder mixture.—73-03049
Synthesis of nanocrystalline intermetallic compounds by MA [mechanical alloying] and EDC [electro-discharge compaction].—73-06091
Synthesis of NaY zeolite on preformed kaolinite spheres. Evolution of zeolite content and textural properties with the reaction time.—73-06092
Synthesis of $Pb(Mg_{1/3}Nb_{2/3})O_3$ powder by the spray pyrolysis with ultrasonic atomizer.—73-13309
Synthesis of perovskite lead magnesium niobate using partial oxalate method.—73-17045
Synthesis of pure fresnoite, $Ba_2TiSi_2O_8$.—73-03052
Synthesis of $Si_3N_4$ powder by thermal decomposition of $Si(NH)_2$.—73-06095
Synthesis of $Si_3N_4$ using residual organics trapped in the silica gel by sol-gel method.—73-03053
Synthesis of SiC fine particles by gas-phase reaction under short-time microgravity.—73-06096
Synthesis of SiC from fine $SiO_2$-C mixed powders.—73-03056
Synthesis of silicon oxynitride from a polymeric precursor: I, Hydrolysis of dichloromethyl silane.—73-09363
Synthesis of single-phase $YBa_2Cu_4O_8$ superconductor at atmospheric pressure of oxygen.—73-08240
Synthesis of translucent sintered cubic boron nitride.—73-17048
Synthesis of $Y_2O_3$-doped $ZrO_2$ gel monoliths by polycondensation of metal alkoxide and their change on heating: I, Preparation of transparent gel monoliths of $Y_2O_3$-doped $ZrO_2$.—73-13315
Synthesis of $Y_2O_3$-doped $ZrO_2$ gel monoliths by polycondensation of metal alkoxide and their changes on heating: I, Preparation of transparent gel monoliths of $Y_2O_3$-doped $ZrO_2$.—73-06099
Synthesis of Y-Ba-Cu-O superconductors using organometallic precursors.—73-08242
Synthesis of Y-TZP ultrafine powder and its properties.—73-06101
Synthesis of $YBa_2Cu_3O_{6+x}$ from coprecipitated hydroxides.—73-11928
Synthesis of ZSM-20 using crown ethers.—73-06103
Synthesis, atomic structure, and electrical conductivity of mixed crystals of (K, Ba)(Zn, Li)$F_3$.—73-16355
Synthesis, structure, and physical properties of the new group IV ternary tellurides, $Cu_2MTe_3$ (M=Ti, Zr, Hf).—73-02506
Synthetic imogolite paracrystals.—73-06105
Ternary system of a ceramic superconductor Y-Ba-Cu-O.—73-04819

Thermoelectric properties of porous β-SiC fabricated from rice hull ash.—73-08995
Time-resolved synchrotron energy dispersive diffraction [EDD] of the dynamic aspects of the synthesis of ettringite during mine packing.—73-00199
Titanium diboride.—73-12304
Wet chemistry and combustion synthesis of nanoparticles of $TiB_2$.—73-06134
Zeolite synthesis in the system pentaerythritol-$Na_2SO_4$-$Na_2O$-$SiO_2$-$Al_2O_3$-$CH_3OH$.—73-06136
Zirconium diboride.—73-12308

**systems,**
Computation of equilibrium composition of liquid and solid phases in the system Pb-Sn-Se-Te.—73-16065
Effect of $SiO_2$ and $P_2O_5$ on the MgO-$Al_2O_3$-$SiO_2$ system glass-ceramics produced by sintering.—73-00616
Electrical properties in the system $(Nd_{0.1}Ca_{0.9-x}Sr_x)MnO_{2.97}$ ($0 \le x \le 0.4$).—73-02601
Electron and X-ray powder diffraction study of cubic fluorite-related phases in various $ZrO_2$-$Ln_2O_3$ systems.—73-02253
Gd-Ba-Cu-O system: phase relationships at ≈950°C in air.—73-02278
Liquation and crystallization in melts of the system $Al_2O_3$-$B_2O_3$.—73-00367
Mathematical simulation for segregation of PVA during drying.—73-05908
Mechanisms of wetting in reactive metal/oxide systems.—73-00249
Metal-insulator transition and thermoelectric properties in the system $(R_{1-x}Ca_x)MnO_{3-\delta}$ (R=Tb, Ho, Y).—73-02643
New perovskite-related compounds in the BaO-$Tl_2O_3$ system.—73-02352
Phase equilibria in systems $Tl_2WO_4$-AO-$WO_3$, $Cs_2O(Cs_2CO_3)$-AO-$WO_3$ (A=Mg, Mn, Ni, Co, Zn, Cu).—73-02377
Phase relations in the system CaO-$Al_2O_3$-$SiO_2$-$H_2O$ relevant to metakaolin–calcium hydroxide hydration.—73-03516
Phase relationships in the Sm-Ba-Cu-O system at ≈950°C.—73-02388
Specifications for choosing a conveying system.—73-12064
System $LiTaO_3$-$SrZrO_3$.—73-02511
Systems approach for grinding of ceramics.—73-06106
Ternary system $CaF_2$-$SrF_2$-$MnF_2$.—73-02517
Ternary system InS-$As_2S_3$-$As_2Te_3$.—73-16364
Thermal expansion coefficient of glass and melts of the system Te-Br.—73-00558
Thermodynamic analysis of the conditions of formation of the condensed phases of the system Cr-C-O-H by use of chrome carbonyl.—73-16375

**tableware,**
Automated flatware production.—73-14325
Bending strength and microstructure of commercial porcelains for tablewares.—73-03974
CADCAM at Wedgwood.—73-03421
Development of a ceramic exterior for thermos coffeepots.—73-10814
Development of the tableware and sanitary ware industry from 1950 to 1990.—73-10824
European protoporcelain: the social context of the history of a sixteenth century ceramic technology known as Saint-Porchaire.—73-00007
Forming tableware.—73-03845
Influence of the grinding of hard materials on porcelain and vitreous tableware.—73-01791
Isostatic pressing of flat porcelain tableware: I.—73-00916
Isostatic pressing of flat porcelain tableware: II.—73-00915
New technologies for porcelain tableware production and their environmental effects.—73-00918
Pilot electrode furnace for hand manufacturing of glass tableware containing fluoride.—73-15889
Removal of lead from ceramic tableware.—73-10895
Role of R&D in the product development process.—73-10896
Testing procedures for food contact hollowware.—73-15854
Use of quasi-isostatic pressing technology in the tableware industry.—73-01836
What does the future material for tableware look like.—73-10908

**talc,**
Behavior of talc in formation of cordierite ceramics.—73-17109
Densification and dilution of black talc slurry.—73-16694
Development of talc porcelain using black talcum.—73-10823
Material phases and properties of household talc porcelain.—73-12626
Talc.—73-12303

**tanks,**
Degassing behavior of glass specimens from various industrial glass-melting tanks.—73-00607
Technological modification of imported large end port glass tank furnace.—73-05131

**tantalates,**
Characteristics of periodically domain-inverted $LiTaO_3$.—73-12750
Dc polarization of defect perovskite $LaTa_3O_9$.—73-09393
Dielectric breakdown properties of $Ta_2O_5/SiO_2$ stacked thin films prepared by rf sputtering.—73-10930
Effect of $BaWO_4$ on the microwave dielectric properties of $Ba(Mg_{1/3}Ta_{2/3})O_3$ ceramics.—73-07303
Ferroelectricity in barium sodium tantalate [BNT], $Ba_2NaTa_5O_{15}$.—73-07890
Generation and measurement of picosecond electrical pulse and dispersion on stripline.—73-14941
Improvement of sinterability of $Ba(Mg_{1/3}Ta_{2/3})O_3$ [BMT] powder compacts by $BaTa_2O_6$ additions.—73-02860
Ir and Raman investigations of OH impurities in doped and pure $KTaO_3$ single crystals.—73-16187
Lattice dynamics of $LaTa_7O_{19}$ crystals.—73-16195
Lattice dynamics of M′-$XTaO_4$ crystals.—73-02316
Local symmetry of hydrogen in cubic and tetragonal $SrTiO_3$ and $KTaO_3$:Li determined by polarized Raman scattering.—73-08657
Magnetic properties of $PrBa_2Cu_2MO_{8-\gamma}$ (M=Ta, Nb).—73-07954
Mechanical and thermal properties of pressureless-sintered MgO-$Mg_4Ta_2O_9$ composites.—73-03324
Microstructural features of $Sc_1TaO_7$.—73-13419
Phase relations in the systems $Ln_2O_3$-$B_2O_3$-$Ta_2O_5$, where Ln=Sm, Eu, in the subsolidus region.—73-16259
Phosphor which emits light by the excitation of X-ray, and an X-ray intensifying screen using the phosphor.—73-04529
Precursor effects and ferroelectric macroregions in $KTa_{1-x}Nb_xO_3$ and $K_{1-y}Li_{1-y}TaO_3$.—73-07910
Properties of proton-exchanged waveguides in lithium tantalate.—73-11606
Quasi-phase-matched second harmonic generation in an $LiTaO_3$ waveguide.—73-07914
Raman scattering study of $Ba_2NaNb_{5(1-x)}Ta_{5x}O_{15}$.—73-07917
Solubility limit in the tetragonal series of the $Fe(Ta_xNb_{1-x})_2O_6$ system.—73-08734
Strophoidal Argand diagram and distribution of relaxation times in $K_{1-x}Li_xTaO_3$.—73-16601
Structural features of $Sc_1TaO_7$.—73-16323
System $LiTaO_3$-$SrZrO_3$.—73-02511
THz phonon-polariton beats in $LiTaO_3$.—73-09000

**tantalum carbide,**
Electrode properties of TaC metal matrix composites.—73-07318
Nanocrystalline intermetallic compounds prepared by mechanical alloying.—73-16876

**tantalum nitride,**
Stoichiometric B1-type tantalum nitride and a sintered body thereof and method of synthesizing the B1-type tantalum nitride.—73-12527
Synthesis of the B1-type tantalum nitride by shock compression.—73-09365
Tantalum nitride films as resistors on chemical vapor deposited diamond substrates.—73-01035

**tantalum oxide,**
Ac impedance investigation of $Ta_2O_5$ film for use as a storage capacitor dielectric.—73-10916
Ceramic composition for microwave dielectric.—73-01044
Comparison of the degradation modes in sandwich structures including amorphous oxides of niobium and tantalum.—73-09440
Crystallographic study by Rietveld's method of barium-magnesium-tantalum-oxide-based ceramics for use as dielectric resonator. X-ray dilatometry at low temperature.—73-08593
Densification of $Ta_2O_5$ film prepared by KrF excimer laser CVD.—73-16696
Density, thickness, and interface roughness of $SiO_2$, $TiO_2$, and $Ta_2O_5$ films on BK-7 glasses analyzed by X-ray reflection.—73-07008
Deposition of tantalum oxide films by ArF excimer laser chemical vapor deposition.—73-05738
Development of tantalum pentoxide coatings by chemical vapor deposition.—73-15923
Effect of postannealing on electrical properties of $Ta_2O_5$ thin film deposited by PECVD using $TaCl_5$ and $N_2O$.—73-04080
Effect of $Ta_2O_5$ additions on phase formation during synthesis and sintering of β-alumina-based ceramics.—73-02799
Effect of $Ta_2O_5$ alloying on low-temperature degradation of 3 mol% Y-TZP.—73-05385
Effect of $Ta_2O_5$ matrix additions on the microstructure and mechanical properties of SiC fiber-reinforced lithia-alumina-silica composites.—73-17126
Effects of annealing conditions on the properties of tantalum oxide films on silicon substrates.—73-16465
Electric conductivity of $CeO_2$-$Ta_2O_5$ ceramics in an atmosphere of combustion products and in air.—73-05553
Growth of $MgTa_2O_6$ single crystals by floating zone method and their optical properties.—73-05574
Interface properties and deep level defects in $Ta_2O_5$ grown on Si by plasma-enhanced liquid-source CVD.—73-04122
Interpretation of L-$Ta_2O_5$-type diffraction patterns in terms of a 1-D shift lattice.—73-08646
Layered tantalum-aluminum oxide films deposited by atomic layer epitaxy.—73-04126
Low-temperature tantalum pentoxide thin films.—73-04130
Measurement of the current transcient in $Ta_2O_5$ films.—73-08913
Mechanical and thermal properties of pressureless-sintered MgO-$Mg_4Ta_2O_9$ composites.—73-13561
Morphology and structure of tantalum oxide deposit prepared by KrF excimer laser CVD.—73-12633
Photopatterning of tantalum oxide films by a sol-gel method using a KrF excimer laser.—73-09239
Physical and electrical properties of tantalum oxide thin films deposited by low-pressure chemical vapor deposition.—73-04148
Properties of solid-state electrochromic cells using $Ta_2O_5$ as electrolyte.—73-14725
Pure $Nb_2O_5$ and $Ta_2O_5$.—73-05623
Quasi-static and high-frequency *c-v* measurements on Al/$Ta_2O_5$/$SiO_2$/Si.—73-07354
Reactive sputtering of Ta under gradient oxygen pressure.—73-16970
Self-aligned stacked gate EPROM cell using tantalum oxide control gate dielectric.—73-11050
Stoichiometry measurement and electric characteristics of thin-film $Ta_2O_5$ insulators for ultra-large-scale integration.—73-07358
Structure of amorphous $Ta_2O_5{\cdot}nH_2O$ derived from peroxo-polytantalate solution.—73-02463
Structure of an L-$Ta_2O_5$-type phase in the L-$Ta_2O_5$-$TiO_2$ system.—73-08759
Synthesis and properties of tantalum oxide films prepared by the sol-gel method using photoirradiation.—73-13299
Ti-Ta oxide complex doped with $Eu^{3+}$.—73-05520
XRD, TEM, and XPS characterization of $IrO_2$+$Ta_2O_5$ films.—73-12739

**tantalum,**
Anomalous behavior of the transverse acoustic phonons in $KTa_{1-x}Nb_xO_3$.—73-08551
Ceramic materials for producing high-purity compounds of niobium and tantalum.—73-08492
Chemical synthesis of tantalum zirconate from alkoxide precursors.—73-12943
Classical-to-quantum crossover in CDW creep at low temperatures.—73-17248
Dielectric properties and leakage current characteristics of $Ta_2O_5$ thin films prepared by sol-gel process.—73-02569
Effect of doping with tantalum on the properties of $YBa_2Cu_3O_{7-y}$.—73-08029
Effect of reaction products on the fracture resistance of a metal/ceramic interface.—73-03581
Electron and X-ray diffraction study of L-$Ta_2O_5$-type phases in L-$Ta_2O_5$ and some L-$Ta_2O_5$-$M_xO_y$ systems: (M=Al, Ti, Zr, Hf, W).—73-02252
In situ fracture monitoring of plasma-sprayed $MoSi_2$-Ta composites.—73-06806
Low-pressure CVD of $Ta_2O_5$ films for ULSI devices using tantalum pentaethoxide as precursor.—73-09193
Mechanism of electrical breakdown in anodic tantalum oxide.—73-16539
Synthesis and structure of $Ln_5Ta_3Sc_2O_{8}$ (Ln=La, Ce, Pr, Nd).—73-02492
Synthesis, structure, and physical properties of new layered ternary telluride $TaPtTe_5$.—73-02505
Thermal reaction of Ta thin films with polycrystalline diamond.—73-10285
Two-wave mixer properties of Fe:$KTa_{1-x}Nb_xO_3$ (KTN) crystal.—73-11627

**tape casting,**
Characterization of material interaction for a nonaqueous lead zirconate titanate (PZT) lead casting slip.—73-05704
Clean burning green ceramic tape cast system using atactic polypropylene binder.—73-04192
Dynamic viscoelastic measurements of suspension for the drying process in tape casting.—73-05747
Dynamic viscoelastic measurements of suspension for the drying process in tape casting.—73-12994
Fabrication of a planar solid oxide fuel cell by tape casting and cofiring method.—73-10947
Fabrication of a planar solid oxide fuel cell by tape-casting and cofiring method.—73-00969
Microstructural development in 1-2-3 tapes produced from spray-dried powder.—73-01606
Sources of sintering inhibition in tape-cast aluminas.—73-09339
Tape casting of platelet-reinforced ceramics.—73-09369
Tape casting of SiC platelet-reinforced alumina.—73-09370
Tape casting of silicon nitride.—73-06107

**tape,**
Electrical characteristics of the materials used in the fabrication of low-temperature transfer tape.—73-04084
Forming principles and manufacturing limits for the production of ceramic tapes.—73-12029
HTCC/LTCC use of multiple ceramic tapes in high-rate production.—73-15768
Influence of technical process on characteristic of Bi2223 thick-film tape.—73-04745
Influences of the precursor powder on the microstructure of HTSC tapes.—73-11806
Method of manufacturing a component of the tape or filament kind out of a material based on a superconducting oxide having a high critical temperature, and a component obtained thereby.—73-11972
Numerical flow simulation of viscoplastic slurries and design criteria for a tape casting unit.—73-05938
Pore structure of thin ceramic tape.—73-05078
Preparation of superconducting YBCO tape on metal substrates by MOCVD.—73-15597
Processing and transport properties of high-$J_c$ silver-clad Bi-2223 tapes and coils.—73-11877

**technology,**
1992—a year of improvements for the ceramic industry.—73-13632
Advancement of processing applications and fine ceramic products.—73-08502
Barriers to applying advanced high-temperature materials.—73-09700
Biotechnology—state of the art and applications in ceramic technologies.—73-00893
Can you teach your old kiln new tricks.—73-08464
Case for strategic partners in a high-tech industry.—73-09701
Ceramic filters for the cast metals industry.—73-07197
Changes in roofing tile technology.—73-00767
Computer design of the plasma-spraying technology.—73-08327
Critical issues in technology transfer.—73-03387
Development and future aspects of ironmaking technology in Japan.—73-17473
Developments in drying technology.—73-12216
Dry grinding technology in Italian ceramic companies.—73-12024
Epitaxial metal oxide films, a leading candidate for 21st century thin-film technology.—73-11749
Evolving technology of high-energy plasma spraying.—73-08336

Forty years of ceramic technology and development.—73-13622
Glassmaking innovation brings rewards for perfume specialist.—73-10547
In-line ratiometric turbidimeters are highly accurate, easy to use.—73-05057
Innovation in glass melting.—73-14412
Intelligent materials—keys to technology friendly to environment and people.—73-06576
Intensive teacher training.—73-06577
Materials and development.—73-09729
New ceramic brick production technologies.—73-14564
Present status and development of high-technology ceramics in Russia.—73-13636
Pressing technology meets manufacturing challenges.—73-04943
Research and competitiveness: the problems of a new rationale.—73-09745
Targeting low-cost high volume MCM {multichip modules} applications.—73-06596
Team sport of technology transfer: spectators welcome.—73-15649
Technological changes in sheet glass manufacture.—73-03408
Technological lines for small capacity plants.—73-14566
Technological state of the art of SiC.—73-15974
Technology of plaster of Paris production and exportation of plant.—73-13786
Tile line builds on trusted technology.—73-10692
Trends in heavy clay technology.—73-10693
Trends in refractory technology.—73-07228
Video gives the competitive advantage.—73-17513

**television,**
Microhardness as an indicator of the thermomechanical strength of the glass parts of TV picture tubes.—73-07049
Thermal processing for TV tube manufacture: process modeling.—73-00711

**tellurides,**
$A_x^{III}B_{2-x}^{V}C_3^{VI}$ crystals of tetradymite structure.—73-03074
Acceptor-influenced transport behavior of *p*-$Hg_{0.953}Mn_{0.065}Te$.—73-06138
Atomic layer epitaxy [ALE] of CdTe-ZnTe and CdTe-MnTe superlattices.—73-04245
Band gap and band levels of Cu-In-Se-Te thin-film compounds.—73-04252
Band parameters of $Hg_{1-x-y}Cd_xMn_yTe$.—73-14781
Calculated atomic structures of ZnS, ZnSe, and ZnTe(110) surfaces.—73-14789
Characteristics of the photoconductivity and of the photomagnetic effect in $Mn_xHg_{1-x}Te$ crystals with anodically oxidized surfaces.—73-04263
Compositional dependence of crystallization of As-Te glasses.—73-03826
Crystal structure of polymeric pyrite-type $Ir_3Te_8$.—73-02209
Crystal structures of $I_2$-*Mn-IV-VI*$_4$ *[I*=Cu, Ag; IV=Si, Ge, Sn; and VI=S, Se, Te] compounds.—73-02221
$Cu_{0.5}RTe_2$ and $Cu_{0.5}RTe_{1.75}$ compounds (R=La or Nd).—73-02225
Defect equilibrium in HgTe.—73-07436
Effect of intercalation by metal atoms on energy spectrum of $Bi_2Te_3$.—73-01134
Electrical conductivity of halogen telluride glasses.—73-14171
Electrical properties of epitaxial *p*-type manganese mercury telluride films.—73-01148
Electrical, thermoelectric, and magnetic properties of In-doped $Cd_{0.2}Hg_{0.8}Te$.—73-07487
Electron cyclotron resonance reactive ion etching of fine features in $Hg_xCd_{1-x}Te$ using $CH_4/H_2$ plasmas.—73-07492
Electronic state of In impurities in narrow-gap semiconductors $Pb_{0.82}Sn_{0.18}Te$ and $Cd_{0.2}Hg_{0.8}Te$.—73-07499
Etching of zinc selenide and zinc telluride epitaxial films in a secondary afterglow plasma: a statistical experimental design study.—73-05794
EuTe/PbTe superlattices: MBE growth and optical characterization.—73-04332
Exciton recombination in Te-rich $ZnSe_xTe_{1-x}$ epilayers.—73-11203
Fabrication of normal-native oxide *p*-ZnTe heterojunctions by the anodic oxidation of ZnTe MBE layers.—73-14912
Far-ir transmission spectra of $Hg_{1-x-y}Cd_xMn_yTe$.—73-16146
Heterojunctions of the ZnTe-PbS type.—73-01182
Hume-Rothery rule in V-VI compounds.—73-04356
Infrared observation of longitudinal optical modes in MBE-grown polar semiconductor films.—73-14989
Infrared reflection spectra of HgCdMnTe multicomponent solid solutions.—73-14990
Intrinsic carrier density and effective mass of electrons in $Mn_xHg_{1-x}Te$.—73-07622
Ionic skin-effect in copper-doped $Bi_2Te_3$ single crystals.—73-16525
Kinetics of nanosecond electrical "conditioning" of switching devices made of noncrystalline $Ge_xTe_{1-x}$ films.—73-01227
Lattice reflection spectrum of $Cd_{1-x}Hg_xTe$ alloys [0≤*x*≤0.8].—73-15012
Lifetime of the minority carriers in *p*-type epitaxial $Cd_xHg_{1-x}Te$ films.—73-07636
Long-wavelength edge of the residual photoconductivity of In-doped $Pb_{0.78}Sn_{0.22}Te$.—73-11294
Long-wavelength HgMnTe avalanche photodiodes.—73-07640
Low threshold, room temperature, pulsed, and quasi-continuous lasing in optically pumped CdZnTe/ZnTe quantum wells.—73-04384
Low-pressure MOVPE [LP-MOVPE] growth of ZnSe, ZnTe, and ZnSe/ZnTe strained-layer superlattices.—73-04385
Magnetothermoelectric power of $Mn_{0.18}Hg_{0.82}Te$.—73-01236
Metal-insulator transition in a disordered antiferromagnet $Yb_{1-x}Gd_xTe$.—73-16540
Microhardness of $Zn_xCd_yHg_{1-x-y}Te$ solid solutions.—73-16543
Nanosecond switching in submicron sandwich structures based on amorphous $Ge_xTe_{1-x}$ films.—73-04414
Narrow gap IV-VI thin films produced by quasi-continuous-wave $CO_2$-laser-induced evaporation.—73-13147
Nonlinear absorption of laser light in $Bi_2TeO_5$ single crystals.—73-16549
Ohmic contacts to *p*-Zn(S, Se) using a pseudograded Zn(Te, Se) structure.—73-11355
Optical, structural, and crystalline properties of $GeSb_2Te_4$ thin films.—73-12644
Photoinduced thermal Faraday rotation in semimagnetic semiconductors.—73-01277
Photon-assisted growth of HgTe by metallorganic chemical vapor deposition.—73-07731
Preparation and characterization of semiconducting α-$MoTe_2$ single crystals.—73-07743
Quasi-bound states in semiconductor single quantum barriers.—73-15132
Rearrangement of vibrational spectra of $Cd_{1-x}Zn_xTe$ semiconductor alloys [0≤*x*≤0.5].—73-15141
Resonant electron spin-flip Raman scattering in $Zn_{1-x}Mn_xTe$.—73-07770
Schottky barrier induced injecting contact on wide band gap semiconductors.—73-07788
Semiconductor-metal transition induced by the structural transition in liquid $Ge_{15}Te_{85}$.—73-07794
Solid solutions in CdTe-MnTe-MgTe system.—73-16306
Space groups of $Tl_5Te_3$ and $Tl_2Te_3$.—73-02436
Specific features of nucleation and growth of solid solution $(Zn_{1-x}Cd_xTe)_{1-y}(In_2Te_3)_y$ films.—73-05483
Spectrum of a shallow acceptor in a semimagnetic semiconductor subjected to a magnetic field.—73-07804
Structural properties of the molybdenum-ruthenium telluride of composition $Mo_{4.5}Ru_{1.5}Te_8$.—73-02451
Structural transformations in $Cu_7Te_4$ single crystals.—73-02456
Structural- and conductivity-type transitions in vapor-phase-grown $(ZnTe)_x(CdSe)_{1-x}$ single crystals.—73-04491
Structure of deep impurity states of II, III, IV group elements in IV-VI semiconductors.—73-01326
Structure refinement of $TlCu_7Te_4$ from X-ray powder profile data.—73-02467
Synthesis and crystal structure of a novel zintl phase: $K_3SbTe_3$.—73-02481
Synthesis, physicochemical investigation, and electrophysical properties of solid solutions based on GeTe in the cross section $(CeTe)_{1-x}[(Ag_2Te)_{0.1667}(Bi_2Te_3)_{0.5333-x}]$.—73-16357
Synthesis, structure, and physical properties of new layered ternary telluride $TaPrTe_5$.—73-02505
Synthesis, structure, and physical properties of the new group IV ternary tellurides, $Cu_2MTe_3$ (M=Ti, Zr, Hf).—73-02506
Thermoelectric property and *p-n* transition mechanism of hot-pressed $Bi_{4/3}Sb_{2/3}Te_2$.—73-11481
Thermopower and fluctuation effects in bismuth cuprate high-$T_c$ crystals.—73-08256
Ultrahigh magnetic field effect on the structural phase transition in (Pb, Ge)Te.—73-07850
$ZnSe_xTe_{1-x}$ films grown by pulsed laser deposition.—73-03073
ZnTe: a potential interlayer to form low-resistance back contacts in CdS/CdTe solar cells.—73-07868

**tellurites,**
Crystallization of $LiNbO_3$ in tellurite glasses.—73-07114
$CuInS_2$ effect on spectral characteristics of borate and tellurite glasses.—73-14150
Effect of the composition of europium-activated tungsten-alkali tellurite glasses on their physicochemical, optical, and spectroscopic characteristics.—73-00466
Electrical transport properties in semiconducting tellurite glasses.—73-14873
Fabrication of transparent tellurite glasses containing potassium niobate crystals by an incorporation method.—73-00625
Hopping transport in vanadium tellurite glasses containing antimony oxide.—73-07569
Influence of temperature on infrared-to-visible conversion in tellurite glass doped with erbium and ytterbium.—73-03793
Influence of the composition of europium- and ytterbium-activated tellurite-wolframate glasses on their physicochemical, optical, and spectral-luminescence properties.—73-14208
Interaction of alkali tungsten tellurite glass with aqueous solutions.—73-00355
Ionic conductivity and structure of thallium tellurite glasses containing AgI.—73-07043
Longitudinal elastic constants of tellurite glasses.—73-01231
Photoconductivity of bismuth tellurite.—73-15278
Preparation and optical properties of transparent $TeO_2$-based glasses containing $BaTiO_3$ crystals.—73-10472
Raman spectra and constitution of binary tellurite glasses containing typical network-modifying cations.—73-14076
Refractive-index dispersion of tellurite glasses in the region from 0.4 to 1.71 μm.—73-14269
Structural study of binary tellurite glasses by X-ray radial distribution analysis.—73-14101
Structure and electrical properties of vanadium tellurite glasses.—73-14284
Structure of alkali and alkaline-earth zinc tellurite glasses.—73-14105
Tellurite glass and fiber amplifier.—73-03970
Ultrasonic detection of microphase separation in binary zinc tellurite glasses.—73-14303

**tellurium oxide,**
$^{11}B$ MAS NMR spectra of $BO_{3/2}$-$TeO_2$ glasses.—73-06884
Accurate analysis of noncollinear acoustooptic interaction in $TeO_2$ crystal.—73-08800
Acoustic shear wave propagation in paratellurite with reduced spreading.—73-08801
Application of tellurite bonding glasses to magnetic heads.—73-03775
Crystallization studies of $30Li_2O$-$70TeO_2$ glass.—73-06901
Electrical conductivity of $V_2O_5$-$Bi_2O_3$-$TeO_2$ glasses.—73-04305
Electrical conductivity of $V_2O_5$-$Bi_2O_3$-$TeO_2$ glasses.—73-14173
Glass formation and conductivity of the AgI-$AgO_{0.5}$-$TeO_2$ system.—73-00491
Microstructure of glass and crystalline phases in the system PbO-$TeO_2$-$B_2O_3$.—73-14036
Preparation and optical properties of transparent $TeO_2$-based glasses containing $BaTiO_3$ crystals.—73-03865
Raman spectra of $BO_{3/2}$-$TeO_2$ glasses.—73-10396
Series of "infinitely adaptive phases" in the $Bi_2O_3$-$TeO_2$ system.—73-02427
Sol-gel processing of $TeO_2$ powders.—73-13278
Uv absorption limit of glasses of the system $TeO_2$-$P_2O_5$.—73-14306

**tellurium,**
Annealing behavior of Au(Te)/*n*-GaAs contacts.—73-11067
Annealing of native defects in Te-doped GaAs.—73-14774
Coefficient of thermal expansion of glasses and melts of the Te-I system.—73-14144
Computation of equilibrium composition of liquid and solid phases in the system Pb-Sn-Se-Te.—73-16065
Crystallization processes and glass-forming ability of a set of glassy alloys in the As-Se-Te system.—73-06899
Growth of tellurium oxychalcogenide single crystals.—73-16163
Influence of crystallization on electrical and optical properties of Te-Se-Sn and Te-Se-Sn-O films.—73-08887
Optical absorption of ZnSe-ZnTe strained-layer superlattices.—73-01263
Photoluminescence of heavily doped GaAs with an ordered distribution of impurity complexes.—73-01281
Physicochemical properties of melts of the system PbTe-Mn.—73-02394
Problem of the nature of the luminescence band at 1.23–1.25 eV in the spectrum of GaAs:Te crystals.—73-01290
Projections of the liquidus surface in the ternary reciprocal system InSe-$Sb_2Se_3$-$Sb_2Te_3$.—73-12663
$p_{total}$-*T*-*x* phase diagram of the system Si-Te.—73-02370
Space-charge-limited conduction in a-$Se_{100-x}Te_x$.—73-11448
Spectroscopic observations of temperature and composition effects on tellurium oxyhalide glasses.—73-10402
Structural and morphological analysis of reactively sputtered tellurium suboxide thin films.—73-03196
Symmetry of the $V_{Ga}Te_{As}$ complex in GaAs and its reorientation at low temperatures.—73-01339
Synthesis and thermal expansion of glasses and melts of the system Te-Cl.—73-14289
Tensimetric investigation of solid solutions $Cr_{2.83}Fe_{0.1}Te_x$.—73-16363
Thermal expansion coefficient of glass and melts of the system Te-Br.—73-00558

**temperature dependence,**
Dependence of the temperature of transition in the superconducting state on the degree of metallicity of chemical bonds.—73-02230
Influence of temperature on microhardness and birefringence of $ZrO_2$-$Y_2O_3$ crystals.—73-02621
Physical origin of the temperature dependence of chromatic dispersion in fused silica.—73-00530
Precision measurements in the temperature dependence of λ in $YBa_2Cu_3O_{6.95}$: strong evidence for nodes in the gap function.—73-15585
Temperature dependence of so-called heat transfer coefficient under thermal shock test.—73-16611
Temperature dependence of the linear magnetoelectric effect in orthorhombic boracites.—73-08977
Temperature effects in GaAs OEMS [optoelectronic modulation spectroscopy] spectra.—73-15201
Thermal stresses in materials with temperature-dependent properties.—73-05677

**temperature measuring,**
Advanced method for the determination of temperature profiles in semitransparent materials at high temperature.—73-12104
Comparison of optical pyrometry and infrared transmission measurements on indium-free mounted substrates during molecular beam epitaxial growth.—73-11114
Data logging devices for the ceramic industry.—73-05105
Elevated temperature dielectric property measurements: results of a parallel measurement program.—73-05044
Experimental study of $T_c$ measurement system for high-$T_c$ superconductor controlled automatically by microcomputer.—73-11754
In situ substrate temperature measurement in high-$T_c$ superconducting film deposition.—73-15509
Infrared line scanning helps ensure quality production for Ford.—73-10557
Ir temperature sensors: single point vs multi point.—73-08407
Measurement and control of gob temperatures.—73-14423
Measuring glass furnace temperature.—73-15815
Measuring hot metals on the move.—73-12162
Method and apparatus for in situ measuring filament temperature and the thickness of a diamond film.—73-01941
Method and instrument for remote temperature control.—73-08411

Method to calculate substrate temperature during intermittent radiant heating in vacuum.—73-05067
MKTA-2500 microanalyzer for engineering monitoring.—73-08419
Semiconductor substrate temperature measurement by diffuse reflectance spectroscopy [DRS] in molecular beam epitaxy.—73-12193
Temperature measurement in a 2.45-GHz microwave furnace.—73-05089
Temperature measurement in the glass industry using radiation thermometers.—73-01832
Temperature measurement with a carbon thermal indicator.—73-01931
Temperature measurements in rapid thermal annealing.—73-01932
Temperature sensor.—73-02072
Wafer-scale temperature mapping for molecular beam epitaxy and chemical beam epitaxy.—73-11508

**temperature,**
Adiabatic temperature rise of low-heat cement using ground granulated blast-furnace slag and fly ash.—73-09806
Automated bottom temperature control for a glass-melting furnace.—73-15867
Control of temperature rise of concrete using cooling aggregate and cooling water.—73-09869
Determination of the Neel temperature in $YBa_2Cu_3O_x$ by electrical conductivity measurements.—73-15416
Devices for noncontact temperature control of glass under production and laboratory conditions.—73-14351
Dynamic measuring of temperature field on porcelain body surface during firing.—73-07246
Effects of the substrate temperature on the properties of Ni-Zn-Cu ferrite thin films deposited by rf magnetron sputtering.—73-01457
Formulas for calculating sintering temperature of body of porcelain and melting temperature of glaze.—73-10849
Fractoemission from ceramics at cryogenic temperatures.—73-06426
Increase in $T_c$ of $Bi_2Sr_2CaCu_2O_x$ due to alpha particle irradiation.—73-08103
Influence of temperature on water loss and shrinkage of hardened cement paste.—73-10015
Mathematical modeling of complex shapes of glass tanks.—73-15885
Rhythm drying—what is it? How can it help you.—73-12240
Sub-$T_g$ phenomena—73-14114
Successful glass temperature conditioning.—73-00708
Temperature control of forehearth.—73-14516
Temperature distribution in a nailed gypsum-stud joint exposed to fire.—73-13787
Temperature gradients in microwave processing: boon and bane.—73-06110
Temperature of ceramic article in tunnel kiln.—73-08489
Temperature sensor or temperature sensor arrangement made from glass-ceramic and bonding film resistors.—73-04535
Verification of 3-D mathematical simulation of glass-melting tank.—73-14527

**tempering,**
Cooling station in a tempering plant for glass sheets.—73-04968
Dynamic fracture process of thermally tempered glass studied by the method of caustics.—73-14160
Internal stress stabilities investigated in tempered glass over 22 years.—73-14210
Method for bending and tempering a glass sheet.—73-00740
Method of predicting glass fracture during tempering.—73-00661
Thermophysical properties controlling annealing and tempering.—73-07090

**tensile,**
Apparatus for tensile testing plate-type ceramic specimens.—73-01940
Methodology for relating the tensile constitutive behavior of ceramic matrix composites [CMC's] to constituent properties.—73-13571
Tensile behavior of ceramic/ceramic composites before and after exposure to high-temperature combustion environment.—73-17440
Tensile properties of cold-chamber die-cast ceramic particulate-reinforced ZA-8 composites.—73-06863

**terbium,**
Anomalous magnetotransport in epitaxial $TbSi_{2-x}$.—73-03079
Characterization of Tb at the interface of SiN/TbFeCo film by Auger electron spectroscopy.—73-03567
$Eu^{2+}$ in $Y_2O_3S:Eu^{3+}$ and $Y_2O_3S:Eu^{3+}$, $Tb^{3+}$.—73-08618
Growth of thin dense gas-tight (Tb, Y)-$ZrO_2$ films by electrochemical vapor deposition.—73-09159
Influence of substitution of terbium on the superconducting behavior of $YBa_2Cu_3O_{7-\delta}$.—73-08109
Pressure-induced amorphization of $Tb_2(MoO_4)_3$: a high-pressure Raman and X-ray diffraction study.—73-16279
Spin freezing in the geometrically frustrated pyrochlore antiferromagnet $Tb_2Mo_2O_7$.—73-08736
Tb distribution in YAG:Tb crystals.—73-02514

**testing,**
Abrasion testing of glass-ceramics.—73-00432
Accelerated testing of cements in brines.—73-03432
Ambient and high-temperature stable fracture tests in ceramics: applications to yttria-partially-stabilized zirconia.—73-03235
Apparatus for tensile testing plate-type ceramic specimens.—73-01940
Application of mixed-mode fracture criteria for weakest-link failure prediction for ceramic materials.—73-17239
Biaxial flexure testing: analysis and experimental results.—73-06334
Characterization of wear behavior of steel and ceramics in the VAMAS round robin tests.—73-06341
Comparison of abrasion model test results and machining tests with PVD-coated indexable inserts.—73-06758
Compressive testing of ceramics.—73-08385
Compressive testing of ceramics.—73-15782
Details of in situ sample retrievals and test completion for the Materials Interface Interactions Test (MITT).—73-08292
Effect of proof testing on the failure probability of multiaxailly loaded ceramic components.—73-17292
Environmental test program for superconductor [$YBa_2Cu_3O_{7-x}$] grounding links.—73-08061
Experimental tests of soil-cement concrete with various water-reducing agents on heat of hydration, setting time, and strength.—73-09961
Fundamental mechanisms of erosion [studied] using Hertzian fracture test.—73-07030
Gage R&R for ceramics.—73-12143
Hot-gas method and apparatus for thermal shock testing.—73-05053
Hydraulic tests on devices for examining glass-melting furnaces.—73-01905
Influence of presaturation and freeze-thaw test conditions on length changes of portland cement mortar.—73-10011
Machine for fretting wear testing of plasma-surface-modified materials.—73-08409
Machine tests optical fibers in flexure.—73-08410
Method and apparatus for testing containers.—73-15769
Microindentation adhesion tester and its application to thin films.—73-08416
Poor man's scratch tester.—73-15831
Process for determining the quality of temper of a glass sheet using a laser beam.—73-05099
Simplified gage method for test reliability.—73-15846
Specimen diameter, impact velocity, erosion rate, and particle density in a slurry pot erosion tester.—73-08445
Temperature dependence of so-called heat transfer coefficient under thermal shock test.—73-08976
Testing and analysis of an advanced hypersonic structure.—73-10284
Testing machine exerts longitudinal and transverse loads.—73-15853
Thermal shock testing and the problem of standardization.—73-05672
Value of ASTM to the commercial fatigue testing laboratory and its customers.—73-06597
VAMAS fracture toughness round robin test on ceramics.—73-13608

**tetraethoxysilane,**
Characterization of TEOS oxides used in the isolation module of high-speed bipolar and BiCMOS circuits.—73-12752
Properties of ORMOSIL with adding organic silanol in TEOS system(II).—73-09285

**texture,**
Aluminum titanate as a material in relation to texture problems.—73-10696
Development of textured microstructures in ceramics with large thermal expansion anisotropy.—73-06207
Diagenetic K-feldspar textures: a TEM study and model for diagenetic feldspar growth.—73-15900
Influence of firing conditions and minor components on the fine textures of alite.—73-10007
Internal textures and chemical compositions of anti-rapakivi mantled feldspars from the Oki-Dogo Island, Japan.—73-15906
Magnetization and critical current density measurements of textured bulk Y-Ba-Cu-O superconductor.—73-01597
Microtexture of high surface area activated carbons.—73-13432
Microtextures formed by the remelting reaction in belite crystals.—73-03178
Textural changes of materials containing diaspore through firing.—73-00878
Texture development via grain rotation in B-silicon nitride.—73-09373
Texture measurement on materials containing platelets using stereology.—73-17211
Texture transition in thin metal films vacuum condensed on glass: a general consideration.—73-03651
Textured Bi-Sr-Ca-Cu-O bulk sample.—73-15651
Textured glass for various applications: a review.—73-14292

**thallium,**
Acoustic emission and memory effects in $TlGaSe_2$ [crystals].—73-16025
Anomalous behavior of the photoacoustic signal near the phase transition in the Tl blue bronze $Tl_{0.3}MoO_3$.—73-08550
Characteristic features of self-compensation in PbSe:Tl:$Pb_{ex}$ films.—73-14796
Charge transfer investigation: X-ray photoelectron spectroscopy on superconducting $Tl_2Ca_2Ba_2Cu_3O_{10}$.—73-01503
Chemical control of high-$T_c$ superconductivity: metal-superconductor-insulator transition in $(Tl_{1-y}Pb_y)Sr_2(Ca_{1-x}Y_x)Cu_2O_7$.—73-11702
Comparison of transport properties between Tl-(1223) and Tl-(2223) phases of Tl-Ba-Ca-Cu-O systems.—73-15401
Critical current density and resistivity measurements for long patterned lines in $Tl_2Ba_2CaCu_2O_8$ thin films.—73-08011
Crystal growth of Tl-based cuprate superconductors.—73-11716
Crystallization of glasses in the As-Se and Tl-As-Se system during heating.—73-00605
Determination of modulation wavelengths in nanoscale electrodeposited superlattices using the scanning tunneling microscope.—73-06206
Diminishing sign anomaly and scaling behavior of the mixed-state Hall resistivity in $Tl_2Ba_2Ca_2Cu_3O_{10}$ films containing columnar defects.—73-15419
Effect of addition of chromium(VI) oxide on the formation of Tl-Sr-Ca-Cu-O 1212 phase.—73-04699
Effect of impurities on thermoelectric power in thallium blue bronze $Tl_{0.3}MoO_3$.—73-16458
Effect of site-selective substitution in bulk superconducting $Tl_2Ba_2CaCu_2O_8$ [Tl-2212].—73-11736
Effect of vortex fluctuations on $^{205}Tl$ spin-lattice relaxation in mixed states of $Tl_2Ba_2CuO_6$.—73-15439
Electronic structure of the channel compound $TlCr_5Se_8$: an XPS study.—73-05393
Energy spectrum of the quasi-particle of $Tl_2Ba_2CaCu_2O_8$ under coexistence of interlayer pairing and intralayer pairing.—73-08060
Enhancement of the superconducting transition temperature of $TlSr_2CaCu_2O_7$ by yttrium and vanadium substitutions.—73-01545
Fluorine-doped high-$T_c$ cuprate $TlSr_2CaCu_2O_7$.—73-15474
Formation and properties of copper film on Tl-(Pb, Bi)-Sr-Ca-Cu-O superconductor by electrodeposition from aqueous solution.—73-01555
Frequency shifts of optical phonons due to size-effect-induced charge transfer in $Tl(Ba_{1-x}Sr_xLa)CuO_5$.—73-15488
Giant suppression of flux-flow resistivity in heavy-ion-irradiated $Tl_2Ba_2Ca_2Cu_3O_{10}$ films: influence of linear defects on vortex transport.—73-09408
Heteroepitaxy of high-$T_c$ superconducting Tl-Ba-Ca-Cu-O films on metal-coated substrates.—73-11781
High-$T_c$ copper-oxide superconductors comprising Tl-Sr-Ca-Cu-O.—73-11955
High-temperature superconductor system comprising $Tl_2Ba_2CuO_6$.—73-04838
Hole concentration and critical temperature in $Tl_{2-x}Ba_{2-y}CuO_{6-\delta}$.—73-11790
In situ growth of Tl-containing oxide superconducting films.—73-15680
In-field logarithmic relaxation of microwave absorption in superconducting $Tl_2Ba_2Ca_2Cu_3O_{10}$ and flux pinning properties.—73-04740
Influence of the size of alkaline-earth cations on the structural distortion and transport properties of the semiconducting 1212-type cuprates $TlBa_{2-x}Sr_xLnCu_2O_7$.—73-04368
Ionic conductivity and structure of thallium tellurite glasses containing AgI.—73-07043
Irreversibility lines of 1223-phase superconductor of Tl system.—73-11811
Low rf loss, bondable ohmic contacts on $Tl_2Ba_2CaCu_2O_{8-\delta}$ for microwave devices.—73-01590
Low-temperature fluctuations of vortices in layered superconductors.—73-15540
Luminescence of $Tl^+$ ions in an NaF:Tl crystal under pulsed excitation.—73-08907
Luminescent determination of Tm in lanthanide oxides.—73-02634
Metallorganic chemical-vapor-deposition-derived lead- and bismuth-doped high-$T_c$ superconducting Tl-Ba-Ca-Cu-O films.—73-11831
Method of fabricating thallium-containing ceramic superconductors.—73-15686
Method of forming smooth, uniform thallium-based superconducting films.—73-11971
Methods for producing $Tl_2Ca_2Ba_2Cu_3$ oxide superconductors.—73-11979
Muon spin rotation study of the correlation between $T_c$ and $n_s/m^*$ in overdoped $Tl_2Ba_2CuO_6$.—73-15561
New superconducting 1201-type phase (Tl,Cr)$Sr_2CuO_5$.—73-01613
Nonsuperconducting oxide $TlBa_2LaCu_2O_7$ with 1212 structure.—73-16233
Optimum preparation of bulk $Tl_2Ba_2CaCu_2O_{8-\delta}$ (2212) high-temperature superconductor.—73-11854
Oxide superconductor composition and a process for the production thereof.—73-15690
Oxyanion derivatives of cuprate superconductors: superconducting thallium cuprate oxysulfate $Tl_{0.5}Pb_{0.5}Sr_4Cu_2(SO_4)O_x$.—73-15573
Phase transitions sequence in B-$TlInS_2$ layered crystal.—73-16268
Phonon and electronic properties of $TlBiSe_2$ thin films.—73-08948
Preparation and characterization of Tl-Ba-Ca-Cu-O superconducting films by spray pyrolysis and Tl-diffusion technique.—73-04788
Preparation and crystallographic characterization of the polyphosphate $TlPO_3$.—73-02401
Preparation and transport properties of $TlBa_2Ca_2Cu_3O_x$ thin films by metallorganic deposition [MOD].—73-15591
Preparation of superconductors of near-single-phase $Tl_2Ba_2Ca_3Cu_4O_{10}$.—73-08179
Preparation of Tl-1223 superconductor and its silver-sheathed tape.—73-15599
Preparation of $TlBa_2Ca_2Cu_3O_{9+\delta}$ high-$T_c$ thin films by laser ablation in combination with thermal evaporation of thallium oxide.—73-11872
Process for making superconducting Tl-Pb-Sr-Ca-Cu oxide films.—73-04865
Process for making superconductor Tl-Pb-Sr-Ca-Cu-O films.—73-04866
Process for producing Bi-Ca-Sr-Cu-O, Tl-Ca-Sr-Cu-O, and Tl-Ba-Ca-Cu-O superconducting ceramics.—73-01736
Processing of the Tl-Ca-Ba-Cu-O high-$T_c$ phase via the sol-gel route.—73-11878
Raman and ir vibrational spectra of $TlGaS_2$.—73-07760
Resistive upper critical field in $Tl_2Ba_2CuO_6$ at low temperatures and high magnetic fields.—73-15612
Space groups of $Tl_4Te_3$ and $Tl_2Te_3$.—73-02436
Statistical theory of X-ray diffraction by one-dimensional randomly disordered $TlBa_2Ca_2Cu_3O_9/TlBa_2Ca_2Cu_3O_{10}$ superconducting thin films.—73-11905

Structural analysis of $Tl_4SnSe_4$.—73-02446
Structural origin of holes in the Tl-O single rock-salt layer superconductor $TlSrRCuO_5$ (R=La, Nd).—73-01667
Structure and superconducting properties of the $Tl_{1-\delta}CaBa_2Cu_2O_7$ and $Tl_{1-\delta}Y_{1-x}Ca_xBa_2Cu_2O_7$ series.—73-11908
Structure refinement of $TlCu_7Te_4$ from X-ray powder profile data.—73-02467
Superconducting material.—73-04877
Superconducting metal oxide (Tl,Bi)$_1Sr_2Ca_2Cu_3O_y$.—73-04878
Superconducting properties of $Tl_{1-x}Pb_xCaSr_2Cu_2O_7$: role of Pb and oxygen stoichiometry.—73-08221
Superconducting $TlSr_2(Ca,Cr)Cu_2O_7$ thin films with critical current density up to $10^6$ A/cm$^2$.—73-08225
Surface and bulk analysis of metallorganic chemical-vapor-deposition-derived superconducting $Tl_2Ba_2Ca_2Cu_3O_x$ thin films by Auger electron spectroscopy.—73-11920
Synthesis and characterization of perovskite-type $BaTl_{0.5}Sb_{0.5}O_3$ and $BaTl_{0.5+x}Sb_{0.5-x}O_{3-x}$.—73-01340
Synthesis and crystal structures of two thallium vanadium phosphates: $TlVO_2(HPO_4)$ and $Tl_2V_2O_3(VO)(PO_4)_2(HPO_4)$.—73-02485
Synthesis of Tl-Ba-Ca-Cu-O high-temperature superconductors from Ba-Ca-Cu-O precursors.—73-15646
Synthesis of Tl-base high-$T_c$ superconducting oxides through a diffusion process.—73-15647
Temperature dependence of the low-energy electronic Raman scattering in $Tl_2Ba_2CaCu_2O_8$ single crystals.—73-02515
Thallium germanate, tellurite, and antimonite glasses.—73-10667
Thallium germanate, tellurite, and antimonite glasses.—73-10668
Thermopower properties of thallium blue molybdenum bronze $Tl_{0.3}MoO_3$.—73-08996
Thickness dependence of electrodynamic properties of TlCaBaCuO thin films.—73-08258
$Tl_2Ba_{2-x}Sr_xCuO_6$: a system exhibiting a compositionally controlled superconductor–metal transition.—73-01695
Weak-link characteristics and transport properties of Tl-1223 tape-shaped wire.—73-15666

**theory,**
Basic theory of finite element method.—73-14572
Can Anderson-Luttinger liquid theory be considered relevant to cuprate superconductors.—73-01498
Development of the concept of R. L. Muller on the possibility of vitrifying melts.—73-14350
Evaluating life reliability of aerial glass by timing termination theory.—73-14181
Influence of Weibull modulus on distribution of estimated modulus.—73-09623
New theory for the dielectric breakdown of solid dielectrics.—73-01000
Prediction of creep reliability of ceramics: some approximate engineering techniques.—73-17412
Self-propagating high-temperature synthesis—review.—73-06033
SHS combustion characteristics of several ceramics and intermetallic compounds.—73-06038
Theoretical predictions of the synthesis by self-propagating combustion.—73-06113
Theory of superconductivity of $Bi_2Sr_2Ca_2Cu_3O_{10}$.—73-11933

**thermal analysis,**
Application of thermal analysis in modern ceramic technology.—73-01885
Evaluation of a multichip module (MCM) thermal design tool—a three-chip MCM thermal mock-up as a case study.—73-04097
Ten years of experience with thermoanalyses.—73-12203
Thermal analysis for characterization of ceramic materials.—73-12204
Thermal analysis for improved quality.—73-01933
Thermal proof test of ceramics.—73-05090

**thermal barriers,**
Advanced thermal barrier coated superalloy components.—73-03669
Ceramic thermal barrier coating for rapid thermal cycling applications.—73-13914
Durability of zirconia thermal barrier coatings.—73-10218
Fatigue of thick thermal barrier coatings [TTBC's].—73-10230
Graded thermal barrier coatings [TBC's]: evaluation.—73-13841
Improving thermal efficiency with ceramic thermal barrier coatings [TBC's].—73-06804
Method for repair and restoration of a ceramic thermal-barrier-coated substrate by providing an intermetallic coating.—73-03693
Micromechanical properties of thermal barrier coatings using depth-sensing indentation.—73-06828
Plasma-sprayed ceramic thermal barrier coating for NiAl-based intermetallic alloys.—73-10335
Processing variables in laser glazing plasma-sprayed thermal barrier coatings.—73-09282
Temperature-variant hardness response of duplex TBC's [thermal barrier coatings].—73-12886
Thermal barrier coating for metallic components.—73-00298
Thermal barrier coating system with intermetallic overlay bond coat.—73-00299
Thermal barrier structure.—73-00891
X-ray residual stress analysis of a ceramic thermal barrier coating undergoing thermal cycling.—73-13610

**thermal conductivity,**
Apparatus for determining the thermal conductivity of ceramic materials.—73-15776
Developing AlN ceramics with high thermal conductivity.—73-12979
Effect of powder properties on thermal conductivity of aluminum nitride.—73-03138
Effect of powder properties on thermal conductivity of aluminum nitride.—73-12774
Experimental determination of the effective thermal conductivity of glass by steady-state method.—73-07025
General analytical approach toward the thermal conductivity of porous media.—73-12805
Influence of composition and oxidation temperature on thermal conductivity of Si-Ti-O-N porous ceramics.—73-05582
International comparison of laboratory results measuring heat conductivity of heat-insulating materials.—73-15808
Novel method for measuring the thermal conductivity of submicrometer thick dielectric films.—73-08427
Porosity dependence of thermal conductivity of ceramics and sedimentary rocks.—73-08954
Process for sintering aluminum nitride to a high thermal conductivity and resultant sintered bodies.—73-16014
Specific heat and thermal conductivity of $ZrO_2$:$Y_2O_3$ fianites.—73-16597
Study by finished elements of the behavior of refractive pieces thermally solicited.—73-00873
Thermal conductivity of aluminum nitride ceramics.—73-02706
Thermal conductivity of an untwinned $YBa_2Cu_3O_{7-\delta}$ single crystal and a new interpretation of the superconducting-state thermal transport.—73-08252
Thermal conductivity of float glass at room temperature.—73-07085
Thermal conductivity of gadolinium-scandium-aluminum garnets codoped by chromium.—73-16620
Thermal conductivity of thin amorphous alumina films.—73-05654
Thermal conductivity of uniaxial coated fiber-reinforced composite with thermal barriers.—73-16621

**thermal decomposition,**
$^{29}$Si NMR study of the thermal decomposition of hydrothermally formed hillebrandite and xonotlite.—73-05478
Hydrothermal synthesis of hillebrandite and thermal decomposition to highly reactive β-$C_2S$.—73-09993
Thermal decomposition of borazane $BH_3NH_3$ under HIP conditions and of the structural evolution of the products of pyrolysis.—73-13323
Thermal decomposition of formiates of some *d*- and *f*-elements.—73-16371
Thermal decomposition of tricalcium silicate hydrate.—73-16372
Thermal decomposition process of ammonium paratungstate.—73-06297

**thermal diffusivity,**
Effect of texture on the thermal diffusivity of a ceramic material.—73-12775
Measurement of thermal diffusivity of Pyroceram 9606 by the laser flash method.—73-05065

**thermal expansion,**
Anorthite and thermal expansion of CaO-$Al_2O_3$-$SiO_2$-$B_2O_3$ ceramics.—73-05532
Calculation of thermal expansion of gallium arsenide.—73-04258
Effect of alkali and alkaline-earth metal ions on the thermal expansion of nepheline.—73-05751
Effect of alkali and alkaline-earth metal ions on the thermal expansion of nepheline.—73-16722
Effect of thermal expansion mismatch between the intergranular glass and crystal phases on the fracture toughness of alumina ceramics.—73-09582
High-temperature mechanical properties and chemical stability of $Ba_{1+x}Zr_xP_{6-2x}Si_{2-x}O_{24}$ low-thermal-expansion ceramics.—73-13546
High-thermal-expansion $NaAlSiO_4$ ceramics.—73-05578
Microstructural mechanics model of anisotropic-thermal-expansion-induced microcracking.—73-09480
Single-crystal EPR and thermal expansion studies of the high-$T_c$ superconductor $Bi_2Sr_2CaCu_2O_{8+\delta}$.—73-01658
Thermal expansion and vitrification of borate melts.—73-00557
Thermal expansion anomalies of $YCo_4B$ compounds.—73-05656
Thermal expansion behavior of fiber-reinforced DURAN glass.—73-07087
Thermal expansion discontinuities of mullite.—73-02709
Thermal expansion of ceramic for building materials.—73-04050
Thermal expansion of ceramic for building materials.—73-14670
Thermal expansion of $K_{1-x}Nb_xZr_{2-x}(PO_4)_3$.—73-08986
Thermal expansion of metallic and cermet coatings.—73-08987
Thermal expansion of potassium borosilicate glasses.—73-00559
Thermal expansion of potassium borosilicate glasses.—73-00560
Thermal expansion of sodium borosilicate glasses.—73-00561
Thermal expansion of sodium borosilicate glasses.—73-00562
Thermal expansivity of periclase at high temperature and high pressure.—73-05657

**thermal insulation,**
Amendment to the thermal insulation order.—73-06555
Application of thermal insulation core plate of expanded perlite to energy-saving buildings.—73-09820
Heat-insulating properties of enclosing structures based on foam glass granulate.—73-00098
Tests of thermal insulation plates of the unpreheated lining of continuous casting machine tundishes.—73-00877
Thermal insulation by layered, fibrous, two-material laminated mats.—73-00880

**thermal properties,**
Correcting for nonlinearity in thermal aspects of electrical glass melting.—73-00604
Effect of thermal cycling on the strength of dinas used in coke oven.—73-00809
Flash method for thermal characterization of glass.—73-15799
Generation and propagation behavior of laser-induced thermal cracks.—73-05571
Improving thermal stability of porcelain.—73-07261
Method for the determination of the thermal transport properties of submicron-thick dielectric films with the use of an analytical expression.—73-10972
Methods for reliable measurements of thermal transport properties of ceramic matrix composites.—73-08413
Phonon scattering and thermal conduction mechanisms of sintered aluminum nitride ceramics.—73-08949
Thermal behavior of alumina from aluminum alkoxide reacted with complexing agent.—73-12888
Thermal behavior of octacalcium phosphate intercalated with B-dihydromuconate.—73-05653
Thermal failure of superconductivity of $YBa_2Cu_3O_{7-x}$ thin films under various conditions of heat removal.—73-15652
Thermal properties of AlN sintered at lower temperature with additives.—73-02710
Thermal properties of concrete from transient conduction of a thin slab.—73-06726
Thermal properties of thin films.—73-05661
Thermal transport in the charged Bose gas and in high-$T_c$ oxides.—73-15653

**thermal shock resistance,**
Ceramic fiber insulation boards with improved thermal shock resistance.—73-00783
Contact damage submitted to thermal shock: a method to evaluate and simulate thermal shock resistance of brittle materials.—73-08829
Design of the interface phase for obtaining thermal shock resistance in silicon nitride.—73-05263
Effect of andalusite, sillimanite, and kyanite on phase composition and thermal shock resistance of refractories.—73-03999
Effect of microstructural scale on thermal shock resistance of aluminum-reinforced alumina.—73-03578
Evaluations of the thermal shock resistances and fracture toughnesses of graphite and C-C composites by arc discharge heating.—73-05562
Factors influencing the thermal shock behavior of ceramics.—73-05565
Improving the thermal shock resistance of siliceous refractories.—73-00827
Improving thermal shock fracture resistance of the mullite tube closing one end.—73-14596
Potential of $Si_3N_4$ for thermal shock applications.—73-05271
Statistical study of the effect of subcritical crack growth on thermal shock resistance.—73-05643
Thermal shock by water quench: numerical simulation.—73-05668
Thermal shock resistance and fracture of ceramic materials.—73-05671
Thermal shock resistance of fiber-dispersed $ZrO_2$ ceramics—influence of $Y_2O_3$ content of matrix.—73-16632
Thermal shock resistance of high thermal conductive SiC ceramics.—73-02712
Thermal shock resistance of high-alumina ceramics.—73-08991

**thermal shock,**
Analysis for strength degradation of indented specimens due to thermal shock.—73-05528
Ceramic composites survive severe thermal shocks.—73-15961
Change of fracture toughness and strength caused by thermal shock for $Si_3N_4$ with microcrack.—73-06339
Cyclic thermal shock in SiC whisker-reinforced alumina and in other ceramic systems.—73-05539
Development of a thermal shock evaluation device for functionally gradient materials for aerospace applications.—73-05037
Effect of temperature dependence of material properties on the critical quenching temperature difference under thermal shock test of ceramics.—73-16461
Evaluation and simulation of thermal shock behavior by liquid solder quenching.—73-05560
Fracture mechanics treatment of thermal shock and the effect of bridging stresses.—73-06435
Generation and propagation behavior of laser-induced thermal cracks.—73-16500
Hot-gas method and apparatus for thermal shock testing.—73-05053
Improving the thermal shock resistance of ceramics based on silicon nitride.—73-02082
Interrelation between flaw resistance, $K^R$-curve behavior, and thermal shock strength degradation in ceramics.—73-06465
Interrelation between flaw resistance, *R*-curve behavior, thermal shock strength degradation, and stress-strain behavior of ceramics.—73-06466
Laser and plasma-arc thermal shock/fatigue fracture evaluation procedure for functionally gradient materials.—73-05061
Monitoring thermal-shock damage development in refractories by stress-wave-factor technique.—73-12169
Multifunctional ceramics for thermal shock applications.—73-03626
Performance of ceramics and fiber composites under severe thermal shocks applied by energetic electron beams or accelerated plasmas.—73-05609
Significance of nonelastic deformation in the thermal shock fracture of heterogeneous ceramic materials [HCM's].—73-06518

Significance of nonlinear stress-strain and *R*-curve behavior of thermal shock of ceramics.—73-06519
Statistical aspects of the thermal shock damage and the quench strengthening of ceramics.—73-05642
Temperature dependence of so-called heat transfer coefficient under thermal shock test.—73-08976
Thermal fatigue of engineering ceramics.—73-05660
Thermal shock and cyclic loading of ceramic parts in stationary gas turbines.—73-05662
Thermal shock and fatigue of mullite and alumina: refined analyses.—73-05663
Thermal Shock and Thermal Fatigue Behavior of Advanced Ceramics (NATO Advanced Science Institutes Series E: Applied Sciences 241).—73-17540
Thermal shock behavior of ceramic materials—modeling and measurement.—73-05664
Thermal shock behavior of ceramics: probabilistic predictions of failure and damage.—73-05665
Thermal shock behavior of continuous fiber ceramic composites (CFCC's).—73-16631
Thermal shock behavior of silicon nitride flexure beam specimens with indentation cracks.—73-05666
Thermal shock of cracked composite materials with temperature-dependent properties.—73-05670
Thermal shock of quartz lascas.—73-12894
Thermal shock testing and the problem of standardization.—73-05672

**thermal spraying,**
Abrasion, erosion, and scuffing resistance of carbide and oxide ceramic thermal-sprayed coatings for different applications.—73-06734
Application of self-propagating high-temperature synthesis in thermal spraying technology.—73-08318
Beneficial effects of mixtures of hydrocarbons and carbon dioxide in thermal plasma spraying.—73-08321
Control modeling and regulation of thermal spraying process.—73-09048
Controlled aspiration—a new thermal spray process.—73-08329
Engineering and user considerations for custom robotic thermal spray systems.—73-08334
Evaluation methods for thermal spray coatings.—73-08399
Evolution of thermal spray automation.—73-08335
Gas dynamics of HVOF [high-velocity oxy-fuel] thermal sprays.—73-09146
Microhardness variations in thermally sprayed coatings.—73-09647
Microstructural index for pores in thermal spray coatings.—73-08418
Particulate collection for thermal spray processes.—73-08355
Progress report—Hobart/Tafa's Model 9000 arc spray system.—73-08359
Quo vadis, thermal spray technology.—73-01825
Residual stress in thermally sprayed coatings.—73-09664
Wear characterization and practical applications of thermal spray coatings in drilling applications.—73-06876

**thermistors,**
Aging study of nickel-copper-manganite negative temperature coefficient thermistors by thermopower measurements.—73-11062
Method of forming electronic devices utilizing diamond.—73-04522

**thermocouples,**
How to avoid thermocouple hazards.—73-12146
Long-lasting thermocouple for high-temperature measurements of liquid metals, mattes, and slags.—73-00285
Measuring inhomogeneities in thermocouple wires.—73-12163

**thermodynamics,**
Critical fluctuations in the thermodynamics of quasi-2-D type II superconductors.—73-08012
Excess thermodynamic properties of nanophase titanium dioxide prepared by chemical and physical methods.—73-05398
Thermodynamic and kinetic approach to the alkali-silica reaction: II, Experiment.—73-08777
Thermodynamic properties of melts of sodium metasilicate according to data from the method of molecular dynamics.—73-00565
Thermodynamics database MALT2.—73-09751
Thermodynamics of zirconia system with a possibility of intelligent characters.—73-05518

**thermoelectric materials,**
Measurements of the thermopower coefficient above the superconducting transition in polycrystalline $YBa_2Cu_3O_{7-\delta}$: absence of appreciable fluctuation effects.—73-01598
Thermopiezoelectricity in noncentrosymmetric crystals.—73-15295
Thermopower of $YBa_2Cu_3O_{7-\delta}$ single crystals.—73-01692

**thermoelectric properties,**
Thermoelectric power and percolation in BSCCO system.—73-08994
Thermoelectric power of high-$T_c$ superconductors: superconducting fluctuations and the marginal Fermi-liquid hypothesis.—73-15655
Thermoelectric properties of CVD boron carbide.—73-16637
Thermoelectric properties of porous ß-SiC fabricated from rice hull ash.—73-16638

**thermogravimetry,**
Modified STA-409/3/6 thermobalance for digital processing of T, DTA, and TG curves.—73-01917
Thermogravimetric determination of carbon, nitrogen, and oxygen in aluminum nitride.—73-15855

**thermoluminescence,**
Dose dependence of the thermoluminescence (TL) peak at 200 K in Al-Na-containing quartz crystals.—73-05541
Effect of heat exposure on the thermoluminescence [TL] of concrete.—73-13709
Pressure effects on the thermoluminescence of quartz.—73-05620

**thermomechanical properties,**
Effect of the thermomechanical properties of the grain-boundary phase on the fracture toughness of laser-derived silicon nitride.—73-17294
Thermal shock fracture mechanism of metal/ceramic functionally gradient materials.—73-03654
Thermomechanical behavior of slide gate refractories.—73-14631
Thermomechanical response of a crossply titanium matrix composite subjected to a generic hypersonic flight profile.—73-03656

**thermometers,**
Development of thermometer production in a precision glass process at about the turn of the century.—73-01893
How noncontact thermometers measure glass temperature.—73-12145
Measurement and control of gob temperatures.—73-14423
Portable microprocessor infrared noncontact thermometer for glass.—73-14462
Sensitive bolometers using high-$T_c$ superconducting thermometers for wavelengths 20–300 µm.—73-08196

**thermophysical properties,**
Experimental study of the thermophysical properties of solids.—73-08869
Thermophysical and operational properties of cellular concrete.—73-13789

**thickness,**
Angle-resolved X-ray photoelectron spectroscopy method for the thickness measurement of metal oxide/metal ultrathin films.—73-08374
Calibration of an off-axis quartz crystal thickness monitor for a pulsed laser deposition system using a high-resolution scanning electron microscope.—73-12114
Development of a new glass thickness selection procedure.—73-13614
Development of an ultrasonic method to determine the residual thickness of refractory blocks.—73-08392
Distribution laws of inclusions across the thickness of plate glass.—73-07119
Effect of interlayer thickness on mechanical properties of Nicalon-fiber-reinforced SiC composites.—73-13510
Float glass ribbon thickness measurement.—73-14380
In situ spectral ellipsometry for real-time thickness measurement: etching multilayer stacks.—73-07583
Optical determination of the film thicknesses in multilayer thin-film structures.—73-15827
Predicting intrawafer film thickness uniformity in an ultralow pressure chemical vapor deposition reactor.—73-16903
Real-time monitoring of cake thickness during slip casting.—73-15749
Thickness dependence of charge-trapping properties in ultrathin thermal oxides prepared by rapid thermal annealing.—73-07366
Thickness determination of SiC-on-Si thin films by anisotropic reactive ion etching and preferential wet etching.—73-04179
Thickness of parison layer formed in blow method.—73-00714
Wall thickness determination for glass hollowware in annealing calculations.—73-00720

**thin films,**
*a*-axis growth of $YBa_2Cu_3O_7$ thin films on $LaAlO_3$ induced by monolayer buffers of $PrO_2$.—73-11680
*ab*-oriented $YBa_2Cu_3O_7$ thin film grown on *c*-axis layer by radio-frequency sputtering.—73-11681
*K*-edge absorption analysis of hydrogenated diamondlike carbon films [a-C:H].—73-02310
Ac impedance investigation of $Ta_2O_5$ film for use as a storage capacitor dielectric.—73-10916
Ac impedance spectroscopy of $Nb_2O_5$ thin films: evidence for a distributed resistance network.—73-03706
Advances in processing and properties of perovskite thin films for FRAM's, DRAM's, and decoupling capacitors.—73-11553
Aggregation at early stage of growth in thin films.—73-09011
AlN thin films prepared by plasma-enhanced chemical vapor deposition.—73-12911
Alterations in optical properties of materials covered with oxide films during laser heating in gases.—73-16407
Alumina material useful with thin-film heads.—73-05188
Aluminum nitride thin-film sensor for force, acceleration, and acoustic emission sensing.—73-14769
Amorphous sol-gel insulating films.—73-04057
Analytical electron microscopy and Raman spectroscopy studies of carbon nitride thin films.—73-06186
Analytical electron microscopy of thin films and interfaces.—73-13373
Angle-resolved X-ray photoelectron spectroscopy method for the thickness measurement of metal oxide/metal ultrathin films.—73-08374
Angle-resolved X-ray photoelectron spectroscopy method for the thickness measurement of metal oxide/metal ultrathin films[—eratum].—73-15775
Angular dependence of magnetoresistance and critical current density in $YBa_2Cu_3O_{7-\delta}$ thin films.—73-04669
Anisotropic thermoelectric effect in Y-Ba-Cu-O thin films during time-varying laser heating.—73-04671
Annealing of silicon nitride thin films prepared by plasma-enhanced chemical vapor deposition with helium dilution.—73-12919
Annealing-related electrical and piezoresistive properties of B- and As-implanted LPCVD silicon films.—73-05531
Atmospheric pressure chemical vapor deposition of gallium-doped zinc oxide thin films from diethyl zinc, water, and triethyl gallium.—73-12923
Atomic force microscopy study of titanium dioxide thin films grown by atomic layer epitaxy [ALE].—73-06188
Atomic layer growth of oxide thin films with perovskite-type structure by reactive evaporation.—73-12924
Atomic-scale simulation of interface defect formation in the initial stages of thin-film growth.—73-06139
Attempt to grow diamond phase carbon films from an organic solution.—73-09021
Auger electron spectroscopy, low-energy electron diffraction, and electron energy loss spectroscopy studies of Se overlayers grown on Cu(111) surfaces.—73-05362
Band gap and band levels of Cu-In-Se-Te thin-film compounds.—73-04252
Basic elements for photodeposited high-$T_c$ thin-film devices.—73-11692
Boron nitride thin films by microwave ECR plasma chemical vapor deposition.—73-12927
Boron nitride thin-film deposition using electron cyclotron resonance microwave plasmas.—73-09024
Brownian motion of vortex-antivortex excitations in very thin films of $Bi_2Sr_2CaCu_2O_8$.—73-07994
Calibration of an off-axis quartz crystal thickness monitor for a pulsed laser deposition system using a high-resolution scanning electron microscope.—73-12114
Capacitive transverse rf discharges in oxygen at elevated pressures for producing thin films of complex oxides.—73-04678
Carbon growth by thermal laser-assisted chemical vapor deposition.—73-12931
$CeO_2$ films deposited by dc reactive magnetron sputtering.—73-02736
Ceramic thin film memory device.—73-11007
Ceramic Transactions, Volume 43: Ferroic Materials: Design, Preparation, and Characteristics.—73-17523
Changes in the crystal structure of rf magnetron-sputtered $BaTiO_3$ thin films.—73-02158
Changes in the crystal structure of rf magnetron-sputtered $BaTiO_3$ thin films.—73-12546
Characteristics of PZT thin film deposited on new buffer layer by sputtering.—73-09036
Characteristics of thin nitrided oxides prepared by an in situ process.—73-16667
Characterization and crystallite growth of semiconducting high-temperature-stable $Ga_2O_3$ thin films.—73-04265
Characterization and optimization of cerium dioxide films deposited by rf magnetron sputtering.—73-12938
Characterization of a radio-frequency plasma source for molecular beam epitaxial growth of high-$T_c$ superconductor films.—73-07997
Characterization of boron carbide thin films fabricated by plasma-enhanced chemical vapor deposition from boranes.—73-12751
Characterization of epitaxial thin films by X-ray diffraction.—73-01889
Characterization of magnetron-sputtered diamondlike thin films for optical coatings in ir.—73-13375
Characterization of oxides and thin films.—73-05024
Characterization of silicon dioxide films deposited at low pressure and temperature in a helicon diffusion reactor.—73-16669
Characterization of silicon oxide films grown at room temperature by point-to-plane corona discharge.—73-10922
Characterization of $SnO_2$ films deposited by dc gas discharge activating reaction evaporation onto amorphous and crystalline substrates.—73-06198
Characterization of the growth of sol-gel-derived Ba-Ti-O thin films by laser Raman spectroscopy.—73-13379
Chemical and mechanical properties of sputtered silicon nitride films.—73-13496
Chemical sensor for carbon monoxide detection.—73-04511
Chemical vapor deposition of SiC thin films for X-ray mask applications.—73-16673
Close-spaced vapor transport combined with free evaporation for doping of semiconductor thin films.—73-07414
Compaction of tungsten oxide films by ion-beam irradiation.—73-13383
Comparative scanning probe microscopy study of the surface morphology of Au films grown from the vapor onto glass, fused silica, and muscovite mica.—73-06201
Comparison of the surface morphology and microstructure of in situ and ex situ derived $YBa_2Cu_3O_{7-x}$ thin films.—73-11704
Composition analysis of rf plasma-deposited amorphous silicon oxynitride thin films by spectroscopic phase-modulated ellipsometry.—73-05374
Computer simulation of growth of thin films fabricated by the sputtering method: comparison with experiment.—73-05718
Computer simulation of thin-film heteroepitaxial ceramic interfaces using a near-coincidence-site lattice theory.—73-08580
Computer simulation study of thin-film formation process.—73-05719
Conductive ZnS:Zn thin films grown by molecular beam deposition.—73-10927
Continuous wave Nd:YAG laser deposition of CdS thin films.—73-11119
Copper oxide thin films grown by plasma evaporation method.—73-09050
Correlation between gas sensing properties and preferential orientations of sputtered tin oxide films.—73-12760
Correlations of plasma properties and magnetic field characteristics to TiN film properties formed using a dual unbalanced magnetron system.—73-02755
Corrosion behavior of various TiN thin films produced by ion mixing and PVD methods.—73-17218
Creation of high-functional magnetic thin films by electrochemical method.—73-15310
Critical current density in high fields in epitaxial thin films of $Y_1Ba_2Cu_3O_{7-\delta}$: flux pinning and pair breaking.—73-11710

Critical current density of high-quality $Bi_2Sr_2Ca_2Cu_3O_x$ thin films prepared by metallorganic chemical vapor deposition.—73-11711
Crystalline characterization by Rutherford backscattering spectrometry and electron channeling of in situ grown $YBa_2Cu_3O_7$ thin films deposited on (100)MgO by dc sputtering or laser ablation.—73-11717
Crystallization and crack formation in sol-gel PLZT thin films.—73-04542
Crystallization of amorphous $PbTiO_3$ thin film.—73-12964
Decomposition of crystalline binary nitride films of tin, copper, and nickel by reactive sputtering.—73-05728
Degradation of CrSi(W)-O resistive films.—73-07293
Densification of $Ta_2O_5$ film prepared by KrF excimer laser CVD.—73-16696
Density of as-deposited and annealed thin silicon nitride films.—73-02566
Dependences of titanium silicide properties on the ratio of silicon to titanium used for electron-beam coevaporation onto heated substrates.—73-05736
Deposition and characterization of $PbTiO_3$ thin films on silicon wafers using metallorganic sources.—73-07878
Deposition and characterization of polysilicon films deposited by rapid thermal processing.—73-09062
Deposition of copper oxide thin films on different substrates by pulsed excimer laser ablation.—73-12975
Deposition of Zr-C thin films and plasma-polymerized hydrocarbon films in the reactive magnetron sputtering process.—73-12978
Detection of residual photoresist with the atomic force microscope.—73-08388
Determination of boron and phosphorus in boron phosphosilicate thin films on silicon substrates by capillary electrophoresis.—73-12127
Determination of stoichiometry of $SiO_x$ thin films using an Auger parameter.—73-08597
Diamond and diamondlike films.—73-12423
Diamond thin films synthesized by a multinozzle oxyacetylene chemical vapor deposition method.—73-16710
Difficulties in estimating the rheological properties of diamondlike films by means of nanoindentation tests.—73-08395
Direct deposition of highly coercive gamma iron oxide thin films for magnetic recording.—73-12991
Direct observation of atomic images of ultrathin diamond and diamondlike films.—73-03130
Direct observation of intrinsic pinning in YBCO thin films.—73-11726
E-beam deposition of $In_2O_3$-stabilized $ZrO_2$ films.—73-02777
Effect of *d*-elements on the spectral characteristics of thin films.—73-00450
Effect of *d*-elements on the spectroscopic characteristics of thin films.—73-02574
Effect of a titanium underlayer on the corrosion behavior of physically vapor deposited titanium nitride films.—73-13822
Effect of deposition parameters on the optical properties and microstructure of radio frequency magnetron sputtered ZnSe films.—73-02782
Effect of deposition pressure on the microstructure and electrochromic properties of electron-beam-evaporated nickel oxide film.—73-13003
Effect of heat treatment on the $SrTiO_3$ thin films prepared by radio-frequency magnetron sputtering.—73-13006
Effect of heating rate on the crystallization behavior of amorphous PZT thin films.—73-02785
Effect of ion energy flux on the properties of hydrogenated amorphous carbon films.—73-02788
Effect of microwave power and reactive gas ratio on the properties of silicon nitride thin films deposited by ECR PECVD.—73-13009
Effect of oxygen on hydrogenated amorphous carbon films.—73-13011
Effect of Pb content on the phase transformation of sputter-deposited PZT thin film during RTA.—73-16121
Effect of postdeposition heat treatment on physical properties of tin oxide thin films prepared by an electron-beam evaporation technique.—73-09085
Effect of postdeposition treatments on morphology, structure, and optoelectronic properties of chemically deposited CdS thin films.—73-05765
Effect of preparation conditions on the morphology and electrochromic properties of amorphous tungsten oxide films.—73-09087
Effect of processing conditions on superconductive properties of laser-deposited YBCO thin films.—73-08036
Effect of radio frequency substrate biasing in the deposition of diamondlike carbon films in an electron cyclotron resonance discharge.—73-02794
Effect of reactive gas mass flow on the composition and structure of AlN films deposited by reactive sputtering.—73-09093
Effect of substrate bias on properties of silicon nitride films prepared by activated reactive evaporation.—73-13020
Effect of substrate temperature and bias on the stress, chemical etch rate, and microstructure of high deposition rate sputtered $SiO_2$ films.—73-02797
Effect of surface reemission on the surface roughness of film growth in low-pressure chemical vapor deposition.—73-05773
Effect of surface roughness on thin-film optical properties.—73-02589
Effect of technological parameters on thin-film reflection.—73-00464
Effects of deposition parameters on sputter deposition of lead titanate thin films.—73-13030
Effects of deposition temperature and annealing process on the superconducting properties of $YBa_2Cu_3O_{7-x}$ thin films prepared by metallorganic chemical vapor deposition.—73-15442
Effects of solvent on properties of sol-gel-derived $TiO_2$ coating films.—73-13034
Effects of strain energy on the preferred orientation of TiN thin films.—73-09109
Effects of substrate orientation and cooling rate on microstructure of $PbTiO_3$ thin films grown by metallorganic chemical vapor deposition.—73-13391
Effects of substrate temperature, deposition pressure, and thickness on the morphology of ultrathin platinum film on $SiO_2$/Si substrate.—73-13035
Effects of thin-film deposition rates and process-induced interfacial layers on the optical properties of plasma-deposited $SiO_2/Si_3N_4$ Bragg reflectors.—73-05783
Einstein relation in ultrathin films of nonparabolic semiconductors under magnetic quantization.—73-04299
Elastic behavior of TiN thin films.—73-12781
Elastic constants and thermal expansion coefficient of metastable C49 $TiSi_2$.—73-02593
Elastic-plastic characterization of thin films with spherical indentation.—73-13522
Electrical and microstructural properties of $BaTiO_3$ thin films on *p*-Si substrates grown by MOCVD.—73-08847
Electrical and optical properties of indium tin oxide thin films deposited on unheated substrates by dc reactive sputtering.—73-02594
Electrical and optical properties of $LiNbO_3$.—73-15259
Electrical and optical properties of undoped and indium-doped ZnO thin films, prepared by the pyrosol process.—73-08850
Electrical characterization of semiconducting diamond thin films and single crystals.—73-04303
Electrical conductivity of vacuum-deposited vanadium pentoxide thin films.—73-10943
Electrical properties and film structures of $(Ba_xSr_{1-x})TiO_3$ [BST] thin films by rf sputtering.—73-04085
Electrical properties of boron-doped polycrystalline diamond films.—73-12789
Electrical properties of vacuum-evaporated stoichiometric and nonstoichiometric CdTe thin films for optoelectronic applications.—73-11182
Electrical, optical, and chemical properties of indium-tin oxidized films grown by sequential electron beam deposition of indium and tin.—73-12792
Electrodeposited GaAs films.—73-14876
Electrodeposited tungsten trioxide thin films.—73-13042
Electroluminescence in $ZnS_{1-x}Te_x$:$CeF_3$ thin-film devices.—73-02605
Electron cyclotron resonance plasma chemical vapor deposition of large-area uniform silicon nitride films.—73-01154
Electron cyclotron resonance plasma-assisted radio-frequency-sputtered strontium titanate thin films.—73-13043
Electron diffraction and electron microscopy studies of phase transitions in thin $Ag_2CdI_4$ films.—73-16129
Electron holographic characterization of ferroelectric thin films.—73-04550
Electron paramagnetic resonance investigation of charge trapping centers in amorphous silicon nitride films.—73-07319
Electron spectroscopic analysis of multicomponent thin films with particular emphasis on oxides.—73-06215
Electronic and optical properties of room-temperature sputter-deposited indium tin oxide.—73-16487
Elimination of planar faults in lattice-matched heteroepitaxial films using ion-assisted [IA] molecular beam epitaxy.—73-11191
Ellipsometric studies on the oxidation of thin copper films.—73-16491
Ellipsometry investigation of nucleation and growth of electron cyclotron resonance [ECR] plasma deposited silicon films.—73-07502
Enhanced electrical properties of ferroelectric $Pb(Zr_{0.5}Ti_{0.5})O_3$ thin films grown with low-energy oxygen ion assistance.—73-07887
Enhancement of photosensitivity in chemically deposited CdSe thin films by air annealing.—73-07504
Epitaxial compositions.—73-04513
Epitaxial growth of YBCO superconducting thin films by dc magnetron sputtering using a partially melted sintered target.—73-11748
Epitaxial metal oxide films, a leading candidate for 21st century thin-film technology.—73-11749
Epitaxial ZnS films grown on GaAs(001) and (111) by pulsed laser ablation.—73-07509
Etching effect of substrate on crystallinity of oriented platinum thin film.—73-00230
Etching effect of substrate on crystallinity of oriented platinum thin film.—73-10226
Excess conductivity and thermally activated dissipation studies under strong electrostatic field in $YBa_2Cu_3O_{7-\delta}$ thin films.—73-04718
Excimer laser processing for surface improvement of tin oxide thin films.—73-09122
Excimer laser reactive ablation: an efficient approach for the deposition of high-quality TiN films.—73-16767
Experimental study of the parameters that determine take-off velocity and CSS performance of thin film disks.—73-08868
Fabrication method of superconductive thin film transistor.—73-15676
Fabrication of amorphous diamond films.—73-13054
Fabrication of Bi(Pb)-Sr-Ca-Cu-O superconducting thin films by rapid thermal annealing.—73-11759
Fabrication of extremely thin [<1000 Å] silicon-on-insulator [SOI] for fully depleted CMOS applications.—73-14908
Feasibility of a high-temperature bolometer based on $Bi_2Sr_2CaCu_2O_{8+x}$ superconducting films.—73-08078
Ferroelectric bismuth titanate films by hot wall metallorganic chemical vapor deposition.—73-04552
Ferroelectric optical image comparator.—73-04578
Ferroelectric thin films and device applications.—73-04553
Ferroelectric thin films for electronic applications.—73-01414
Ferroelectric thin-film research in France.—73-11578
Films of molybdenum trioxide obtained from $MoTe_2$-oriented films.—73-13061
Fingers of auto-oscillation in a circular YIG film with pinned surface spins.—73-04613
Floating temperature deposition of device-quality $SiO_2$ thin films by DECR [distributed electron cyclotron resonance] plasma.—73-03843
Fluorinated gate oxide films utilized in polysilicon thin-film transistors.—73-04103
Fluorohydrogenated amorphous carbon (a-C:H, F) films prepared by the rf plasma decomposition of 1,3-butadiene and carbon tetrafluoride.—73-09134
Flux trapping in superconducting thin films in weak magnetic fields.—73-11766
Formation of ceramic thin film on ceramic body.—73-12078
Formation of highly uniform and dense diamond microcrystal thin films using a combustion flame surrounded by an inert gas flow.—73-09139
Formation of iron oxide films from stabilized magnetite sols—magnetic liquids.—73-04614
Formation of $PbTiO_3$ thin films by thermal diffusion from multilayers.—73-10950
Formation of $RuO_2$-$TiO_2$ thin films by thermal decomposition technique.—73-00972
Fracture origins and evaluation of fracture strength of aluminum oxide ceramic thin coating films.—73-17330
FTIR, SIMS, and electrical characterization of $Si_3N_4$ thin films obtained from CVD assisted by in situ electrical discharge.—73-04107
Functional materials prepared by electron shower method.—73-16800
Grain-oriented ferroelectric PZT thin films on lattice-matched substrates.—73-07892
Growth and characterization of ferroelectric thin films by the photo-CVD process.—73-15267
Growth and characterization of laser-deposited superconducting Bi-Sr-Ca-Cu-O thin films.—73-08090
Growth and characterization of thin films of $Y_2O_3$, $La_2O_3$, and $La_2CuO_4$.—73-02279
Growth and characterization of thin SiN films grown on Si by electron cyclotron resonance nitrogen plasma treatment.—73-09153
Growth and dielectric characterization of yttrium oxide thin films deposited on Si by rf magnetron sputtering.—73-05573
Growth and microstructural study of radio frequency magnetron sputtered MgO films on silicon.—73-03150
Growth and properties of thin $Al_2O_3$ films.—73-05829
Growth and structure of $YBa_2Cu_3O_{7-\delta}$ thin films studied by scanning tunneling microscopy and electron microscopy.—73-06223
Growth mechanism of gold films on alumina.—73-00236
Growth of *a,b*-axis oriented perovskite thin films over a buffer/template layer.—73-15678
Growth of BN by hot-filament-assisted electron beam deposition.—73-16808
Growth of Er-doped Si films by electron cyclotron resonance [ECR] plasma-enhanced chemical vapor deposition.—73-04351
Growth of gamma-$Al_2O_3$ thin films on silicon by low-pressure metallorganic chemical vapor deposition.—73-09155
Growth of strontium titanate thin films of controlled thickness by the hydrothermal-electrochemical method.—73-16810
Growth of thin-film silicon on glass substrates from Zn-based solutions.—73-05835
Growth of titanium dioxide thin films by atomic layer epitaxy.—73-05836
Growth of ZnO films by low-pressure organometallic chemical vapor deposition.—73-10444
Heat diffusion through a glass substrate coated by a thin $^4He$ film.—73-00497
Hexagonal boron nitride synthesis by nitrogen ion implantation of boron films.—73-16814
High-quality, high-deposition-rate $SiO_2$ films at low temperatures using silicon fluorides and plasma-assisted deposition techniques.—73-16818
High-rate sputtering of metals and metal oxides with a moving plasma zone.—73-05842
High-temperature Hall measurements on cerium dioxide thin films.—73-11249
High-temperature superconducting thin-film-based devices.—73-04735
Highly transparent and conductive group IV impurity-doped ZnO thin films prepared by radio frequency magnetron sputtering.—73-14965
Hydrogen diffusion and reaction processes in thin films investigated by real-time spectroscopic ellipsometry [SE].—73-17145
Improved electrical properties of silicon dioxide films for MOS gate dielectrics grown in an inductively coupled rf plasma.—73-10960
Improvement of the crystalline quality of a yttria-stabilized zirconia film on silicon by a new deposition process in reactive sputtering.—73-09168
In and ex situ diagnostics of the growth of alpha-Ti thin films deposited by plasma-enhanced physical vapor deposition.—73-05854
In situ compositional analysis of multielement thin films.—73-05055
In situ fabrication of high-$T_c$ Y-Ba-Cu-O thin film by resistive evaporation.—73-11797
In situ growth of superconducting Bi-Sr-Ca-Cu-O thin films by a high-pressure sputtering process.—73-01573

In situ growth of superconducting Y-Ba-Cu-O thin films by ion-beam sputtering method.—73-11798
Indium tin oxide films radio frequency sputtered from specially formulated high-density indium tin oxide targets.—73-02863
Influence of a hydride preflow on the crystalline quality of InP grown on exactly oriented (100)Si.—73-11268
Influence of bath composition on the photocurrent response and morphology of chemically deposited CdS thin films.—73-07591
Influence of energy reflected from the target on thin-film characteristics.—73-05866
Influence of precursors on the preparation of thin pyrite films by metallorganic chemical vapor deposition.—73-05872
Influence of preparation conditions on the surface roughness of SiC thin films coated on 304 stainless steel.—73-13848
Influence of sputtering parameters on the composition and crystallinity of tin oxide.—73-09178
Influence of substrate temperature on the properties of argon-ion-assisted deposited $CeO_2$ films.—73-12816
Influence of the deposition parameters on the composition, structure, and X-ray photoelectron spectroscopy spectra of Ti-N films.—73-13103
Influence of thickness and index inhomogeneities on the transmission of semiconductor thin films.—73-07942
Influence on the chemical durability of $B_2O_3$-$SiO_2$ and $Al_2O_3$-$SiO_2$ thin films at the addition of $P_2O_5$.—73-12818
Information about the microcrystalline structure from the ir reflection spectra of thin uv optical films: $NdF_3$ and $MgF_2$.—73-08641
Infrared and morphological studies of hydrogenated AlN thin films.—73-13403
Initial growth mechanism of Bi-Sr-Ca-Cu-O thin films on $SrTiO_3$(110) surfaces studied by in situ reflection high energy electron diffraction observation.—73-04746
Interdiffusion in Cu/reactive-ion-sputtered TiN, Cu/chemical-vapor-deposited TiN, Cu/TaN, and TaN/Cu/TaN thin-film structures: low-temperature diffusion analyses.—73-13356
Interface-controlled phase transformation and abnormal grain growth of alpha-$Al_2O_3$ in thin gamma-alumina films.—73-12610
Interfacial reactions in single-crystal TiN(100)/Al/polycrystalline TiN multilayer thin films.—73-10243
Internal stress analysis in diamond films formed by dc plasma chemical vapor deposition.—73-13409
International Conference on Metallurgical Coatings and Thin Films.—73-17490
Interrelationship between densification, crystallization, and chemical evolution in sol-gel titania thin films.—73-13338
Intrinsic stress in sputter-deposited thin films.—73-13105
Ion activation in the in situ low-temperature laser deposition of superconducting $YBa_2Cu_3O_{7-\delta}$ films.—73-08114
Ion beam sputtering of in situ superconducting $YBa_2Cu_3O_{7-\delta}$ films.—73-08115
Ion-beam-based characterization of multicomponent oxide thin films and thin-film-layered structures.—73-05882
Ir ellipsometry investigations of $N_2O$-nitrided silicon oxide thin films on silicon.—73-13411
Ir spectroscopic investigation of $SiO_2$ film structure.—73-08650
Irradiation effects of synchrotron radiation on silicon epitaxial growth using a disilane molecular beam epitaxy.—73-13107
*I-V* characteristics of thin-film $YBa_2Cu_3O_{7-\delta}$ and *K-T* transition.—73-11793
Kinetics of morphological change during annealing of amorphous yttria.—73-09189
Laminated plate theory for high-frequency, piezoelectric thin-film resonators.—73-07895
Langmuir probe diagnostics of a radio-frequency magnetron discharge for deposition of high-$T_c$ YBCO films.—73-15530
Large-scale and low-resistance ITO films formed at high deposition rates.—73-03854
Laser ablation method for forming oxide superconducting films.—73-11958
Laser ablation process for preparing oxide superconducting thin films.—73-15681
Laser chemical vapor deposition of fluorinated diamond thin films for solid lubrication.—73-08534
Laser deposition of epitaxial $YBa_2Cu_3O_7$ films with low droplet densities.—73-11815
Laser evaporation method for forming high-$T_c$ superconducting films.—73-04841
Laser evaporation method for preparing a superconducting oxide thin film.—73-04842
Laser irradiation of amorphous thin films.—73-13115
Lead zirconate titanate ferroelectric thin films by laser ablation deposition.—73-04558
Linear thermal expansion coefficient and biaxial elastic modulus of diamondlike carbon [DLC] films.—73-08900
Liquid-phase-deposited $SiO_2$ film with incorporated organic dye.—73-03855
Low-energy (~100 eV) ion irradiation during growth of TiN deposited by reactive magnetron sputtering: effects of ion flux on film microstructure.—73-03160
Low-temperature atmospheric pressure chemical vapor deposition of tungsten oxide thin films.—73-13119
Low-temperature preparation of $SrTiO_3$ thin films.—73-13122
Low-temperature preparation of $TiO_2$ thin films by plasma-enhanced chemical vapor deposition.—73-16853
Low-temperature solid-state reaction of in situ growth of $YBa_2Cu_3O_{7-\delta}$ thin films by resistive evaporation.—73-11818
Low-temperature tantalum pentoxide thin films.—73-04130
Magnetic flux relaxation in $YBa_2Cu_3O_{7-x}$ thin film: thermal or athermal.—73-15544
Magnetic thin films and nanostructures: anisotropy, microstructure, and their interrelationship.—73-06243
Material properties and tribological performance of hydrogenated sputter carbon overcoat on rigid disk.—73-17375
Material properties of a $ZrN_x$ film on silicon prepared by ion-assisted deposition method.—73-16535
Measurement of the elemental composition of a-SiC:H films by electron spectroscopy and high-energy ion scattering spectrometry.—73-12627
Mechanism of delamination of thin films under thermal and residual compressive stresses.—73-13569
Mechanisms of low-temperature epitaxial silicon growth using ArF excimer laser photochemical vapor deposition from disilane.—73-13132
Metallorganic chemical vapor deposition of ferroelectric Pb(Zr,Ti)$O_3$ thin films.—73-11589
Method and apparatus for producing diamond thin films.—73-05307
Method for making a semiconductor device having an anhydrous ferroelectric thin film.—73-04583
Method for manufacturing an oxide superconductor thin film.—73-11966
Method of growing thin film.—73-05317
Method of shaping superconducting oxide material.—73-04854
Method of synthesizing diamond.—73-05318
Microanalysis of $Ar^+$-bombarded zirconia–yttria films on silicon substrates.—73-12629
Microelectronic superconducting crossover and coil.—73-11980
Microelectronic superconducting device with multilayer contact.—73-04855
Microscopic theory of epitaxial film growth on vicinal surfaces.—73-05912
Microstructure and $NO_2$ sensing properties of $Fe_2O_3$ thin films.—73-17161
Microstructure and optical properties of CdSe-microcrystal-doped $SiO_2$ glass thin films prepared by rf sputtering.—73-03802
Microstructure of $KTa_xNb_{1-x}O_3$ thin films on MgO(100) single crystals.—73-17171
Microwave magnetic envelope dark solitons in YIG thin films.—73-15350
Modeling and computer simulation of ion-beam- and plasma-assisted film growth.—73-05929
Modeling of ellipsometric data of inhomogeneous $TiO_2$ films.—73-10458
Modification of the X-ray photoemission spectrum of in situ deposited thin films of $Y_1Ba_2Cu_3O_{7-y}$ for various oxygen treatments.—73-15559
Molecular dynamics modeling of microstructure and stresses in sputter-deposited thin films.—73-17175
Monitoring of photodeposited superconductive films.—73-11841
Monte Carlo simulation of electron transport in alternating-current thin-film electroluminescent devices.—73-03103
Morphology of TiN coating produced by laser ablation.—73-09492
Multilevel thin-film packaging technology at IBM.—73-04142
Nanocrystalline aluminum nitride: growth by sputter deposition, optical absorption, and corrosion protection behavior.—73-12436
Nanoindentation response of systems with thin hard carbon coatings.—73-12837
Nanoindentation studies of thin-film-coated systems.—73-12838
Nanoindentation studies of ultrahigh strength carbon nitride thin films.—73-08923
Narrow gap IV-VI thin films produced by quasi-continuous-wave $CO_2$-laser-induced evaporation.—73-13147
Near-room-temperature deposited indium tin oxide films as transparent conductors and counterelectrodes in electrochromic systems.—73-14720
Network structure of rf-sputtered amorphous $AlPO_4$-MgO and $AlPO_4$-CaO films.—73-05439
New apparatus for measuring the ultimate strain of thin films.—73-05071
New approach to low-temperature deposition of high-quality thin films by electron cyclotron resonance microwave plasmas.—73-09221
New materials for the photovoltaic conversion of solar energy.—73-07693
New precursor for growing nitride films.—73-13149
Nonlinear Fabry-Perot cavity with chalcogenide glass thin films.—73-07056
Novel deposition technique for switchable vanadium sesquioxide ($V_2O_3$) thin films.—73-02910
Novel palladium thin-film hydrogen detector.—73-13877
Numerical analysis of deposition rates of zirconium thin films by thermal chemical vapor deposition.—73-13155
Optical absorption and photoluminescence of unhydrogenated amorphous carbon films.—73-05600
Optical and compositional studies of SiN thin films with conventional and synchrotron radiation ellipsometry.—73-07348
Optical constants of vacuum-evaporated polycrystalline cadmium selenide thin films.—73-12847
Optical determination of the film thicknesses in multilayer thin-film structures.—73-15827
Optical properties and structure of thermally evaporated tin oxide films.—73-12848
Optical properties of amorphous carbon thin films prepared by plasma deposition in a graphite hollow cathode.—73-12849
Optical properties of ion-assisted deposited zirconia thin films.—73-11362
Optical properties of ion-assisted-deposited $CeO_2$ films.—73-02653
Optical properties of selective reflection $TiN_x$ films.—73-12851
Optical transmittance and reflectance on the $YBa_2Cu_3O_{7-x}$ ($x$=0, 1) thin films.—73-05607
Optical, structural, and crystalline properties of $GeSb_2Te_4$ thin films.—73-12644
Oxidation kinetics of thin copper films studied by ellipsometry.—73-03631
Oxygen detection in thin silicon dioxide layer by low-energy X-ray fluorescence spectrometry.—73-16242
Oxygen molecules stably caged in a uv-irradiated thin film from peroxo polytungstic acids.—73-05943
Particulates in laser-deposited copper oxide films.—73-13159
Phase formation of $BaTiO_3$ thin films by sputtering.—73-13161
Photoconductive $SnO_2$ thin films from thermal decomposition of chemically deposited SnS thin films.—73-07350
Photoelectric properties of $CuInSe_2$.—73-05613
Photoelectrochemical effects of $BaTiO_3$ thin-film electrodes prepared by the sol-gel method.—73-10981
Photoinduced chemical vapor deposition of silicon oxide thin films.—73-13164
Photoinduced phase inhibition during growth of boron nitride thin films.—73-05946
Photothermal characterization of optical thin films.—73-12175
Physical and electrical properties of tantalum oxide thin films deposited by low-pressure chemical vapor deposition.—73-04148
Physical vapor deposition of multicomponent oxide thin films: techniques, basic deposition processes, and film processing–microstructure–property relationships.—73-05947
Physics and diagnostics of laser ablation plume propagation for high-$T_c$ superconductor film growth.—73-11863
Plasma-deposited oxynitride films: structural and electrical characterization.—73-04149
Precision metrology for studying thin films and surfaces.—73-13440
Preferential axis control of $YBa_2Cu_3O_x$ thin films by quasi-lattice-match engineering.—73-08171
Preferred orientation of $SnO_2$ thin films grown from tri-*n*-butyltin acetate by spray pyrolysis technique.—73-16906
Preparation and characterization of iron(III) oxide films by a novel spray pyrolysis method.—73-02932
Preparation and characterization of rf-sputtered thin films of $Li_2O$-$P_2O_5$-$Nb_2O_5$ glasses.—73-01013
Preparation and characterization of $YBa_2Cu_3O_{7-x}$ high-$T_c$ superconducting thin films deposited by S-gun sputtering.—73-08173
Preparation and nanoscale characterization of highly stable $YBa_2Cu_3O_{7-\delta}$ thin films.—73-15586
Preparation and optical properties of gold-dispersed $BaTiO_3$ thin films.—73-16574
Preparation and properties of $Bi_4Ti_3O_{12}$ single-crystal thin films by atmospheric pressure metallorganic chemical vapor deposition.—73-04567
Preparation and study of $CuXY_2$ (X=Ga, In; Y=Se, Te) thin films for solar cell applications.—73-15112
Preparation of apatite thin films through rf sputtering from calcium phosphate [CP] glasses.—73-16916
Preparation of $Bi_4Ti_3O_{12}$ thin films with *c*-axis orientation by MOCVD using Bi(*o*-$C_7H_7)_3$ and Ti(*i*-$OC_3H_7)_2$(DPM)$_2$.—73-16918
Preparation of CdS semiconductor thin films by a solution growth technique.—73-11401
Preparation of diamond and diamondlike thin films.—73-05325
Preparation of epitaxial $Bi_4Ti_3O_{12}$ films on sapphire substrates by chemical vapor deposition.—73-09261
Preparation of indium tin oxide films at room temperature by pulsed laser deposition.—73-16923
Preparation of ITO thin films by sol-gel methods.—73-14257
Preparation of $PbTiO_3$ thin films by laser ablation.—73-11602
Preparation of Si thin films by spontaneous oxidation reaction of silane with fluorine.—73-15115
Preparation of vanadium oxide thin films by radio-frequency magnetron sputtering.—73-13211
Preparation of $YBa_2Cu_3O_{7-\delta}$ superconducting thin films over large-area substrates.—73-04791
Preparation of $ZrO_2$ thin films by CVD using $H_2$-$CO_2$ as oxidizer.—73-05986
Preparation of $ZrO_2$ thin films by CVD using $H_2$-$CO_2$ as oxidizer.—73-16945
Process for making oxide superconducting films by pulsed excimer laser ablation.—73-11640
Process for patterning layered thin films including a superconductor.—73-15692
Process for preparing *a*-axis-oriented superconducting oxide thin films.—73-01730
Process for preparing a superconducting thin film of compound oxide.—73-04867
Process for preparing a superconducting thin oxide film.—73-01731
Process for preparing a thin film of Bi-type oxide superconductor.—73-01732
Process for the selective deposition of thin diamond film by gas phase synthesis.—73-12511
Processing-texture relationships in dual-unbalanced magnetron deposition of TiN films.—73-16955
Production of barium titanate thin films.—73-15957
Production of oxide superconducting films by multilayer deposition.—73-04870
Properties of $BaPb_{1-x}Bi_xO_3$ as observed in single-crystal thin films.—73-16576

Properties of CdS films prepared by the chemical mist deposition process.—73-15123
Properties of $CeO_2$ and $CeO_{2-x}$ films: II. High-temperature properties.—73-12868
Properties of epitaxial $YBa_2Cu_3O_7$ thin films prepared by pulsed laser ablation.—73-11879
Properties of ferroelectric $PbTiO_3$ films grown in an ionized cluster beam system.—73-07912
Properties of mixed-phase BN films deposited by rf PECVD.—73-12870
Properties of polysilicon films annealed by a rapid thermal annealing process.—73-12871
Properties of silicon dioxide films deposited at low temperatures by microwave plasma-enhanced decomposition of tetraethylorthosilicate.—73-08960
Properties of transparent-conducting oxides deposited at room temperature.—73-12873
Properties of ultrathin amorphous silicon nitride films on III-V semiconductors.—73-04153
Properties of very low temperature plasma-deposited silicon nitride films.—73-09286
Property control for high-quality $Ba_{1-x}K_xBiO_3$ [BKBO] epitaxial thin films prepared by high-pressure reactive rf magnetron sputtering.—73-15604
Proximity effects of a thin film of unconventional superconductor in contact with a magnetic substrate.—73-11881
Pulsed laser deposition of oxide superconducting thin films.—73-11882
Pulsed laser deposition: a method for in situ deposition of crystalline hydroxyapatite thin-film coatings.—73-16962
Quantitative infrared analysis of the stretching peak of $SiO_2$ films deposited from tetraethoxysilane plasmas.—73-13223
Quasi-stoichiometric silicon nitride thin films deposited by remote plasma-enhanced chemical vapor deposition.—73-06004
Radiative substrate heating for high-$T_c$ superconducting thin-film deposition: film-growth-induced temperature variation.—73-11884
Radio frequency plasma jet applied to coating of internal walls of narrow tubes.—73-09289
Raman scattering in diamond film prepared by hot-filament chemical vapor deposition.—73-12668
Raman scattering study of lead zirconate titanate thin films prepared on silicon substrates by radio-frequency magnetron sputtering.—73-12669
Rapid synthesis of diamond film by dc plasma CVD.—73-06009
Reaction between AlN and metal thin films during high-temperature annealing.—73-13889
Reactive coevaporation system for in situ, epitaxial $YBa_2Cu_3O_{7-x}$ thin film deposition.—73-01646
Reactive deposition of $In_2O_3$ films on nucleated-crystallite substrates.—73-13233
Reactive sputtering of Ta under gradient oxygen pressure.—73-16970
Real-time spectroscopic ellipsometry for characterization of nucleation, growth, and optical functions of thin films.—73-15840
Real-time stress measurements and elastic constant of aluminum nitride thin films on Si(111).—73-08962
Reflection electron microscopy study of thin-film growth.—73-06276
Relation between optical property and crystallinity of ZnO thin films prepared by rf magnetron sputtering.—73-01302
Relationship between the composition and the reflection coefficient of thin films.—73-00542
Reoxidation of silicon substrates during the sputter deposition of oxide thin films.—73-06020
Reproducibility of the coloration processes in $TiO_2$ films.—73-09304
Residual stresses and fracture properties of magnetron-sputtered Ti films on Si microelectronics.—73-06512
Review of sol-gel thin-film formation.—73-13237
Rf plasma-assisted chemical vapor deposition of diamondlike carbon: physical and mechanical properties.—73-17422
Role of drying-control chemical additives on the preparation of sol-gel-derived PLZT thin films.—73-15286
Role of gas-phase reactions in boron nitride growth by chemical vapor deposition.—73-09308
Scaling of the current-voltage characteristics of epitaxial high-$T_c$ thin films.—73-08193
Scanning tunneling optical spectroscopy of semiconductor thin films and quantum wells.—73-07785
Selective area deposition of diamond on 4 in Si wafers.—73-13248
Selective formation of thin-film iron garnet by complexing agent-assisted sol-gel processing.—73-11671
Sensitive YBaCuO thin-film bolometer with ultrawide wavelength response.—73-11897
Silicon dioxide thin films prepared by photochemical vapor deposition from silicon tetraacetate.—73-16985
Silicon dioxide trench filling process in a radio-frequency hollow cathode reactor.—73-13254
Silicon nitride thin film production on Si(111).—73-03004
Silicon nitride thin films with improved properties.—73-12524
Simple method for optical parameter determination of inhomogeneous thin films.—73-15845
Simple model for the formation of compressive stress in thin films by ion bombardment.—73-06046
Single-electron charging effect in BiSrCaCuO granular thin films.—73-11898
$SnO_2$ transparent conductor films produced by filtered vacuum arc deposition.—73-13276
Sol-gel thin film formation.—73-03195
Solid-phase epitaxy of $Bi_2Sr_2CaCu_2O_x$ superconducting thin films.—73-01660
Solution growth technique for deposition of nickel oxide thin films.—73-13284
Spatial variation of the critical current density of the high-$T_c$ superconducting thin films.—73-11902
Spectroscopic characterization of thermally treated carbon-rich $Si_{1-x}C_x$ films.—73-02439
Spectroscopic ellipsometry [SE] characterization of the index profile in inhomogeneous thin films.—73-12196
Spectroscopic ellipsometry studies on ion beam sputter deposited Pb(Zr, Ti)$O_3$ films on sapphire and Pt-coated silicon substrates.—73-09508
Spiral mountains.—73-04807
Sputter-deposited silicon films.—73-15175
Sputtered $HfO_2$ thin films on silicon.—73-07357
Stability criteria for buckling of thin anodic films on aluminum.—73-03643
Stability of SiN thin films prepared by reactive sputtering.—73-05640
Stability of SiN thin films prepared by reactive sputtering.—73-13285
Stoichiometry effects in TiN diffusion barriers.—73-13286
Strength and toughness measurement of thin brittle coatings on substrates: I, Theory and measurement.—73-13592
Strength and toughness measurement of thin brittle coatings on substrates: II, Experimental determination.—73-13593
Structural and analytical characterization of an iridium oxide thin layer.—73-12693
Structural and dielectric properties of $PbTiO_3$ ferroelectric thin film prepared by sol-gel processing.—73-11620
Structural and electrical characteristics of $SrTiO_3$ thin films for dynamic random access memory applications.—73-07359
Structural and electrical properties of Ni films grown on Si(100) and $SiO_2$ by dc bias sputtering.—73-08970
Structural and electrical studies on rapid thermally processed ferroelectric $Bi_4Ti_3O_{12}$ thin films by metallorganic solution deposition.—73-11621
Structural and morphological analysis of reactively sputtered tellurium suboxide thin films.—73-03196
Structural and optical characterization of CuO particulate solid films and the corresponding gels and xerogels.—73-08746
Structural change of titanium-oxide-evaporated films during in situ heating in an electron microscope.—73-17199
Structural characterization of low-temperature epi-silicon grown on {100} and {111}Si substrates using ultrahigh resolution cross-sectional TEM.—73-06287
Structural characterization of preferentially oriented cubic BN films grown on Si(001) substrates.—73-06288
Structural transformation in thin films of the system As-Se investigated by the method of differential scanning calorimetry.—73-16327
Structural, optical, and dielectric properties of sol-gel-derived $SrTiO_3$ thin films.—73-08972
Structure and the piezoelectric properties of thin $Pb(Zr_{0.53}Ti_{0.45}W_{0.01}\text{-}Cd_{0.01})O_3$ films.—73-07921
Structure and tribology of hard carbon films synthesized by ion beam deposition.—73-17013
Structure development study of Pb(Zr,Ti)$O_3$ thin films by an optical method.—73-11623
Structure of organometallic chemical vapor deposited $BaTiO_3$ thin films on $LaAlO_3$.—73-06291
Structure of TiN films deposited on heated and negatively biased silicon substrates.—73-12705
Structure of $YBa_2Cu_3O_{7-\delta}$ epitaxial films.—73-01672
Structure, texture, and aging of thin $ZrO_2$ films.—73-02468
Subnanometer-equivalent PZT thin films fabricated by low-temperature MOCVD.—73-04573
Subsidiary absorption spin wave instability processes in yttrium iron garnet thin films, critical modes, and the "kink" effect.—73-07978
Superconducting characteristics of epitaxial growth analyses of $YBa_2Cu_3O_{7-y}$ thin films by direct current magnetron sputtering.—73-11914
Superconducting thin film and wire on a smooth substrate.—73-04879
Superconducting thin films with fullerenes and method of making.—73-15696
Surface dielectric response function of optical phonons in an ionic-crystal film.—73-07361
Synthesis and characterization of Ba ß-diketonate complexes for chemical vapor deposition of thin-film superconductors.—73-15644
Synthesis and characterization of $Bi_2Sr_2Ca_{n-1}Cu_nO_x$ ($n$=1–7) thin films grown by off-axis, three-target magnetron sputtering.—73-11923
Synthesis and characterization of Pb($Zr_xTi_{1-x}$)$O_3$ thin films produced by an automated laser ablation deposition technique.—73-03037
Synthesis and characterization of zinc sulfide thin films by pyrolysis and application to thin-film electroluminescence.—73-11472
Synthesis and properties of highly $c$-axis-oriented $PbTiO_3$ thin films prepared by an MOCVD method.—73-09350
Synthesis and properties of tantalum oxide films prepared by the sol-gel method using photoirradiation.—73-13299
Synthesis and structure of $R_2TiO_5$ [R=La–Lu, Y] thin films.—73-03039
Synthesis of optical thin films: fundamentals and applications.—73-06093
Synthesis of PLT/PLZT ferroelectric thin films by a sol-gel method.—73-15290
Synthesis of thin films of semiconductor and refractory metal nitrides by laser irradiation of solid samples in ambient gases.—73-13311
Techniques for ellipsometric measurement of the thickness and optical constants of thin absorbing films.—73-12202
TEM studies of oxide thin films in transverse section intended for device applications.—73-03206
Temperature-time texture transition of Pb($Zr_{1-x}Ti_x$)$O_3$ [PZT] thin films: II, Heat treatment and compositional effects.—73-17055
Temperature-time texture transition of Pb($Zr_{1-x}$33$Ti_x$)$O_3$ [PZT] thin films: I, Role of Pb-rich intermediate phases.—73-16362
Tensile properties of aluminum/alumina multilayered thin films.—73-03650
Texture transition in thin metal films vacuum condensed on glass: a general consideration.—73-03651
Thermal annealing of radiation-induced trapped charge in SIMOX and thermal oxide thin films.—73-04177
Thermal properties of thin films.—73-05661
Thermal stability of encapsulated tungsten/carbon multilayer thin films.—73-08992
Thermally activated coherent vortex motion in $YBa_2Cu_3O_{7-\delta}$ thin-film microbridges.—73-15654
Thermostability of diamondlike carbon [DLC] films.—73-08997
Thin AlN films for piezolayer-field effect transistor applications.—73-04574
Thin epitaxial films of wide gap II-VI compounds studied by spectroscopic ellipsometry.—73-15206
Thin ferroelectric films for thermal detector applications.—73-11626
Thin film pyroelectric imaging array.—73-11644
Thin films for magnetooptical [MO] applications.—73-01482
Thin films of high-resistivity zinc oxide produced by a modified CVD method.—73-07367
Thin films of transparent electronic materials [studied] by phase-modulated spectroellipsometry.—73-15856
Thin films on the integrated circuit industry: requirements and deposition methods.—73-06118
Thin silicon nitride films for reduction of linewidth and proximity effects in electron-beam lithography.—73-15207
Thin $SiO_2$-$Si_3N_4$-$SiO_2$ films: Auger depth profile evaluation by means of factor analysis.—73-05519
Thin-film capacitor and apparatus for manufacturing [the] same.—73-04238
Thin-film compound phase formation sequence: an effective heat of formation model.—73-16381
Thin-film diamond derby.—73-03657
Thin-film growth and compositional effects in $YBa_2Cu_3O_{7-x}$ layers prepared by metallorganic chemical vapor deposition.—73-11937
Thin-film properties of germanium oxide synthesized by pulsed laser sputtering in vacuum and oxygen environments.—73-17058
Thin-film properties of low-pressure chemical vapor deposition TiN barrier for ultra-large-scale integration applications.—73-12900
Thin-film thickness and density determination from X-ray reflectivity data using a conventional power diffractometer.—73-08998
Thin-film transistor with excellent stability for liquid crystal display.—73-11549
Third-order nonlinear optical susceptibility of α-$Fe_2O_3$ thin film prepared by the sol-gel method.—73-12901
Three-dimensional finite element analysis of thin-film stresses using ALGOR personal-computer-based software.—73-01934
Time-resolved observation of coherent phonons in superconducting $YBa_2Cu_3O_{7-\delta}$ thin films.—73-08261
Tin oxide films grown over glass and KBr at several substrate temperatures.—73-17062
TiN thin film by sol-gel.—73-06122
$TiO_2$ thin films by chemical vapor deposition: control of the deposition process and film characterization.—73-17063
Toughening and crack tip shielding in brittle materials by residually stressed thin films.—73-03369
Transmission electron microscopy of oxide thin films.—73-06299
Transmission ion channeling facility for structural studies of monolayer films on clean semiconductor surfaces.—73-07842
Transparent conducting ZnO films deposited by ion-beam-assisted reactive deposition.—73-07371
Transparent conductive indium oxide thin films prepared by chemical vapor deposition.—73-14740
Transparent-conducting $p$-type NiO thin films prepared by magnetron sputtering.—73-10998
Transverse electrooptic properties of magnetron-sputtered PLZT thin films.—73-04576
Tungsten and tungsten-carbon thin films deposited by magnetron sputtering.—73-06128
Ultrahigh vacuum metallorganic chemical vapor deposition growth and in situ characterization of epitaxial $TiO_2$ films.—73-17066
Ultrathin heteroepitaxial $SnO_2$ films for use in gas sensors.—73-07852
Using a design of experiments approach for characterization of undoped plasma-enhanced chemical vapor deposited $SiO_2$ film properties.—73-03070
Valence manipulation and homojunction diode fabrication of chalcopyrite structure Cu-In-Se thin films.—73-04508
Vanadium dioxide thin films prepared by CVD from vanadium(111) acetylacetonate.—73-13334
Very thin silicon dioxide film thickness determination using transmission electron microscopy, spectroscopic ellipsometry, and X-ray photoelectron spectroscopy.—73-08458
Vibrational mode softening in thin-film CdS.—73-01362
Voltage, fluence, and polarity dependence of trap generation inside of thin silicon oxide films.—73-03772
Vortex configuration and dynamics in $Bi_2Sr_{1.8}CaCu_2O_x$ thin films by Lorentz microscopy.—73-11940
X-ray phase analysis with depth profiling for thin films.—73-08461
X-ray photoelectron spectroscopy and secondary ion mass spectrometry of boron nitride thin films on austenitic stainless steel.—73-03668

X-ray reflectivity study of rf-sputtered thin $SiO_2$ films.—73-07103
XPS study of zinc oxide thin film growth on copper using zinc acetate as a precursor.—73-00278
$YBa_2Cu_3O_{7-\delta}$ thin films and microstrip resonators on $MgLaAl_{11}O_{19}$ substrates.—73-08278
ZnO films deposited on GaAs substrates with an $SiO_2$ thin buffer layer.—73-07373

**thoria,**
Optical absorption spectroscopy on $ThO_2$: analysis of oxidizing and reducing anneals and gamma and uv radiation on both flux-grown and arc-fused single crystals.—73-08680

**thorium,**
Crystal structure and phase transitions in $NaTh_2(PO_4)_3$.—73-16081
Neutron diffraction studies of interatomic distances in $Y_{1-2x}Ca_xTh_xBa_2Cu_3O_{7-\delta}$ system.—73-01610
Zirconlike aspect of $KTh_2(PO_4)_3$ structures.—73-16402

**thullium,**
Band structure and optical characteristics of thullium monoantimonide.—73-16413
Compound upconversion luminescence mechanism in crystalline $TmP_5O_{14}$.—73-16423
Cross relaxation for $Tm^{3+}$ ions in indium-based glasses.—73-06896
Decrease of the homogeneous width of the $Tm^{3+}$ electron energy levels in $TmBa_2Cu_3O_{6+x}$ at the superconducting transition.—73-08014
Efficient 2.05-μm RT $Y_2SiO_5:Tm^{3+}$ cw laser.—73-12780
Efficient amplification in the first telecommunications window.—73-07021
Electrical conduction in $TmVO_4$ single crystal.—73-04304
Exchange-relativistic interactions and magnetooptical properties of orthoferrites.—73-01459
Excitation of the *4f-4f* emission of donor-type rare-earth centers through donor-acceptor pair states (ZnS:Tm).—73-04338
Influence of Tm on the properties of lead telluride.—73-01212
Ir to visible upconversion spectroscopy in $Tm^{3+}$-doped fluorozirconate fibers.—73-08896
Luminescence of $Tm^{3+}$ in gallium arsenide grown by metallorganic vapor phase epitaxy.—73-04390
Magnetic properties of $TmFeO_3$ and $TmGa_{0.13}Fe_{0.87}O_3$ orthoferrites.—73-15342
Mechanism of slow excitation in X-ray luminescence and thermoluminescence of $CaF_2$:Tm crystals.—73-08916
Multisite optical spectra and energy levels of trivalent thulium ions in yttrium scandium gallium garnet.—73-08674
Operation of resonantly pumped Tm:Ho:YAG in active mirror mode.—73-12843
Spectroscopic analysis of $Tm^{3+}$:$NaLa(MoO_4)_2$.—73-12689
Ternary system Tm-As-Se.—73-12717
Thermal conductivity of $TmBa_2Cu_3O_x$ and $Bi_2Sr_2CaCu_2O_x$ single crystals in the vicinity of $T_c$.—73-08253
Tm doping of lead telluride.—73-04499

**thyristors,**
Lifetime control in thyristors by proton irradiation.—73-04381

**tile,**
Application of tremolite to glazed tile fired quickly at low temperature.—73-07234
Approach to positioned crystal glaze of glazed tiles.—73-10799
Ball milling at varied rotating speed and its optimization of process parameters—ball milling of luster tile bodies.—73-14646
Body preparation for dry-press forming of production tile.—73-12014
Ceramic composition for the production of the top layer of two-layered stoneware tiles.—73-10911
Ceramic world in Chicago.—73-17464
Cevisama.—73-17465
Cevisama: the new face of Spain.—73-17466
Cleanability of slip-resistant tile.—73-00900
Comparative investigation of high-temperature ceramic fiber insulating tile.—73-05163
Confirmation for Cersaie.—73-17470
Continuous kiln.—73-01974
Control of "black core."—73-15783
Creaton chooses Keller equipment for new tile production plant.—73-12122
Decoration of self-glazing ceramic tiles.—73-00903
Densification of spray-dried powders [for imitation granite ceramic tiles].—73-12972
Developing glazed tiles from perlite tailings.—73-10812
Developing pearl-glazed tiles.—73-10813
Development of glazed fly ash tile.—73-10818
Development of glazed tiles using inferior diopside.—73-14650
Development of glazed tiles utilizing Guangfen black talcum.—73-07243
Development of imitation granite porcelain tiles.—73-10821
Development of stoneware wall and floor tiles once-fired at low temperature.—73-14651
Development of the brick and roofing tile industry.—73-10675
Device on a double disk lapping machine.—73-15765
Die for ceramic tiles.—73-15766
Ease of cleaning of ceramic tiles.—73-14652
Effects of glazing technologies on tile surface properties.—73-14654
Energy-saving mechanism of diopside in glazed tiles.—73-10836
Experience with silicon carbide tiles in mass-fired refuse boilers.—73-15963
F. v. Muller Dachziegelwerke: tilemaker of Eisenberg.—73-00769
Fabrication of glazed tiles using Qi county weathered clay and sulfuric acid tailings.—73-10839
Fabrication of gold tone glazed tile.—73-10840
Fabrication of internally burned tiles.—73-10681
Face cracking of glazed tiles.—73-10844
Fast firing of textured color glazed tile.—73-14657
Glazes for ceramic wall and floor tiles: evolution and perspectives.—73-07256
In search of global quality.—73-14662
Inertizing—beyond double and single firing.—73-15731
Kaolins from Zhana-Daursk as local materials for ceramic tile production.—73-01984
Manufacture of glazed tile utilizing water-granulated slag from blast furnace.—73-10865
Method for cooling ceramics, especially ceramic tiles produced in roller kilns, and the relative plant.—73-12083
Method of making a tile.—73-04052
More ceramics and natural stone at Cevisama.—73-17495
One-step firing of color glazed tile in coal-fired roller kilns.—73-10872
Opaque glazed mosaic tiles.—73-10874
Optimizing the manufacture of ceramic facing tiles (exchange of experience).—73-07266
PEI method gains ground.—73-15829
Phase transformations occurring during the firing process of ceramic tiles based on beneficiation tailings.—73-07267
Process and properties of ceramic tile prepared from blast-furnace slag [BFS] raw materials.—73-04046
Process and properties of ceramic tile prepared from blast-furnace slag raw materials.—73-14665
Raw materials for the single firing of tiles.—73-07268
Situation of the brick and tile industry in Greece.—73-03406
Surface degradation and Vickers indentation hardness of glazed ceramic tiles.—73-07273
Technology of forming ceramic tile by vacuum filtration.—73-04049
Tecnargilla expanding.—73-17507
Tile applications in public buildings.—73-07276
Tile line builds on trusted technology.—73-10692
Unidirectional field generator.—73-11679
Unique tile glaze concept—free of pinholes.—73-07277
Will the proposed ISO ceramic tile standards meet consumer expectations.—73-07280

**tin oxide,**
Blackening of tin oxide thin films heavily doped with antimony.—73-08814
Characterization of $SnO_2$ films deposited by dc gas discharge activating reaction evaporation onto amorphous and crystalline substrates.—73-06198
Chronoabsorptometric determination of adsorption isotherms for cytochrome *c* on tin oxide electrodes.—73-10923
Copper-doped $SnO_2$ thin films for $PH_3$ detection.—73-16688
Correlation between gas sensing properties and preferential orientations of sputtered tin oxide films.—73-12760
Correlation between gas-sensing properties and preferential orientations of sputtered tin oxide films.—73-01111
Correlation function and statistical properties of xerogel $(Sn,Ti,Zr)O_2$.—73-16433
Crystal structure and gas sensing property of tin oxide films sputtered in $N_2/O_2$ atmosphere.—73-11129
Crystal structure of anatase-type $TiO_2$-$SnO_2$ solid solution prepared by CVD.—73-02189
Crystal structure of $TiO_2$-$SnO_2$ fine powders prepared by coprecipitation.—73-12565
Depth profiles of ion-implanted fluorine in tin oxide films prepared by atmospheric pressure chemical vapor deposition.—73-02231
Effect of antimony addition on electrical and optical properties of tin oxide film.—73-08837
Effect of dopant incorporation on structural and electrical properties of sprayed $SnO_2$:Sb films.—73-08838
Effect of electrolyte on the gelation and aggregation of $SnO_2$ colloidal suspensions.—73-13004
Effect of ethanol on electrical properties of $SnO_2$.—73-11152
Effect of heterovalent additions of oxides on formation of the solid solution $SnO_2$-$TiO_2$.—73-02244
Effect of mercury uv photolysis on vapor deposition of $SnO_2$.—73-13008
Effect of $Nb_2O_5$ on crystallite growth during sintering of $SnO_2$ ceramics.—73-09081
Effect of postdeposition heat treatment on physical properties of tin oxide thin films prepared by an electron-beam evaporation technique.—73-09085
Effect on lacquer adhesion of solid-state properties of tin oxides.—73-05549
Electrical and optical properties of Sb-doped $SnO_2$ films prepared by chemical vapor deposition.—73-05555
Ellipsometry and X-ray photoelectron spectroscopy study of $SnO_2$ reduction at the interface with sputtered a-Si:H.—73-08613
Excimer laser processing for surface improvement of tin oxide thin films.—73-09122
Factors determining the carbon monoxide sensing properties of tin oxide thick films calcined at different temperatures.—73-14914
Fluorescent lamps having reduced interference colors.—73-03919
Formation process of $SnO_2$ thin films by sol-gel method.—73-05817
Formation process of $SnO_2$ thin films by sol-gel method.—73-16795
Hydrogen gas sensing characteristics of the Pd-doped $SnO_2$ thin films prepared by sputtering.—73-11254
Influence of additives on the electrical properties of dense $SnO_2$-based ceramics.—73-12814
Influence of sputtering parameters on the composition and crystallinity of tin oxide.—73-09178
Influence of the matrix glass and $Al_2O_3$ substrate on the electrical conduction paths in the $SnO_2$ thick-film resistor system.—73-10962
Influence of the matrix glaze and $Al_2O_3$ substrate on the electrical conduction paths in the $SnO_2$ thick-film resistor system.—73-01211
Intellectualization of semiconductor gas sensors by layer building of oxide thin films with heterostructure.—73-04370
Mossbauer studies of reactively deposited tin oxide films.—73-09217
Mossbauer studies of reactively deposited tin oxide films.—73-16223
Nanoparticle tin(IV) oxide entrapped in amorphous matrices.—73-03860
Nature of paramagnetic centers in tin dioxide.—73-17178
Nonlead sealing glasses.—73-00751
Optical properties and structure of thermally evaporated tin oxide films.—73-12848
Organometallic chemical vapor deposition of $SnO_2$ single-crystal and polycrystalline films.—73-02914
Paramagnetic point defects in $SnO_2$ and their reactivity with the surrounding gases—interaction of oxygen lattice centers with vapor-phase $H_2O_2$, air, inert and combustile gases, as revealed by EPR spectroscopy.—73-13360
Phase equilibrium in the $SnO_2$-$V_2O_5$ system.—73-08693
Photoconductive $SnO_2$ thin films from thermal decomposition of chemically deposited SnS thin films.—73-07350
Photoemission spectromicroscopy: a new insight in the chemistry of $SnO_2$ films for gas sensors.—73-01274
Plasma-assisted chemical vapor deposition of tin oxide coatings.—73-02926
Preferred orientation of $SnO_2$ thin films grown from tri-*n*-butyltin acetate by spray pyrolysis technique.—73-16906
Preparation of semiconductive tin oxide–glass composite by sol-gel process.—73-15114
Properties of fluorine-doped tin oxide films produced by atmospheric pressure chemical vapor deposition from tetramethyltin, bromotrifluoromethane, and oxygen.—73-16577
Reactive deposition of W-, Mo-, and V-doped $SnO_2$ films.—73-05626
Refractive index of metal/ceramic composites and their components [determined] by spectroscopic ellipsometry [SE] and effective medium theories.—73-10271
Relationships between dopants, microstructure, and the microwave dielectric properties of $ZrO_2$-$TiO_2$-$SnO_2$ ceramics.—73-04161
Role of initial conductance and gas pressure on the conductance response of single-crystal $SnO_2$ thin films to $H_2$, $O_2$, and CO.—73-07778
$SnO_2$ gels [studied] by $Eu^{3+}$ fluorescence spectroscopy.—73-10400
$SnO_2$ grazing-incidence antireflection films for monochromatization of synchrotron radiation: design, preparation, and characterization.—73-12879
$SnO_2$ transparent conductor films produced by filtered vacuum arc deposition.—73-13276
$SnO_2$-based gas sensors affected by addition of several metal oxides.—73-15164
SnS-$SnO_2$ conversion of chemically deposited SnS thin films.—73-09336
Synthesis of a new compound, $Ca_{0.8}Ce_{1.2}Sn_2O_7$, with pyrochlore structure.—73-03040
Thermal stability of pure and doped $SnO_2$ ultrafine particles.—73-12720
Thermal stability of pyrolytic tin oxide films on aluminum.—73-10287
Tin oxide films grown over glass and KBr at several substrate temperatures.—73-17062
Tin(IV) oxide coating of aluminum borate whiskers and alumina particles by chemical vapor deposition.—73-03062
$TiO_2$-$SiO_2$ deposits prepared by CVD.—73-17064
$TiO_2$-$SnO_2$ deposits prepared by CVD.—73-06123
Ultrathin heteroepitaxial $SnO_2$ films for use in gas sensors.—73-07852
XPS, EPMA, and XRD analysis of hot-end-coated glass containers.—73-00430

**tin,**
All-solid-state electrochromic device: I, Electrophoretic deposition film of proton conductive solid electrolyte.—73-00932
Anomalous birefringence hysteresis and thermooptical memory effect in incommensurate phase of ferroelectric-semiconductor $Sn_2P_2Se_6$.—73-14776
Calculated electronic structure of $SnFe_3N$.—73-05363
Crystal structure of new natural borate tusionite, $MnSn[BO_3]_2$.—73-16087
Deep states in Ga-doped $Pb_{1-x}Sn_xTe$ solid solutions.—73-11130
Effect of Sn substitution on cation ordering in $(Zr_{1-x}Sn_x)TiO_4$ microwave dielectric ceramics.—73-10939
Effect of uniaxial compression on phase transitions in the ferroelectrics $Sn_2P_2S_6$ and $Sn_2P_2Se_6$.—73-15257
Effects of substitution of tin for copper in Bi-based compound.—73-04711
Electron localization in $Pb_{1-x}Sn_xTe(In)$ in high magnetic fields.—73-12795
Epitaxial layers Si:(Sn,Yb) produced by the crystallization from the melt solution on the basis of Sn.—73-04322
EPMA, RBS, and SIMS analyses of tin profiles in commercial float glass.—73-14375
Fabrication and characterization of $YBa_2Cu_3O_{7-\delta}$/Sn composite superconductors: I, Microstructure and mechanical properties.—73-08072
Fabrication and characterization of $YBa_2Cu_3O_{7-\delta}$/Sn composite superconductors: II, Electrical properties.—73-11755
Formation and annealing of radiation defects during proton bombardment of *p*-type $Pb_{0.76}Sn_{0.24}Te$ films.—73-07532
Hierarchical domain structures and in situ domain migration in the antiferroelectric ceramic PLSnZT.—73-08636

High-temperature behavior of impurities and dimensionality of the charge transport in unintentionally and tin-doped indium selenide.—73-07567
Hot-stage transmission electron microscopy studies of phase transformations in tin-modified lead zirconate titanate.—73-09460
Influence of crystallization on electrical and optical properties of Te-Se-Sn and Te-Se-Sn-O films.—73-08887
Influence of In on the energy spectrum of $Pb_{1-x}Sn_xTe$.—73-07595
Influence of the In impurity on the electrophysical properties of $Pb_{1-x}Sn_xTe$ with $x>0.3$.—73-01210
Interactions in the system $SnO_2$-$GaSbO_4$.—73-12608
Kinetics and spectrum of the photoconductivity of PbTe/$Pb_{1-x}Sn_xTe$ heterostructures grown on $BaF_2$ substrates.—73-07628
Lattice softening on Bi system superconductor [studied] by means of $^{119}$Sn Mossbauer spectroscopy.—73-08123
Magnetic relaxation and flux pinning of $YBa_2(Cu_{1-x}Sn_x)_3O_{3-y}$.—73-11822
Microwave characteristics and far-infrared reflection spectra of zirconium tin titanate dielectrics.—73-10973
Microwave loss quality of $(Zr_{0.8}Sn_{0.2})TiO_4$.—73-14718
Mossbauer spectroscopy of glasses based on tin fluorides.—73-14045
Nanomaterials: tin(IV) sulfide endo- and exosemiconductors.—73-04413
New arguments for off-center position of tin atoms in $Pb_{1-x}Sn_xTe_{1-y}Se_y$ and $Pb_{1-x}Sn_xTe_{1-y}S_y$.—73-16548
NMR study of fluoride ion and proton motion in $N_2H_5Sn_3F_7$.—73-01002
Nonequilibrium phenomena in incommensurate phase of $Sn_2P_2Se_6$.—73-01259
Optical study of domains in Ba(Ti,Sn)$O_3$ ceramics.—73-15273
Particle size effect on the apparent brittle-ductile transition in $YBa_2Cu_3O_{7-x}$-Sn composite superconductor.—73-15576
Photoelectric properties induced by microinhomogeneities and macroinhomogeneities in epitaxial $Pb_{1-x}Sn_xS$ films and structures made from them.—73-07714
Relaxation of the delayed photoconductivity of $Pb_{1-x}Sn_xTe$:In alloys in an electric field.—73-04467
Resonant energy band of radiation defects in *p*-type $Pb_{1-x}Sn_xTe$ ($x$=0.2) alloy irradiated with electrons.—73-03110
Role of the exchange interaction in piezospectroscopic properties of an exciton bound to an Sn acceptor in GaAs.—73-01307
Row of defects in acceptor doping of PbTe-type semiconductors with group I elements.—73-07781
Self-compensation of electrically active impurities by intrinsic defects in $Pb_{0.8}Sn_{0.2}Te$ solid solutions.—73-01312
SnS-$SnO_2$ conversion of chemically deposited SnS thin films.—73-09336
Structural analysis of $Tl_4SnSe_4$.—73-02446
Structural study of $Zr_{0.8}Sn_{0.2}TiO_4$.—73-05496
Structure of tin silicate glasses.—73-03766
Temperature dependence of the photoluminescence of modified InP:Sn crystals.—73-15199
Thermal properties of the Sn/$SiO_2$ interface as studied by surface spectroscopies.—73-02711
Tin float bath for manufacturing sheet glass utilizing recuperative gas burners.—73-12098
Transport phenomena on $Pb_{0.78}Sn_{0.22}Te$ with high impurity concentrations.—73-15217
$V_{Ga}Sn_{Ga}$ complex in GaAs [investigated] by the polarization photoluminescence [PL] and piezospectroscopic methods: I, Structure of the complex and its reorientation under low uniaxial pressure.—73-11498

**titanates,**
α-decay damage effects in curium-doped titanate ceramic containing sodium-free high-level nuclear waste.—73-15697
Anisotropic titanate etch.—73-01840
Barium neodymium titanates: stoichiometry and phase equilibria.—73-02150
Calculations and modeling of grain-boundary acceptor states for (Ba,Pb)$TiO_3$ positive temperature coefficient ceramics.—73-07397
Contributions to the dielectric constant of the system $BaLn_2Ti_4O_{12}$ from packing fraction and nephelauxetic ratio.—73-07290
Coordination state of titanium atoms in titanate glasses.—73-06894
Crystal structure and luminescent properties of indium titanate.—73-08586
Crystal structure of $Na_xTi_3O_4$ with $0.5\leq x\leq 0.57$.—73-02201
Crystal structure of octatitanate $M_2Ti_8O_{17}$ (M=K, Rb).—73-02208
Crystal structures of $La_2Ti_2O_7$ and $La_4Ti_5O_{17}$: high-resolution electron microscopy.—73-02222
Development of textured microstructures in ceramics with large thermal expansion anisotropy.—73-06207
Dielectric properties and electrical conductivity in the system $BaPbO_3$-$PbTiO_3$.—73-12765
Dielectric properties of Ni-doped (Ba, Sr)$TiO_3$ ceramics at very low frequencies.—73-16446
Dielectric spectroscopy of $MgTiO_3$-based ceramics in the $10^9$–$10^{14}$ Hz region.—73-14692
Effect of $Al_2O_3$ and $Bi_2O_3$ on the formation mechanism of Sn-doped $Ba_2Ti_9O_{20}$.—73-08603
Effect of $Nb_2O_5$ addition on the phase change in $Li_2Ti_3O_7$.—73-16119
Effect of sintering aids on microstructures and PTCR characteristics of $(Sr_{0.2}Ba_{0.8})TiO_3$ ceramics—comment.—73-09096
Effect of sintering aids on microstructures and PTCR characteristics of $(Sr_{0.2}Ba_{0.8})TiO_3$ ceramics—reply.—73-09097
Effect of Sn substitution on cation ordering in $(Zr_{1-x})Sn_xTiO_4$ microwave dielectric ceramics.—73-10939
Effect of substrate texture on orientations of rf sputtered $Ba_2Si_2TiO_8$ [BST] thin films.—73-01405
Effect of the processes of thermal cycling on the structure and properties of heat-resistant ceramics.—73-00808
Effect of ZnO additive on the microwave dielectric properties of $(Zr_{0.8}Sn_{0.4})TiO_4$ ceramic.—73-14698
Effects of glass additions on (Zr,Sn)$TiO_4$ for microwave applications.—73-14699
Electrical characterization of phase changes in lithium titanate.—73-16474
Electrical conduction in calcium yttrium titanium cobalt oxide, $Ca_{1-x}Y_xTi_{1-x}Co_xO_3$ ($x\leq 0.15$).—73-02597
Electrical properties of $Sr_{1-x}La_xTiO_3$ ($0\leq x\leq 0.1$) single crystals grown by the floating zone method.—73-02603
Evolution of microstructure and V-shaped positive temperature coefficient of resistivity of $(Pb_{0.6}Sr_{0.4})TiO_3$ materials.—73-07513
Formation mechanism, nucleation, and crystallization of $Li_2TiO_3$ from fused salts.—73-12584
Formation region of K-Al priderite ($K_xAl_xTi_{8-x}O_{16}$).—73-05405
Grain-boundary defect chemistry of acceptor-doped titanates: space charge layer width.—73-06160
High ionic conductivity in $Li_{0.35}La_{0.51}TiO_{2.94}$.—73-07327
High-voltage ceramic dielectric material of $(100-x)(Sr_{1-y-z}Mg_yPb_z)$- $TiO_3$:$xBi_2O_3$:$3TiO_2$ system.—73-07328
Influence of chemical processing in the crystallization behavior of zirconium titanate materials.—73-05863
Interaction of the titanates of the rare-earth elements ($LnTiO_3$) with sulfur.—73-02297
Ionic conduction of $Li_2Ti_3O_7$ and $Li_4Ti_5O_{12}$.—73-14712
Kinetic study of crystallization in zirconium titanate from an amorphous reactive prepared precursor.—73-12619
Method for manufacturing a ceramic capacitor having varistor characteristics.—73-04217
Microwave characteristics and far-infrared reflection spectra of zirconium tin titanate dielectrics.—73-10973
Multilayer ceramic chip capacitor [with ceramic coatings].—73-14755
Neutron scattering investigation of the high-temperature phase transition in $NiTiO_3$.—73-12636
New reduced ternary titanates from borate fluxes.—73-02353
Nonlinear electrical properties of lead lanthanum titanate thin films deposited by multi-ion-beam reactive sputtering.—73-07903
Paraphase symmetry and phase transition of dynamics in $Na_{1/2}Bi_{1/2}TiO_3$.—73-01421
Phase and microstructure of $MgTiO_3$ ceramic fired in reducing atmosphere.—73-10980
Phase and microstructure of $MgTiO_3$ ceramics fired in reducing atmosphere.—73-01007
Phase changes and thermodynamic properties of $CaTiO_3$. Spectroscopic data, vibrational modeling, and some insights on the properties of $MgSiO_3$ perovskite.—73-08691
Phase changes in $Li_2Ti_3O_7$.—73-02372
Phase changes in $Li_2Ti_3O_7$.—73-12649
Phase relationships and electrical properties of $Ti_3O_5$, $CrTi_2O_5$, and the pseudobrookite-type systems $Mg_xTi_{3-x}O_5$ and $Li_xTi_{3-x}O_5$.—73-05452
Phase transition in $NaTiO_2$: a candidate for $S$=1/2 triangular Heisenberg antiferromagnet.—73-05456
Physicochemical aspects of a limiting oxide-based solid solution in the $In_2O_3$-$TiO_2$ system and indium titanate.—73-16568
Physicochemical investigation of phase development in the system $LiFeO_2$-$Li_4TiO_4$.—73-12659
Polymorphism of calcium titanate.—73-02395
Precipitation and solidification of calzirtite in liquid-phase-sintered $ZrO_2$ (10.8 mol% CaO) with $TiO_2$ additions.—73-13439
Preparation and characterization of radio-frequency-sputtered $Ba_2Si_2TiO_8$ thin films.—73-07911
Preparation of tazheranite powders by solid phase reaction and conductivity of sintered bodies.—73-02972
Preparation of uniform submicrometer particles of calcium titanate and lead niobate by replacement reactions.—73-13210
Single-crystal growth of $A_xMg_{x/2}Ti_{2-x/2}O_4$ (A=K, Rb, Cs) and synthesis of priderite by a compositional-structural change process from those crystals.—73-12683
Sintering aid.—73-05013
Slow-cooling calcination process of potassium tetratitanate and potassium hexatitanate fibers.—73-13275
Stabilization of ordered zirconium titanates through the chemical substitution of $Ti^{4+}$ by $Al^{3+}/Ta^{5+}$.—73-04173
Structural study of $Zr_{0.8}Sn_{0.2}TiO_4$.—73-05496
Structure and electric properties of $(Ba_{1-x}Pb_x)TiO_3$ ceramics.—73-05497
Structure and properties of (Ba,Ca)$TiO_3$ ceramics prepared using (Ba,Ca)$CO_3$ precursors: I, Crystallographic and microstructural studies.—73-13287
Structure and properties of (Ba,Ca)$TiO_3$ ceramics prepared using (Ba,Ca)$CO_3$ precursors: II, Diffuse phase transition [DPT] behavior.—73-11622
Structure of sodium gallotitanate glass in relation to glass formation.—73-14112
Subharmonics in photorefractive $Bi_{12}TiO_{20}$ crystals.—73-02695
Synthesis and characterization of $Sr_3Ce_2Ti_5O_{16}$ in the system SrO-$CeO_2$-$TiO_2$.—73-12710
Synthesis and crystal structure of $NaTi_8O_{13}$.—73-02483
Synthesis and intercalation chemistry of $K[Ca_2(Ca,Sr)_{n-3}Nb_3Ti_{n-3}O_{3n+1}]$ ($n$=4, 5).—73-02486
Synthesis and properties of hollandite-like $Ba_xLi_{(2x+4y)}Ti_{(8-2y)}O_{16}$.—73-12711
Synthesis and structure of cerium titanates in films.—73-02491
Synthesis and structure of $R_2TiO_5$ [R=La–Lu, Y] thin films.—73-03039
Synthesis and structure of the rare-earth titanates, $R_2TiO_5$, in films.—73-13457
Synthesis of a new compound $NaGaTi_2O_{12}$.—73-06086
Synthesis of fine-particle titanates by the pyrolysis of oxalate precursors.—73-06089
Synthesis of $K_2Ti_4O_9$ by the hydrolysis of KOH-Ti(iso-$C_3H_7O)_4$ ethanol solution.—73-03048
Synthetic $GdGaTi_2O_7$—new polymorphic modification of polymignyte.—73-02509
Thresholding of two facing double phase conjugate mirror and semilinear phase conjugate mirror with fanning in BTO [$Bi_{12}TiO_{20}$].—73-08999
Vacancy titanates intercalated with cationic hydroxy aluminum complexes.—73-03704
X-ray absorption study of the Ti coordination in glasses of the system SrO-$B_2O_3$-$Al_2O_3$-$TiO_2$.—73-14126
X-ray powder diffraction study of $CaTiO_3$ perovskite at high temperatures.—73-08794

**titania,**
Alkali passivation mechanism of sol-gel-derived $TiO_2$-$SiO_2$ films coated on soda-lime-silica glass substrates.—73-00304
Alkali passivation mechanism of sol-gel-derived $TiO_2$-$SiO_2$ films coated on soda-lime-silica glass substrates.—73-10355
Atomic force microscopy study of titanium dioxide thin films grown by atomic layer epitaxy [ALE].—73-06188
Bonelike hydroxyapatite induction by a gel-derived titania on a titanium substrate.—73-06740
Characteristics of alumina-supported $TiO_2$ composite ultrafiltration membranes prepared by the sol-gel method.—73-05162
Characterization of chemically and physically derived nanophase titanium dioxide.—73-06194
Characterization of the *n*-$TiO_2$/electrolyte interface through photoelectrochemical measurements.—73-12753
Characterization of $TiO_2$ films modified by platinum doping.—73-13380
Characterization of $TiO_2$-based sensor materials using immittance spectroscopy.—73-06199
Characterization of titania gels by $^{17}$O NMR and electron diffraction.—73-08573
Characterization of titania silicalites.—73-08574
Chemical composition of electron-beam evaporated $TiO_2$ films.—73-05368
Coating of anatase titanium dioxide particles.—73-12352
Cog dielectric with high K.—73-01047
Comparative study of the electronic structure of titanium dioxide and strontium titanate.—73-05537
Comparison between BIS and Ti *K*-XAS for $TiO_2$: experimental and theoretical study.—73-16059
Comparison of alumina titanate powders prepared by various technologies.—73-09045
Computer simulation of the adsorption of argon on the surface of titanium dioxide: I, Crystalline rutile.—73-12757
Computer simulation of the adsorption of argon on the surface of titanium dioxide: II, Amorphous surface.—73-12758
Controlling crystallinity during processing of nanocrystalline titania.—73-12957
Coprecipitation of two insoluble products of chemical reactions.—73-16689
Correlation function and statistical properties of xerogel (Sn,Ti,Zr)$O_2$.—73-16433
Crystal structure of anatase-type $TiO_2$-$SnO_2$ solid solution prepared by CVD.—73-02189
Crystal structure of $TiO_2$-$SnO_2$ fine powders prepared by coprecipitation.—73-12565
Density, thickness, and interface roughness of $SiO_2$, $TiO_2$, and $Ta_2O_5$ films on BK-7 glasses analyzed by X-ray reflection.—73-07008
Deposition of $TiO_2$ on heated substrates by the spray–inductively coupled plasma technique.—73-16697
Development and electroanalytical investigation of a novel rectifying semiconductor/polymer interface.—73-07443
Development of phosphorus-titaniferrous glaze.—73-10822
Development of Ti-containing opal glazes with high covering power.—73-10825
Dielectric ceramic body including $TiO_2$ dispersion in crystallized cordierite matrix phase, method of producing the same, and circuit board using the same.—73-04199
Effect of a magnetic field on the deposition of $TiO_2$ films.—73-05749
Effect of anisotropy on microellipsometry in the Ti/$TiO_2$ system.—73-13824
Effect of fabrication conditions on microwave dielectric properties of BaO-$RE_2O_3$-$TiO_2$ ceramics.—73-14696
Effect of frit composition on the crystallization and relative opacity of low-temperature melting $TiO_2$-opacified porcelain enamels in the $SiO_2$-$B_2O_3$-$Na_2O$-$K_2O$- $Li_2O$-CaO-$TiO_2$-$ZrO_2$-F-$P_2O_5$ system.—73-00221
Effect of heterovalent additions of oxides on formation of the solid solution $SnO_2$-$TiO_2$.—73-02244
Effect of hydrolysis conditions on thermal transformation of alkoxide-derived titanium dioxide.—73-05761
Effect of hydrolysis conditions on thermal transformation of alkoxide-derived titanium dioxide.—73-16730
Effect of peptization on densification and phase-transformation behavior of sol-gel-derived nanostructured titania.—73-09083
Effect of substrate temperature on the properties of dc reactive magnetron sputtered titanium oxide films.—73-02798
Effect of the composition of titania silica on its physical and catalytic properties.—73-12776

Effect of $TiO_2$ layer on dielectric properties of pyrogenic silica.—73-16463
Effect of $TiO_2$ on ceramic acidity and basicity.—73-13022
Effects of added $TiO_2$ on the characteristics of $SnO_2$-based thick-film gas sensors.—73-11169
Effects of disperse system history on heat compaction of materials containing $\alpha$-$AlO_{1.5}$ and $TiO_2$.—73-16749
Effects of mechanical activation of inorganic gels on their thermal behavior: I, Crystallization process of titania gels.—73-02247
Effects of mechanical activation of inorganic gels on their thermal behavior: II, Comparison of structure and thermal behavior between zirconia and titania gels.—73-02248
Effects of solvent on properties of sol-gel-derived $TiO_2$ coating films.—73-13034
Effects of synthesis conditions on structure and ion-exchange properties of hydrated titanium dioxide.—73-16755
Elastic and dry sliding characteristics of [high-velocity oxyfuel] HVOF-sprayed $Al_2O_3$ and $Al_2O_3$-$TiO_2$ coatings.—73-09588
Elastic moduli of rf-sputtered $Al_2O_3$-$TiO_2$ amorphous films.—73-03279
Electrochemical synthesis and in situ Raman spectroscopy of thin films of titanium dioxide.—73-02810
Electroplating process for enhancing the conformality of titanium and titanium nitride films in the manufacture of integrated circuits and structures produced thereby.—73-12077
Enameling of titanium-stabilized steel.—73-00228
Excess thermodynamic properties of nanophase titanium dioxide prepared by chemical and physical methods.—73-05398
Factors and mechanism of changes in the refractive index of sol-gel-derived $80TiO_2$-$20SiO_2$ films coated on soda-lime-silicate glass substrates.—73-13987
Formation and sintering of alkoxy-derived $Al_2O_3$-$TiO_2$ composite powders.—73-09136
Formation and sintering of alkoxy-derived $Al_2O_3$-$TiO_2$ composite powders.—73-16785
Formation of high adhesive and pure Pt layers on $TiO_2$.—73-10232
Formation of $RuO_2$-$TiO_2$ thin films by thermal decomposition technique.—73-00972
Glass and ceramic thin films deposited by an ultrasonically assisted sol-gel technique.—73-13075
Glass-ceramic article decorated with ceramic color and process for its production.—73-03926
Glass-ceramics of the cordierite system—the effects of $TiO_2$ addition.—73-14397
Grain-boundary-layered PTCR ceramics based on $PbTiO_3$-$TiO_2$.—73-11222
Growth of titanium dioxide thin films by atomic layer epitaxy.—73-05836
Heteroepitaxy of $TiO_2$, $VO_2$ films, and $TiO_2$/$VO_2$ multilayers grown on sapphire(1120) by metallorganic chemical vapor deposition.—73-09160
Highly heat-resistant glass fiber and process for its production.—73-00736
Holographic characteristics of doped BTO crystals.—73-16508
Humidity-sensitive properties of titania films prepared using the sol-gel process.—73-16510
Immobilization of barium, cadmium, and antimony over titania.—73-02290
Incorporation of hydrogen in $TiO_2$ deduced from polarized Raman scattering.—73-08640
Influence of $TiO_2$ crystallization and transformation on the opacification of hollowware.—73-00242
Interaction between colloidal particles in $SiO_2$ and $TiO_2$ sols.—73-07146
Interfacial reaction of MgO/$TiO_x$ superlattice thin films.—73-05424
Interrelationship between densification, crystallization, and chemical evolution in sol-gel titania thin films.—73-13338
Low-temperature preparation of $TiO_2$ thin films by plasma-enhanced chemical vapor deposition.—73-05901
Low-temperature preparation of $TiO_2$ thin films by plasma-enhanced chemical vapor deposition.—73-16853
Mechanism of formation of titanium dioxide ultrafine particles in reverse micelles by hydrolysis of titanium tetrabutoxide.—73-16861
Method for manufacturing an optical waveguide fiber with a very thin titania-silica outer cladding layer.—73-14428
Microstructure analysis of [optical] thin films deposited by reactive ion plating.—73-17157
Microstructure and mechanical strength of $TiO_2$-doped $Al_2O_3$ ceramics fired in vacuum atmosphere.—73-17160
Mixing effects in $CeO_2$/$TiO_2$ and $CeO_2$/$SiO_2$ systems submitted to $Ar^+$ sputtering.—73-05437
Modeling of ellipsometric data of inhomogeneous $TiO_2$ films.—73-10458
Nitrogen dioxide adsorption of deuteroxylated titania (anatase).—73-16228
Nonlinear current-voltage characteristics generated from TiN/$TiO_2$ composite.—73-05598
Optical properties of $TiO_2$, $Y_2O_3$, and $CeO_2$ thin films deposited by electron beam evaporation.—73-02655
Optical studies of $SiO_2$, $TiO_2$, and $SiO_2$-$TiO_2$ coatings prepared by the sol-gel process.—73-03807
Optical waveguide fiber with very thin titania–silica outer cladding layer.—73-00753
Optimizing plasma-sprayed alumina titania coatings using statistical methods.—73-09228
Oxide catalyzed reactions of ethylene oxide under conditions relevant to ethylene epoxidation over supported silver.—73-02660
Oxygen chemisorption on titania–zirconia mixed oxide supported vanadium oxide catalysts.—73-08688
Paper whiteners: I, Titania-coated silica.—73-01991
Phase relations in the system titanium dioxide-diniobium-zinc hexoxide.—73-02387
Photocatalytic deposition of Bi(III) ions onto $TiO_2$ powder.—73-12855
Photocatalytic property of $TiO_2$ anchored on porous alumina ceramic support by the alkoxide method.—73-05612
Photocatalytic property of $TiO_2$ anchored on porous alumina ceramic support by the alkoxide method.—73-16564
Photoconducting $TiO_2$ prepared by spray pyrolysis using $TiCl_4$.—73-09238
Photodegradation of surfactants: II, $\zeta$-potential measurements in the photocatalytic oxidation of surfactants in aqueous $TiO_2$ dispersions.—73-08950
Physicochemical investigation of hydrated titanium dioxide and products of sorption of ions $As^V$ and $Na^+$ on it.—73-16273
Preparation and characterization of antireflective film in $TiO_2$-$SiO_2$ system by sol-gel method.—73-10574
Preparation and characterization of fine $TiO_2$ powders by vapor-phase hydrolysis of $TiCl_4$.—73-02931
Preparation and properties of $TiO_2$ films by complexing agent-assisted sol-gel method.—73-02935
Preparation of $Al_2O_3$-$TiO_2$ coatings by sol-gel method and their nitridation.—73-03868
Preparation of $Al_2O_3$-$TiO_2$ nanocomposite powders.—73-09254
Preparation of anatase titanium dioxide.—73-15952
Preparation of monosized spherical titania fine particles by controlled hydrolysis of titanium tetraethoxide in ethanol.—73-09267
Preparation of $SiO_2$-$TiO_2$ gels with controlled pore structure via sol-gel route.—73-05980
Preparation of $SiO_2$-$TiO_2$-$ZrO_2$ gel glasses and coatings by means of modified alkoxide solutions.—73-10585
Preparation of vanadium-titanium oxide thin films by sol-gel method and their electrochromic properties.—73-16941
Preparation, characterization, and photoreactivity of titanium(IV) oxide encapsulated in zeolites.—73-12865
Preparing densified low-porosity titania sol-gel forms.—73-05240
Preparing titanium dioxide by the vapor phase oxidation of titanium tetrachloride.—73-12395
Processing of nanograined materials.—73-09280
Raman scattering and X-ray diffractometry studies of epitaxial $TiO_2$ and $VO_2$ thin films and multilayers on $\alpha$-$Al_2O_3$(1120).—73-02413
Raman spectral characterization of ceramics in the system $ZrO_2$-$TiO_2$.—73-02415
Raman spectroscopic study on $ZrO_2$-$TiO_2$ using $MoO_3$ as molecular probe.—73-02416
Rapid-rate sintering of anatase-type $TiO_2$ by microwave heating.—73-16969
Reaction sintering of $TiO_2$ with $ZrB_2$, a new method for the production of $ZrO_2$-reinforced $TiB_2$ composite ceramics.—73-13231
Reactions of hydrous titanium oxide colloids with strong oxidizing agents.—73-12673
Real structure of $TiO_2$ in samples of the $TiO_2$-$V_2O_5$ system.—73-02421
Reflection holographic gratings in [111] but $Bi_{12}TiO_{20}$ crystal for real-time interferometry.—73-12875
Relationships between dopants, microstructure, and the microwave dielectric properties of $ZrO_2$-$TiO_2$-$SnO_2$ ceramics.—73-04161
Reproducibility of the coloration processes in $TiO_2$ films.—73-09304
Resistivity and microstructure of alumina ceramics added with $TiO_2$ fired in reducing atmosphere.—73-16588
Resistivity and microstructure of alumina ceramics added with $TiO_2$ fired in reducing atmosphere.—73-16589
Role of gas-phase nucleation in the preparation of $TiO_2$ films by chemical vapor deposition.—73-09307
Rutile-type $TiO_2$ formation by ion beam dynamic mixing.—73-09311
SANS study of $x$$TiO_2$-$SiO_2$ gels with low titania content.—73-16299
Selective catalytic reduction of nitric oxide with ammonia on vanadium oxide catalysts supported on titania–alumina.—73-02685
Self-trapped state and phonon localization in $TiO_2$ quantum dot with a dipole layer.—73-01313
Sinter forging of nanocrystalline $TiO_2$.—73-06048
Sintering of titania–silica powder compacts with a bimodal pore size distribution.—73-13268
Sol-gel coating process for the preparation of supported $TiO_2$ composite membranes.—73-03019
Sol-gel preparation and optical nonlinearity of lead(II) oxide–titanium(IV) oxide amorphous monoliths.—73-06062
Sol-gel route to synthesis of microporous ceramic membranes: preparation and characterization of microporous $TiO_2$ and $ZrO_2$ xerogels.—73-13279
Solid-state reaction in the MgO excess region of the system MgO-$TiO_2$-$Al_2O_3$.—73-00866
Solvent–solute interaction in KTP crystal growth solution.—73-06066
Spectroellipsometric [SE] characterization of lanthanide-doped $TiO_2$ films obtained via the sol-gel technique.—73-12688
Spectroscopic measurements of stress relaxation during thermally induced crystallization of amorphous titania films.—73-12881
Sputter distribution of a large scale ion beam coater.—73-17007
Strengthening of glasses by sol-gel coating $TiO_2$-$SiO_2$ films.—73-14501
Structural changes of sol-gel-derived $TiO_2$-$SiO_2$ coatings in an environment of high temperature and high humidity.—73-00407
Structure and dispersion of molybdenum oxide supported on alumina and titania.—73-08758
Structure and thermal evolution of glasses obtained from porphiric sands, MgO (15%) and $TiO_2$ (0–16%).—73-10408
Structure of X-ray-amorphous hydrated titanium dioxide.—73-16341
Surface effects in photochemistry: an in situ cylindrical internal reflection-Fourier transform infrared investigation of the effect of ring substituents on chemisorption onto $TiO_2$ ceramic membranes.—73-16346
Surface structure and reactivity of molybdena-titania catalysts prepared by different methods.—73-12708
Synthesis and characterization of siloxane-titania materials.—73-13292
Synthesis and textural properties of unsupported and supported rutile ($TiO_2$) membranes.—73-09351
Synthesis of high-purity $TiO_2$ powder from elemental titanium particles.—73-09356
Synthesis of polymetalloxanes and their properties as a precursor for amorphous oxide: VI, Preparation of $SiO_2$-$TiO_2$ fibers containing various $TiO_2$ contents from polytitanosiloxane [PTS].—73-03051
Synthesis of $SiO_2$-$TiO_2$ glasses by sol-gel process.—73-14511
Tensile deformation of nanostructured $TiO_2$ at low temperatures.—73-13601
Textural evolution and phase transformation in titania membranes: I, Unsupported membranes.—73-16367
Textural evolution and phase transformation in titania membranes: II, Supported membranes.—73-16368
Textural stability of titania–alumina composite membranes.—73-09517
Thermal stability of nanostructured titania and titania-ceria ceramic powders prepared by the sol-gel process.—73-17057
Thin $TiO_2$ films prepared by low-pressure chemical vapor deposition.—73-04180
Ti-Ta oxide complex doped with $Eu^{3+}$.—73-05520
Time-resolved photoluminescence from excitons in $TiO_2$.—73-05681
$TiO_2$ thin films by chemical vapor deposition: control of the deposition process and film characterization.—73-17063
$TiO_2$-based vitreous coatings obtained by sol-gel method.—73-09379
$TiO_2$-$SiO_2$ deposits prepared by CVD.—73-17064
$TiO_2$-$SiO_2$ glasses prepared by the alkoxide route.—73-10609
$TiO_2$-$SnO_2$ deposits prepared by CVD.—73-06123
Titania gels: aggregation and gelation kinetics.—73-13326
Titanium oxide films deposited by dc reactive magnetron sputtering in different sputtering pressures.—73-06124
Titanium silica glass [investigated] by vibration spectroscopy.—73-14121
Ultrahigh vacuum metallorganic chemical vapor deposition growth and in situ characterization of epitaxial $TiO_2$ films.—73-17066
Ultrastructural evolution during gelation of $TiO_2$-$SiO_2$ sols.—73-10413
Ultrathin Fe films on $TiO_2$(110): growth and reactivity.—73-06870
Uranium adsorption capacity of $TiO_2$-$SiO_2$ porous glass-ceramics.—73-01758
Valence band densities-of-states of $TiO_2$(110) from resonant photoemission and photoelectron diffraction.—73-02720
Vanadia/titania catalysts in selective catalytic reduction of nitric oxide with ammonia.—73-02535
Wear characteristics of $TiO_2$ coating and silicon carbide alloyed layer on Ti-6Al-4V material.—73-10297
X-ray diffraction study of $TiO_2$-PbO glasses.—73-10415
XPS and XAES [X-ray-excited AES] study of $TiO_2$-$SiO_2$ mixed oxide system.—73-02548

**titanium carbide,**
$Al_2O_3$ and $ZrO_2$ composites with high-TiC contents fabricated by tailoring oxide powders.—73-09012
Al/TiC composites produced by melt infiltration.—73-13796
Analysis of TiC and TiN films prepared by an arc-induced ion plating.—73-00209
Application of microwave heating to combustion synthesis and sintering of $Al_2O_3$-TiC ceramics.—73-05695
Bonding in $Ti_8C_{12}$ and the substantial Jahn-Teller effect.—73-08556
Cause of formation of pores in titanium-carbide-based cermet with the addition of zirconium carbide.—73-13804
Characteristic TiC body fabricated by combustion synthesis using reactant compact with density of more than 80%.—73-05702
Characteristics of hollow cathode discharge plasma and its application for the reactive ion plating of TiN and TiC.—73-09034
Chemical reaction and fracture behavior of hot-pressed $Si_3N_4$-TiC composites.—73-09549
Composite materials for sliding members.—73-12455
Creep characteristics of TiC-$Mo_2C$-Ni cermet sintered after nitrification in the course of raising temperature.—73-06763
Cutting performance of titanium-carbide-based cermet nitrified during the course of sintering.—73-13816
Defect structures in single-crystal TiC.—73-09396
Effect of aluminum addition on the combustion reaction of titanium and carbon to form TiC.—73-16723
Effect of microstructure on mechanical properties and cutting performance of $Al_2O_3$-Ti(C,N) ceramics.—73-06385
Effect of pore size on the infiltration kinetics of aluminum in titanium carbide preforms.—73-06775
Effects of TiC content and grain size on cutting performance of $Al_2O_3$-TiC ceramic tools.—73-08511
Electronic structure and bonding in metallocarbohedrene $Ti_8C_{12}$.—73-16132

Electronic structure of $Ti_8C_{12}$ cluster.—73-08611
Fabrication and characterization of CVD-deposited TiC-SiC composites.—73-02819
Fabrication of a functionally gradient material of TiC-SiC system by chemical vapor deposition.—73-02822
Fabrication of a functionally gradient material of TiC-SiC system by chemical vapor deposition.—73-13052
Fracture toughness of TiC-SiC composites fabricated by CVD and the mechanism of toughening.—73-03302
Fracture toughness of TiC-SiC composites fabricated by CVD and the mechanism of toughening.—73-13541
Gas-pressure combustion sintering and properties of $Cr_3C_2$ ceramic and its composite with TiC.—73-13071
High-temperature toughening mechanism in SiC/TiC composites.—73-05267
High-temperature toughening mechanism in SiC/TiC composites.—73-13547
Hot-pressed $Al_2O_3$/SiC whisker/TiC nanocomposites.—73-05847
Hot-pressed $Al_2O_3$/SiC whisker/TiC nanocomposites.—73-13548
Influence of reactant characteristics on the microstructures of combustion-synthesized titanium carbide.—73-09176
Interfacial characterization of chemically vapor deposited titanium carbide on cemented carbide.—73-16186
Kinetics in thermal laser-assisted chemical vapor deposition of titanium carbide.—73-13109
Mechanical properties and oxidation resistance of TiC-dispersed titanium aluminide produced by mechanical alloying process.—73-13866
Metal and carbide coatings of ceramic particles using chemical plating techniques.—73-13870
Microstructure and chemical reaction in an $Si_3N_4$-TiC composite.—73-06252
Microstructure of chemically vapor codeposited SiC-TiC-C nanocomposites.—73-13430
Precursor morphology effects in combustion-synthesized and dynamically consolidated titanium carbide and titanium boride.—73-02929
Process for producing titanium carbide whisker.—73-05330
Processing and investigation of tauboride-containing NiCrBTi-TiC plasma coatings.—73-10266
Production of a dense metal-ion stream for ion coating by a pulsed vacuum arc in a strong magnetic field.—73-16956
Ptomic oxygen [AO] of TiC and $TiB_2$.—73-12441
Role of the metallic phase in high-temperature deformation of titanium-carbide-based ceramics.—73-09667
Roller body, method of its manufacture, and of [coated ceramic] roller or plain bearings.—73-16015
Sintering properties of $TiB_2$-TiC composite by self-propagating high-temp. synthesis method.—73-06059
Sintering property of green compacts of Si and TiC mixed powders in nitrogen.—73-03013
Sliding-wear behavior of ceramic particle-reinforced high-speed steel obtained by powder metallurgy.—73-06855
Stability, bonding, and geometric structure of $Ti_8C_{12}$, $Ti_8N_{12}$, $V_8C_{12}$, and $Zr_8C_{12}$.—73-16313
Structurization of SHS [self-propagating high-temperature synthesis] products [investigated] under model experiments.—73-13597
Synthesis and characterization of Ti-B-C system ceramics prepared by self-propagating high-temperature synthesis method.—73-06080
TiC-base cermet alloy.—73-00300
TiC-strengthened $Al_2O_3$ by powder tailoring and doping procedures.—73-06120
TiC-strengthened $Al_2O_3$ by powder tailoring and doping procedures.—73-09378
TiC/SiC ceramic composite prepared by SHS/HP processing.—73-17061
Titanium-carbide-based porous high-temperature synthesis material.—73-05279
Tribological and structural characterization of a physical-vapor-deposited TiC/Ti(C,N)/TiN multilayer.—73-17453
Unoccupied Shockley surface state on a carbon-deficient TiC(110) surface.—73-16389
Wetting of titanium carbide by molten metals.—73-03666

**titanium carbonitride,**
Deposition of Ti(C,N) coatings by arc evaporation.—73-10214
Effect of microstructure on mechanical properties and cutting performance of $Al_2O_3$-Ti(C,N) ceramics.—73-13511
Effects of carbide addition on the mechanical properties of the $Ti(C_{0.5},N_{0.5})$-30 wt% $TiB_2$-carbide sintered compacts.—73-03274
Performance of TiN-, Ti(C,N)-, and (Ti,Al)N-coated cutting tools.—73-10260
Titanium-carbonitride-based cermets: processes and properties.—73-06867

**titanium diboride,**
Anomalous temperature dependence of cyclic fatigue-crack growth in a silicon carbide matrix composite.—73-17238
Ceramic composites and process for manufacturing the same.—73-15937
Characteristics of $TiB_2$ ceramics.—73-02742
Chemical reactions in $TiB_2$/$Si_3N_4$ composites.—73-12941
Chemical stability of titanium diboride reinforcement in nickel aluminide matrices.—73-06749
Chemical vapor infiltration of $TiB_2$-matrix composites.—73-16674
Composition of titanium boride synthesis products.—73-12555
Copper-$TiB_2$ coatings obtained by plasma spraying reactive micropellets.—73-06761
EDMing ceramics and composites.—73-15720
Effects of SiC addition on the mechanical properties and sinterability of $TiB_2$-(2 mol% $Y_2O_3$-$ZrO_2$) composite.—73-02807
Effects of SiC addition on the mechanical properties and sinterability of $TiB_2$-(2 mol% $Y_2O_3$-$ZrO_2$) composite.—73-13519
Effects of $ZrO_2$ addition on the mechanical properties of $TiB_2$ HIPed compacts.—73-03278
Effects of $ZrO_2$ addition on the mechanical properties of $TiB_2$ HIPed compacts.—73-13521
Effects of $ZrO_2$ addition on the mechanical properties of $TiB_2$-6% $TaB_2$-1% CoB-2% TiC-α% $ZrO_2$ ceramics.—73-17301
Elastic moduli of $TiB_2$.—73-08844
Electrical resistivity of plasma-sprayed titanium diboride coatings.—73-08858
Electrochemical synthesis of $TiB_2$ powder in molten salts.—73-13041
Fracture toughness assesssment of silicon-carbide-based ceramics and particulate-reinforced composites.—73-03299
Friction and wear test of titanium boride ceramics at elevated temperatures.—73-06444
Friction and wear tests of titanium boride ceramics at elevated temperatures.—73-17336
High-temperature strength of $TiB_2$ ceramics.—73-17349
In situ reacted $TiB_2$-reinforced alumina.—73-03312
Kinetics of interaction between titanium diboride and molten glasses.—73-00364
Material made from highly reactive [submicron] amorphous titanium diboride powder and products made therefrom.—73-12479
Mechanical properties of hot-pressed SiC-$TiB_2$/TiC composites synthesized in situ.—73-03334
Mechanical properties of SiC whisker-reinforced $TiB_2$ composites fabricated by hot-pressing.—73-17392
Microstructure and sintering mechanism of $TiB_2$-$ZrO_2$-SiC composite.—73-06254
Microstructure and sintering mechanism of $TiB_2$-$ZrO_2$-SiC composite.—73-13427
Microstructure of $B_4C$/$TiB_2$ composite fabricated by reaction sintering of $B_4C$ and TiC.—73-17168
Oxidation of $TiB_2$-20 vol% $B_4$ composite.—73-09534
Oxidation of $TiB_2$-$CaB_6$ composite material.—73-13486
Precursor morphology effects in combustion-synthesized and dynamically consolidated titanium carbide and titanium boride.—73-02929
Ptomic oxygen [AO] of TiC and $TiB_2$.—73-12441
Sinterability of $TiB_2$ ceramics containing Cr and C as the sintering aids.—73-13256
Sintering behavior and mechanical properties of reaction-sintered $TiO_2$-$ZrO_2$ composite ceramics.—73-06053
Sintering properties of $TiB_2$-TiC composite by self-propagating high-temp. synthesis method.—73-06059
Strength and microstructure of electrodischarge-machined titanium diboride.—73-09675
Synthesis, processing, and phase evolution of TiN/$TiB_2$ composites from polymeric precursors.—73-06104
Thermal conductivities of Ti-SiC and Ti-$TiB_2$ particulate composites.—73-06864
$TiB_2$-$B_4C$ composites pressureless-sintered [at 1600°C] using Ni and C as densification aids.—73-06119
Titanium diboride.—73-12304
Toughening mechanisms of $TiB_2$/$Si_3N_4$ composite.—73-06542
Wet chemistry and combustion synthesis of nanoparticles of $TiB_2$.—73-06134
Wire electrical discharge machining of $TiB_2$ composite.—73-06135
Wire electrical discharge machining of $TiB_2$ composites.—73-13336

**titanium nitride,**
Active plasma species in TiN film formation process by plasma CVD method.—73-02723
Active plasma species in TiN film formation process by plasma CVD method.—73-12908
Analysis of TiC and TiN films prepared by an arc-induced ion plating.—73-00209
Application of TiN-coated bushings in the standard method for indicating the wear characteristics of hydraulic fluids in vane pumps.—73-06739
Ceramic composite and process for its production.—73-15936
Characteristics of hollow cathode discharge plasma and its application for the reactive ion plating of TiN and TiC.—73-09034
Characterization and optical properties of thin films formed on TiN coatings during electrochemical treatments.—73-02558
Characterization of electroconductive TiN/Al-O-N composites.—73-10921
Characterization of TiN/$TiSi_2$ bilayer for application to ULSI.—73-08819
Coating thickness and surface roughness of TiN-coated high-speed steel in relation to coating functionality.—73-06752
Comparison of TiAlN coatings grown by unbalanced magnetron and arc bond sputtering techniques.—73-16681
Convenient, rapid, low-energy route to crystalline TiN, VN, and $Ti_xV_yN$ ($x+y=1$).—73-16686
Conversion electron Mossbauer characterization of Fe-Ti and Fe-TiN interfaces in dependence on pretreatments and bias voltage in physical vapor deposition.—73-17119
Correlations of plasma properties and magnetic field characteristics to TiN film properties formed using a dual unbalanced magnetron system.—73-02755
Corrosion behavior of steel coated with thin-film TiN/Ti composites.—73-03570
Corrosion behavior of various TiN thin films produced by ion mixing and PVD methods.—73-17218
Creep of silicon nitride–titanium nitride composites.—73-09564
Crystal growth and microstructure of polycrystalline $Ti_{1-x}Al_xN$ alloy films deposited by ultrahigh-vacuum dual-target magnetron sputtering.—73-13385
Deposition of diamond/TiN composite film on tool steel substrate.—73-03572
Deposition of high-quality TiN films by excimer laser ablation in reactive gas.—73-12976
Deposition of TiN films onto glaze of porcelain by reactive sputtering.—73-00768
Deposition rates of titanium nitride plates prepared by chemical vapor deposition of $TiCl_4$+$NH_3$ system.—73-16698
Development of (Ti,Al)N and (Ti,Nb)N ceramic coatings produced by steered arc ion plating.—73-10215
Diffusion barrier properties of TiN films for submicron silicon bipolar technologies.—73-11140
Effect of a titanium underlayer on the corrosion behavior of physically vapor deposited titanium nitride films.—73-13822
Effect of microstructure on mechanical properties and cutting performance of $Al_2O_3$-Ti(C,N) ceramics.—73-06385
Effect of plasma nitriding on the properties of (Ti, Al)N coatings deposited onto hot-work steel substrates.—73-03580
Effect of postdeposition annealing on structure and chemistry of the TiN film/steel substrate interfaces.—73-00222
Effect of TiN anneal ambient on the microstructure and electromigration performance of Al-based alloys.—73-03583
Effects of precoating and bias voltage on the adhesion of reactive arc evaporated TiN and ZrN coatings.—73-00224
Effects of strain energy on the preferred orientation of TiN thin films.—73-09109
Effects of TiN particle size on mechanical properties of $Si_3N_4$/TiN particulate composites.—73-06401
Effects of TiN particle size on mechanical properties of $Si_3N_4$/TiN particulate composites.—73-13520
Elastic behavior of TiN thin films.—73-12781
Electroconductivity of sintered bodies of α-$Al_2O_3$-TiN composite prepared by CVD reaction in a fluidized bed.—73-08859
Electroplating process for enhancing the conformality of titanium and titanium nitride films in the manufacture of integrated circuits and structures produced thereby.—73-12077
Excimer laser reactive ablation: an efficient approach for the deposition of high-quality TiN films.—73-16767
Formation and properties of laser coatings based on oxynitride ceramic.—73-13062
Formation of titanium nitride on semiconductor wafer by reaction of titanium with nitrogen-bearing gas in an integrated processing system.—73-01372
Gas porosity formation in epitaxial TiN films deposited by reactive magnetron sputtering in mixed Ar/$N_2$ discharges.—73-09455
Golden yellow pigment.—73-02041
Growth of epitaxial TiN films on MgO(100) by high current discharge plasma.—73-13081
Hard material coatings on flat glass and their applications.—73-00637
Hardness and elastic [modulus] of TiN based on continuous indentation technique and new correlation.—73-00237
High-stability titanium-nitride-based solar control films.—73-16505
Hot-pressing of TiN-alumina composites.—73-16822
Influence of composition and oxidation temperature on thermal conductivity of Si-Ti-O-N porous ceramics.—73-16515
Influence of the deposition parameters on the composition, structure, and X-ray photoelectron spectroscopy spectra of Ti-N films.—73-13103
Intake or exhaust valve actuator.—73-00284
Interatomic interactions and electronic properties of NaCl-type $Ti_xAl_{1-x}N_y$.—73-12609
Interdiffusion in Cu/reactive-ion-sputtered TiN, Cu/chemical-vapor-deposited TiN, Cu/TaN, and TaN/Cu/TaN thin-film structures: low-temperature diffusion analyses.—73-13356
Interfacial reactions in epitaxial Al/$Ti_{1-x}Al_xN$ ($0 \le x \le 0.2$) model diffusion-barrier structures.—73-06165
Interfacial reactions in single-crystal TiN(100)/Al/polycrystalline TiN multilayer thin films.—73-10243
Low-energy (–100 eV) ion irradiation during growth of TiN deposited by reactive magnetron sputtering: effects of ion flux on film microstructure.—73-03160
Low-pressure chemical vapor deposition process for depositing high-density, highly conformal titanium nitride films of low bulk resistivity.—73-02103
Low-temperature deposition of TiN on steel substrate by plasma-assisted CVD.—73-06815
Mechanical and electrical properties of hot-pressed TiN ceramics without additives.—73-06477
Mechanical properties of hot-pressed TiN ceramics with various additives.—73-06480
Mechanical properties of hot-pressed TiN ceramics with various additives.—73-17386
Mechanical properties of TiN/AlON composites.—73-09643
Metallorganic precursors to titanium nitride.—73-16000
Method for forming a titanium nitride barrier layer.—73-02108
Method of depositing high-density titanium nitride films on semiconductor wafers.—73-05315
Method of forming titanium nitride coatings on carbon/graphite substrates by electric arc thermal spray process using titanium feed wire and nitrogen as the atomizing gas.—73-05316

Microstructure and properties of the sintered composite prepared by hot-pressing of TiN-coated alumina powder.—73-17165
Microstructure of iron nitride–titanium nitride films prepared by CVD.—73-09489
Morphology of TiN coating produced by laser ablation.—73-09492
Morphology of TiN films deposited by arclike plasma-enhanced ion plating.—73-09493
Nonlinear current-voltage characteristics generated from TiN/$TiO_2$ composite.—73-05598
Nonlinear current-voltage characteristics generated from TiN/$TiO_2$ composite.—73-12840
Nucleation and growth of chemical vapor deposition TiN films on Si(100) as studied by total reflection X-ray fluorescence, atomic force microscopy, and Auger electron spectroscopy.—73-09496
Optical properties and equilibrium temperatures of titanium-nitride- and graphite-coated Langmuir probes for space application.—73-10259
Optical properties of selective reflection $TiN_x$ films.—73-12851
Performance of TiN-, Ti(C,N)-, and (Ti,Al)N-coated cutting tools.—73-10260
Phase diagrams of ordered nonstoichiometric HfC and TiN.—73-05449
Photodeposition sputtering of titanium and TiN thin films.—73-13163
Photoemission study of low pressure chemical vapor deposited and reactively sputtered titanium nitride in W/TiN/Si.—73-07721
Physical vapor deposition of titanium nitride on a nonconductive substrate.—73-05324
Plasma nitriding of sputtered Ti films.—73-09243
Preparation of nonoxidizing abrasive by sol-gel method.—73-09767
Process for depositing titanium nitride film by CVD.—73-12508
Processing and mechanical properties of $Si_3N_4$-SiC whisker-TiN system composite materials.—73-16948
Processing and mechanical properties of $Si_3O_4$-SiC whisker–TiN system composite material.—73-05995
Processing-texture relationships in dual-unbalanced magnetron deposition of TiN films.—73-16955
Production of a dense metal-ion stream for ion coating by a pulsed vacuum arc in a strong magnetic field.—73-16956
Radio frequency plasma jet applied to coating of internal walls of narrow tubes.—73-09289
Reactive pulsed laser deposition of thin TiN films.—73-02992
Regularities of structure formation at ignition of titanium in nitrogen.—73-13443
Reliability study of TiN/AlCu/TiN interconnect in submicron CMOS process.—73-04469
Residual stresses in TiN-coated graphite.—73-17421
Science and technology in composite materials—composite ultrafine particles.—73-13896
Secondary ion mass spectrometry quantification of elements in $TiSi_2$, TiN, and TiW matrices.—73-08728
$Si_3N_4$-TiN porous ceramics: I, Microstructure and electrical properties in a humid atmosphere.—73-03193
$Si_3N_4$-TiN porous ceramics: I, Microstructure and electrical properties in a humid atmosphere.—73-13446
Sliding-wear behavior of ceramic particle-reinforced high-speed steel obtained by powder metallurgy.—73-06855
Stability, bonding, and geometric structure of $Ti_8C_{12}$, $Ti_8N_{12}$, $V_8C_{12}$, and $Zr_8C_{12}$.—73-16313
Stoichiometry effects in TiN diffusion barriers.—73-13286
Stress and anisotropy effects in the interfacial reactions of Al and $TiN_x$.—73-03645
Structural analysis of Zr-N and Ti-N films prepared by reactive plasma beam deposition.—73-06285
Structural stability and mechanochemical activity of titanium nitride prepared by mechanical alloying [MA].—73-09343
Structure and properties of $(Ti_{1-x}Al_x)N$ films prepared by reactive sputtering.—73-05499
Structure of TiN films deposited on heated and negatively biased silicon substrates.—73-12705
Surface impedance measurements of superconducting (NbTi)N films by a ring microstrip resonator technique.—73-01682
Synthesis of titanium nitride by SHS method.—73-17047
Synthesis of titanium nitride whiskers from potassium fluorotitanate(IV)[—comment on using chemical equilibria calculation].—73-02501
Synthesis, processing, and phase evolution of TiN/$TiB_2$ composites from polymeric precursors.—73-06104
Temperature dependence of the electrical resistivity of reactively sputtered TiN films.—73-02702
Texture and residual macrostress of Ti-N coatings.—73-05649
Thermal oxidation of TiN studied by means of soft X-ray absorption spectroscopy.—73-05513
Thin-film properties of low-pressure chemical vapor deposition TiN barrier for ultra-large-scale integration applications.—73-12900
Ti/TiN reactive sputtering: plasma emission, X-ray diffraction, and modeling.—73-00271
Ti/TiN/Ti contact metallization.—73-01388
TiN thin film by sol-gel.—73-06122
Titanium nitride coatings created by nitriding titanium dioxide coatings on corundum cutting tools.—73-03063
Titanium nitride oxidation chemistry: an X-ray photoelectron spectroscopy study.—73-13490
Transformation of titanium nitride in oxygen plasma.—73-06321
Transmission electron microscopy analysis of a $TiN_x$ substoichiometric CVD coating.—73-13461
Tribological and structural characterization of a physical-vapor-deposited TiC/Ti(C,N)/TiN multilayer.—73-17453
Tribological investigation of physical vapor deposition TiN coatings paired with surface-treated steels for machine element applications.—73-06868
Use of elastic recoil detection for stoichiometry determination of reactively evaporated TiN layers.—73-08454
X-ray residual stress measurement in TiN, ZrN, and HfN films using the Seemann-Bohlin method.—73-16649

**titanium oxide,**
Formation of $RuO_2$-$TiO_2$ thin films by thermal decomposition technique.—73-13066
Influence of microcracking on fracture toughness of $TiO_2$ sintered body.—73-13552
Ionic conductivity of quasi-one-dimensional superionic conductor $KTiOPO_4$ (KTP) single crystal.—73-00987
Microwave loss quality of $(Zr_{0.8}Sn_{0.2})TiO_4$.—73-14718
Modeling of time-dependent process changes and hysteresis in Ti-$O_2$ reactive sputtering.—73-09214
New oxidation process of potassium titanium dioxide bronze with the hollandite structure.—73-02901
Nonlinear current-voltage characteristics generated from TiN/$TiO_2$ composite.—73-12840
Picosecond optical parametric generation in flux grown by KTP.—73-02669
Preparation and properties of $TiO_2$ films by complexing agent-assisted sol-gel method.—73-13178
Preparation and sinterability of zirconia-toughened-alumina composite powder.—73-02936
Preparation of titanium oxide fibers by use of sodium alginate.—73-02973
Preparation of titanium oxide fibers by use of sodium alginate.—73-13208
Solid reaction in the MgO excess regions of the system MgO-$TiO_2$-$Al_2O_3$.—73-13368
Solid-state chemistry of thermally induced yellow coloring in synthetic hydrous titanium oxide from $TiCl_3$.—73-12685
Structural change of titanium-oxide-evaporated films during in situ heating in an electron microscope.—73-17199
Structural investigation of titanium dioxide photocatalysts.—73-02448
Structure of an L-$Ta_2O_5$-type phase in the L-$Ta_2O_5$-$TiO_2$ system.—73-08759
Titanium oxide formation by dynamic ion beam mixing.—73-03064

**titanium silicide,**
Characterization of dense combustion-synthesized $Ti_5Si_3$.—73-05367
Characterization of TiN/$TiSi_2$ bilayer for application to ULSI.—73-08819
Dependences of titanium silicide properties on the ratio of silicon to titanium used for electron-beam coevaporation onto heated substrates.—73-05736
Difluorosilylene as a precursor for the chemical vapor deposition of titanium silicide.—73-12988
Elastic constants and thermal expansion coefficient of metastable C49 $TiSi_2$.—73-02593
Improved control of momentary rapid thermal annealing for silicidation.—73-04112
Kinetics of the formation of C49 $TiSi_2$ from Ti-Si multilayer as observed by in situ stress measurements.—73-07630
Nucleation and growth in the initial stage of metastable titanium disilicide formation.—73-09495
Oxide-capped titanium silicide formation.—73-14758
Secondary ion mass spectrometry quantification of elements in $TiSi_2$, TiN, and TiW matrices.—73-08728
Sinterability and electrical conductivity of some $TiSi_2$/glass systems.—73-16989
Titanium disilicide formation by interdiffusion of titanium/amorphous silicon multilayers: influence of the bilayer silicon to titanium thickness ratio on the film properties.—73-13327

**titanium,**
Analytical and chemical techniques in the study of surface species in atomic layer epitaxy.—73-05020
Application of titanium glaze to the ceramic tiles.—73-10795
ß-tricalcium phosphate [ß-TCP] coating on titanium.—73-00210
Chemical interactions in titanium- and tungsten-implanted fused silica.—73-06888
Combined mechanical alloying and thermochemical processing approach to synthesize titanium aluminides.—73-05712
Composition dependence of discontinuous magnetization in Li-Ti ferrites.—73-15309
Continuously tunable coherent source over 202–3180 nm based on a Ti:sapphire laser.—73-16429
Crystal structure of two modifications of natural Ba, Mn titanium silicate.—73-02217
Crystallization of $AgTi_2(PO_4)_3$ and related compounds close to ambient conditions.—73-05723
Damage development in titanium metal-matrix composites subjected to cyclic loading.—73-03258
Decomposition of monohydride and eutectoid transformation in Ti-H (D) system.—73-13656
Defect clustering and color in Fe,Ti: α-$Al_2O_3$.—73-05540
Development of titanium aluminide composites.—73-10216
Development of titanium-opacified glaze.—73-07245
Diffusion bonding behavior of austenitic stainless steel containing titanium and alumina.—73-03575
Dimensional change characteristics of ceramics produced by simultaneous nitriding of Si and Ti powders and its application to adiabatic engine parts.—73-05743
Dimensional change characteristics of ceramics produced by simultaneous nitriding of Si and Ti powders and its application to adiabatic engine parts.—73-12989
Effect of electron-beam deposition rate on the electrical properties of Ti/ and Pt/*n*-GaAs contacts.—73-12771
Effect of heat treatment on the microstructure of near-γ-TiAl powder alloys.—73-06773
Effect of mechanical alloying on γ-TiAl alloys.—73-05762
Effect of processing parameters on mechanical alloying of $Ti_3Al$-base alloys.—73-05769
Effect of TiW as adhesion layer and underlying metal on electromigration characteristics of tungsten via plugs.—73-03584
Elastic and piezoelectric properties of $KTiOPO_4$ crystals.—73-15258
Electrical characterization of zirconia-niobium and zirconia-titanium composites.—73-08852
Electron nuclear double resonance [ENDOR] study of $LaMgAl_{11}O_{19}$:$Ti^{3+}$.—73-02255
Electronic properties and carrier spectrum parameters of titanium disulfide intercalated by silver.—73-16488
Enameling of titanium-stabilized steel.—73-03585
Evaluation of adhesion strength in a Ti/$Al_2O_3$ composite.—73-00231
Evidence of refractive index change by Ti indiffusion into $LiNbO_3$ substrate as a result of multipulse free-running ruby laser irradiation.—73-08866
Fastener Development Program for TMC [titanium matrix composite] applications.—73-13619
Fatigue crack growth in a fiber-reinforced titanium MMC at ambient and elevated temperatures.—73-03289
Fine structure analysis of mechanically alloyed titanium aluminides.—73-05808
Formation of high-$T_c$ $Bi_{1.6}Pb_{0.4}Sr_2Ca_2(Cu_{0.9}Ti_{0.1})_3O_x$.—73-11770
Formation of Ti-Al-$ZrO_2$ film on the surface of mechanical alloying ball.—73-06794
Formation of Ti-Al-$ZrO_2$ film on the surface of mechanical alloying ball.—73-16794
Fully packaged high-speed TiLi$NbO_3$ waveguide Mach-Zehnder intensity modulator.—73-15266
Fully reversed fatigue of a Ti MMC.—73-10234
Glass-ceramic coatings for titanium aluminides.—73-06798
Growth and characterization of $Bi_{12}(Si_{1-x}Ti_x)O_{20}$ mixed crystals.—73-05572
Guided mode field distributions of Ti:$LiNbO_3$ optical waveguides.—73-07893
Hardening of a titanium alloy by laser nitriding.—73-06799
Hydrothermal strontium titanate films on titanium: an XPS and AES depth-profiling study.—73-10959
Implantation of quartz with high-dose Ti ions as studied by XPS.—73-13401
In and ex situ diagnostics of the growth of alpha-Ti thin films deposited by plasma-enhanced physical vapor deposition.—73-05854
Instability of $Ti_xGa_x$ alloys with respect to GaAs at elevated temperatures.—73-07610
Interaction of titanium with single-crystal silicon during rapid electron beam heating.—73-00243
Interface characterization of chemically vapor deposited diamond on titanium and Ti-6Al-4V.—73-10240
Interface reaction of TiC particle-reinforced titanium composites.—73-10241
Interfacial reactions between titanium and borate glass.—73-00245
Large-pressure effect on photoluminescence lines in 6H SiC:Ti crystals.—73-16529
$Li_{3-x}Ti_2(PO_4)_3$ ($0 \le x \le 1$): a new mixed valent titanium(III/IV) phosphate with a Nasicon-type structure.—73-02318
Local crystallization of titanium-containing glasses under the action of laser radiation.—73-00652
Manganese- and tantalum-modified titanium alumina alloys.—73-03688
Means of raising the quality of white titanium enamels.—73-06817
Measurement of low-frequency electric field using Ti:$LiNbO_3$ optical modulator.—73-15271
Mechanical alloying [MA] of TiAl: preliminary results.—73-06818
Microstructural features related to corrosion initiation in titanium-aluminum nitride coated steel.—73-10254
Microstructural study of $Al_2O_3$/Ti joints brazed with different Ag-Cu filler metals.—73-03618
Microstructure of a sputtered Ti film on an indium tin oxide substrate.—73-17167
Microstructure of iron nitride-titanium nitride films prepared by CVD.—73-17170
Monitoring damage growth in titanium matrix composites [TMC's].—73-12167
New barium titanium(III) pyrophosphate: $BaTi_2(P_2O_7)_2$.—73-02349
New ceramics based on $Ti_3SiC_2$.—73-08536
Nitriding of titanium surface by the self-propagating high-temperature synthesis.—73-10258
Photodeposition sputtering of titanium and TiN thin films.—73-13163
Picosecond and femtosecond pulse generation in a regeneratively mode-locked Ti:sapphire laser.—73-07733
Point defects and collective interactions in $Ti_{1-x}V_xO_2$ single crystals.—73-03106
Polar-oriented crystallization of fresnoite ($Ba_2TiSi_2O_8$) on glass surface due to ultrasonic treatment with suspensions.—73-14072
Positions of 3-valent and 4-valent titanium ions in [corundum] lattice.—73-16275
Preparation and characterization of titanium oxynitrides with high specific surface areas.—73-02934
Preparation and microstructure of reactively sputtered $Ti_{1-x}Zr_xN$ [$x$=0.3–0.8] films.—73-06269
Preparation and properties of phosphate glasses and glass-ceramics containing large amounts of titanium: IV.—73-14472

Preparation of $Na_{1-x}Ti_{2+x}Al_{5-x}O_{12}$ (x=0.2) fiber by precursor method.—73-02959
Preparation of $Na_{1-x}Ti_{2+x}Al_{5-x}O_{12}$ [NTAO] whiskers by calcining with excess $Na_2O$.—73-02960
Process for producing crack-free nitride-hardened surface on titanium by laser beams.—73-10342
Processing-structure properties' relations in titanium boron carbon ceramic-ceramic composites produced by transient plastic phase processing.—73-16954
Properties of functionally gradient composite consisting of hydroxyapatite containing glass-coated titanium and characters for bioactive implant.—73-03636
Properties of functionally gradient composite consisting of hydroxyapatite containing glass-coated titanium and characters for bioactive implant.—73-10267
Pyrolysis of titanium metal-filled poly(siloxane) preceramic polymers: effect of atmosphere on the chemistry of titanium transformation.—73-16966
Raman investigation of the nonlinear optical phenomenon of polarization rotation in Ti:$LiNbO_3$ channel waveguides.—73-07916
Rapid infrared joining [RIJ] of titanium alloys and titanium matrix composites.—73-00261
Reaction bonding of $ZrO_2$ and NiTi: reaction products' analyses on $ZrO_2$/NiTi bonding interface with AEM.—73-13890
Reaction-induced changes in interfacial and macroscopic mechanical properties of SiC-monofilament-reinforced titanium.—73-03348
Reactivity between Ti and $N_2$-$C_2H_2$ mixed gas on Ti(C,N) film deposition by arclike plasma-enhanced ion plating.—73-06016
Refractive index changes in $Ti^{3+}$-doped glass.—73-14268
Residual stresses and fracture properties of magnetron-sputtered Ti films on Si microelectronics.—73-06512
Schottky barrier height and negative electron affinity of titanium on (111)diamond.—73-07787
Sensitivity of intracavity absorption measurements with Ti:sapphire laser.—73-16593
Sintered carbonitride alloy with highly alloyed binder phase.—73-16018
Sintering and properties of $CaTi_4(PO_4)_6$ [CTP] prepared by sol-gel process.—73-03006
Sintering and properties of $MgTi_4(PO_4)_6$ [MTP] prepared by sol-gel process.—73-03007
Sol-gel processing of titanium-containing thin coatings: I, Preparation and structure.—73-03022
Spectroscopic investigations into plasma used for nitriding processes of steel and titanium.—73-06856
Structure and properties correlation dependence of titanium and silicon coatings obtained by sol-gel processing.—73-14103
Structure determination [by powder XRD] of two new ternary oxides: $Ti_3PdO$ and $Ti_4Pd_2O$.—73-02460
Synchronous pumping of a visible dye laser by a frequency-doubled mode-locked Ti:sapphire laser and its application for difference frequency generation in the near ir.—73-08975
Synthesis and characterization of titanium hydride thin films obtained by reactive cathodic sputtering.—73-06081
Synthesis and characterization of titanium pillared clays: influence of the temperature of preparation.—73-03038
Synthesis of $(Cr_{1-x}Ti_x)O_3$ solid solution by laser-ignited vapor-phase reaction.—73-06085
Synthesis of $Ti_3SiC_2$-based materials using microwave-initiated SHS.—73-17046
Synthesis of titanium oxynitride by mechanical milling.—73-13312
Synthesis, characterization, and catalytic properties of titanium silicates prepared using phosphonium ions.—73-08769
Synthesis, structural characterization, and two-dimensional antiferromagnetic ordering for the oxides $Ti_{x(1-y)}Ni_xSb_2O_6$ [1≥x≥0.6].—73-02504
Tapered, both in dimension and in index, velocity coupler: theory and experiment.—73-15291
$TE_0$ mode polarizer of Ti:$LiNbO_3$ optical waveguides in 1.5-μm wavelength.—73-01436
Temperature dependence of dc drift of Ti:$LiNbO_3$ optical modulators with sputter-deposited $SiO_2$ buffer layers.—73-01437
Thermal conductivities of Ti-SiC and Ti-$TiB_2$ particulate composites.—73-06864
Thermal fixing technique of Ti-diffused $LiNbO_3$ waveguide characteristics.—73-01438
Thermal residual stresses in SiC/Ti (0/90) laminate.—73-13902
Thermal-fatigue properties of $Ti_3Al$-based intermetallics.—73-10288
Thermochemistry of the selenides of titanium of variable composition, $TiSe_{1.5-2}$.—73-02523
Thermoluminescence and defect annealing in γ-irradiated $KTiOPO_4$.—73-16639
Thermomechanical response of a crossply titanium matrix composite subjected to a generic hypersonic flight profile.—73-03656
Thio sol-gel process for the synthesis of titanium disulfide.—73-09377
Ti/borophosphosilicate glass interfacial reactions and their effects on adhesion.—73-06866
Ti/TiN/Ti contact metallization.—73-01388
Ti:$Al_2O_3$ master-oscillator/power-amplifier system.—73-15210
$TiB_2$-$B_4C$ composites pressureless sintered using Ni and C as densification aids.—73-17060
Time synchronization measurements between two self-mode-locked Ti:sapphire lasers.—73-16642
Titanium matrix composites for NASP airframe usage.—73-10290
Toward an understanding of the reaction sequences in brazed joints: investigation of the Ti-Cu-O ternary at 945°C.—73-00273
Tunable ps pulses below 200 nm by external frequency conversion of cw mode-locked Ti:$Al_2O_3$ laser radiation.—73-09002
Ultrashort pulse generation from a passively mode-locked Ti:sapphire-based system.—73-07851
Using rapid infrared forming to control interfaces in titanium matrix composites.—73-06871
Valence Auger analysis of the annealing effect on atomic interaction at titanium–sapphire, titanium–silica, and silver–silica interfaces.—73-10296
Wear behavior of titanium coating combinations at elevated temperatures.—73-06875
X-ray control of white titanium enamel production.—73-06880

**titration,**
Cold decomposition and potentiometric titration of chlorine in glass and raw materials.—73-05028
Determination of Cu(II) and Bi(III) in oxide systems based on Bi, Cu, Ca, and Sr by photometric titration by EDTA with pyrocatechol violet.—73-11724

**tobermorite,**
$^{29}Si$ MAS NMR study on structural change of silicate anions with carbonation of synthetic 11 Å tobermorite.—73-12679
$^{29}Si$ MAS NMR study on structural change of silicate anions with carbonation of synthetic 11-Å tobermorite.—73-02430
Carbonation reaction of synthetic 11-Å tobermorite in aqueous solution.—73-03440
Carbonation reaction of synthetic 11-Å tobermorite in aqueous solution.—73-16044
Factors influencing the crystallization of tobermorite from CSH gel.—73-03469
$Mg^{2+}$ uptake by synthetic tobermorite [T] and xonotlite [X].—73-00138
Quantum chemical determination of the Al-substituted site in tobermorite.—73-16286
Synthesis and characteristics of $Al^{3+}$-substituted tobermorite by alkoxide method.—73-03035
Synthesis of calcium-deficient tobermorite under atmospheric pressure and its $CO_2$ adsorption ability.—73-17034
Tobermorite formation in the system CaO, $C_3S$-$SiO_2$-$Al_2O_3$-NaOH-$H_2O$ under hydrothermal conditions.—73-00200

**tomography,**
X-ray computed tomography for the testing and evaluation of ceramic processes.—73-01939

**tools,**
Cutting characteristic of ceramics.—73-12965
High-performance ceramic tool-bit produced by microwave heating.—73-05841
Mechanics of tool wear during machining of advanced fibrous composites.—73-06487
Metallurgy of cBN and its wear in high-speed machining of ferrous materials.—73-05268
Performance of metal-bonded single-layer diamond abrasive tool.—73-03632
Possibilities of utilization of ceramic techniques in mechanical industries.—73-05177
Recent trend of carbide tool materials.—73-08539
Regularities of structure formation of synthetic hard tool materials at SHS compaction.—73-13894

**topography,**
Characterization of surface topography of glass substrates for LCD by atomic force microscope.—73-07001
Lateral forces during atomic force microscopy of graphite in air.—73-06241

**topology,**
Evolution of topology during simulated sintering of powder compacts.—73-03144
Quantitative zeolite topology can help to recognize erroneous structures and to plan syntheses.—73-08715

**toughening,**
Advances in the design of toughened ceramics.—73-03234
In situ-toughened silicon carbide.—73-05858
Mechanics of toughness development in ductile phase-reinforced brittle matrix composites.—73-17394
Relationships between toughening mechanisms of ceramics.—73-17420
Stress prediction and measurement in chemical toughening.—73-00404
Toughening alumina ceramic with silver inclusions.—73-03658
Toughening and crack tip shielding in brittle materials by residually stressed thin films.—73-03369
Toughening and strengthening of ceramics reinforced by dilatant transformations and ductile particles.—73-03370
Toughening in brittle systems by ductile bridging ligaments.—73-17448
Toughening of alumina matrices by the inclusion of nickel particles.—73-00272

**toughness,**
Correlation of interfacial and macroscopic toughness in SiC laminates.—73-03249
Deformation and toughness of α-silicon nitride single crystals.—73-06369
Mechanics and mechanisms of crack growth at or near ceramic-metal interfaces: interface engineering strategies for promoting toughness.—73-09644
Toughness behavior of fiber-reinforced rapid-set materials: a preliminary study.—73-06727
Toughness properties of a silicon carbide with an in-situ-induced heterogeneous grain structure.—73-17451

**trace elements,**
Incorporation of minor and trace elements into calcium silicate hydrate (CSH) gel in hardened cement paste.—73-03482
Trace element balances in kiln system of a few Indian cement plants.—73-10183
Trace element determination by X-ray fluorescence in a cement plant.—73-00201

**transducers,**
Lead zirconate titanate hollow-sphere transducers.—73-10965
Method for manufacturing low noise piezoelectric transducer.—73-04584

**transfers,**
Critical issues in technology transfer.—73-03387
Electrical characteristics of the materials used in the fabrication of low-temperature transfer tape.—73-04084
Energy transfer in the mechanical alloying process in the collision regime.—73-16762
Solutions found to high-speed transfer problems.—73-10605

**transformation toughening,**
Effects of shear stresses on crack-growth microstructures in transformation-toughened ceramics.—73-09587
Influence of a reduced cross section on the mechanical properties of transformation-toughened zirconia bars.—73-15807

**transformations,**
$^{29}Si$ and $^{27}Al$ magic angle spinning nuclear magnetic resonance study of the thermal transformations of pyrophyllite.—73-02429
Change of mass and composition in transformation processes.—73-16047
Diffusionless tetragonal–cubic transformation temperature in zirconia–ceria solid solutions.—73-02237
Disclination splitting and crystal-glass transformation under mechanical alloying.—73-14352
Electron microscopy study of the fluorite↔rhombohedral ($R_{III}$) transformation in the U-La-O system.—73-01746
Evolution of elastic and mechanical properties of silica aerogels during gel-glass transformation.—73-06411
In situ transmission electron microscopy study of electron-beam-induced amorphous-to-crystalline transformation of $Al_2O_3$ films on silicon.—73-03153
Influence of $TiO_2$ crystallization and transformation on the opacification of hollowware.—73-00242
Martensite transformation behavior during isothermal aging in partially stabilized zirconia with and without alumina addition.—73-03161
Mossbauer study of hydrothermal transformation of natural clinoptilolite into Y and $P_1$ zeolites.—73-02333
New high-pressure transformation in α-quartz.—73-16226
Nucleation of ultrafine particles during irreversible solid-solid phase transformation in oxides.—73-16235
Soft atomic configurations, average order, and structural gross scale of transformations in glasses.—73-14083
Solid-state transformation of SAPO-37 molecular sieve above 1100 K.—73-12686
Structural transformations in some oxyborates observed by high-resolution transmission electron microscopy.—73-03201
Time-dependent tetragonal-to-monoclinic transition in hot-pressed zirconia stabilized with 2 mol% yttria.—73-17213
Transformation of titanium nitride in oxygen plasma.—73-06321
Transformation process of laser-ablated PZT thin films.—73-04575
Transformation-transport processes in polycrystal systems and material creeping.—73-17452
Transformations of nonautonomous phases and polycrystalline system compaction.—73-17065

**transformers,**
Piezoelectric ceramic transformer being driven with thickness extensional vibration.—73-01445
Piezoelectric ceramic transformer material with large output power.—73-04565
Piezoelectric ceramic transformer.—73-11637

**transistors,**
Accelerated degradation mechanisms in amorphous silicon thin-film transistors.—73-04054
Amorphous silicon thin-film transistors produced by atmospheric pressure CVD.—73-04058
Be diffusion at the emitter-base junction of graded AlInAs/GaInAs heterojunction bipolar transistors.—73-07389
Characteristics of graded-gap bipolar transistors on the basis of semiconductor structure of $Ge_xSi_{1-x}$.—73-01096
Characterization of selective reactive ion etching effects on δ-doped GaAs/AlGaAs MODFET [modulation-doped field-effect transistor] layers.—73-04266
Critical passivation ledge thickness in AlGaAs/GaAs heterojunction bipolar transistors [HBT's].—73-11124
Design, fabrication, and characterization of a hot electron vacuum transistor.—73-11132
Development of aluminum gate thin-film transistors [TFT's] based on aluminum oxide insulators.—73-04073
Diamond and silicon carbide heterojunction bipolar transistor.—73-11517
Dry etching bilayer and trilevel resist systems for submicron gate length GaAs-based high-electron-mobility transistors for power and digital applications.—73-14844
Dry surface cleaning of plasma-etched high electron mobility transistors [HEMT's].—73-11148
Effects of light and electrical stress on asymmetric a-Si TFT [thin-film transistor].—73-05550
Engineering sub-50-nm quantum effect devices and single-electron transistors using electron-beam lithography.—73-14890
Fabrication of encapsulated silicon vacuum field emission transistors and diodes.—73-14907
Fluorinated gate oxide films utilized in polysilicon thin-film transistors.—73-04103
Future of the transistor.—73-07540
High gain AlInAs/GaAsSb/AlInAs NpN HBT's on InP.—73-11243
High-channel-mobility a-Si:H thin-film transistors [TFT's] with oxide/nitride dielectrics.—73-04109
High-performance heterojunction bipolar transistor [HBT] grown by molecular beam epitaxy using novel growth method.—73-11245
High-power pseudomorphic gallium arsenide high electron mobility transistors.—73-04516

Low-temperature crystallization and patterning of amorphous silicon films on electrically insulating substrates.—73-11527
Mesa surface recombination current in AlGaAs/GaAs heterojunction bipolar transistors with an emitter-base-emitter structure.—73-07668
Method for making a bipolar transistor having a silicon carbide layer.—73-04521
Passivation of carbon acceptors during growth of carbon-doped GaAs, InGaAs, and HBT's by MOCVD.—73-11371
Performance of polycrystalline silicon thin-film transistors [TFT's] with double-layer gate dielectric.—73-05610
Polycrystalline silicon thin-film transistor.—73-11538
Self-aligned gallium arsenide/aluminum gallium arsenide collector-up heterojunction bipolar transistors capable of microwave applications and method.—73-04532
Silicon carbide and SiCAlN heterojunction bipolar transistor structures.—73-14762
Silicon nitride for amorphous silicon thin-film transistors [TFT's].—73-04167
Thin-film transistor with excellent stability for liquid crystal display.—73-11549
Three-level charge pumping on submicronic MOS transistors.—73-01355

**transition metals,**
Aminoalkoxide sol-gel coating of transition metal oxide films.—73-12916
CNDO [complete neglect of differential overlap] parameterized cluster model calculations of transition metals in diamond.—73-06144
Coordination of atoms in structures of ternary compounds of rare-earth element–transition element–silicon systems.—73-16070
Effects of transition-metal additions on the properties of AlN.—73-16469
Influence of soluble chlorides on the rheological properties of suspensions of transition-metal oxides.—73-02872
O1s X-ray absorption of transition-metal oxides $TiO_2$, $ZrO_2$, $HfO_2$, and $V_2O_5$, $Nb_2O_5$, and $Ta_2O_5$.—73-16236
Oxidation states of transition metals in ZBLAN.—73-06950
Simple and perovskite oxides of transition metals: why some are metallic, while most are insulating.—73-02687
Transition metal ions in silicate melts: III, Nickel in quenched oxide glasses.—73-10412

**transitions,**
3-D–2-D dimensional crossover in $YBa_2Cu_3O_7$ films.—73-11938
Chemical aspects of the glass transition in mixed alkali and mixed network glasses.—73-13939
Computer simulation of glass transition.—73-03717
Correlation between radiative transition probabilities of $Nd^{3+}$ and composition in silicate, borate, and phosphate glasses.—73-00313
Electron structure of metal phase and metal-to-insulator transition in $VO_2$.—73-16130
Equipment for contactless determination of the superconducting transition of ceramic specimens.—73-11750
Experimental evidence for a first-order vortex-lattice-melting transition in untwinned single-crystal $YBa_2Cu_3O_7$.—73-08069
Metal-insulator transition in heavily doped InSb subjected to a magnetic field.—73-01244
Metal-insulator transitions in $BaCo_{1-x}Ni_xS_{2-y}$.—73-15039
Molecular mechanics study on the α-quartz/β-quartz transition.—73-12632
Non-Debye relaxation and the glass transition.—73-07055
Pressure-induced structural transition in $SiO_2$ glass.—73-06957
Radiationless transition of $Eu^{3+}$ excited state $^5D_0$ in SBN crystals.—73-12666
Resistive transitions and the origin of the *n* value in superconductors with a Gaussian critical current distribution.—73-08189
Sb-induced optical transitions of the Sb/GaAs(110) interface.—73-01308
Size effect in the vortex-glass transition in submicron $YBa_2Cu_3O_x$ strips: evidence for softening of vortex motion.—73-08198
Sol-gel transition in ceramic systems [studied] by high-resolution refractometry.—73-03024
Structural- and conductivity-type transitions in vapor-phase-grown $(ZnTe)_x(CdSe)_{1-x}$ single crystals.—73-04491
Technique for differential scanning calorimetry (DSC).—73-12201
Transition of fluorite-type crystals to superionic conductor state.—73-02531
Transition to vanishing current superconductivity in $YBa_2Cu_3O_x$.—73-01697
Viscoelastic properties and molecular mobility near the glass transition range.—73-14308
Visible light scattering intensity as a function of the temperature in transition of glasses to the state of a metastable liquid.—73-00579

**transmission electron microscopy (TEM),**
Advanced characterization techniques.—73-05017
Electron holography applied to the study of ceramic materials.—73-08398
TEM direct observation of the crack propagation in ceramics.—73-13459
TEM investigations in the PFN-PFW-PZN perovskite system.—73-09516
Transmission electron microscopy of oxide thin films.—73-06299
Transmission electron microscopy of polished AlN with ultrafine alumina abrasive.—73-13462
Using coherent illumination to extend HRTEM resolution: why we need an FEG-TEM for HREM.—73-05096

**transmission,**
Degradation of transmission of silica glass on excimer laser irradiation.—73-03781
Transmission characteristics of single-mode fibers.—73-10491

**transparency,**
New approach to the preparation of ir transparent $Ca_{12}Al_{14}O_{33}$ material.—73-09222

**transparent materials,**
Advanced method for the determination of temperature profiles in semitransparent materials at high temperature.—73-12104
Experimental measurements of the phonic diffusivity of semitransparent materials up to 800 K.—73-12137
Fabrication of transparent γ-$Al_2O_3$ from nanosize particles.—73-16777
Shaped bodies of transparent, polycrystalline alumina.—73-02067

**transport properties,**
Effect of microwave heating on the mass transport in ceramics.—73-06156
Factors dominating the transport critical current behavior in high-$T_c$ superconductors.—73-11762
High-magnetic-field transport properties of η-$Mo_4O_{11}$ crystals.—73-09410
Influence of iridium tin oxide deposition on the transport properties at InP junctions.—73-17081
Transport of YO molecules produced by ArF laser ablation of $YBa_2Cu_3O_{7-\delta}$ in ambient oxygen gas.—73-11939
Transport properties of $CuInS_2$, $CuInSe_2$, and $CuInTe_2$ thin films.—73-09426
Transport properties of low-resistance ohmic contacts to InP.—73-17104

**transport,**
Bulk and surface transport properties of *n*-type $Hg_{1-x}Cd_xTe$ crystals in the temperature range $0.5<T<50$ K.—73-07395
Current and angular-dependent transport in the mixed state of $Bi_2Sr_2Ca$-$Cu_2O_{8+\delta}$.—73-15409
Direct simulation of turbulent particle transport in electrostatic precipitators.—73-15716
Effect of external fields on mass-transport and defect-related phenomena.—73-13348
Effects of field-induced hole-density modulation of normal-state and superconducting transport in $YBa_2Cu_3O_{7-x}$.—73-11737
Heat pulse transport in single-phase ceramics.—73-02616
Ion transport in alumina-pillared zirconium phosphate.—73-06166
Nanoparticulate drug delivery system.—73-16546
Operational variables of redundant equipment in transport systems.—73-04939
Thermochemical evaluation of electron transport in metal oxides.—73-17103
Three-dimensional simulations of quantum transport in semiconductor nanostructures.—73-11483
Transport processes in chalcogenide glasses of silver-copper-arsenic-selenium system.—73-00569
Transport properties of *n*-type ZnSe crystals with radiation defects.—73-03116
Two-way transport on curved conveyor belt system.—73-01835
Use of Lagrangian statistics to describe slurry transport.—73-15759

**traps,**
Characterization of deep traps in semiinsulating gallium arsenide.—73-14799
Characterization of the spatial distribution of traps in $Si_3N_4$ by field-assisted discharge of metal-nitride-oxide-semiconductor devices.—73-11104
Charge trapping centers in ferroelectric ceramics.—73-04540
Charge trapping on different cuts of a single-crystalline α-$SiO_2$.—73-07288
Charge-trapping properties of thin plasma-nitrided oxides induced by nitrogen and hydrogen incorporation.—73-05536
Comparison of the density and distribution of traps generated by high-voltage stress in silicon oxide and silicon oxynitrides.—73-04066
Diesel particulate trap of perforated tubes having laterally offset cross-wound wraps of inorganic yarn.—73-02033
Interface and bulk traps in oxide-nitride stacked films.—73-05058
Kinetics of the oxide charge trapping and breakdown in ultrathin silicon dioxide.—73-02626
Measurement of high-voltage stress-induced traps inside thin silicon oxide films.—73-04132
Trapping and recombination processes via deep level $T_3$ in semiinsulating gallium arsenide.—73-04502
Voltage, fluence, and polarity dependence of trap generation inside of thin silicon oxide films.—73-03772

**treatment,**
Activity of cement stone treated by hydrodynamical method.—73-00016
Chemical treating composition for glass fibers having emulsified epoxy with good stability and the treated glass fibers.—73-00729
Effect of the two-stage thermal treatment of two-phase sodium borosilicate glasses on the structure of the porous glass obtained thereby.—73-00334
Effect of treating time by high-speed impact method on the calcination of oxide superconductor $YBa_2Cu_3O_{7-x}$.—73-15437
Features of hydroabrasive treatment of glass-ceramic components.—73-01899
Improvement of the thermal-humid treatment of heavy concretes.—73-13735
Micro-Shirasuballoons (hollow glass microspheres) from the milled Shirasu refined by hydrothermal treatment.—73-00662
Modification of surfaces with new excimer uv sources.—73-13141
Physicochemical properties of glassware treated in electromagnetic field.—73-14253
Preparation of electrochemically treated glass for metallization.—73-00683
Treating surfaces to obtain narrow band thermal emission.—73-13903

**tribology,**
Ceramics, friction, and chemistry.—73-08506
Role of dielectric properties in the tribological behavior of insulators.—73-09665
Tribological characteristics of $Si_3N_4$ ceramic in high-temperature and high-pressure water.—73-06545
Tribological characteristics of SiC ceramics in high-temperature and high-pressure water.—73-13607
Tribology of amorphous diamond films grown or modified by ion implantation.—73-03661
Tribology of ceramics.—73-06546

**tricalcium phosphate,**
ß-tricalcium phosphate [ß-TCP] coating on titanium.—73-00210
Injection molding of ß-TCP powder.—73-05878
Injection molding of ß-TCP powder.—73-13104
Injection molding of highly purified hydroxyapatite and TCP utilizing solid-phase reaction method.—73-05879
Preparation of microstructure-controlled porous hydroxyapatite–ß-tricalcium phosphate composites by reaction sintering.—73-13193
Preparation of microstructure-controlled porous hydroxyapatite–ß-tricalcium phosphate composites by reaction sintering.—73-02955
Selective flocculation of tribasic calcium phosphate [TCP] from mixtures with quartz using polyacrylic acid [PAA] flocculant.—73-01996
Tricalcium phosphate coating on zirconia by using calcium metaphosphate and tetracalcium phosphate.—73-03067

**tritium,**
Anisotropic luminescence centers of $T^{3+}$ ion luminescence in fluoroapatite crystals.—73-08808

**tubes,**
Calculation of the temperature and stress fields of the base-quartz tube during MCVD technology.—73-14334
Carbon nanotubes at as-grown top surface of columnar carbon deposit.—73-17112
Characterization of ceramic matrix composite tubes at ambient and elevated temperatures.—73-17246
Compositional improvement of fluorescent tube glasses.—73-03716
Device and forming finger for forming a mouth area on a glass vial.—73-04970
Device and process for deformation of the heat-softened end of a glass tube.—73-12074
Evaluation of tests for measuring the strength of ceramic tubes.—73-17310
Formation of carbon nanotubes by evaporation of carbon rod containing scandium oxide.—73-17135
Improvement in the magnetic shielding property of Bi(Pb)-Sr-Ca-Cu-O superconducting tubes.—73-04738
Ion laser tubes.—73-15998
Manufacturing process of (cold cathode discharge lamp-type) neon sign tubes.—73-03856
Method for the ply-level elastic characterization of composite materials using thick tubular angle-ply specimens.—73-15819
Method of fabricating superconducting ceramic pipe.—73-04849
Method of making a cylinder head or other article with cast in situ ceramic tubes.—73-04995
Periclase-carbon tubes for protection of a stream of metal from secondary oxidation.—73-00836
Piezoelectric tubes and tubular composites for actuator and sensor applications.—73-07908
Process for manufacturing porous tubes of high permeability made from carbon-carbon composite material, and their application.—73-05327
Promising polymeric materials for the jacketing of glass pipes.—73-00690
Properties of glass tubes made of photochromic glasses.—73-00535
Spout bowl for molten glass feeder.—73-15774
Superconductive tube for magnetic shielding and manufacturing method therefor.—73-04885
Thermal processing for TV tube manufacture: process modeling.—73-00711

**tundish,**
Robotic-sprayed tundish linings at Sparrows Point.—73-14622
Tundish cover layer containing flux ingredients and expandable graphite.—73-04041

**tungstates,**
Antiferromagnetic correlations in $Na_xWO_3$ of superconducting compositions.—73-07988
Cation-exchange characteristics of $K_2W_4O_{13}$ in molten nitrate salts.—73-08817
Coloration, impurities, and nonlocal charge compensation in $ZnWO_4$.—73-16421
Compositional effect on the liquid-phase formation in lead iron tungstate ferroelectric ceramics.—73-15252
Determination of standard Gibbs energies of formation of $FeWO_4$ and $Fe_2WO_6$ by electromotive force measurement.—73-02234
Domain structure in excess-$WO_3$ lead complex perovskite.—73-07301
Effect of $BaWO_4$ on the microwave dielectric properties of $Ba(Mg_{1/3}Ta_{2/3})O_3$ ceramics.—73-07303
Effect of glass additions on BaO-$TiO_2$-$WO_3$ microwave ceramics.—73-10936
Electron paramagnetic resonance study of paramagnetic centers in antiferroelectric $Pb_2MgWO_6$.—73-16486
Electronical and Raman two-photon resonances interference in KGW:Nd crystals.—73-02262
Hydrogen loading of $[(Li_2O)(B_2O_3)]_2WO_3$ glasses through electrolyte/glass and Pd/glass interfaces.—73-03791
Ion exchange of potassium hexatungstate ($K_{0.3}WO_{3.15}$) by protons.—73-05425

Ionic conductivity and phase transitions in the $Li_2SO_4$-$Li_2WO_4$ system and their relation to ion transport mechanism.—73-03098
Ionic conductivity of solid solutions of α-$Li_2SO_4$ with $Li_2WO_4$: strong evidence for the paddle wheel mechanism of ion transport.—73-00988
Optical transition probabilities for $Er^{3+}$ in $KY(WO_4)_2$ crystals.—73-02657
Orthorhombic structures of $Pb_2MgWO_6$ and $Pb_2CoWO_6$.—73-08686
Phase diagram of $Al_2(WC_4)_3$-related systems and the kinetics of flux volatilization.—73-05447
Phase equilibria in systems $Tl_2WO_4$-AO-$WO_3$, $Cs_2O(Cs_2CO_3)$-AO-$WO_3$ (A=Mg, Mn, Ni, Co, Zn, Cu).—73-02377
Structural study of peroxopolytungstic acid prepared from metallic tungsten and [aqueous] hydrogen peroxide.—73-02454
Structure and electrochemistry of $Li_xWO_2$ [0<x<1].—73-02459
Structure of the intercalate $NaWO_2Cl_2$.—73-02466
Temperature and composition dependence of the ferroelastic phase transition in $(Cu_xZn_{1-x})WO_4$.—73-05509
Thermal degradation behavior of $WOP_2O_7$/phenanthroline complex.—73-16624
Transport studies on silver borotungstate glasses.—73-00570
Vibrational spectra of double molybdates and tungstates of the type $Na_5Ln(XO_4)_4$.—73-12730

**tungsten bronze,**
Optical properties of lithium tungsten bronze thin films.—73-08933
Twin structure of perovskite- and tetragonal-tungsten-bronze-type crystals.—73-16387

**tungsten carbide,**
Acoustic emission investigations of structural changes in tungsten carbide metal-ceramics during thermal and radiation treatment and hydrogenation.—73-06735
Carbide/metal composite material and a process therefor.—73-10303
Cemented carbide.—73-10304
Characterization of a sputtered amorphous W-C-Co coating annealed in air.—73-03564
Characterization of tungsten carbide cobalt powders and HVOF [high-velocity oxy-fuel] coatings.—73-06748
Chisel insert [made of WC] for rock bits.—73-15982
Comparative studies of microstructures, residual stress distributions, and wear properties for HVOF [high-velocity oxy-fuel] and APS [air-plasma-sprayed] WC-Co coatings of Ti6Al4V.—73-06756
Cutting insert for a rotary cutting tool.—73-02092
Cutting insert for a rotary cutting tool.—73-12458
Erosive wear behavior of chemical-vapor-deposited multilayer tungsten carbide coating.—73-06784
Friction and wear mechanisms of multilayered plasma-sprayed ceramic coatings.—73-09604
Group VIB metal carbides from metal salicylate precursors.—73-02097
Heat-treated chemically vapor deposited products and treatment method.—73-03683
High-hardness fine-grained beta tungsten carbide.—73-12469
High-strength tungsten carbide material for use in earth-boring bits.—73-10317
Hydrogenation of nitriles by a tungsten carbide catalyst.—73-15995
Influence of deposition conditions on the morphology of sputtered W-C-(Co) films.—73-06808
Initial stages of sintering of nanostructured WC-7 wt% Co.—73-13850
Kinetics of chemical vapor deposition of tungsten carbide.—73-13110
Magnetic abrasive finishing of WC-Co curved surfaces.—73-05907
Magnetic recording medium rubbed with a super hard alloy blade containing tungsten carbide powder and cobalt.—73-01489
Mechanisms of hard alloy wear in frictional processes with polymers and composite materials.—73-03615
Method for brazing tungsten carbide particles and diamond crystals to a substrate and products made therefrom.—73-05308
Methods for coating adherent diamond films on cemented tungsten carbide substrates.—73-02118
Microstructural study of tungsten-carbide-reinforced Ni-based superficial composite obtained by laser melt–particle injection processing.—73-13872
Microstructure of sintered polycrystalline diamond/cemented tungsten carbide doped with Si-Ti-B.—73-06260
Multicomponent hard coatings for WC-Co sintered carbides.—73-10255
New look at carbide tool life.—73-06835
New route for the synthesis of tungsten carbide-cobalt nanocomposites.—73-13876
Nonmagnetic nickel tungsten cemented carbide compositions and articles made from the same.—73-05321
Preparation of SiC-$W_2C$ nanocomposite powders by chemical vapor deposition of the $SiH_4$-$CH_4$-$WF_6$-$H_2$ system.—73-13201
Quantitative phase analysis by X-ray for Co binder structure in WC-Co cemented carbides.—73-10269
Relation between microstructures and cutting performance of titanium-carbide-based cermet containing nitrogen.—73-06850
Rock bit with cobalt alloy cemented tungsten carbide inserts.—73-10346
Secondary hardening type high-temperature wear-resistant sintered alloy.—73-05335
Spray parameter effects on structure and wear properties of detonation gun sprayed WC+17% Co coatings.—73-06857
Structural characterization of laser-processed WC/Co layers.—73-10279
Tool of cemented carbide for cutting, punching, or nibbling.—73-00301
Tungsten and tungsten-carbon thin films deposited by magnetron sputtering.—73-06128
WC-8 *t*-Co cemented carbide containing sheetlike WC phases.—73-06874

**tungsten oxide,**
Aluminum tungsten oxide ceramics synthesized by a high-power cw $CO_2$ laser.—73-09014
Anodic oxidation of tungsten in nonaqueous electrolyte: II, Electrochemical coloring and bleaching of the oxide film.—73-13466
Characteristics of a rechargeable cell constructed by coupling $Na_{x-y}WO_3$ and $Na_{1-y}Pd_2O_4$.—73-04063
Compaction of tungsten oxide films by ion-beam irradiation.—73-13383
Design model for electrochromic windows and applications to the $WO_3$/$IrO_2$ system.—73-07296
Dielectric relaxations (1 MHz–10 GHz) in tungsten trioxide hydrates synthesized by sol-gel process.—73-02573
Effect of excess $WO_3$ on the dielectric properties of $Pb(Fe_{2/3}W_{1/3})O_3$ [PFW] ceramics.—73-14695
Effect of preparation conditions on the morphology and electrochromic properties of amorphous tungsten oxide films.—73-09087
Effect of temperature on a complementary $WO_3$-Prussian blue electrochromic system.—73-01137
Electrodeposited tungsten trioxide thin films.—73-13042
Formation mechanism of ultrafine tungsten oxide particle during thermal decomposition of ammonium paratungstate [APT].—73-09453
Fundamental role of oxygen for the photochromic effect of $WO_3$.—73-12804
High resolution electron microscopy structural study of tungsten oxide synthesized under high pressure.—73-16166
Lithium insertion into pyrochlore $WO_3$.—73-02319
Low-temperature atmospheric pressure chemical vapor deposition of tungsten oxide thin films.—73-13119
Microstructure and properties of aluminum tungsten oxide ceramics synthesized by a high-power cw $CO_2$ laser.—73-17162
pH dependence on the formation process of tungsten oxide gel.—73-02917
Raman spectra of sol-gel-derived tungsten oxides.—73-02414
Stability of polarons in monoclinic $WO_3$.—73-05488
Structure of tungsten oxide $WO_{2.625}(W_{32}O_{84})$.—73-12706
Thermal anomalies in $Bi_2WO_6$ and EPR of doped $Gd^{3+}$ ions.—73-08984
Thermal decomposition process of ammonium paratungstate.—73-06297

**tungsten,**
Characterization of tungsten films and hard tungsten-carbon coatings prepared by dc magnetron sputtering process.—73-03568
Chemical interactions in titanium- and tungsten-implanted fused silica.—73-06888
Compaction, distribution, and chemical bonding of tungsten-implanted glassy carbon.—73-12553
Comparison of Mo-N and W-N synergism during passivation of stainless steel through X-ray photoelectron spectroscopy and electrochemical analysis.—73-06759
Effect of oxygen partial pressure on tungsten–alumina bonding behavior.—73-03579
Effect of TiW as adhesion layer and underlying metal on electromigration characteristics of tungsten via plugs.—73-03584
Fabrication of $Al_2O_3$/W nanocomposites.—73-10228
Heat-resistant sintered hard alloy.—73-00281
Heat-treated chemically vapor deposited products and treatment method.—73-03683
Hydrogen atom recombination on tungsten and diamond in hot-filament-assisted deposition of diamond.—73-13090
Influence of small amounts of tungsten on the physicochemical and catalytic properties of (40)4-heteropolyanions.—73-12815
Influence of the composition of europium- and ytterbium-activated tellurite-wolframate glasses on their physicochemical, optical, and spectral-luminescence properties.—73-14208
Interaction of alkali tungsten tellurite glass with aqueous solutions.—73-00355
Laser-induced deposition of tungsten on GaAs from $WF_6$.—73-11291
Magnetic and electronic transport properties of the monophosphate tungsten bronze $(PO_2)_4(WO_3)_{2m}$, $m$=2.—73-03101
Mechanism of wear of rotary percussive drilling bits and the effect of rock type on wear.—73-17395
Method for forming metallized layer on an aluminum nitride sintered body.—73-10324
New tungsten pyrophosphate with cubic zirconium pyrophosphate-type structure.—73-02354
Possible reaction of $WF_6$ with $SiO_2$ and $Si_3N_4$ at several temperatures.—73-03184
Preliminary study of the formation of $WSi_2$ by high-current W ion implantation.—73-08708
Preparation of rare-earth-oxide dispersion tungsten powder by spray dry method and its sintering.—73-09268
Reaction of tungsten hexafluoride with Si and TiN surfaces.—73-13228
Secondary ion mass spectrometry quantification of elements in $TiSi_2$, TiN, and TiW matrices.—73-08728
Synchrotron-radiation-stimulated tungsten deposition on silicon from $W(CO)_6$.—73-03034
Synthesis of tungsten silicide by pulsed laser irradiation of sputtered alloy layers.—73-09366
Thermal stability of encapsulated tungsten/carbon multilayer thin films.—73-08992
Wetting properties of W by molten $SiO_2$-MgO-$Al_2O_3$ ternary eutectic composition.—73-00277

**tunnel kilns,**
Approach to the optimum structure of tunnel kiln roof.—73-10701
Batch formula for saving energy and increasing production of tunnel kiln.—73-10800
Mathematical model of one-dimensional heating and cooling of flat ceramic bodies inside the tunnel kiln.—73-02890
Optimization of firing technology in a tunnel kiln for firing super-duty refractories by direct automatic control of the oxygen content.—73-10749
Practice-oriented evaluations for improving the heat balance of tunnel kilns.—73-10882
Reduction of tunnel kiln energy consumption in the brick and tile industry.—73-00772
Small high-temperature tunnel kiln with an injector system of firing.—73-01970
Temperature of ceramic article in tunnel kiln.—73-08489
Tunnel kiln simulation model Q-KILN.—73-05133

**tunneling,**
Characteristics of the tunneling across Schottky barriers made of narrow-gap semiconductor *p*-type $Hg_{1-x}Cd_xTe$.—73-01098
Double barrier resonant tunneling device with selectively applied field in the well.—73-06154
Electron-phonon coupling mechanism in $Bi_2Sr_2CaCu_2O_x$ by tunneling.—73-08053
Fabrication of lateral resonant tunneling devices.—73-14909
Gapless superconductivity in $Bi_2Sr_2CaCu_2O_8$.—73-15489
Linear conductance backgrounds in tunnel junctions.—73-08899
Single-particle tunneling studies on $Bi_2Sr_2Ca_1Cu_2O_y$.—73-01659
Spin-polarized electron tunneling from a ferromagnet into GaAs.—73-07808
Theory of scanning tunneling microscopy of the (110) surface of GaAs based on the method of quasi-stationary states in the tight binding method.—73-07834
Tunneling measurements of BSCCO single crystals.—73-08267
Tunneling through intermediate (19–50 Å) oxide layer of silicon semiconductor–tunneling transparent insulator–semiconductor structure.—73-15218

**turbines,**
Gas turbine cooling.—73-10312
Gas turbine engine combustor fiber-reinforced glass-ceramic matrix liner with embedded refractory ceramic tiles.—73-15992
Inhibiting coke formation by coating gas turbine elements with alumina.—73-03686
Low-$NO_x$ combustor for automotive ceramic gas turbine—reliability assurance.—73-08535
Method of making a core/pattern combination for producing a gas-turbine blade or component.—73-04994
Status of research and development on materials for ceramic gas turbine components.—73-05277
Thermal shock and cyclic loading of ceramic parts in stationary gas turbines.—73-05662

**tuyeres,**
Application of mathematical and statistical methods for analyzing the wear of the tuyere assembly of open-hearth furnaces.—73-00777
Development and application of refractories for tuyere zone of nickel converters: II.—73-07204

**twin roll press,**
[Cement] raw meal production with twin roll presses—a report on two years of operation experience.—73-09843
Drive systems for large twin roll presses.—73-12023
Finish grinding of cement with POLYCOM twin roll press: I, Investigation of mixtures of clinker meal and sulfate-containing agents.—73-00091
Influence of rheological parameters of the process of interparticle comminution in twin roll presses: I.—73-12037
Influencing the properties of cement by grinding clinker in twin roll presses.—73-03491
Operating experience with twin roll presses at the Asia Cement Corporation, Taiwan.—73-00154

**twinning,**
Interface of orthogonally oriented twins in $YBa_2Cu_3O_{7-\delta}$.—73-04748
Mechanism to describe the basal twinning of sapphire.—73-16211
Microtwinning of Na, Ba, Nd silicate, $NaBa_6Nd[SiO_4]_4$.—73-02328
Transformation twinning in monoclinic zirconia particles.—73-16385
Twin-corner disclinations in $YBa_2Cu_3O_{7-\delta}$.—73-04824
Twinning in ZnO ceramics with $Sb_2O_3$ additions.—73-02532
Twins and properties of classical and high-$T_c$ superconductors.—73-08270
Unusual twin structure in transformed precipitates in Y-PSZ single crystals—correction.—73-06303
Unusual twin structure in transformed precipitates in Y-PSZ single crystals.—73-05522

**ultrasonics,**
Composition dependence of the elasticity, reaction rate, and porosity of orthophosphate bonded ceramics using an ultrasonic double-probe method.—73-02752
Damage measurement in concrete via an ultrasonic technique: I, Experiment.—73-00054
Effect of ultrasonic irradiation on hydration of MgO powder.—73-09100
Effect of ultrasound on the formation of $ZrO_2$ sols and wet gels.—73-05774
Fractionation of suspensions using synchronized ultrasonics and flow fields.—73-05048
Materials characterization at high temperatures using laser ultrasound.—73-12160

Peculiarities of ultrasonic propagation in piezoactive superionic conductors.—73-01422
Production-oriented, nondestructive testing of structural advanced ceramics: I, Ultrasonic testing.—73-12182
Synthesis of hydroxyapatite using phosphate-rich glasses in the system $CaO$-$P_2O_5$-$H_2O$ and acoustic waves.—73-13305
Ultrasonic attenuation study of $NH_4^+/H_3O^+$-Rb$^+$-ß´´-alumina.—73-06182
Ultrasonic characterization of green and sintered ceramics: I, Time domain.—73-12206
Ultrasonic characterization of green and sintered ceramics: II, Frequency domain.—73-15858
Ultrasonic measurement of surface and subsurface structure in ceramics.—73-05094
Ultrasonic microscopy.—73-05095
Ultrasonic shaping: an economical procedure to machine complex ceramic components.—73-04952
Use of ultrasonic transmission for the control of the structure of fused cast blocks.—73-15860
Use of ultrasound technology to prepare polymer-impregnated concrete.—73-03556

**ultraviolet,**
Ultraviolet absorbing [borosilicate] glasses.—73-14561
Vuv [vacuum ultraviolet] photochemical reactions over solid surfaces.—73-17070

**unit cells,**
Concentration dependence of unit cell parameters of $M_{1-x}R_xF_{2+x}$ phases [M=Ca, Sr, Ba, Cd, Pb; R=rare-earth elements] with fluorite structure.—73-16066
Kinetics of the atoms of a unit cell $YBa_2Cu_3O_{6+x}$.—73-11812
Program package for obtaining unit-cell constants and possible space groups from X-ray powder diffraction data.—73-05080
Program package for obtaining unit-cell constants and possible space groups from X-ray powder diffraction data.—73-17499
Technique for determination of unit cell periods of $YBa_2Cu_3O_{7-\delta}$.—73-08244
Unit cell parameter of annealed strontium titanate single crystals.—73-02533

**uranium oxide,**
20 years of production of $UO_2$ by the integrated dry route—a BNFL [British Nuclear Fuels plc] perspective on dry conversion.—73-08311
Calcination and reduction of AUC (ammonium uranyl carbonate)—characteristics and phase change of powder.—73-08285
Computer simulation studies of alkali and alkaline-earth metal intercalation into uranium oxides.—73-12008
Crystal structure and magnetic susceptibility of UOSe single crystals.—73-04889
Effect of the addition of aluminum distearate [ADS] on manufacturing $UO_2$ nuclear fuel.—73-04890
Magnetic susceptibilities of $Mg_yU_{1-y}O_{2+x}$ solid solutions.—73-01751
Microdomains in urania-yttria and urania-ceria.—73-01753
$Sr_3U_{11}O_{36}$: crystal structure and thermal stability.—73-02440
Structure of the insertion compound $Li_{0.88}U_3O_8$ by powder neutron diffraction.—73-02465
Vacuum carbothermic reduction of uranium dioxide microspheres in a static graphite bed.—73-15702

**uranium,**
Antiferromagnetic resonance in the heavy fermion state of $URu_2Si_2$.—73-08282
Crystal structure, magnetic susceptibility, and electrical conductivity of the uranium silicide carbides, $U_3Si_2C_2$ and $U_{20}Si_{16}C_3$.—73-05377
Crystal structure, short-range and long-range magnetic ordering in $CuSb_2O_6$.—73-02218
Discrete mechanism of amorphization of crystals with radioactive impurities.—73-02239
Interaction of yttria with uranium fluoride gases ($UF_n$, $n$=4, 6) at high temperatures.—73-12010
Magnetic susceptibilities of $Y_yU_{1-y}O_{2+x}$ solid solutions.—73-01752
Neutron diffraction refinement of structure of nonlinear optical crystal of $Cs_2UO_2Cl_4$.—73-01755
Nuclear track method for neutron-induced radionuclide mapping with applications to uranium distributions in superconductors.—73-08152
Optical functioning glass and apparatus using the same.—73-00752
Powder neutron diffraction of α-$UB_2$ (α-$UB_2C$-type).—73-01756
$U^{3+}$-doped bulk and fiber fluoride glasses.—73-06985
Uranium adsorption capacity of $TiO_2$-$SiO_2$ porous glass-ceramics.—73-01758
Zone sintering of ceramic fuels.—73-15704

**vacancies,**
Charge states of anion vacancy in magnesium oxide.—73-03081
Determination of vacancy migration volume in ionic crystals from data on electrical conductivity of mixed crystals.—73-17076
Energy spectrum of chalcogen vacancies in ion-implanted PbS.—73-11195
Indium vacancy in as-grown InP: a positron annihilation study.—73-03097
Measuring properties of point defects by electron microscopy: the Ga vacancy in GaAs.—73-07664
Native vacancies in semiinsulating GaAs observed by positron lifetime spectroscopy under photoexcitation.—73-15053
Role of vacancies in the magnetic and magnetooptic properties of Tb-doped EuO and EuS films.—73-04646
Simulation of vacancies in a glass by molecular dynamics.—73-06968
Vacancy emission from intercrystallite boundary.—73-17215
Vacancy migration, adatom motion, and atomic bistability on the GaAs(110) surface studied by scanning tunneling microscopy.—73-09427
Vacancy topography in corundum, grown in sets with graphite thermal units by horizontal directed crystallization technique, and control over vacancy structure of crystals.—73-03071

**vacuum,**
Safety and health considerations related to vacuum gaging.—73-08439
Scanning tunneling microscope for use in vacuum.—73-15843
Trends and developments in vacuum furnace technology.—73-12205
Use of a computer model to assist in VPS [vacuum plasma spray] parameter development.—73-09382

**valence,**
Application of Dirichlet polyhedra for calculating valence balance in crystal structures.—73-15698
Application of X-ray photoelectron spectroscopy valence bands in studying ceramic surfaces and interfaces.—73-12538
Characteristics of the valence bands of some II-IV compounds.—73-01099
Coordination and the bond valence sums in modulated $Bi_2(Sr,Ca)_2Cu_2O_{8+x}$.—73-01512
Valence ordering in $V_3O_9$ below 120 K.—73-02534

**valves,**
Development of advanced silicon nitride valves for combustion engines and some practical experience on the road.—73-05264
Valve disks of silicon-infiltrated silicon carbide.—73-12532

**vanadates,**
Anisotropy of thermal expansion of the Brannerite-type $MnV_2O_6$—effect of doping with $MoO_3$ and $Li_2O$: theoretical predictions, verification, new rules.—73-02552
Crystal structure analysis and phase transition in lead orthovanadate $Pb_3(VO_4)_2$.—73-08585
Crystal structure and magnetic properties of orthorhombic $Sr_2VO_4$ with tetrahedral vanadium(IV).—73-02180
Crystal structure of $SrCuV_2O_7$ and structural family $SrMV_2O_7$ (M=Cu, Zn, Mg, Sr).—73-16095
Crystal structures of double pseudopyrovanadates PbM'$V_2O_7$ (M'=Mg,Zn).—73-02219
Domain wall of ferroelastic $BiVO_4$ studied by TEM.—73-03133
Electrical conduction in $TmVO_4$ single crystal.—73-04304
Electrical properties of ß-$Li_xV_2O_5$ thin layers prepared by the sol-gel process.—73-08855
Electrical, optical, and structural properties of binary semiconducting vanadate glasses containing rare-earth oxide.—73-14874
Electrochromism in Nb-V and Cr-V mixed oxides.—73-04092
Electronic properties of $Na_{0.33}V_2O_5$ bronze obtained by the sol-gel process.—73-02608
Electronic structure of $SrVO_3$.—73-16135
Electronic structure of vanadium oxide clusters in layered perovskite compounds $Sr_{n+1}V_nO_{3n+1}$ ($n$=1, 2, 3).—73-08054
Ferromagnetism in the Tl-Sr-V-O system.—73-01462
Formation of oriented conductive $SrVO_{3-x}$ (SVO) films on Si(100) substrates by evaporation in low-pressure hydrogen.—73-04105
Indium vanadates of sodium and cesium, their physical-chemical properties.—73-16173
Interactions of nickel metavanadate with metavanadates of rubidium, cesium, and silver.—73-02300
Isomorphic miscibility of the metavanadates of calcium, copper, and zinc.—73-16190
Isomorphic miscibility of the metavanadates of manganese, cadmium, and nickel.—73-12617
Low-temperature magnetoelastic properties of dilute Jahn-Teller $D_xY_{1-x}VO_4$ crystals.—73-08904
Mechanistic studies on the electrochemically lithiated spinel $LiCuVO_4$.—73-02326
Metal-insulator transition with oxygen content in $CaVO_{3-y}$.—73-05596
Neutron and X-ray Rietveld analysis of the three phases of lead orthovanadate $Pb_3V_2O_8$: importance of the electronic lone pairs in the martensitic transitions.—73-02342
Obtaining meta- and pyrovanadates of cadmium from an unusual low energy process: II, Pyrovanadate.—73-02364
Obtaining meta- and pyrovanadates of cadmium from an unusual low-energy process: I, α-metavanadate.—73-02365
Performance characteristics of silver cerium vanadate batteries.—73-07349
Polytypic study on a new layered perovskite vanadate $Sr_4V_3O_{10-y}$.—73-03183
Pressure-induced phase transition by $YVO_4$:$Eu^{3+}$: an emission lifetime study at high pressure.—73-05621
Pressure-induced phase transition in $YVO_4$:$Eu^{3+}$: a luminescence study at high pressure.—73-12660
Refinement of structure of $(Na,Li)_2V_2O_6$ at 293, 600, and 800 K.—73-16292
Single crystals of new Ruddlesden-Popper phases $(SrLa)_3V_2O_7$ and $Sr_4V_3O_{9.7}$: preparation, crystal structure, and electrical resistivity.—73-02432
Synthesis and crystal structure of ß-$SrV_2O_6$.—73-02478
Synthesis and magnetic property of $NaFe_3V_9O_{19}$.—73-02487
Synthesis and structure refinement of $SrT_xV_{6-x}O_{11}$ (T=Ti, Cr, and Fe).—73-02496
Synthesis of a new series of rare-earth vanadates $RBa_2V_3O_{11}$ (R=Y, La, Pr, Nd, Eu, Gd, Dy, Ho, Er, Tm).—73-05508
Temperature sensitvity of the optical constants of $BiVO_4$.—73-02703
Transport mechanism in semiconducting glassy silicon vanadates.—73-09424
Trapped-hole centers in irradiated $Li_3VO_4$.—73-03117
Valence and magnetic properties of $YSr_{2-x}CaV_3O_{9-y}$.—73-15375
Vanadium(V) environments in bismuth vanadates: a structural investigation using Raman spectroscopy and solid-state $^{51}V$ NMR.—73-02536

**vanadia,**
Annealing response of disordered sputter-deposited vanadium pentoxide ($V_2O_5$).—73-02727
Correlation of the electrical and optical properties of thin films of $V_2O_5$-$Bi_2O_3$.—73-12761
Effect of $Sb_2O_3$ addition on water durability of $V_2O_5$-$P_2O_5$ glass.—73-10367
EXAFS analysis of $V_2O_5$ thin overlayers on $SiO_2$ prepared by CVD.—73-08622
Fast ion transport in the new mixed system $(CuI)_x$-$[(Ag_2O)_2(V_2O_5)]_{100-x}$ ($40\le x\le 80$).—73-09406
Glass formation in $V_2O_5$-$MoO_3$-$Fe_2O_3$.—73-10380
Incommensurate spin density wave in metallic $V_{2-y}O_3$.—73-16514
Phase equilibrium in the $SnO_2$-$V_2O_5$ system.—73-08693
Preparation and physical properties of $V_2O_5$ aerogel.—73-13176
Reactivity of ionic oxides through water molecule adsorption process. MgO-$V_2O_5$ behavior.—73-02419
Real structure of $TiO_2$ in samples of the $TiO_2$-$V_2O_5$ system.—73-02421
Selective catalytic reduction of nitric oxide with ammonia on vanadium oxide catalysts supported on titania–alumina.—73-02685
Structure and physical properties of $V_2O_5$ aerogels and xerogels.—73-14285
Structure-transport relationships in lead borate glasses containing $V_2O_5$.—73-03813
Synthesis and study of $CeO_2$-$V_2O_5$ ceramic pigment.—73-10900
$V_2O_5$ surface phonon spectrum.—73-08789
Vanadia/titania catalysts in selective catalytic reduction of nitric oxide with ammonia.—73-02535

**vanadium oxides,**
Comparison of Li$^+$ transport in $Na_{1+x}V_3O_8$ and $Li_{1+x}V_3O_8$ by $^7Li$ NMR investigation.—73-17074
Effect of local coulomb fields on semiconductor-metal phase transition in $VO_2$ films.—73-01135
Effect of $Sb_2O_3$ addition on water durability of $V_2O_5$-$P_2O_5$ glass.—73-00333
Electrical conductivity of $V_2O_5$-$Bi_2O_3$-$TeO_2$ glasses.—73-04305
Electrical conductivity of $V_2O_5$-$Bi_2O_3$-$TeO_2$ glasses.—73-14173
Electrical conductivity of vacuum-deposited vanadium pentoxide thin films.—73-10943
Electrical properties of $Sb_2O_3$-SrO-$V_2O_5$ glasses and crystallized ones.—73-00477
Electrical properties of semiconducting $VO_2$-based critical temperature sensors.—73-14872
Electron structure of metal phase and metal-to-insulator transition in $VO_2$.—73-16130
Heteroepitaxy of $TiO_2$, $VO_2$ films, and $TiO_2$/$VO_2$ multilayers grown on sapphire(1120) by metallorganic chemical vapor deposition.—73-09160
Insertion reaction of $V_6O_{13}$ electrodes reversibly incorporating divalent cations.—73-04119
Insertion reactions of sodium in $V_6O_{13}$ single crystals from a solid polymeric electrolyte.—73-00980
Ionic conductivity and dielectric properties of vanadium pentoxide xerogels.—73-10964
Novel deposition technique for switchable vanadium sesquioxide ($V_2O_3$) thin films.—73-02910
Optical parameters of the film-type reversible recording media Al-$VO_2$-AK-113F and Al-$VO_2$-$Al_2O_3$.—73-05603
Oxygen chemisorption on titania–zirconia mixed oxide supported vanadium oxide catalysts.—73-08688
Phase equilibria in the system $Y_2O_3$-$V_2O_5$-CuO-$Cu_2O$ in atmospheric air.—73-16251
Phase relations in the system $Y_2O_3$-$B_2O_3$-$V_2O_5$ in the subsolidus region.—73-16258
Point defects and collective interactions in $Ti_{1-x}V_xO_2$ single crystals.—73-03106
Preliminary consideration of the growth behavior of $CeO_2$, $SrTiO_3$, and $SrVO_3$ films on Si substrate.—73-05955
Preparation and characterization of a new polymorph of $V_2O_5$.—73-02398
Preparation of vanadium oxide thin films by radio-frequency magnetron sputtering.—73-02976
Preparation of vanadium oxide thin films by radio-frequency magnetron sputtering.—73-13211
Preparation of vanadium-titanium oxide thin films by sol-gel method and their electrochromic properties.—73-16941
Raman scattering and X-ray diffractometry studies of epitaxial $TiO_2$ and $VO_2$ thin films and multilayers on α-$Al_2O_3$(1120).—73-02413
$S\neq1$ impurity effect on phase transition in $LiVO_2$.—73-16298
Sol-gel vanadium pentoxide glucose biosensor.—73-05180
Synthesis, characterization, and inelastic neutron scattering study of hydrogen insertion compounds of $VO_2$ (rutile).—73-02502
Three-dimensional model of a $VO_2$ memory element.—73-05680
Ultrasonic investigations of $V_2O_5$-$GeO_2$ glass.—73-07094
Valence ordering in $V_3O_9$ below 120 K.—73-02534
Vanadium dioxide thin films prepared by CVD from vanadium(111) acetylacetonate.—73-13334

**vanadium,**
Convenient, rapid, low-energy route to crystalline TiN, VN, and $Ti_xV_yN$ ($x$+$y$=1).—73-16686

Crystal structure of $TiFe_{1.16}V_{0.84}D_{1.9}$.—73-12564
Electroluminescence of vanadium in GaAs.—73-01152
Encapsulating efficiency for vanadium of $ZrO_2$-$SiO_2$ gels prepared from alkoxides to give V-$ZrSiO_4$ blue colored stains.—73-08614
Hopping transport in vanadium tellurite glasses containing antimony oxide.—73-07569
Hydrothermal preparation of vanadium zeolites.—73-13091
Hydrothermal synthesis and characterization of vanadyl(IV) hydrogen phosphate, $K_2(VO)_3(HPO_4)_4$.—73-02285
Hydrothermal synthesis, structure, and magnetic properties of a new polymorph of lithium vanadyl(IV) orthophosphate: ß-$LiVOPO_4$.—73-02288
Impurity-phonon interaction effects on the phonon density of states in MgO:$V^{2+}$.—73-02291
Jahn-Teller effect in $V^{4+}$-doped $Gd_3Ga_5O_{12}$ garnet.—73-08654
Mixed valence vanadium phosphate with a tunnel structure: $Rb_6V_6P_8O_{31}$.—73-02330
New vanadium(III) potassium phosphate with a cage structure: $K_6V_2P_4O_{16}$.—73-02356
Optically detected EPR of a V impurity in 6H-SiC.—73-09498
Prealloyed high-vanadium, cold work tool steel particles and methods for producing the same.—73-00293
Protonic conduction of vanadyl phosphate intercalation compounds.—73-01019
Space-charge-field feedback effect on carrier transport in photorefractive CdTe:V.—73-09422
Spectral luminescence and relaxation parameters of the $V^{3+}$ ion in glasses.—73-00546
Structure and electrical properties of vanadium tellurite glasses.—73-14284
Synthesis and characterization of $KV_2P_2O_{16}$: a new mixed-valence vanadium (III,IV,IV) diphosphate.—73-02476
Synthesis and crystal structure of $Zn_2VO(PO_4)_2$, a vanadyl(IV) orthophosphate containing a dimer of edge-sharing $ZnO_5$ square pyramids.—73-02484
Synthesis and crystal structures of two thallium vanadium phosphates: $TlVO_2(HPO_4)$ and $Tl_2V_2O_3(VO)(PO_4)_2(HPO_4)$.—73-02485
Thermodynamic and structural considerations of insertion reactions in lithium vanadium bronze structures.—73-02524
Thermodynamic properties of vanadium diboride in wide temperature ranges.—73-16378
Vanadium- and copper-containing glasses for use as filters for light sources intended for use with night vision devices.—73-00765

**vapor phase epitaxy,**
Characterization of vapor phase epitaxial ZnSe films.—73-04268
Current research problems and opportunities in the vapor phase synthesis of diamond and cubic boron nitride.—73-02759
Growth mechanisms in the metallorganic vapor phase epitaxy of InP.—73-11230
Low-pressure OMVPE of ZnSe with hydrogen selenide and dimethylzinc-triethylamine.—73-04386
Optimization of undoped GaAs by low-pressure OMVPE using trimethylgallium.—73-11365
Photoassisted organometallic vapor phase epitaxy of CdTe.—73-07713

**vaporization,**
Laser diagnostics of zirconium carbide vaporization.—73-13477
Model concept of vaporization from silicate melts.—73-00665
Reactive vaporization of sodium tetraborate with water vapor.—73-06962

**vapors,**
Concentration distribution of SiC vapor in the crystal growth zone.—73-12953
Influence of surface treatment of GaAs in chalcogen vapors on the properties of Schottky barriers in Me-GaAs structures.—73-14985
Vapor phase reactions in the synthesis of ceramics.—73-06131

**varistors,**
Ac impedance spectroscopic characterization of 10 mol% MgO-doped ZnO varistors.—73-07376
Characteristics of ZnO varistors prepared by organic process.—73-04264
Characterization of interface states in ZnO varistors using isothermal capacitance transient spectroscopy [ICTS].—73-01101
Characterization of interface states in ZnO varistors using isothermal capacitance transient spectroscopy.—73-11103
Chip type varistor.—73-15235
Cooling rate effects in ZnO varistors.—73-04276
Cryogenic behavior of ZnO varistors.—73-11128
*c-t* characteristics of Pr-doped ZnO varistors.—73-11087
Deep level transient spectroscopy of zinc oxide varistors doped with aluminum oxide and/or silver oxide.—73-14824
Densification and defect chemistry related to the varistor performance of ZnO-based ceramics.—73-14827
Effect of grain boundaries on the electrical properties of zinc-oxide-based varistor.—73-11153
Effect of heat treatment on the nonlinear exponents in ZnO varistors.—73-04290
Effect of $Zn_7Sb_2O_{12}$ content on grain growth and microstructure of ZnO varistor.—73-14859
Effects of grain size distribution on the breakdown voltage in ZnO varistors.—73-07471
Electrical properties and dc degradation characteristics of silver-doped ZnO varistors.—73-01144
Electrical properties and degradation phenomena of glass-doped ZnO chip varistors.—73-07486
Electrical properties of multilayer-chip ZnO varistors in a moist-air environment.—73-14871
Electrical properties of ZnO/PrCo oxide multilayered composites.—73-11183
Exaggerated grain growth of ZnO in low-voltage ZnO varistor.—73-14897
Fabrication of thin-film varistors using sputtering technique.—73-14913
Field-dependent changeover from current-to-voltage-limiting characteristics by nonlinear *n*-type $BaTiO_3$ ceramics.—73-14926
Grain-boundary properties of hot-pressed zinc oxide varistors.—73-14943
Grain-boundary structure of a ZnO-$Bi_2O_3$-CoO varistor.—73-01176
High-frequency terminal resonance in ZnO-$Bi_2O_3$-based varistors.—73-11244
How to beat lightning bolts.—73-07571
Improvement in the performance parameters of ZnO-based varistors with 10 mol% MgO.—73-01194
Improvement of the nonlinearity and degradation behavior of ZnO varistors.—73-11259
Influence of sintering temperature on electrical properties of ZnO varistors.—73-07602
Interface states at grain boundaries and their effects on the *I-V* characteristics in ZnO:Pr varistors—theoretical calculation.—73-11279
*I-V* characteristics of single grain boundary in ZnO varistor.—73-01193
Method of making varistor or capacitor.—73-01379
Method of producing varistor.—73-11533
Microemulsion mediated synthesis of zinc-oxide nanoparticles for varistor studies.—73-15041
Microwave processing of rare-earth-oxide-doped ZnO varistors.—73-04406
Modeling the electrical characteristics of polycrystalline varistors using individual grain-boundary properties.—73-11319
Novel approach to control of ZnO-based varistor microstructures at the nanometer level.—73-11354
Passivating coating for metal oxide varistors.—73-11041
Sintering and microstructural development of metal oxide varistor ceramics.—73-07800
Sub-grain-boundary phenomenon in ZnO varistor ceramics during sintering.—73-11463
Synthesis of ZnO-based varistor precursor powders by means of the reaction spray process.—73-11474
Tape-cast rare-earth-oxide-doped ZnO varistor.—73-01342
Varistor having interleaved electrodes.—73-01389
Varistors based on *n*-$BaTiO_3$ ceramics.—73-07857
Zinc oxide varistor, a method of preparing the same, and a crystallized glass composition for coating.—73-11551
ZnO varistors produced using colloidal-gel powders.—73-11512

**velocity,**
Determination of crack velocity as a function of stress intensity from static fatigue data.—73-17275

**vermiculite,**
Dehydration of vermiculites and montmorillonites: a time-resolved neutron diffraction study.—73-16103
Vermiculite.—73-12305

**vibration,**
Effect of vibration on rheological properties of fresh concrete.—73-09926
Method for detecting small vibrations of particles by LDV [Laser Doppler Velocimeter] for particle size and electrostatic charge measurements.—73-12164
Normal vibrations of atomic groups in sillenite lattice: I, $O_{11}Bi_3$ and $O_{12}Bi_3$ groups.—73-02361
Normal vibrations of atomic groups in sillenite lattice: II, $Me(O_3Bi_3)_4$ groups.—73-02362
Optical vibrations in $Bi_{1-x}(Sr_{1-y}Ca_y)_xO_{1.5-x/2}$ crystals.—73-16240
Overdamped lattice vibration of silicon carbide.—73-02366
Vibration absorption of PZT piezoelectric ceramics.—73-15300
Vibrational anomalies and phonon localization in glasses.—73-07101
Vibrational technique for stress measurement in films: I, Ideal membrane behavior.—73-05097
Vibrational technique for stress measurement in films: II, Extensions and complicating effects.—73-05098

**viscoelasticity,**
Viscoelastic effects in testing of an $Al_2O_3$ ceramic containing a glassy phase.—73-09689
Viscoelasticity in alumina ceramics at room temperature.—73-09690

**viscometers,**
High- and medium-range viscometers and their test with some alkali silicate glasses.—73-01902

**viscosity,**
Automated rotating cylinder viscometer for glass.—73-01887
Calculation of the CaO-$SiO_2$-$Me_2O_y$ system viscosity.—73-02554
Effects from electrolyte concentration and temperature on the effective viscosity of a slip emulsion.—73-02801
Experimental study on workability and self-compacting property of high fluidized concrete.—73-09960
Fluidity analysis of cement paste using a tuning-fork vibrating viscometer.—73-09965
Homogeneity effects on feedstock viscosity in powder injection molding.—73-05844
Rheology.—73-16977
Use of optical basicity to estimate the viscosities of glasses and melts.—73-14305
Viscosity measurement of quartz glass.—73-01938
Viscosity of glasses of the systems BaO-$P_2O_5$, SrO-$P_2O_5$, and PbO-$P_2O_5$ in the temperature ranges of softening and annealing and their elastic properties.—73-00573
Viscosity of potassium borosilicate glasses in the glass transition region.—73-00574
Viscosity of potassium borosilicate glasses in the vitrification interval.—73-00575
Viscosity of sodium borosilicate glasses in the glass transition range.—73-00576
Viscosity of sodium borosilicate glasses in the vitrification range.—73-00577

**vitreous materials,**
Anisotropy induced by photoinduced alloying of vitreous $As_2Se_3$ by silver.—73-16409
Computer simulation of the structure of silica glass.—73-06893
Diagnostics and monitoring for vitreous enameling.—73-10217
Functional classification of vitreous, vitrocrystalline, and ceramic materials.—73-03392
Genesis of the vitreous state: three variant approaches to the problem.—73-14391
Vitreous $B_2O_3$: a geometrical study.—73-06304

**vitrification,**
Advanced technology for the vitrification of contaminated soils.—73-09699
Characterization and vitrification of various waste streams.—73-09703
Design of a vitrification process for the destruction of asbestos wastes.—73-09710
Design of a vitrification process for the stabilization of mixed wastes at the Fernald Environmental Management Project.—73-09711
Development of the concept of R. L. Muller on the possibility of vitrifying melts.—73-14350
Features of the recombination kinetics of paramagnetic defects during vitrification of molten silicates in external magnetic fields.—73-00627
Genesis of the vitreous state: three variant approaches to the problem.—73-14391
Issues related to volatilization, phase alteration, and presence of unreacted feed in the borosilicate glass waste form.—73-06933
Microwave destruction/vitrification of electronic components.—73-06579
Pilot-scale vitrification laboratory for treatability studies on hazardous and mixed wastes.—73-09739
Preliminary assessment of disposal limits for vitrified low-level mixed wastes in RCRA (Resource Conservation and Recovery Act) landfills.—73-08305
Reactive additive stabilization process (RASP) for vitrification of hazardous and mixed waste (U).—73-08308
Regulatory issues in vitrification research: a case study of circuit board reclamation.—73-09744
Results of vitrifying Fernald OU-4 wastes.—73-08309
Status of vitrification for DOE low-level mixed waste forms.—73-08310
Thermal expansion and vitrification of borate melts.—73-00557
Use of local clays for vitrification of radioactive wastes.—73-01759
Use of local loam in vitrifying radioactive wastes.—73-01760
Viscosity of sodium borosilicate glasses in the vitrification range.—73-00577
Vitrification of heterogeneous weapon components.—73-08312
Vitrification of Superfund site soils and sludges.—73-09759
Vitrification of whiteware bodies in alumina–feldspar–kaolin system.—73-10906
Vitrification of whiteware bodies in alumina-feldspar-kaolin system.—73-00927
Waste acceptance product specifications for vitrified high-level waste forms.—73-08314

**volatilization,**
Kinetics of volatilization of $P_2O_5$ from sol-gel-derived phosphosilicate glass-ceramic powder.—73-00366
Volatilization of type E borosilicate glass.—73-00426
Volatilization of volatile glass components.—73-10618

**voltage,**
Bias voltage diagnostics during oxide etch in Drytek 384T.—73-07283
Transient flat-band voltage shifts following high-voltage stressing of thin oxides.—73-04181

**volume,**
Analysis of dependence of volume fraction and micropore shape on fracture toughness by the equivalent inclusion method.—73-03236

**wafers,**
Carrier lifetime and material study in intrinsically gettered silicon wafers for high precipite density.—73-04260
Characterization of stress in semiconductor wafers using birefringence measurements.—73-07411
Charge-carrier lifetime in Si wafers.—73-14806
Formation of titanium nitride on semiconductor wafer by reaction of titanium with nitrogen-bearing gas in an integrated processing system.—73-01372
Real-time determination of the direction of wafer temperature change by spatially resolved infrared laser interferometric thermometry.—73-15838
Semiconductor wafer bonding: a review of interfacial properties and applications.—73-15159
Single crystal diamond wafer fabrication.—73-11547
Surface defects in 6H-SiC wafers.—73-13369

**wall tiles,**
Ceramic tile from raw material from Kazakhstan.—73-00896
Development of ceramic wall and floor tiles using fly ash.—73-10817
Influence of the production cycle on the formulation and properties of bodies and glazes.—73-10859
Optimal firing temperature curve for ceramic wall and floor tile.—73-07265
Removal of cracks and pinholes on once-fired outside wall tiles.—73-07271

Sintered color glass tiles with rough sticking face.—73-10481
Using copper ore tailing to fabricate exterior wall tile once-fired at low temperature.—73-14673
Wall and floor tile body and glaze formulas for once fast firing at low temperature.—73-10907

**washing,**
Choosing a flat glass washing and drying system.—73-15709

**waste disposal,**
Ceramics Transactions, Volume 39: Environmental and Waste Management Issues in the Ceramic Industry.—73-17524
Characterization and vitrification of various waste streams.—73-09703
Design of a vitrification process for the stabilization of mixed wastes at the Fernald Environmental Management Project.—73-09711
Development of the Minimum Additive Waste Stabilization (MAWS) program for Fernald.—73-09712
Engineering properties of rubberized concrete.—73-03465
Environmental protection in the glass industry—program of waste management.—73-17477
How to control oil/grease in the effluent from glass container plants.—73-03850
International in situ testing of waste forms and package components: an overview of the MIIT [Materials Interface Interactions Test] program.—73-08298
Melting of fly ashes and product properties.—73-10456
Processing systems for inorganic and toxic chemical wastes.—73-13637
Rapid stirred melting of simulated West Valley high-level waste.—73-08483
Reactive additive stabilization process (RASP) for vitrification of hazardous and mixed waste (U).—73-08308
Regulatory issues in vitrification research: a case study of circuit board reclamation.—73-09744
Results of vitrifying Fernald OU-4 wastes.—73-08309
Retention of radioactive and toxic liquids [in a cementitious matrix].—73-03531
Stabilization/solidification of contaminated spent blasting media in portland cement mortars.—73-03539
Vitrification of heterogeneous weapon components.—73-08312
Vitrification of Superfund site soils and sludges.—73-09759
Waste acceptance product specifications for vitrified high-level waste forms.—73-08314
Waste glass design based on property composition functions.—73-08315

**wastes,**
Analysis of the formation of glass waste in the electric lamp industry.—73-00589
Application of inorganic waste residue.—73-09818
Binder-enhanced refuse-derived fuel ash: a study of hydrolysis.—73-13682
Building material based on the wastes of tungsten and molybdenum integrated works.—73-03976
Building materials based on industrial wastes.—73-01978
Burning of solid waste in cement kilns.—73-05102
Ceramic bodies obtained using the waste products of the fluorite concentration plants.—73-00894
Ceramic brick production making use of coal mining wastes of Ekibastuzsky basin.—73-00766
Ceramic linings for waste incinerators: I.—73-00784
Complete substitution of natural raw materials by shale industry waste at cement plant reconstruction.—73-09862
Complex evaluation of waste from the electroplating industry as a secondary source of raw materials for silicate production.—73-08494
Composition effects on microstructure in heat-treated Fernald waste glasses.—73-09706
Conservation of raw material through use of industrial wastes in cement manufacture.—73-09864
Durability of simulated DWPF [Defense Waste Processing Facility] annealed glasses.—73-06908
Ecological and economical aspects of cement production when using waste-derived fuels.—73-00068
Ecology activities of SVUS.—73-15717
Emerging technologies for utilizing wastes in cement production.—73-03464
Feasibility study of thermal plasma destruction of toxic wastes in a counterflow liquid injection plasma reactor.—73-13058
Ferrite powders obtained by retreatment of metallurgic wastes.—73-01461
Glasses and pyroceramics based on industrial wastes.—73-07134
High-efficiency cementless binders made of ash and slag wastes of thermal power stations and concretes based on them.—73-00100
Hydraulic behavior of calcium sulfoaluminate-based cements derived from industrial process wastes.—73-13731
Literature review of surface alteration layer effects of waste glass behavior.—73-08299
Long-term alteration of borosilicate waste glasses.—73-06936
Metallurgical wastes—an important raw material base for ceramic industry.—73-05144
Microstructure and fluoride concentration in Fernald waste glasses.—73-07151
Microstructure of materials of glass composition for immobilization of radioactive wastes.—73-00516
Microwave processing of geopolymer–cement-based waste forms.—73-03501
Petrurgic materials obtained from rocks and industrial wastes.—73-14454
Phase composition changes in quartzitic waste from grain processing in relation to firing temperature.—73-01992
Phosphogypsum waste for construction materials.—73-03517
Possibilities of utilization of wastes from desulfurization in building materials manufacturing.—73-10088
Preparation of porous ceramics from industrial waste silica mineral.—73-02963
Processing and recycling of the waste materials in ceramic tile industry.—73-10886
Production of activated mineral filler from ash and slag wastes of thermal power plants for the preparation of asphalt concretes.—73-05146
Production of magnesia from dolomitized waste products.—73-15912
Production of perforated bricks using architectural discard residues.—73-07194
Production parameters for ceramics based on waste at the Zaporozhe refractories factory.—73-01821
Progress of research and development of high-level radioactive waste materials.—73-12011
Recovering and reusing enamel waste.—73-13893
Reduction of environmental pollution by using secondary raw materials.—73-05147
Refractory channel composition based on production waste from silicon carbide articles.—73-00854
Reuse of wastes from wastewaters of the ceramic industry.—73-13644
Solidification/stabilization of a synthetic electroplating waste in lime–fly ash binder.—73-10156
Synthesis of black low-priced pigment using industrial waste.—73-08501
Synthesis of colored, nonfritted glazes based on mining-ore waste products.—73-00925
Time-temperature-transformation diagrams for DWPF [Defense Waste Processing Facility] projected glass compositions.—73-06983
Turning geothermal waste into glasses and glass-ceramics.—73-01999
Update on the properties of clinker and cement derived from industrial chemical wastes.—73-03551
Use of scrap tires in the U.S. cement industry.—73-03554
Use of waste products in glass melting.—73-00718
Waste burning and thermal destruction of organic compounds in a cement kiln.—73-13649
Waste burning and thermal destruction of organic compounds in kilns.—73-03557
Waste materials from the production of electrolytic manganese dioxide in the glass container industry.—73-07188
Waste water legislation in the Federal Republic of Germany. The goal: prevention–reduction–salvage.—73-03412

**water,**
Advanced design electrode holders can make a difference.—73-01942
Behavior of monosulfate in seawater and effects of adding amino acid.—73-09829
Capillary suction of water into concrete and the abnormal viscosity of the pore water.—73-06631
Changes in surface structure of sputtered glasses [observed] by AFM [atomic force microscopy] upon water absorption.—73-03711
Changes in the physical properties of hydrated ß-$CaSO_4{\cdot}H_2O$ by a drastic reduction of the water/plaster ratio.—73-00033
Corrosion behavior of mullite ceramics in water at 300°C.—73-03213
Degradation of stressed optical fibers in water: new worst-case lifetime estimation model.—73-10428
Determination of water permeability coefficient of porous concrete for prefabricated drainage units.—73-09886
Dynamic behavior of concrete: influence of free water.—73-00066
Effect of mixing water on morphology of $C_3A$ hydrates.—73-09912
Effect of the action of make-up water subjected to the treatment of magnetic field on cement mortars and their chemistry of binding processes.—73-00079
Effects of impact angles of jet stream in the abrasive water jet cutting of $Si_3N_4$ ceramics.—73-16751
Energy distribution function associated with Dubinin's description of water adsorption on zeolite Y.—73-16493
Erosion and abrasive water jet cutting of ceramics.—73-05792
Exchange of water and heavy water in gypsum, lime, and hydrogarnet.—73-09955
Experimental study on water extraction sheet sheathings (performance and convertibility on a fiber-layered permeable sheet).—73-09959
Forms of water in perlites and genesis of volcanic glasses.—73-13989
Fourier transform infrared attenuated total reflection spectroscopy linear dichroism study of sodium dodecyl sulfate adsorption at the $Al_2O_3$/water interface using $Al_2O_3$-coated optics.—73-12141
Fourier transform infrared spectroscopy of $H_2O$ on the hydroxylated ZnO surface.—73-12588
Friction and wear properties of fine ceramics in high-temperature and high-pressure water.—73-03303
Glass size compositions and glass fibers coated therewith.—73-03925
High-pressure benefits of water jet cutting.—73-14403
Hydration of cement with heavy water.—73-09990
Hydrophilicity-hydrophobicity of the kaolinite surface.—73-05579
Influence of material composition on rheological properties of clay/water suspensions.—73-02870
Interaction of hydrogen and water with diamond (100): infrared spectroscopy.—73-09468
Interactions of water with trisiloxane rings: I, Experimental analysis.—73-02301
Interactions of water with trisiloxane rings: II, Theoretical analysis.—73-02302
Mechanism of diffusion of water in silica glass.—73-06937
Modeling of the corrosion of cement paste by deionized water.—73-03503
Monitoring wastewater takes a fistful of technologies.—73-08422
Optimization of planetary cooler operation by accurately controlled injection of water.—73-00155
Plasma processing of materials underwater.—73-09244
Reaction of the oxygen-deficient $YBa_2Cu_3O_8$ phase with water.—73-04797
Reagent-less processing of stagnant water containing fluorine.—73-09742
Recycling wastewater.—73-15751
Reuse of wastes from wastewaters of the ceramic industry.—73-13644
Structural modeling of molecular correlation of water-gel interface.—73-14096
Structural water in volcanic glass.—73-14102
Structure and properties of confined liquids: a molecular model of the clay–water interface.—73-08974
Structure of amorphous $Ta_2O_5{\cdot}nH_2O$ derived from peroxo-polytantalate solution.—73-02463
Surface segregation of PVA during drying of a PVA–water–$Al_2O_3$ slurry.—73-13290
Surface segregation of PVA during drying of a PVA-water-$Al_2O_3$ slurry.—73-03032
Thermodynamics and kinetics of $H_2O(v)$ chemisorption and solubility in nanometric and single-crystal MgO particles during sintering.—73-08781
Tribological characteristics of $Si_3N_4$ ceramic in high-temperature and high-pressure water.—73-06545
Waste water legislation in the Federal Republic of Germany. The goal: prevention–reduction–salvage.—73-03412
Water and the silica surface as studied by variable-temperature high-resolution $^1H$ NMR.—73-06988
Water model simulation on tundish sliding nozzle—fluid flow in submerged entry nozzle.—73-00883
Water movement within concrete due to drying under various temperature conditions.—73-10191

**waterproofing,**
Mechanical durability of water-repellent film on glass.—73-14224
Water-repellent coatings on glass substrates by the sol-gel process.—73-14528

**waveguides,**
Action of γ-irradiation on light attenuation in waveguides made of multicomponent glass.—73-14130
Brillouin scattering by localized acoustic modes in silicon oxynitride–fused silica optical waveguides.—73-08816
Calculation of hybrid modes in uniaxial planar optical waveguides: application to proton-exchanged $LiNbO_3$ waveguides.—73-11557
Coated optical fibers and method.—73-03912
Conductance quantization in a GaAs electron waveguide device fabricated by X-ray lithography.—73-14816
Conformal method of fabricating an optical waveguide on a semiconductor substrate.—73-01441
Coupling of orthogonally polarized waves in $LiNbO_3$ optical waveguides.—73-07874
Design and fabrication of a broad-band silica-based optical waveguide coupler with asymmetric structure.—73-07116
Development of a fiber optic sensor for ceramic materials characterization.—73-16701
Direct measurement of ordinary refractive index of proton-exchanged $LiNbO_3$ waveguides.—73-01402
Effect of external action on the optical loss from fiber light guides made of chalcogenide glass.—73-00455
Effect of radiation on longevity of light guides.—73-00331
Effect of radiation treatment on durability of light guides.—73-00461
Effects of reactive ion etching on optical and electrooptical properties of GaInAs/InP-based strip-loaded waveguides.—73-11174
Efficiency method of excitation of a semiconductor waveguide with a single-mode optical fiber.—73-04297
Electroabsorption and electrooptic modulation in single-crystal ZnSe-ZnSSe waveguides grown by OMPVE on GaAs.—73-01149
Electromagnetic modes and prism-film coupling in anisotropic planar waveguides of epitaxial (101) rutile thin films.—73-08860
Epitaxial waveguides of aluminum garnet.—73-08514
Fabrication and characterization of optical waveguides in glass by diffusion of silver films.—73-14184
Fabrication of nonlinearly shaped optical waveguide tapers on InP with precise design parameter control.—73-14911
Fabrication of sol-gel-derived ferroelectric $Pb_{0.865}La_{0.09}Zr_{0.65}$- $Ti_{0.35}O_3$ optical waveguides.—73-04551
Fabrication of waveguides using low-temperature plasma processing techniques.—73-07526
Four-channel ridge waveguide quantum well wavelength division demultiplexing detector and its optimization.—73-07538
GaAs 2×2 Mach–Zehnder optic waveguide switch/modulator.—73-11216
Guided mode field distributions of Ti:$LiNbO_3$ optical waveguides.—73-07893
Heat treatment of strengthened epoxy acrylate-coated silica light guides.—73-00639
High-efficiency 50-GHz InGaAs multimode waveguide photodetector.—73-07559
High-index proton-exchanged MgO:$LiNbO_3$ optical waveguides using adipic acid.—73-01417
Influence of shallow traps on the properties of $LiNbO_3$ waveguides.—73-07894
Interaction of optical waveguide modes with magnetostatic surface waves in tangentially magnetized finite samples.—73-01217
Interaction of optical waveguide modes with magnetostatic transverse surface eigenmodes in a channel yttrium iron garnet waveguides.—73-07944

$LiNbO_3$ waveguide devices.—73-04559
$LiNbO_3$ waveguide devices.—73-11587
Lithium niobate waveguide.—73-11632
Loss characteristics of potassium and silver double-ion-exchanged glass waveguides.—73-07045
Lossy mode cutoff conditions in planar waveguides with semiconductor guiding layer.—73-15016
Magnetooptic channel waveguides in Ce-substituted yttrium iron garnet.—73-11665
Magnetooptical waveguides of aluminum garnet.—73-04626
Method of controlling metal oxidation during waveguide formation.—73-00742
Modeling of refractive index profiles of $He^+$ ion-implanted $KNbO_3$ waveguides based on the irradiation parameters.—73-11590
Monolithic integration of glass waveguides with semiconductor lasers.—73-01254
Optical and structural properties of annealed PE:$LiNbO_3$ waveguides formed wth pyrophosphoric and benzoic acid.—73-01420
Optical characterization of $KTiOPO_4$ periodically segmented waveguides for second-harmonic generation of blue light.—73-12845
Optical characterizations of ion-exchanged glass waveguides.—73-14239
Optical nonlinearities on GaAs-GaAlAs multiple-quantum-well hetero-*nipi* waveguides.—73-01264
Optical waveguide formed of compound semiconductor materials and process of fabricating the optical waveguide.—73-01380
Phase-matched second harmonic blue light generation in ion-implanted $KNbO_3$ planar waveguides with 29% conversion efficiency.—73-07904
Photoinduced processes in the volume of photochromic glass PhKhS-2 and waveguides based upon it.—73-14248
Preparation of $KTiOPO_4$ crystal planar waveguides and measurement of their effective refractive indices.—73-08957
Preparation of substituted $Y_3Fe_5O_{12}$ single-mode buried waveguides on a [100]-oriented $Gd_3Ga_5O_{12}$ substrate.—73-16939
Process for the preparation of glass fiber optical waveguides with increased tensile strength.—73-00758
Propagation characteristics of a ferrite image guide.—73-04640
Properties of proton-exchanged waveguides in lithium tantalate.—73-11606
Proton- and ammonium-exchanged optical waveguides in $KTiOPO_4$.—73-02677
Quartz optical waveguide and method for producing the same.—73-00760
Raman investigation of the nonlinear optical phenomenon of polarization rotation in Ti:$LiNbO_3$ channel waveguides.—73-07916
Special traits of the defect structure of $LiNbO_3$ single crystals and their effect on the optical properties of titanium-diffusion waveguides.—73-11617
Test structures for characterization of electrooptic waveguide modulators in $LiNbO_3$.—73-15294
Theoretical analysis of Cherenkov second harmonic generation [CSHG] in proton-exchanged *c*-cut MgO:$LiNbO_3$ optical waveguides.—73-07922
Wave propagation in integrated acoustooptical anisotropic waveguides.—73-16648
Wave-guiding structure with lasing properties.—73-10671

**waves,**
Transformation of acoustic waves on superconductor layer in piezocrystals.—73-01440
Wave propagation in integrated acoustooptical anisotropic waveguides.—73-16648

**wear resistance,**
Abrasion wear-resistant coated substrate product.—73-03902
Approaches to improve wear resistance of rolling ring of double roll.—73-12110
Ceramic compositions for wear-resistant applications.—73-15938
Deposition of wear-resistant BN coatings by rf plasma-assisted chemical vapor deposition.—73-03573
Influence of quartz and particle size on the blast wear of ceramic materials.—73-17360
Mechanically retained wear-resistant ceramic pad.—73-10321
Secondary hardening type high-temperature wear-resistant sintered alloy.—73-05335
Selection and application of wear-resistant materials to increase service life of components.—73-08541
Silicon nitride sintered product excellent in wear resistance.—73-16016
Slidable ceramic member and method of manufacturing [the] same.—73-16019
Sliding material.—73-10351
Tribochemical mechanisms of $Si_3N_4$ with additives.—73-09519
Wear resistance of $C^+$-implanted silicon investigated by scanning probe microscopy.—73-09698
Wear-corrosion-resistant materials for mechanical components in harsh environments.—73-06878
Wear-resistant coating for fuel cladding.—73-05249
Wear-resistant double rolls.—73-12207

**wear,**
Abrasive wear of $Al_2O_3$-SiC composites.—73-03233
Abrasive wear of sintered aluminum alloy and its composite containing SiC particles.—73-03559
Accelerated wear testing using the grit size effect.—73-05016
Active wear mechanisms in a titanium-based cermet when machining steels.—73-03560
Application of mathematical and statistical methods for analyzing the wear of the tuyere assembly of open-hearth furnaces.—73-00777
Ball-on-flat reciprocating sliding wear of single-crystal, semiconductor silicon at room temperature.—73-06327
Ceramic tool wear when machining austempered ductile iron.—73-06338
Ceramic wear materials—horses for courses.—73-05160
Characterization of wear behavior of steel and ceramics in the VAMAS round robin tests.—73-06341
Characterization of wear damages in coatings by optical profilometry.—73-08379
Combined effect of speed and humidity on the wear and friction of silicon nitride.—73-06343
Comparative dry wear behavior of hard coatings.—73-06755
Comparative study of the fretting wear of hard carbon coatings.—73-03246
Dry sliding wear of TiN-based ternary PVD coatings.—73-09571
Effect of microstructure on the wear transition of zirconia-toughened alumina.—73-06386
Environmental effects on friction and wear of ceramics.—73-12798
Environmental effects on wear behavior of alumina.—73-09592
Erosion wear properties of tetragonal $ZrO_2(Y_2O_3)$-toughened $Al_2O_3$ composites.—73-06405
Friction and wear behavior of a number of ceramic-coated steels matched as sliding pairs to various surface-treated steels.—73-06795
Friction and Wear of Ceramics.—73-17526
Friction and wear tests of titanium boride ceramics at elevated temperatures.—73-17336
Galling in aluminum alloys and Duralcan aluminum matrix composites.—73-06797
Grain size effect on abrasive wear mechanisms in alumina ceramics.—73-06447
Lubricated rolling wear of SiC-whisker-reinforced $Al_2O_3$ composites against M2 tool steel.—73-06470
Machine for fretting wear testing of plasma-surface-modified materials.—73-08409
Mechanics of tool wear during machining of advanced fibrous composites.—73-06487
Mechanism of wear of rotary percussive drilling bits and the effect of rock type on wear.—73-17395
Mechanisms of hard alloy wear in frictional processes with polymers and composite materials.—73-03615
Metallurgy of cBN and its wear in high-speed machining of ferrous materials.—73-05268
Microscopic observations of wear of heat-resistant ceramics.—73-09475
On-line wear monitoring using acoustic emission.—73-08428
Phase analysis and wear mechanism of basic refractories.—73-10754
Role of oxidation in the wear of plasma-nitrided and PVD TiN-coated steel.—73-06852
Sliding friction and wear of ceramics in neutral, acid, and basic aqueous solutions.—73-06523
Sliding wear of self-mated $Al_2O_3$-SiC whisker-reinforced composites at 23–1200°C.—73-03351
Sliding wear properties of sintered mullite ceramics.—73-13590
Sliding wear properties of sintering mullite ceramics.—73-03352
Stress-induced increased low-level leakage in thin oxides.—73-05644
Tool flank wear in single-point diamond turning.—73-06539
Transmission electron microscopy study of wear of magnesia partially stabilized zirconia.—73-06300
Tribology of ceramics.—73-06546
Turning of fiber- and particle-reinforced aluminum.—73-03662
Wear and friction of a unidirectional carbon fiber–glass matrix composite against various counterparts.—73-07102
Wear and friction properties of prosthetic joint materials evaluated on a reciprocating pin-on-flat apparatus.—73-09692
Wear and wear protection [in the glass industry].—73-01838
Wear behavior of titanium coating combinations at elevated temperatures.—73-06875
Wear characteristics of $TiO_2$ coating and silicon carbide alloyed layer on Ti-6Al-4V material.—73-10297
Wear control in a variable-pitch lead screw with cylindrical meshing elements.—73-13906
Wear mechanism of castable for steel ladle by slag.—73-14632
Wear mechanism of ceramic tools.—73-09693
Wear mechanisms of silicon nitride, partially stabilized zirconia, and alumina in unlubricated sliding against steel.—73-06550
Wear mechanisms of ultrahard, nonmetallic cutting materials.—73-06551
Wear of media balls during the ball milling of $Si_3N_4$ powder.—73-06133
Wear of reflected materials and composites sliding against $MoS_2$ films.—73-09695
Wear of $Si_3N_4$ ceramics by abrasive water jet.—73-09696
Wear of $Si_3N_4$ ceramics by abrasive water jet.—73-17457
Wear reduction by pyrolytic carbon on tribosurfaces.—73-09697
Wear resistance of diffusion-treated surfaces.—73-06877
Wear tester capable of monitoring and evaluating the movement pattern of abrasive particles in three-body abrasion.—73-15760
Wear transition diagram for silicon nitride.—73-08544

**weathering,**
Influences of humidity and temperature on weathering of glass substrates coated with sol-gel-derived films.—73-03794

**Weibull statistics,**
Designing ceramic components for structural applications.—73-12322
Effect of specimen number on the determination of the characteristic strength and Weibull modulus of ceramics—an experimental study.—73-15792
Evaluation of Weibull modulus by Weibull plane.—73-17312
Influence of Weibull modulus on distribution of estimated modulus.—73-09623
Weibull estimators for pooled fracture data.—73-17458

**weighing and weights,**
Ensuring accuracy and traceability of weighing instruments.—73-05045
Optical measurement of gob weight.—73-12052

**welding,**
Capacitor discharge and flash welding of SiC-reinforced high-temperature Al alloys.—73-00212
Ceramic welding process.—73-02031
Ceramic welding process.—73-04965
Laser welding process for attaching metal to ceramic substrate.—73-10320

**wet processing,**
Formation reaction of Mn-Zn ferrite by wet process.—73-09144
Mechanism of formation of ferroelectric lead-titanate-based ceramics by wet chemical methods.—73-07899
New technique of wet processing of quartz sandstone and its application.—73-14440

**wettability,**
Effect of zirconium on wettability of alumina and zirconia by silver-indium base alloy.—73-00223
New experimental setup for wettability characterization under monitored oxygen activity: II, Wettability of sapphire by silver-oxygen melts.—73-03628
Wettability and interfacial reaction of alumina and zirconia by reactive silver-indium base alloy at mid-temperatures.—73-00276
Wettability of MgO single crystals by liquid pure Pb, Sn, and Bi.—73-13907
Wettability of SiC by liquid Sn and binary Sn-Si alloys.—73-03664
Wetting behavior of aluminum and aluminum alloys on $Al_2O_3$ and CaO.—73-13908

**wetting,**
Interfaces and wetting properties between PLZT ceramics and electrode metals.—73-03607
Mechanisms of wetting in reactive metal/oxide systems.—73-00249
Promoting the wetting and brazing of ceramics.—73-03635
Wetting behavior of fresnoite and sphene on $BaTiO_3$ ceramics.—73-13464
Wetting of titanium carbide by molten metals.—73-03666
Wetting properties of AlN with electrode metals and their interfaces.—73-13909

**whiskers,**
Branching phenomena in $Si_3N_4$ whiskers.—73-17110
Catalytic process for mullite whiskers.—73-09030
Characterization of SiC whiskers through infrared absorption spectroscopy.—73-08818
Effect of whisker orientation on toughening behavior and cutting performance of $SiO_w$-$Al_2O_3$ composite.—73-06391
Fiber and Whisker Reinforced Ceramics for Structural Applications.—73-13654
Formation of SiC whiskers from rice husk silica–carbon black mixture: effect of preheat treatment.—73-09141
Improved carbon coatings for silicon carbide whiskers.—73-16831
Mechanical properties of SiC whisker-reinforced glass-ceramic composites: II, Effects of whisker diameter and carbon coating to whisker.—73-10454
Mechanical properties of whisker-reinforced cordierite glass-ceramic composites.—73-10455
Mechanisms of oxide whisker growth.—73-16862
Morphology and crystallography of aluminum nitride whiskers.—73-08670
Preparation of alumina-hydrate-coated SiC whisker—effect of reaction condition on the morphology of coated body.—73-17415
Preparation of alumina-hydrate-coated SiC whiskers—effect of reaction condition on the morphology of coated body.—73-09256
Preparation of $Na_{1-x}Ti_{2+x}Al_{1-x}O_{12}$ whiskers by calcining with excess $Na_2O$.—73-13196
Preparation of $Si_3N_4$ whiskers from various natural resources.—73-16932
Process for producing titanium carbide whisker.—73-05330
Silicon carbide whisker and its application.—73-05275
Silicon carbide whisker production apparatus.—73-05012
Silicon carbide whiskers.—73-12298
Synthesis and characterization of ß´-SiAlON whiskers prepared from the carbothermal reaction of silica fume and $\alpha$-$Al_2O_3$.—73-17018
Synthesis of titanium nitride whiskers from potassium fluorotitanate(IV)[—comment on using chemical equilibria calculation].—73-02501
Thermal-shock- and creep-resistant porous mullite articles prepared from topaz and process for manufacture.—73-05247
Ultrastructure of bulk SiC fibrils grown by VLS methods.—73-09381
Whisker and particulate reinforcement of glass and glass-ceramics.—73-14530

**whiteware,**
Benefits of Dorset ball clay in traditional whiteware applications.—73-10801
Crazing on whitewares having both an engobe and a glaze.—73-07241
Effects of alkali oxides on the cristobalitization of quartz in whiteware body.—73-10831
Effects of microcrystalline cellulose on the properties of whiteware bodies.—73-10834
History of the ceramic whitewares industry [in Hungary], 1920-1994.—73-00911
Modern design basics for whiteware firing technology in the 1990's.—73-10870

Modern fast firing of whiteware products—effects on product quality.—73-10871
Quantum leap in cup technology.—73-04047
Special process features of isostatic pressing of whiteware bodies.—73-10898
Vitrification of whiteware bodies in alumina–feldspar–kaolin system.—73-10906
Vitrification of whiteware bodies in alumina-feldspar-kaolin system.—73-00927

**windows,**
Chemical analysis of some stained glass windows in Leon Cathedral.—73-13663
Glass sensor study to estimate the corrosive stesses at the stained glass windows of Santa Maria del Mar, Barcelona[, Spain].—73-13669
Molding for automobile windows.—73-10649
New comprehensive concept for the conservation of stained glass windows.—73-13671
Process for formation of an aluminum oxide based layer on glass, the product thus obtained, and its use in windows incorporating a conductive layer.—73-00756
Solid-state electrochromic variable transmission windows.—73-00545
Water-repellent window glass and method for preparation thereof.—73-10670
Window glasses for amenity life.—73-00582

**wire,**
Barrier-modulated semiconductor quantum wires.—73-11084
Ceramic superconductor wire and method of manufacturing the same.—73-11947
Fabrication of sintered oxide superconducting wires by a powder-in-tube method.—73-01706
High critical temperature superconducting wire with radially grown crystallites.—73-04836
Magnetoplasmons, protons, and spin-flip excitations in GaAs quantum wires.—73-15034
Method for producing oxide superconducting composite wire.—73-11968
Method for producing strain tolerant multifilamentary oxide superconducting wire.—73-15685
Method of manufacturing oxide superconducting wire.—73-11974
Method of preparing oxide superconducting wire.—73-01722
Method of producing superconducting ceramic wire having protective metal coating thereon.—73-01724
Optical fiber promises wiring system and private network applications.—73-09734
Oxide superconductor, superconducting wire and coil using the same, and method of production thereof.—73-15691
Photoluminescence spectra and anisotropic energy shift of GaAs quantum wires in high magnetic fields.—73-07730
Process for producing sintered ceramic wire.—73-12093
Process for producing superconducting wires.—73-11997
Superconductive ceramic wire and method for making [the] same.—73-04881
Superconductive ceramic wire and method for producing the same.—73-04882
Two-phonon absorption in GaAs quantum wires.—73-07847

**wollastonite,**
Dispersion stability of alumina–wollastonite aqueous suspensions.—73-05746
Flexural strength and microstructure of cement binders reinforced with wollastonite microfibers.—73-06655
Impedance studies of wollastonite microfiber-reinforced cement paste systems.—73-06671
Industrial minerals as strengthening agents in ceramic matrix composites.—73-09170
Magnesium content effects on the crystallization behavior of bioactive glasses in the system CaO-MgO-$SiO_2$-$P_2O_5$-$CaF_2$.—73-14031
Nucleation of beta-wollastonite crystal by noble metal particles.—73-14446
Synthesis of glass-ceramics in the wollastonite–apatite–celsian system.—73-07182
Wollastonite.—73-12306

**work function,**
Anomalous temperature dependence of the work function in $YBa_2Cu_3O_{7-\delta}$.—73-07986

**wurtzite,**
Structural aspect of wurtzite boron nitride phase stabilization.—73-12694

**X-ray diffraction,**
Characterization of epitaxial thin films by X-ray diffraction.—73-01889
Determination and refinement of structure of kuznetsovite mineral from X-ray powder pattern.—73-02232
Effect of sample preparation technique on X-ray diffraction analysis results.—73-15791
Electron density distribution in AlN from powder X-ray diffraction data by the maximum-entropy method.—73-05389
Experimental apparatus for polycrystalline X-ray diffraction methods.—73-01897
In situ X-ray diffraction studies of $YBa_2Cu_3O_x$.—73-11799
Indirect processes in standing X-ray wave method.—73-01907
Local ordering structure of meta-kaolinite and meta-dickite by the X-ray radial distribution function analysis.—73-08656
Program package for obtaining unit-cell constants and possible space groups from X-ray powder diffraction data.—73-05080
Resonant X-ray diffraction near the iron *K*-edge in hematite ($\alpha$-$Fe_2O_3$).—73-08725
Simple calculation of SiC polytype contents from powder X-ray diffraction peaks.—73-16303
Structural evolution of sol-gel solutions and thin films by means of X-ray diffraction methods.—73-14092
Structure refinements with a new version of the Rietveld refinement program RIETAN.—73-15851
Thin-film thickness and density determination from X-ray reflectivity data using a conventional power diffractometer.—73-08998
X-ray phase analysis with depth profiling for thin films.—73-08461
X-ray study of $TlGaSe_2$ and $TlInS_2$.—73-01367
XRD characterization of multilayered systems.—73-12735
XRD study on the structures of ferrites: hematite, Ba ferrite, and $Zn_2Y(Ba_2Zn_2Fe_{12}O_{22})$.—73-12737

**X-ray fluorescence,**
Standardless X-ray fluorescence (XRF) analysis of liquids.—73-08446
Trace element determination by X-ray fluorescence in a cement plant.—73-00201
X-ray fluorescence (XRF) spectrometer for analysis of silicate ceramic materials.—73-15862
X-ray fluorescence analysis of piezoceramic materials based on PZT.—73-15302
X-ray fluorescence analysis of solutions in the production of zeolites.—73-02545
X-ray fluorescence measurements of X-ray absorption near edge structure [XANES] at the Si, P, and S *L* edges.—73-16395
X-ray fluorescent analysis of oxide compounds with the langasite structure.—73-08460

**X-ray photoelectron spectroscopy,**
Angle-resolved X-ray photoelectron spectroscopy method for the thickness measurement of metal oxide/metal ultrathin films.—73-08374
Angle-resolved X-ray photoelectron spectroscopy method for the thickness measurement of metal oxide/metal ultrathin films[—eratum].—73-15775
Application of X-ray photoelectron spectroscopy to quantitative analysis of PZT composition.—73-05359
Application of X-ray photoelectron spectroscopy to quantitative analysis of PZT composition.—73-16034
Application of X-ray photoelectron spectroscopy valence bands in studying ceramic surfaces and interfaces.—73-12538
Exponential decrease of the XPS signal of substrate with the initial growth of $Y_1Ba_2Cu_3O_{7-\delta}$ overlayer.—73-04721
Grazing-incidence X-ray photoemission spectroscopy investigation of oxidized GaAs(100): a novel approach to nondestructive depth profiling.—73-11223
Indirect processes in standing X-ray wave method.—73-01907
O1*s* XPS binding energy in $YBa_2Cu_3O_{7-\delta}$.—73-15570
Silylation of H-ZSM-5: an X-ray photoelectron and ir spectroscopy study.—73-12682

**X-ray,**
Application of carbon fibers to the resistive wire anode of position-sensitive proportional counters for soft X-rays (100–1000 eV).—73-04059
Characterization of ceramics and glass using proton-induced X-ray emission.—73-01888
Design and operation of monolithic X-ray inteferometers for super-precision metrology.—73-05035
Determination of the quantitative phase composition of a ceramic by X-ray phase analysis.—73-08599
Determining pigments in glass by XFA.—73-00321
Qualitative X-ray phase analysis based on calculated standards.—73-15834
Soft X-ray emission study of $YBa_2Cu_4O_8$.—73-11900
X-ray and neutron diffraction studies of the diffuse phase transition in $PbMg_{1/3}Nb_{2/3}O_3$ ceramics.—73-02541
X-ray computed tomography for the testing and evaluation of ceramic processes.—73-01939
X-ray phase analysis and small-angle X-ray scattering study of the reduced layer of microchannel plates.—73-00427

**xerogels,**
Analysis of EPR spectra of Cu(II) spin label of heat-treated $SiO_2$ xerogels.—73-03707
CdS semiconductor-doped silica xerogels.—73-11091
Correlation function and statistical properties of xerogel $(Sn,Ti,Zr)O_2$.—73-16433
Diffusion of sodium cations in high silicon xerogels and gel-glass.—73-00325
Heat treatment of $SiO_2$ xerogels [investigated] by EPR and ir spectroscopy.—73-03732
Ionic conductivity and dielectric properties of vanadium pentoxide xerogels.—73-10964
Microstructure of puffed silica xerogel.—73-09490
Preparation, characterization, and ionic conductivity of $(LiCl)_2$-$B_2O_3$-$SiO_2$ xerogels.—73-05459
Sintering and crystallization behavior of BaO-$Al_2O_3$-$SiO_2$ and BaO-ZnO-$Al_2O_3$-$SiO_2$ xerogel powders.—73-13257
Structure and physical properties of $V_2O_5$ aerogels and xerogels.—73-14285
Texture evolution of zirconium oxide xerogels prepared by sol-gel process.—73-13319

**xonotlite,**
Mechanical properties and microstructure of cement binders reinforced with synthesized xonotlite microfibers.—73-13751
$Mg^{2+}$ uptake by synthetic tobermorite [T] and xonotlite [X].—73-00138

**Young's modulus,**
Effect of surface-limited microcracks on the effective Young's modulus of ceramics: III, Experiments.—73-13513
Effective tensile Young's modulus of early aged concrete.—73-09929
Prediction of the mechanical high-temperature behavior of ceramic materials by measuring Young's modulus.—73-03344
Structural features and Young's modulus of carbon fibers.—73-03359
Temperature dependence of the Young's modulus [YM] of diamond thin film prepared by plasma chemical vapor deposition.—73-03360
Young's modulus of ceramics at elevated temperature: I.—73-06553
Young's modulus of ceramics at elevated temperature: I.—73-13612

**ytterbia,**
Solid-state reaction, microstructure, and phase relations in the $ZrO_2$-rich region of the $ZrO_2$-$Yb_2O_3$ system.—73-09507
$Yb_2O_3$-fluxed sintered silicon nitride: I, Microstructure characterization.—73-09522

**ytterbium,**
Chemical and electrical properties of Yb-doped strontium cerates in coal combustion atmospheres.—73-02560
Compensation of the conductivity of *n*-type GaAs:Yb radiation defects.—73-14813
Correlation of the location in crystal lattice and optical activity of the Yb impurity in III-V compounds.—73-04278
De Haas-van Alphen [dHvA] studies of YbAs above and below Neel temperature.—73-08831
Dynamic conductivity and the coherence peak in the submillimeter spectra of superconducting YbN films.—73-15422
Effect of high pressure on electrical properties of europium and ytterbium hexaborides.—73-02580
Effects of ytterbium addition on liquid phase epitaxial growth of InGaAs/InP heterostructures.—73-04296
Electrical and optical properties of Yb-, Er-doped GaAs.—73-04302
Electrical resistivity and Seebeck coefficient of ytterbium monosulfide under ultrahigh pressure up to 20 GPa.—73-16480
Electronic structure of Si doped by rare-earth $Yb^{3+}$.—73-04314
Eu and Yb excitation mechanisms in ZnS, CaS, SrS, and InP.—73-04331
Evaluation of absorption and emission properties of $Yb^{3+}$-doped crystals for laser applications.—73-16494
Excitation and deexcitation mechanisms of rare-earth ions in III-V compounds: optically detected microwave-induced impact ionization of Yb dopants in InP.—73-04336
Formation of a superconducting $YbBa_2Cu_3O_x$ phase on an insulating $Yb_2BaCuO_5$ substrate prepared by the PMQ [plasma arc melting and rapid quenching] method.—73-01556
Formation of a superconducting $YbBa_2Cu_3O_x$ phase on an insulating $Yb_2BaCuO_5$ substrate prepared by the PMQ method.—73-11768
Frequency upconversion in $Er^{3+}$- and $Yb^{3+}/Er^{3+}$-doped silica fibers.—73-00488
Heat generation in Nd:YAG and Yb:YAG.—73-14957
High-efficiency ytterbium-doped fluoride fiber laser.—73-07034
Local structural distortions of Yb-$\alpha'$-SiAlON's determined by extended X-ray absolution fine structure spectroscopy.—73-02320
Luminescence properties of Yb- and Nd-implanted CdS.—73-04392
Luminescence properties of Yb-doped InP.—73-04393
Magnetic susceptibility, electron paramagnetic resonance, and thermal diffusivity of ytterbium-yttrium-aluminum garnet crystals.—73-02640
Metal-insulator transition in a disordered antiferromagnet $Yb_{1-x}Gd_xTe$.—73-16540
Neutron spectroscopy of the crystalline electric field (CEF) in high-$T_c$ $YbBa_2Cu_3O_7$.—73-08141
Optical activity of $Yb^{3+}$ in MeV ion-implanted InP.—73-04425
Pr substitution effect on $T_c$ of $YbBa_2Cu_3O_{7-\delta}$.—73-08170
Preparation of high-$T_c$ superconductors by a plasma-arc melting and rapid quenching method [PMQ].—73-01638
Quasi-three-level 1.03-$\mu$m laser operation of a planar ion-implanted Yb:YAG waveguide.—73-07758
Simple model for rare-earth impurities in the compound semiconductors.—73-04481
Spectral and magnetic studies of nickelates $Ln_2BaNiO_5$ and $Yb_2BaNiO_5$.—73-08968
Structural model of $NaYb_2F_7$ fluoritelike phase.—73-02449

**yttria,**
Agglomeration control in the preparation of ultrafine $ZrO_2$ ($Y_2O_3$) powder by means of a wet-chemical process.—73-05686
Alumina, calcia, yttria sealing composition.—73-13913
Aspects of the chemical technology of $ZrO_2$-$Y_2O_3$-$Al_2O_3$ powders and testing them in ceramics technology.—73-02729
BaO-1/2$Y_2O_3$-$CuO_x$ eutectic melting in air.—73-12540
Binary system $ZrO_2$-$Y_2O_3$.—73-02151
Changes of YAP phase content and some properties by the annealing of $Si_3N_4$-$Al_2O_3$-$Y_2O_3$-AlN ceramic.—73-16048
Compositional and electronic properties of chemical-vapor-deposited $Y_2O_3$ thin film–Si(100) interfaces.—73-13384
Conductivity of $ZrO_2$-$Y_2O_3$-$In_2O_3$ ceramics.—73-16424
Conductivity of $ZrO_2$-$Y_2O_3$-$In_2O_3$ ceramics.—73-16425
Crystallization behavior of zirconia 10 mol% yttria by hot-stage X-ray diffraction.—73-02223
Cyclic annealing-induced microstructural and crystallographic changes in crystalline yttria films on silica.—73-09056
Deposition of $Y_2O_3$ by plasma-enhanced organometallic chemical vapor deposition using an electron cyclotron resonance source.—73-09065
Developments in highly toughened $CeO_2$-$Y_2O_3$-$ZrO_2$ ceramic system.—73-02772
Effect of chemically added zirconia and yttria on the mechanical properties of zirconia-dispersed alumina.—73-08510
Effect of powder processing on slip-casting parameters and sintering of $Si_3N_4$-$SiO_2$-$Y_2O_3$.—73-05766
Effect of yttria and ceria on mechanical properties and oxidation behaviors of $\alpha$-SiAlON ceramics.—73-17296
Effect of yttria on the thermal conductivity of aluminum nitride.—73-12777

Effects of long-range forces on oxygen transport in yttria-doped ceria: simulation and theory.—73-13349
Effects of $Y_2O_3$ addition on the sinterability and microstructure of mullite: I, Phase transformation and sinterability.—73-13038
Effects of $Y_2O_3$ addition on the sinterability and microstructure of mullite: II, Crystallization of liquid phase and grain growth.—73-05784
Effects of $Y_2O_3$ addition on the sinterability and microstructure of mullite: II, Crystallization of liquid phase and grain growth.—73-16756
Electron microscopy studies of phase transformations in nanostructured yttrium oxide.—73-06213
Grain-boundary conductivity of the system $Y_2O_3$-$Nb_2O_5$ composites.—73-00973
Grain-boundary conductivity of the system $Y_2O_3$-$Nb_2O_5$ composites.—73-12806
Growth and dielectric characterization of yttrium oxide thin films deposited on Si by rf magnetron sputtering.—73-05573
High-temperature wear of plasma-sprayed $ZrO_2$-$Y_2O_3$ coating.—73-17350
Influence of batch preparation method on the structure and properties of ceramics in the $Al_2O_3$-$ZrO_2$-$Y_2O_3$ system.—73-02865
Interaction of yttria with uranium fluoride gases ($UF_n$, $n$=4, 6) at high temperatures.—73-12010
Kinetics of morphological change during annealing of amorphous yttria.—73-09189
Massive transformation in the $Y_2O_3$-$Bi_2O_3$ system.—73-12625
Mechanical properties and NDE of a HIPed silicon nitride.—73-17380
Mechanical properties of yttria- and ceria-doped zirconia ceramics.—73-03339
Metastable phases in yttrium oxide plasma spray deposits and their effect on coating properties.—73-02892
Metastable zirconia phases prepared from zirconium alkoxide and yttrium acetylacetonate: I, Formation and characterization of metastable zirconia solid solutions.—73-08666
Microdomains in urania-yttria and urania-ceria.—73-01753
Optical properties of $TiO_2$, $Y_2O_3$, and $CeO_2$ thin films deposited by electron beam evaporation.—73-02655
Optical spectra of $Y_2O_3$ single crystals in the vacuum ultraviolet region: II.—73-08938
Oxidation behavior of the sintered $Si_3N_4$-$Y_2O_3$-$Al_2O_3$ system.—73-03226
Phase characterization and grain size effects of nanophase $Y_2O_3$, $ZrO_2$, and $Y_2O_3$-$ZrO_2$ composites produced by the gas-phase condensation technique.—73-05446
Phase characterization and stabilization due to grain size effects of nanostructured $Y_2O_3$.—73-12650
Phase equilibria in the system $Y_2O_3$-$V_2O_5$-CuO-$Cu_2O$ in atmospheric air.—73-16251
Phase relations in the system $Y_2O_3$-$B_2O_3$-$V_2O_5$ in the subsolidus region.—73-16258
Phase transition and oxygen deficiency in electrochemically reduced Y-, Ca-PSZ crystals.—73-05455
Plasma sintering temperature for $Y_2O_3$-doped AlN.—73-13165
Preparation of continuous $ZrO_2$-$Y_2O_3$ fibers by precursor method using polyzirconoxane.—73-05971
Preparation of continuous $ZrO_2$-$Y_2O_3$ fibers by precursor method using polyzirconoxane.—73-16920
Preparation of $Y_2O_3$-doped $CeO_2$ ceramic for pH electrode.—73-10985
Preparation of $YBa_2Cu_3O_{7-x}$ films and $YBa_2Cu_3O_{7-d}$/$Y_2O_3$ multilayers using coevaporation and atomic oxygen.—73-01639
Preparation of $ZrO_2$-$Y_2O_3$ films by CVD using ß-diketone metal chelates.—73-05987
Preparation of $ZrO_2$-$Y_2O_3$ films by CVD using ß-diketone metal chelates.—73-16946
Quasi-binary systems $HFO_2$-$ZrO_2$, $ZrO_2$-$Y_2O_3$, and $HfO_2$-$Y_2O_3$.—73-02410
Reactions between the components of the powders in the Nb-$Y_2O_3$ system.—73-12671
Regularities of phase formation and structural evolution during hot-pressing of ultrafine powders.—73-16294
SiAlON ceramics sintered with yttria and rare-earth oxides.—73-06039
Sintering kinetics of ultrafine $ZrO_2$-$Y_2O_3$ powder.—73-06056
Sintering of coated powders: I, Silica–yttria system.—73-06058
Sputter deposition of yttrium oxides.—73-09340
Structural characteristics of (AlN+$Y_2O_3$) ceramics.—73-13450
Structural characterization of yttria ($Y_2O_3$) inclusions in $YBa_2Cu_3O_{7-x}$ films: growth model and effect on critical current density.—73-08211
Structure of vapor-deposited yttria and zirconia thin films.—73-16340
Synthesis of $Y_2O_3$-doped $ZrO_2$ gel monoliths by polycondensation of metal alkoxide and their change on heating: II, Crystallization behavior of gel monoliths and synthesis of translucent $Y_2O_3$-doped $ZrO_2$ ceramics.—73-13316
Thermal barrier coatings from sol-gel-derived spray-grade $Y_2O_3$-$ZrO_2$ microspheres.—73-09375
Thermal stress characteristics of graphite coated with $Y_2O_3$.—73-12897
Zirconia-, yttria-, and ceria-based ceramics with high electrical conductivity.—73-10999

**yttrium aluminum garnet (YAG),**
15-W single-frequency operation of a cw diode laser-pumped Nd:YAG ring laser.—73-08870
$Ce^{3+}$ centers in $Y_3Al_5O_{12}$ (YAG) single crystals: II.—73-08558
Comparison of threshold energy of selectively excited $YAlO_3$:Er and YAG:Er lasers.—73-08826
Creep of yttrium aluminum garnet single crystals.—73-09565
Creep resistance of developmental polycrystalline yttrium aluminum garnet fibers.—73-17268
Defect structure and electrical properties of $Y_3Al_5O_{12}$ and $Y_3Al_5O_{12}$:$Nd^{3+}$ single crystals.—73-00945
Determination of the fundamental laser parameters of an acoustooptical device.—73-16441
Efficient, scalable, internally folded Nd:YAG laser end pumped by laser diodes.—73-14864
Electronic structure of $Cr^{4+}$-center in yttrium aluminum garnet.—73-02260
Electrooptically fast tunable miniature diode-pumped Nd:YAG ring laser.—73-12797
Epitaxial waveguides of aluminum garnet.—73-08514
Estimation of fracture toughness and residual stresses in yttrium-aluminum garnet [single] crystals.—73-17307
Fabrication and microstructure of $Al_2O_3$-SiC-YAG hybrid composites prepared by particulate dispersion.—73-09125
Gain-switching dynamics of laser diode array (LDA) end-pumped Nd:YAG lasers.—73-11218
Heat generation in Nd:YAG and Yb:YAG.—73-14957
High-temperature elastic constants of yttrium aluminum garnet.—73-08880
Influence of spatial hole burning effects on relaxation oscillations in waveguide-distributed feedback $Nd^{3+}$:YAG lasers.—73-16520
Influence of surface charge on the cathodoluminescence of Ce:YAG.—73-02620
Intracavity frequency doubling of double-heterostructure junction-diode laser array (DH-LDA) pumped Nd:YAG laser.—73-12823
Ir cross-section measurements for crystals doped with $Er^{3+}$, $Tm^{3+}$, and $Ho^{3+}$.—73-08895
Laser-cladding cross-section modeling obtained by metallic powder spraying into an Nd:YAG laser beam.—73-15007
Lower level relaxation of Nd:YAG.—73-07647
Magnetic susceptibility, electron paramagnetic resonance, and thermal diffusivity of ytterbium-yttrium-aluminum garnet crystals.—73-02640
Magnetooptical waveguides of aluminum garnet.—73-04626
Multiple mode-locking of the *Q*-switched Nd:YAG laser with a coupled resonant cavity.—73-07684
Negative nonlinear absorption effects in erbium-yttrium aluminum garnets.—73-12839
New mode locking technique for continuous-wave Nd:YAG laser.—73-15055
Operation of resonantly pumped Tm:Ho:YAG in active mirror mode.—73-12843
Optical spectra of $Y_3Al_5O_{12}$ (YAG) single crystals in the vacuum ultraviolet region: II.—73-08939
Optimizing the efficiency and stored energy in quasi-three-level lasers.—73-08941
Optimum beam launching conditions for graded index optical fibers: theory and practice.—73-15078
Passive and self-*Q*-switching of phase-conjugation Nd:YAG laser oscillators.—73-08945
Phase development and luminescence in chromium-doped yttrium aluminum garnet (YAG:Cr) phosphors.—73-16562
Photo- and thermostimulated charge transfer on impurity ions and intrinsic defects in $Y_3Al_5O_{12}$.—73-17093
Photochromic effects of impurity and structural centers in YAG.—73-02663
Photoinduced effects and real structure of yttrium-aluminum garnet crystals.—73-02665
Preparation and characterization of $Y_3Al_5O_{12}$ (YAG) from an alkoxide-derived polymer.—73-05960
Pressure dependence of the fluorescence spectra of the Sm doped YAG to 73 GPa.—73-16277
Quasi-three-level 1.03-µm laser operation of a planar ion-implanted Yb:YAG waveguide.—73-07758
Quenching of $N^{3+}$ ion luminescence by iron impurity ions in $Y_3Al_5O_{12}$ crystals.—73-02411
Rod-imaging super-Gaussian unstable resonator for high-power solid-state lasers.—73-08964
Side-pumped Nd:YAG epitaxial waveguide laser.—73-01314
Solid-liquid reactions in the system $Si_3N_4$-ß-SiAlON-$Y_3Al_5O_{12}$.—73-16308
Stable output of laser diode (LD) array pumped continuous wave (cw) and quasi-cw Nd:YAG laser.—73-11452
Static and dynamic luminescence effects of $Ce^{3+}$-$Tm^{3+}$ pairs in YAG.—73-05641
Tb distribution in YAG:Tb crystals.—73-02514
Thermally stimulated luminescence excitation spectra and electronic excitation relaxation branching in $Y_3Al_5O_{12}$ crystals.—73-16635

**yttrium barium copper oxide (Y-Ba-Cu-O),**
$^{151}$Eu Mossbauer study and role of Eu ions in $Eu_xY_{1-x}Ba_2Cu_3O_{7-y}$ high-$T_c$ superconductors.—73-08064
$^{89}$Y NMR observation of Knight shift anisotropy and motional line narrowing in $YBa_2Cu_3O_{7-\delta}$.—73-11942
$^{89}$Y NMR study of the anisotropy of the static and dynamic susceptibility in $YBa_2Cu_3O_{6+x}$.—73-15671
3-D–2-D dimensional crossover in $YBa_2Cu_3O_7$ films.—73-11938
*a*-axis growth of $YBa_2Cu_3O_7$ thin films on $LaAlO_3$ induced by monolayer buffers of $PrO_2$.—73-11680
*ab*-oriented $YBa_2Cu_3O_7$ thin film grown on *c*-axis layer by radio-frequency sputtering.—73-11681
Absence of finite-temperature vortex-glass phase transition in 2-D $YBa_2Cu_3O_{7-\delta}$ films.—73-07983
Acoustoelectronic interaction in superconducting $YBa_2Cu_3O_{7-x}$ films.—73-01491
Ag addition to $YBa_2Cu_3O_{7-x}$ films prepared using electrophoretic deposition.—73-15383
Aging of superconducting $Y_1Ba_2Cu_3O_{7-x}$ structures on silicon.—73-01492
Alignment ratio of magnetically aligned high-$T_c$ superconducting $Y_1Ba_2Cu_3O_{7-y}$ and $Y_{0.5}Dy_{0.35}Ba_2Cu_3O_{7-y}$ thick films.—73-15384
Analysis of NMR data in the superconducting state of $YBa_2Cu_3O_7$.—73-11685
Analysis of Y-Ba-Cu-O films by differential dissolution.—73-04668
Angular dependence of magnetoresistance and critical current density in $YBa_2Cu_3O_{7-\delta}$ thin films.—73-04669
Anharmonic phonons and site-selective isotope effects in $YBa_{2-x}M_xCu_3O_7$ (M=La, Sr).—73-04670
Anisotropic thermoelectric effect in Y-Ba-Cu-O thin films during time-varying laser heating.—73-04671
Anisotropic vortex lattice in $YBa_2Cu_3O_7$.—73-15387
Anisotropy of magnetic $J_c$ for YBaCuO superconductor prepared by melt-texture-growth (MTG) process.—73-11688
Anisotropy of the transport critical current in $YBa_2Cu_3O_{7-\delta}$(110) films.—73-04672
Anomalous behavior of the flux line lattice of vibrating high-$T_c$ superconductors at 30 K in magnetic fields parallel to the $CuO_2$ planes.—73-15389
Anomalous temperature dependence of the work function in $YBa_2Cu_3O_{7-\delta}$.—73-07986
Anomaly of phonon state of superconducting $YBa_2Cu_3O_7$ studied by inelastic neutron scattering.—73-07987
Antiferromagnetic phase diagram of $YBa_2(Cu_{1-x}Fe_x)_3O_y$.—73-05357
Automatically position-controlled system with high-$T_c$ oxide superconductor.—73-04675
Axial oxygen position in Y-Ba-Cu-O superconductors.—73-07993
Basic elements for photodeposited high-$T_c$ thin-film devices.—73-11692
Behavior of ac susceptibility of YBCO and BSCCO superconductors in dc magnetic fields.—73-11693
Behavior of the 123 superconductor system during changes in atmospheric condition.—73-01495
Bolometric response of superconducting $YBa_2Cu_3O_{7-x}$ microbridges.—73-11697
Bonding and valence states in $YBa_2Cu_3O_{7-x}$ through secondary ion mass spectrometry.—73-01496
Capacitive transverse rf discharges in oxygen at elevated pressures for producing thin films of complex oxides.—73-04678
$CaSiO_3$ as a substrate material for Ba-Y-Cu-O superconducting oxide films.—73-01499
$CaSiO_3$ as a substrate material for Ba-Y-Cu-O superconducting oxide films.—73-11698
Cathodoluminescence and micro-Raman analysis of oxygen loss in electron-irradiated $YBa_2Cu_3O_{7-x}$.—73-11699
Certain mechanical behavior of Y-123 specimens with pinning centers from different origins.—73-15396
Chain-related Fermi surface in (R)$Ba_2Cu_3O_{7-\delta}$.—73-11700
Characterization and properties of YBCO samples containing metastannate inclusion.—73-07996
Characterization of bilayer-metal contacts to high-$T_c$ superconducting films.—73-01501
Characterization of Co-substituted $YBa_2Cu_3O_7$ superconductors by Raman spectroscopy—application of Raman spectroscopy to high-$T_c$ superconductors: I.—73-15397
Characterization of critical current for high-$J_c$ single-crystal $YBa_2Cu_3O_x$ thin films on $LaAlO_3$ deposited by dc magnetron sputtering.—73-01502
Characterization of screen-printed $YBa_2Cu_3O_x$ thick films.—73-15398
Chemical etching for fine-grained $YBa_2Cu_3O_{7-x}$.—73-07999
Chemical nature of the barrier in Pb/$YBa_2Cu_3O_{7-x}$ tunneling structures.—73-01506
Chemical pressure and other effects on strontium substitution in $YBa_2Cu_3O_{9-\delta}$.—73-01507
Chemical reactivity of YBCO and Bi(Pb)SrCaCuO superconductors in water.—73-15399
Circular dichroism microspectroscopy: evidence of broken symmetries in high-$T_c$ superconducting films.—73-08000
Citrate-gel syntheses in the Y(O)-Ba(O)-Cu(O) system.—73-05708
Cluster formation in the vapor produced by laser pulsing of the $Y_1Ba_2Cu_3O_7$ superconducting solid.—73-08001
Coefficients of friction of YBCO-YBCO and YBCO-Ag ball-on-flat couples.—73-12755
Coherence length and penetration depth in high-$T_c$ superconductors.—73-04680
Comparative study of the low-temperature acoustic properties of CuO and $YBa_2Cu_3O_x$ ceramics.—73-08005
Comparison of nuclear spin relaxation rates of Y and O sites in $YBa_2Cu_3O_{7-y}$.—73-15400
Comparison of the acoustic properties of CuO and $YBa_2Cu_3O_x$ ceramics at 5–310 K.—73-08006
Comparison of the surface morphology and microstructure of in situ and ex situ derived $YBa_2Cu_3O_{7-x}$ thin films.—73-11704
Complex susceptibilities of Co-doped $YBa_2Cu_3O_{7-d}$ synthesized by the polymerized complex method.—73-15402
Composites of magnetic fluid with high-$T_c$ superconducting particles.—73-08007
Composition dependence of superconductivity in $YBa_2(Cu_{1-x}Al_x)O_y$.—73-01509
Computer simulation for the design of high-performance, high-$T_c$ superconducting thin-film switches.—73-15404
Computer simulation of the atomic structure of twin boundaries in HTS $YBa_2Cu_3O_7$.—73-08009
Conditions of formation of $YBa_2Cu_3O_{7-\delta}$ from CuO, $Y_2O_3$, and $BaCO_3$.—73-04684
Construction of a new type of spray dryer and its application to synthesis of YBaCuO-type superconductors.—73-04686
Control of the preferred orientation of $Y_1Ba_2Cu_3O_{7-x}$ films by the plasma flash evaporation method.—73-11706

Correlated flux creep through columnar defects in $YBa_2Cu_3O_7$ crystals.—73-15406

Covalence corrections on ionic model total energy for $YBa_2Cu_3O_7$.—73-11707

Critical carrier density and revival of superconductivity in Ca-substituted $YSrBaCu_{2.6}M_{0.4}O_{6+z}$ (M=Al, Fe).—73-08010

Critical current density and magnetic properties of a melt-processed $Y_{0.8}Ho_{0.2}Ba_2Cu_3O_x$ superconductor.—73-11708

Critical current density and magnetization decay in oxygen-deficient YBCO.—73-11709

Critical current density in high fields in epitaxial thin films of $Y_1Ba_2Cu_3O_{7-\delta}$: flux pinning and pair breaking.—73-11710

Critical current irreversibility and possible $J_c(H)$ modification of oxide superconductors.—73-04687

Critical current of Ag/$YBa_2Cu_3O_{7-\delta}$ random bulk composites.—73-11712

Cross-sectional observation of $YBa_2Cu_3O_x/La_{0.7}Ca_{0.3}MnO_3$/-$YBa_2Cu_3O_x$ trilayered films.—73-11715

Crystal field levels and fine structure of the ground orbital state for high spin $Fe^{2+}$ and $Fe^{4+}$ ions in $YBa_2(Cu_{1-x}Fe_x)_3O_{7-\delta}$.—73-04690

Crystalline characterization by Rutherford backscattering spectrometry and electron channeling of in situ grown $YBa_2Cu_3O_7$ thin films deposited on (100)MgO by dc sputtering or laser ablation.—73-11717

Crystalline phase and superconductor characteristics of the plasma-sprayed $YBa_2Cu_4O_{7-y}$ high-$T_c$ superconductor thick film.—73-04692

Crystallographic relationship between $Y_2Cu_2O_5$ and 123 phase in chemical vapor deposited Y-Ba-Cu-O superconducting films.—73-11719

Cubic metal oxide thin film epitaxially grown on silicon.—73-04197

CuO chain contribution to the electronic Raman scattering of a $YBa_2Cu_3O_7$ single crystal.—73-04693

Current states of high-$T_c$ superconducting ring in Aaronov-Bohm configuration.—73-15410

Dc sputtering deposition of *a*-axis on *c*-axis double-layer Y-Ba-Cu-O films.—73-11720

de Haas-van Alpen effect and Fermi surface of $YBa_2Cu_3O_{6.97}$.—73-11721

Deceleration of magnetic dipoles interacting with $YBa_2Cu_3O_x$ superconductors.—73-01514

Deformation, structure, and properties of ceramics and crystals of high-$T_c$ superconductors.—73-08015

Degree of epitaxy in high-$T_c$ thin films [determined] by Raman spectroscopy.—73-01515

Densification of superconducting $Ba_2YCu_4O_8$ ceramics by two-stage sintering.—73-15411

Dependence of Raman light scattering line shape on scattering geometry in $YBa_2Cu_3O_{7-\delta}$.—73-15413

Depositing $In_2O_3$ films as conductive buffer layers for high-temperature $YBa_2Cu_3O_{7-x}$ superconducting thin films on silicon.—73-15414

Determination of Cu in the high-temperature superconductor $YBa_2Cu_3O_{7-z}$ by amperometric titration with sodium diethyldithiocarbamate.—73-01519

Determination of electron density of laser-produced Y-Ba-Cu-O plasma with laser interferometry.—73-15415

Determination of oxygen deficiency in oxide superconductors.—73-11725

Determination of the flux creep time from the microwave absorption in the high-temperature superconductor $YBa_2Cu_3O_{7-\delta}$.—73-08018

Determination of the Neel temperature in $YBa_2Cu_3O_z$ by electrical conductivity measurements.—73-15416

Device for continuous production of ceramic superconductor.—73-01852

Diamagnetic susceptibility and magnetic flux creep in $YBa_2Cu_3O_x$.—73-08019

Diffusion of sulfur, selenium, and bismuth in HTSC $YBa_2Cu_3O_{7-\delta}$ and $(Pb_xBi_{1-x})_2Ca_2Sr_2Cu_3O_y$ ceramics.—73-03092

Diffusion phenomenon in Y-Ba-Cu-O superconductors.—73-01523

Direct observation of crystallization process from amorphous Y-Ba-Cu-O film by means of optical microscopy.—73-15420

Direct observation of intrinsic pinning in YBCO thin films.—73-11726

Directional growth of extruded $YBa_2Cu_3O_{7-x}$ superconductors.—73-15421

Disappearance of Hall resistance in one-unit-cell thick $YBa_2Cu_3O_{7-\delta}$: evidence of free vortex-antivortex excitation.—73-08020

Dislocations in the Monte Carlo simulation of flux lattice melting in high-$T_c$ superconductors.—73-08022

Dissipation mechanisms at the resistivity transition of HTSC in a magnetic field.—73-08023

Dissociation of dislocations in $YBa_2Cu_3O_{7-\delta}$.—73-04695

Domain size modeling in $YBa_2Cu_3O_{7-\delta}$ powders and powdered single crystals by means of X-ray diffraction.—73-08024

Edge-geometry SNS devices made of Y/Ba/Cu/O.—73-15423

Effect of 14-MeV fast neutron irradiation on melt-textured $YBa_2Cu_3O_{7-\delta}$.—73-11729

Effect of an increase in the lower critical field in superfine-grained $YBa_2Cu_3O_{7-\delta}$.—73-08027

Effect of carbon dioxide on the reaction of $YBa_2Cu_3O_{6.5+x}$ with water vapor.—73-11731

Effect of disorder in oxygen sublattice on Raman spectra of $YBa_2Cu_3O_x$ crystals. Experiment and calculations.—73-15425

Effect of doping with tantalum on the properties of $YBa_2Cu_3O_{7-y}$.—73-08029

Effect of fast-neutron irradiation on critical current MTG bulk YBCO superconductors.—73-04700

Effect of gamma irradiation on silver diffusion in $YBa_2Cu_3O_{7-y}$.—73-15426

Effect of gamma-irradiation on pure and Ag-doped YBCO superconductor.—73-15427

Effect of heating on the characteristic loss spectra of the high-temperature superconductor $YBa_2Cu_3O_{7-x}$.—73-04701

Effect of Hf, Nb, Ta, and Zr nitrides on $T_c$ of some high-temperature superconducting systems.—73-01529

Effect of Ho addition on properties of Y-system superconductors.—73-04702

Effect of impregnation of $ZrO_2$ on the chemical stability and the superconductivity of Y and Bi systems.—73-11733

Effect of low-temperature preheating on properties of superconducting $YBa_2Cu_3O_x$ ceramics prepared by chemical solution process.—73-04704

Effect of low-temperature preheating on properties of superconducting $YBa_2Cu_3O_x$ ceramics prepared by chemical solution process.—73-11735

Effect of low-temperature quenching on $T_c$ and substructural thermal activity of $YBa_2Cu_3O_{7-\delta}$ ceramics.—73-15428

Effect of MG [mechanical grinding] on the critical current density and global pinning force of $YBa_2Cu_3O_7$-Ag composite superconductor.—73-15429

Effect of microstructure on the hardness and fracture toughness of $YBa_2Cu_3O_{7-x}$/Ag composites.—73-03270

Effect of oxygen disordering in $YBa_2Cu_3O_{6+z}$ on the electrical conductivity and $T_c$ at $0.21\leq z\leq 0.73$.—73-15431

Effect of oxygen subsystem ordering on copper NQR spectrum in $YBa_2Cu_3O_x$ high-$T_c$ superconductors.—73-15432

Effect of partially oriented precursors in the melt-textured growth of $YBa_2Cu_3O_{6+x}$.—73-08035

Effect of particle size on binary reactions common to the Y-Ba-Cu-O system.—73-15433

Effect of processing conditions on superconductive properties of laser-deposited YBCO thin films.—73-08036

Effect of processing parameters in the chemical vapor deposition of $YBa_2Cu_3O_{7-\delta}$ thin films on polycrystalline silver.—73-08037

Effect of strong electric field on conductivity of high-$T_c$ superconducting ceramics of YBaCuO system.—73-15434

Effect of structure on the properties of the superconducting ceramic Y-Ba-Cu-O.—73-01532

Effect of substrate defects on the properties of high-$T_c$ superconducting thin films.—73-08040

Effect of the grain-boundary orientation on the current-carrying capacity of $YBa_2Cu_3O_{7-x}$ ceramics.—73-04706

Effect of the substitution of Cu(I) by dopants on oxygen cont..nt and superconductivity in Y(123).—73-01533

Effect of treating time by high-speed impact method on the calcination of oxide superconductor $YBa_2Cu_3O_{7-x}$.—73-15437

Effect of undecomposed carbonate on the oxygen analysis of $YBa_2Cu_3O_{7-x}$.—73-01534

Effect of uniaxial compression on current-voltage characteristics of high-$T_c$ $YBa_2Cu_3O_{7-x}$ films.—73-15438

Effect of uniaxial stress on the superconducting transition in $YBa_2Cu_3O_7$.—73-08041

Effects of deposition temperature and annealing process on the superconducting properties of $YBa_2Cu_3O_{7-x}$ thin films prepared by metallorganic chemical vapor deposition.—73-15442

Effects of deposition temperature on the microstructure of MOCVD $YBa_2Cu_3O_{7-x}$ thin films.—73-08042

Effects of dimensional crossover on flux pinning in model high-$T_c$ superconductor $YBa_2Cu_3O_7/(Pr_xY_{1-x})Ba_2Cu_3O_{7-\delta}$ superlattices.—73-08043

Effects of electron irradiation on $J_c$ of $Y_1Ba_2Cu_3O_x$ superconductors.—73-04708

Effects of F doping in $YBa_2Cu_3O_{7-\delta}$ polycrystalline samples.—73-08044

Effects of field-induced hole-density modulation of normal-state and superconducting transport in $YBa_2Cu_3O_{7-x}$.—73-11737

Effects of gamma radiation on electromagnetic properties of $YBa_2Cu_3O_x$ by melting texture growth (MTG).—73-11738

Effects of Landau damping on the Raman-active phonons of $YBa_2Cu_3O_{7-\delta}$.—73-07472

Effects of melt composition on the growth behavior of 211 particles in the Y-Ba-Cu-O system.—73-15444

Effects of ozone oxygenation of $YBa_2Cu_3O_{7-\delta}$ thin crystals.—73-01536

Effects of processing on electrical properties of $YBa_2Cu_3O_7$ films: I, Postdeposition anneal process.—73-04710

Effects of pulling direction on directional growth of $YBa_2Cu_3O_{7-x}$ superconductors.—73-11741

Effects of slow neutron irradiation on superconductive films.—73-15446

Effects of substitution for Cu in $CuO_2$ planes with dopants of different electron configurations in $YBa_2Cu_3O_7$.—73-08047

Elasticity and thermal expansion anomalies of anisotropic high-$T_c$ superconductors.—73-15447

Electric field effects on vortex dynamics in ultrathin $YBa_2Cu_3O_{7-\delta}$ films.—73-08049

Electrochemical investigation of oxides of high-temperature superconductors with different types of conductivity.—73-04712

Electrochemical response of $YBa_2Cu_3O_{7-x}$ as a function of oxygen content.—73-01539

Electroconducting gap and the sharp 1-eV structure in angle-resolved photoelectron spectra in $YBa_2Cu_3O_{7-\delta}$ crystals.—73-08051

Electron microscopic study of partial dislocations in textured Y-Ba-Cu-O superconductors.—73-11745

Electron microscopic study of the interaction of $YBa_2Cu_3O_8$ with iodine.—73-04713

Electron paramagnetic resonance studies on $YBa_{2-x}La_xCu_3O_n$ high-temperature superconductors.—73-08052

Electronic properties of high-$T_c$ superconductors below and above the Fermi energy.—73-01540

Electronic specific heat of $YBa_2Cu_3O_{6+x}$ from 1.8 to 300 K.—73-15453

Electronic structure of the high-$T_c$ superconductor $Ba_2YCu_3O_{6.9}$.—73-15454

Electronic structure of $YBa_2Cu_3O_{7-x}$ single crystals [studied] by λ-modulation optical technique.—73-15455

Electronic structures of lanthanide analogs of Y-Ba-Cu-O superconductors.—73-08055

Electrophysical processes on the surface of mechanically and irradiation excited $YBa_2Cu_3O_{7-x}$ superconductors.—73-01541

Ellipsometric study of ambient-produced overlayer growth rate on $YBa_2Cu_3O_{7-x}$ films.—73-01542

Energy characteristics of hydrogen-treated Y-Ba-Cu-O high-$T_c$ superconductors.—73-15456

Energy gap and surface structure of $YBa_2Cu_3O_{7-x}$ probed by STM.—73-08058

Energy gap distribution in a $YBa_2(Cu_{1-0.04}Fe_{0.04})_3O_7$ film using the Si reflection Fabry-Perot method.—73-08059

Energy loss and charge exchange studies of cleaved $YBa_2Cu_3O_{7-\delta}$ single-crystal surfaces.—73-15458

Energy loss related to ferroelastic behavior in $Y_{1-x}Pr_xBa_2Cu_3O_y$.—73-15459

Enhanced critical magnetization currents of hot-pressed $YBa_2Cu_3O_{6+x}$ through partial-melting post-oxygenation.—73-04716

Enhancement of the noise spectral densities near the resistive transition of YBCO microbridges.—73-01544

Entropy of $YBa_2Cu_3O_{7-\delta}$ mixed state.—73-01546

Environmental reactivity characteristics of $K_3C_{60}$ and $YBa_2Cu_3O_{7-x}$ high-temperature superconductor thin film.—73-15461

Environmental test program for superconductor [$YBa_2Cu_3O_{7-x}$] grounding links.—73-08061

Epitaxial $CeO_2$ buffer layers for $YBa_2Cu_3O_{7-\delta}$ films on sapphire.—73-08062

Epitaxial growth of $YBa_2Cu_3O_{7-\delta}$ films on oxidized silicon with yttria- and zirconia-based buffer layers.—73-08063

Epitaxial growth of YBCO superconducting thin films by dc magnetron sputtering using a partially melted sintered target.—73-11748

Evaluation of the magnetic susceptibility of $YBa_2Cu_3O_7$.—73-08065

Evidence for a scaling of the superconducting gap with $T_c$ in $Pr_xY_{1-x}BaCu_4O_8$.—73-15462

Evidence for layered structure of $YBa_2Cu_3O_{7-x}$ single crystals.—73-01547

Evidence for rapid suppression of quasi-particle scattering below $T_c$ in $YBa_2Cu_3O_{7-\delta}$.—73-08066

Evidence of two-gap *s*-wave superconductivity in $YBa_2Cu_3O_{7-x}$ from microwave surface impedance measurements.—73-11752

Excess conductivity and thermally activated dissipation studies under strong electrostatic field in $YBa_2Cu_3O_{7-\delta}$ thin films.—73-04718

Experimental determination of the superconducting pairing state of YBCO from phase coherence of YBCO-Pb dc SQUID's.—73-15463

Experimental evidence for a first-order vortex-lattice-melting transition in untwinned single-crystal $YBa_2Cu_3O_7$.—73-08069

Experimental evidence for a multicritical point in the magnetic phase diagram for the mixed state of clean, untwinned $YBa_2Cu_3O_7$.—73-15324

Experimental evidence of a crossover in the pinning of vortices in untwinned single crystals of $YBa_2Cu_3O_{7-\delta}$.—73-11753

Experimental search for current-driven plasma instabilities in superconducting layers.—73-04720

Experimental study of copper diffusion in $YBa_2Cu_3O_{7-x}$ polycrystals.—73-08070

Exponential decrease of the XPS signal of substrate with the initial growth of $Y_1Ba_2Cu_3O_{7-\delta}$ overlayer.—73-04721

Fabrication and characterization of $YBa_2Cu_3O_{7-x}$/Sn composite superconductors: I, Microstructure and mechanical properties.—73-08072

Fabrication and characterization of $YBa_2Cu_3O_{7-x}$/Sn composite superconductors: II, Electrical properties.—73-11755

Fabrication and properties of textured $YBa_2Cu_3O_7$ thick films on polycrystalline $Ag_{0.9}Pd_{0.1}$ and silver substrates.—73-08073

Fabrication of dc superconducting quantum interference devices with hybrid structure of polycrystalline $Y_1Ba_2Cu_3O_x$ films and epitaxial $Y_1Ba_2Cu_3O_x$ films.—73-15468

Fabrication of high-$T_c$ superconducting integrated circuits.—73-11760

Fabrication of protective layers on surfaces of $YBa_2Cu_3O_{7-\delta}$ superconducting thin films.—73-08075

Fabrication of superconducting $YBa_2Cu_3O_{7-\delta}$ submicron structures.—73-11761

Fabrication of tunnel junctions with YBCO/insulator/YBCO layered structure using (013)-oriented films as base layer.—73-15469

Fabrication of $Y_1Ba_2Cu_3O_8$ films and $Y_1Ba_2Cu_3O_{7-x}$ films with higher $J_c$ by metallorganic deposition.—73-15262

Fabrication of $YBa_2Cu_3O_{7-x}$ thick films on Ag substrate by gas deposition using ultrafine powders.—73-01549

Fabrication of $YBa_2Cu_3O_x$-$La_{0.7}Ca_{0.3}MnO_z$- $YBa_2Cu_3O_x$ coplanar junctions and their anisotropic current-voltage characteristics.—73-08076

Fabrication of YBaCuO Josephson junctions on MgO substrates damaged by a focused ion beam prior to film deposition.—73-15470

Fabrication of YBCO/PBCO/$SrTiO_3$/PBCO/YBCO layered structure for superconductor-insulator-superconductor tunnel-type Josephson junction.—73-15471

Factors dominating the transport critical current behavior in high-$T_c$ superconductors.—73-11762

Far-ir investigation on $YBa_2Cu_3O_7$ films with the use of a reflection Fabry-Perot interferometer.—73-08077

Fermi surface and transport properties of $YBa_2Cu_4O_8$.—73-11763

Ferroelectric $PbZr_{0.2}Ti_{0.8}O_3$ thin films on epitaxial Y-Ba-Cu-O.—73-11575

Field enhancement of the diamagnetic onset temperature in a $YBa_2Cu_3O_{0.645}$.—73-04724

Field-dependent crossover in the vortex response at microwave frequencies in $YBa_2Cu_3O_{7-\delta}$ films.—73-08079

Film thickness dependence of microwave surface resistance for $YBa_2Cu_3O_7$ thin films.—73-01551

Fine structure of ir reflection spectra of $YBa_2Cu_3O_{6+x}$ single crystals.—73-08080

Flux creep and pinning in Ag-doped high-$T_c$ superconductor $YBa_2Cu_3O_{6+x}$.—73-04725

Flux movement in quench- and-melt-grown YBCO generated by a pulsed magnetic field.—73-15475

Flux penetration of melt-processed $YBa_2Cu_3O_{7-\delta}$: direct observation of anisotropy.—73-08082

Flux pinning by collision cascades and large defect clusters in single-crystal $YBa_2Cu_3O_{7-\delta}$.—73-08083

Flux pinning in a slab model of grain and twin boundaries.—73-11765

Flux pinning mechanism of high-$T_c$ Y-Ba-Cu-O superconductor containing artificial pinning centers $Y_2BaCuO_5$.—73-08084

Flux-creep-flow crossover in laser ablation YBCO thin film.—73-04726

Force-displacement characteristics of fluxoid lattice and pinning potential in Y-Ba-Cu-O bulk superconductor.—73-15478

Formation of a new superconducting phase, YBCO-T* ($T_c$=87 K) in $YBa_2Cu_3O_{7-\delta}$.—73-08086

Formation of atomic beams and dynamics of in situ superconducting film growth by pulsed laser deposition.—73-11769

Free flux flow at high dissipation levels in $YBa_2Cu_3O_{7-\delta}$ epitaxial films.—73-15485

Frequency dependence of vortex-state resistivity in $YBa_2Cu_3O_{7-\delta}$.—73-15487

Frequency response of $YBa_2Cu_3O_{7-\delta}$ granular and epitaxial films under radiation.—73-04729

Frequency shifts and linewidth changes of ir-active phonons in double-layered high-temperature superconductors.—73-11771

Gap anisotropy and gapless superconductivity in the Zn-doped $YBa_2Cu_3O_7$.—73-08087

Gas-phase oxidation chemistry during pulsed laser deposition of $YBa_2Cu_3O_{7-\delta}$ films.—73-04730

Generation and dissociation of dislocations in $YBa_2Cu_3O_{7-\delta}$ single crystals and deformed oriented powders.—73-08088

Generation of neutrons in high-temperature superconducting $YBa_2Cu_3O_{7-\delta}D$ stimulated by a superconducting phase transition.—73-15490

Geometrical rationalization of the special properties of the 14° [001] grain boundary in $YBa_2Cu_3O_{7-\delta}$.—73-11772

Giant flux flow in superconducting $YBa_2Cu_3O_{7-\delta}$ films.—73-15491

Glass formation and crystallization of $Y_2O_3$-BaO-CuO-$B_2O_3$ glass-ceramics.—73-08089

Grain growth of high-$T_c$ $YBa_2Cu_3O_{7-x}$.—73-11773

Grain-boundary degradation of YBCO superconductors sintered in $CO_2$-containing atmospheres.—73-11774

Growth and patterning of high-$T_c$ superconducting films.—73-11776

Growth and properties of high-$T_c$ films in $Y_1Ba_2Cu_3O_{7-x}$ perovskite by molecular beam epitaxy.—73-01561

Growth and structure of $YBa_2Cu_3O_{7-\delta}$ thin films studied by scanning tunneling microscopy and electron microscopy.—73-06223

Growth of $[YBa_2Cu_3O_{7-\delta}]_M$- $[PrBa_2Cu_{3-x}Ga_xO_{7-\delta}]_N$ superlattices by pulsed laser deposition.—73-15493

Growth of high-$T_c$ $YBa_2Cu_3O_x$ films with an off-axis sputtering configuration.—73-08091

Growth of single-crystal $Y_{1-x}Gd_xBa_2Cu_3O_{6+y}$.—73-08092

Growth of $YBa_2Cu_3O_{7-\delta}$ single crystals with the aid of an NaCl-KCl flux.—73-01565

Growth of $YBa_2Cu_3O_x$ single crystals from a mixture of $YBa_2Cu_3O_x$ and $Ag_2O$.—73-01566

Hall effect near the vortex glass transition in high-temperature superconductors.—73-11779

Hall effect of vortices parallel to $CuO_2$ layers and the origin of the negative Hall anomaly in $YBa_2Cu_3O_{7-\delta}$.—73-15495

Heat exchange during the boiling of helium on the surface of $YBa_2Cu_3O_7$ HTSC ceramics.—73-01567

Heavy ion irradiation and vortex glass description of the mixed state in $YBa_2Cu_3O_7$ epitaxial films.—73-04732

Heterogeneous equilibrium between $YBa_2Cu_3O_{7-\delta}$ and oxygen gas studied by a kinetic approach.—73-05414

Hexatic vortex glass [observed] in [4%] Al-doped $YBa_2Cu_3O_{7-x}$ single crystals.—73-15498

High Temperature Superconductors: Processing and Science.—73-17530

High-$J_c$ YBaCuO superconducting materials prepared by zone melting.—73-11782

High-$T_c$ ceramic superconductors: overcoming a materials processing challenge.—73-11783

High-field magnetization of MSTG [melt spun texture growth] processed $YBa_2Cu_3O_7$.—73-08095

High-quality $Y_1Ba_2Cu_3O_{7-\delta}$ ultrathin films produced in situ by high-growth-rate chemical vapor deposition.—73-04733

High-resolution electron microscopy on superconducting $YBa_2Cu_3O_7$ thin films.—73-04734

High-resolution electron microscopy study of defects in high-oxygen-pressure $YBa_2Cu_4O_8$.—73-01568

High-responsivity $YBa_2Cu_3O_{7-x}$ microbolometers with fast response times.—73-01569

High-temperature superconductivity on $YBa_2Cu_3O_{7-\delta}$-$YBa_2SbO_6$ system by rapid quenching in air.—73-04736

Hole distribution and pressure effect in YBCO superconductor ionic model study.—73-11791

Hybridization features in density of states of $Y_{1-x}Pr_xBa_2Cu_3O_{7-\delta}$ superconducting compounds.—73-15505

Hydrostatic pressure effects on superconductive phase transitions in $Y_{1-x}Ca_xBa_2Cu_3O_{7-\delta}$ [$0\leq x\leq 0.2$] and $Y(Ba_{1-y}La_y)_2Cu_3O_{7-\delta}$ [$0\leq y\leq 0.15$].—73-10957

Image of the energy gap anisotropy in the vibrational spectrum of a high-temperature superconductor.—73-15506

Importance of electromagnetic pinning in high-$T_c$ superconductors with long defects.—73-11794

Improved microwave performance of Ag-doped $Y_1Ba_2Cu_3O_{7-\delta}$ thin-film microstrip resonators.—73-01571

Impurity effects in cuprate superconductors.—73-01572

Impurity phase recognition in YBCO high-$T_c$ superconductors by cathodoluminescence [CL] spectroscopy.—73-15507

In situ fabrication of high-$T_c$ Y-Ba-Cu-O thin film by resistive evaporation.—73-11797

In situ growth of epitaxial $YBa_2Cu_3O_7$ thin films by on-axis unbalanced dc magnetron sputtering.—73-04739

In situ growth of superconducting Y-Ba-Cu-O thin films by ion-beam sputtering method.—73-11798

In situ observation of Ba oxide layer at the interface between $Y_1Ba_2Cu_3O_{7-x}$ film and MgO substrate.—73-08101

In situ observation of growing surface of oxide films by reflection high-energy electron diffraction beam-excited Auger electron spectroscopy.—73-17146

In situ optical monitoring of two-dimensional crystal growth in layer-by-layer chemical vapor deposition of $YBa_2Cu_3O_x$.—73-15508

In situ substrate temperature measurement in high-$T_c$ superconducting film deposition.—73-15509

In situ X-ray diffraction studies of $YBa_2Cu_3O_x$.—73-11799

In-plane orientations and grain boundaries of $YBa_2Cu_3O_{7-x}$ thin films on (001)MgO substrates grown by metallorganic chemical vapor deposition.—73-15511

Inductance mode characteristics of a ceramic $YBa_2Cu_3O_{7-x}$ radio-frequency superconducting quantum interference device at 77 K.—73-08104

Influence of Ca on superconductivity of $(Y_{1-x}Pr_x)Ba_2Cu_3O_{6.95}$ system.—73-11801

Influence of electrical and magnetic fields on the excess current in HTSC–normal metal point contacts.—73-08105

Influence of fluorine on the superconducting properties of $YBa_2Cu_3O_{7-\delta}$.—73-08106

Influence of internal strain on the charge distribution and superconducting transition temperature in $Ba_2YCu_3O_x$.—73-01575

Influence of iron doping on the microstructure of $YBa_2(Cu_{1-x}Fe_x)_3O_{7-\delta}$ ceramics.—73-01576

Influence of magnetic field from microwave surface resistance of two-layer $YBa_2Cu_3O_{7-x}$ films.—73-01577

Influence of preparation conditions on characteristics of the $YBa_2Cu_3O_{7-\delta}$ compound.—73-01578

Influence of radiation defects on the energy gap in $YBa_2Cu_3O_{7-x}$ as measured with the help of Andreev reflection effect.—73-11803

Influence of sputtering conditions on the characteristics of superconducting Y-Ba-Cu-O films.—73-15515

Influence of substitution of terbium on the superconducting behavior of $YBa_2Cu_3O_{7-\delta}$.—73-08109

Influence of the native $BaAl_2O_4$ boundary layer on microstructure and properties of $YBa_2Cu_3O_{7-x}$ thin films grown on sapphire.—73-01579

Influence of the phase equilibria on the critical temperatures $T_c$'s of the high-$T_c$ Bi-Sr-Ca-Cu-O and Y-Ba-Cu-O compounds.—73-11804

Influence of the spin gap on the normal state transport in $YBa_2Cu_4O_8$.—73-15516

Influence on electronic structure and superconductivity due to the partial substitution of Ni for Cu in $YBa_2(Cu_{1-x}Ni_x)_3O_{7-y}$.—73-11805

Infrared absorption bands of Cu–O stretching vibration in $YBa_2Cu_3O_{7-\delta}$.—73-15517

Infrared and Raman scattering studies of apex anharmonicity in high-$T_c$ cuprates.—73-11807

Infrared spectroscopy and Raman spectroscopy evidences of silver replacement into Cu(1) site in $YBa_2Cu_4O_8$.—73-15518

Initial growth of epitaxial (001)$SrTiO_3$ film deposited in situ on (001)YBaCuO/(100)MgO.—73-15519

Interaction of electrodes in $YBa_2Cu_3O_{7-\delta}$/metal tunnel junctions.—73-08111

Interactions of $YBa_2Cu_3O_{7-x}$ thin films with alkaline earth fluoride substrates.—73-08112

Interbilayer charge dynamics in $YBa_2Cu_3O_{6+x}$.—73-15520

Interface of orthogonally oriented twins in $YBa_2Cu_3O_{7-\delta}$.—73-04748

Intergranular link nature in $YBa_2Cu_3O_{7-x}$ ceramics and their dependence on sample density.—73-01580

Interlocked grain growth of YBCO film on magnesium oxide as observed by scanning tunneling microscopy.—73-01581

Interpretation of a $YBa_2Cu_3O_{7-\delta}$ canvas structure in terms of elasticity.—73-01582

Interpretation of tweed contrast from the $YBa_2Cu_3O_{7-\delta}$ system.—73-04747

Ion activation in the in situ low-temperature laser deposition of superconducting $YBa_2Cu_3O_{7-\delta}$ films.—73-08114

Ion beam sputtering of in situ superconducting $YBa_2Cu_3O_{7-\delta}$ films.—73-08115

Ion emission studies of pulsed laser evaporation of $YBa_2Cu_3O_{7-}$.—73-08116

*I-V* characteristics of point contacts of untwinned $YBa_2Cu_4O_8$.—73-08098

*I-V* characteristics of thin-film $YBa_2Cu_3O_{7-x}$ and *K-T* transition.—73-11793

$J_c$ behavior and the distribution of 211 particles in melt texture growth (MTG) YBCO.—73-04751

$J_c$ of a sample of melt-grown YBCO.—73-15525

Joining of semiconductive $BaTiO_3$ with YBCO thick film and their interfaces.—73-15526

Kinetic and structural characteristics of Zr-doped Y-Ba-Cu-O ceramic.—73-08119

Kinetics of oxidation of $YBa_2Cu_3O_{6+y}$.—73-15528

Kinetics of oxidation-reduction processes in $YBa_2Cu_3O_y$.—73-15529

Kinetics of the atoms of a unit cell $YBa_2Cu_3O_{6+x}$.—73-11812

Knoop hardness anisotropy of $YBa_2Cu_3O_{7-\delta}$ single crystals.—73-08120

*1/f* noise in $YBa_2Cu_3O_{7-\delta}$ superconducting bicrystal grain-boundary junctions.—73-11813

Langmuir probe diagnostics of a radio-frequency magnetron discharge for deposition of high-$T_c$ YBCO films.—73-15530

Large-area deposition of superconducting $YBa_2Cu_3O_x$ films by plasma flash evaporation.—73-08121

Large-area epitaxial $CeO_2$ buffer layers on sapphire substrates for the growth of high-quality $YBa_2Cu_3O_7$ films.—73-04752

Large-area epitaxial MgO buffer layers on sapphire substrates for Y-Ba-Cu-O film deposition.—73-15531

Large-area sputtering of in situ superconducting $YBa_2Cu_3O_7$ films.—73-01584

Laser ablation deposition of $YBa_2Cu_3O_{7-x}$ thin films using a microwave plasma disk reactor oxygen source.—73-11814

Laser annealing of high-$T_c$ superconductors.—73-15532

Laser deposition of epitaxial $YBa_2Cu_3O_7$ films with low droplet densities.—73-11815

Laser deposition of Y-Ba-Cu-O on $ZrO_2$-coated sapphire substrates.—73-04754

Lattice parameters and electrical resistivity dependences of $YBa_2Cu_3O_x$ ceramics on oxygen content.—73-01585

Layered perovskite with alternating Cu-$O_2$ and C-O planes.—73-04755

Locus of pairing interaction in $YBa_2Cu_3O_7$ by site-selective oxygen isotope shift: $^{18}O$ in the $CuO_2$ plane layers.—73-15536

Long-range interactions, long-range order, and a devil's staircase in $YBa_2Cu_3O_x$.—73-01587

Low magnetic field anomalies in the electrical dissipation of superconducting $YBa_2Cu_3O_7$:$YBaCuO_5$ composites.—73-04757

Low-frequency and low-magnetic-field effects on the alternating current volume susceptibility of cuprate superconductors.—73-11817

[Low frequency and] microwave absorption by high-$T_c$ ceramics in magnetic field.—73-01589

Low-frequency electromagnetic losses on high-$T_c$ $YBa_2Cu_3O_{7-\delta}$ superconductors in magnetic fields up to $H_{c1}$.—73-15538

Low-temperature magnetic phase transition in $YBa(Cu_{1-x}Fe_x)_3O_{7+\delta}$ system ($0.15\leq x\leq 0.3$) accompanied by change in electronic structure of Fe atoms.—73-15541

Low-temperature oxygen ordering in $YBa_2Cu_3O_{6+x}$.—73-15542

Low-temperature solid-state reaction of in situ growth of $YBa_2Cu_3O_{7-\delta}$ thin films by resistive evaporation.—73-11818

Magnetic circular dichroism in $YBa_2Cu_3O_{7-x}$ films.—73-08125

Magnetic excitations in superconducting $YBa_2Cu_3O_{6+x}$ crystals studied by neutron inelastic scattering.—73-01593

Magnetic excitations in the *t-J* model: application to neutron and NMR experiments in high-$T_c$ materials.—73-04758

Magnetic field dependences of ultrasound velocity in $YBa_2Cu_3O_7$ and $Bi_2Sr_2CaCu_2O_8$.—73-04759

Magnetic field on $^{63}Cu$ nuclear relaxation rates in $YBa_2Cu_3O_7$ and in $La_{1.85}Sr_{0.15}CuO_4$ above and below $T_c$.—73-11819

Magnetic flux distribution over the surface of a superconducting $YBa_2Cu_3O_x$ single crystal measured by ESR.—73-04760

Magnetic flux relaxation in $YBa_2Cu_3O_{7-x}$ thin film: thermal or athermal.—73-15544

Magnetic hysteresis of $p^+$ and $^3He^{++}$ irradiated melt-textured $YBa_2Cu_3O_{7-\delta}$.—73-11820

Magnetic phase diagrams of the system $YBa_2(Cu_{1-x}Fe_x)_3O_y$.—73-08661

Magnetic properties of high-$T_c$ superconductors studied by means of positive muons.—73-01595

Magnetic properties of $Y_{1-x}Er_xBa_2Cu_3O_{7-\delta}$ compounds.—73-04761

Magnetic relaxation and flux pinning of $YBa_2(Cu_{1-x}Sn_x)_3O_{7-y}$.—73-11822

Magnetic shielding studies using cylinders of $YBa_2Cu_3O_{7-x}$ prepared by isostatic compression.—73-15546

Magnetic structure of $Y_2BaCuO_5$.—73-15547

Magnetic structure of $Y_2BaCuO_5$.—73-15548

Magnetic suspension, critical current, and morphology in $YBa_2Cu_3O_{7-x}$-silver composites.—73-11823

Magnetically ordered states in $YBa_2(Cu_{1-x}Fe_x)_3O_{7+\delta}$ with $0.15<x<0.3$.—73-07960

Magnetization and critical current density measurements of textured bulk Y-Ba-Cu-O superconductor.—73-01597

Magnetization and microstructure of melt-textured growth (MTG) $YBa_2Cu_3O_{7-\delta}$ irradiated by fast neutrons.—73-11825

Magnetization currents in $YBa_2Cu_3O_{7-x}$ superconductors.—73-04765

Magnetoresistance and $H_{c2}$ in single-crystal $Y_{1-x}Pr_xBa_2Cu_3O_{7-y}$.—73-04766

Manifestation of a superconducting gap in the optical absorption of $YBa_2Cu_3O_{7-\delta}$ and $Bi_2Sr_2CaCu_2O_8$ in the visible spectral range.—73-08128

Measurement of the hardness of metal/high-temperature superconductor contact joints.—73-11827

Measurement of the spontaneous polar Kerr effect in $YBa_2Cu_3O_7$ and $Bi_2Sr_2CaCu_2O_8$.—73-08131

Measurements of anisotropic characteristic lengths in YBCO films at microwave frequencies.—73-04768

Measurements of the thermopower coefficient above the superconducting transition in polycrystalline $YBa_2Cu_3O_{7-\delta}$: absence of appreciable fluctuation effects.—73-01598

Measuring microwave conductivities of superconducting films.—73-11828

Mechanical anisotropy of $YBa_2Cu_3O_x$ single crystals.—73-01599

Mechanical energy dissipation phenomena in Y superconductors.—73-04770

Mechanism for electric field effects observed in $YBa_2Cu_3O_{7-y}$ films.—73-15552

Mechanisms of $YBa_2Cu_3O_{7-y}$ stability enhancement.—73-15553

Metallic Ag addition effects on $Y_1Ba_2Cu_3O_{7-x}$ superconducting thick films.—73-11829

Method for determining the texture of Y and Bi high-temperature superconducting materials.—73-08133

Method for fabricating oxide superconducting coatings.—73-15682

Method for forming Josephson break junctions.—73-15684

Method for making a superconducting field effect transistor with inverted MISFET structure.—73-11964

Method for producing a superconductor layer of $YBa_2Cu_3O_7$ on a sapphire substrate.—73-11967

Method for the formation of high-temperature superconductors.—73-04848

Method of forming an inorganic protective layer on an oxide superconducting film.—73-04850

Method of making high-$T_c$ superconductor material, and article produced by the method.—73-01718

Method of manufacturing an electrical contact for a superconductive ceramic.—73-11973

Method of preparing high-temperature superconductor films on opposite sides of a substrate.—73-11975

Method of producing $YBa_2Cu_4O_x$-type superconducting metal oxides.—73-11978

Method of X-ray diffraction examination of thin superconducting films.—73-15820

Micromorphological structure and superconductive properties of $YBa_2(Cu_{3-x}Zn_x)_3O_{6.9}$ alloys.—73-01603

Microstructural analysis of interface between $YBa_2Cu_3O_{7-x}$ [Y123] and Ag/Pd alloys.—73-11832

Microstructural development in 1-2-3 tapes produced from spray-dried powder.—73-01606

Microstructural features of Y-Ba-Cu-O thin films grown on single-crystal MgO.—73-01607

Microstructural properties of Pt-doped $YBa_2Cu_3O_{7-x}$ high-$T_c$ superconductor prepared by melting method.—73-15555

Microstructural study of melt-processed $YBa_2Cu_3O_{7-\delta}$ thick films on yttria-stabilized zirconia.—73-11833

Microstructure and associated properties of YBCO superconductors prepared by melt-processing techniques.—73-11834

Microstructure and composition analysis of high-$T_c$ $YBa_2Cu_3O_{7-x}$ oxides studied by analytical electron microscopy.—73-01608

Microstructure and cracking in pure and substituted $YBa_2Cu_3O_{7-\delta}$.—73-03167

Microstructure of barium-deficient superconducting Y-Ba-Cu-O thin films: observations using transmission electron microscopy.—73-04772

Microstructure of epitaxial ferroelectric $YBa_2Cu_3O_{7-}$/$Pb_{0.9}La_{0.1}$-$(Zr_{0.2}Ti_{0.8})_{0.975}O_3$-$YBa_2Cu_3O_{7-}$ heterostructures on $LaAlO_3$ [LAO].—73-03171

Microstructure, thermoelectric power, and magnetic irreversibility of coprecipitated $YBa_2Cu_4O_8$ powders.—73-08134

Microwave joining of yttrium-based superconductor and its microstructure features.—73-08135

Microwave penetration depth measurements in $Bi_2Sr_2CaCu_2O_{7-\delta}$ single crystals and $YBa_2Cu_3O_8$ thin films.—73-15556

Microwave properties of high-$T_c$ $Y_1Ba_2Cu_3O_x$ superconducting bridges on $Y_2BaCuO_5$ substrates.—73-08136

Microwave surface resistance of plasma-sprayed YBaCuO thick films on large-area metallic substrates.—73-15557

Mid- and near-ir ellipsometry of $Y_{1-x}Pr_xBa_2Cu_3O_7$ [$x$=0–1] epitaxial films.—73-11837

Millimeter-wave detection by YBaCuO step-edge microbridge Josephson junction.—73-08137

Mobility and short-range ordering of oxygen in $RBa_2Cu_3O_{6+x}$ by anelastic relaxation and possible correlation with the 90-K and 60-K superconducting phases.—73-08138

Model for the oxygenation of the $YBa_2Cu_3O_{7-x}$ 90-K superconductor.—73-11838

Model of oxygen ordering for $Y_2Ba_4Cu_7O_{14+x}$ compound.—73-15558

Modification of the X-ray photoemission spectrum of in situ deposited thin films of $Y_1Ba_2Cu_3O_{7-y}$ for various oxygen treatments.—73-15559

Monte Carlo calculation for nonequilibrium oxygen content of $YBa_2Cu_3O_x$.—73-01609

Morphology and transport of $YBa_2Cu_3O_{7-x}$ sputtered in argon, oxygen, and hydrogen: dependence on deposition temperature.—73-11842

Nature of preferred orientation of $YBa_2Cu_3O_x$ thin films.—73-11843

Negative magnetoresistance in single-crystal $Y_{1-x}Pr_xBa_2Cu_3O_{7-y}$.—73-15563

Neutron diffraction and Hall effect measurements in Y-Ba-Cu(Mn)-O system.—73-11844

Neutron diffraction studies of interatomic distances in $Y_{1-2x}Ca_xT^{+}_xBa_2Cu_3O_{7-\delta}$ system.—73-01610

Neutron diffraction study of high-$T_c$ superconducting ceramics $YBa_2Cu_3O_{6.9}$.—73-01611

Neutron diffraction study of $YBa_2Cu_{2.7}Fe_{0.3}O_y$.—73-08140

Neutron measurements of the vortex lattice in $YBa_2Cu_3O_7$.—73-04777

New biepitaxial grain-boundary junction.—73-08143

New laser ablation geometry for the production of smooth thin single-layer $YBa_2Cu_3O_{7-x}$ and multilayer $YBa_2Cu_3O_7$-/$PrBa_2Cu_3O_{7-y}$ films.—73-15566

New technique for the growth of superconducting $YBa_2Cu_3O_{6+\delta}$ crystals completely separated from flux.—73-01614

Nonlinear $I$-$V$ characteristics of $YBa_2Cu_3O_{7-x}$-In contacts.—73-08147

Nonlinear electrodynamics of $YBa_2Cu_3O_7$ thin films in the microwave region.—73-08148

Nonlinear Hall resistivity in $YBa_2Cu_3O_{7-\delta}$ films near the vortex-glass transition.—73-11846

Nonlinear response of $YBa_2Cu_3O_{7-y}$ thin-film microstrip resonator at microwave frequency.—73-01615

Nonohmic conductivity, fluctuations, and dimensional crossover in YBaCuO.—73-01616

Nonrandom gold-$YBa_2Cu_3O_{7-x}$ composites.—73-08150

Normal atmospheric preparation of $YBa_2Cu_4O_8$ superconductor from nitrate solution by freeze-drying method.—73-15568

Normal state behavior and microstructure in $YBa_2Cu_{3-x}Co_xO_y$ system.—73-01618

Nucleation and growth of a flux instability in superconducting $YBa_2Cu_3O_{7-x}$ films.—73-15569

Nucleation and heteroepitactic growth of $YBa_2Cu_3O_{7-\delta}$ thin films on MgO.—73-01620

O1$s$ XPS binding energy in $YBa_2Cu_3O_{7-x}$.—73-15570

One small step: an SC [superconductor] motor is tested successfully.—73-15571

Optical absorption of the high-$T_c$ superconductors $Y_1Ba_2Cu_3O_{7-\delta}$, $LaCuO_{4+\delta}$, and $Bi_2Sr_2Ca_{1-x}Y_xCu_2O_{8+\delta}$.—73-04781

Optical absorption spectroscopic diagnostics during sputter deposition of Y-Ba-Cu oxide.—73-11849

Optical conductivity of $c$-axis-oriented $YBa_2Cu_3O_{6.7}$: evidence for a pseudogap.—73-15572

Optical study of the doping effect of oxygen in $YBa_2Cu_3O_y$ and $Bi_2Sr_2CaCu_2O_{8+\delta}$ single crystals.—73-11851

Optical transmittance and reflectance on the $YBa_2Cu_3O_{7-x}$ ($x$=0, 1) thin films.—73-05607

Optimization of critical current density of bulk YBCO superconductor prepared by coprecipitation in oxalic acid.—73-08154

Optimizing metallorganic chemical vapor deposition of YBCO films: substrates and $pO_2$-$T$ conditions.—73-01621

Optimum bias conditions for $K$-band microwave mixing using YBaCuO step-edge microbridge Josephson junction.—73-11853

Ordering principles for tetrahedral chains in Ga- and Co-substituted YBCO intergrowth.—73-05443

Oriented grain growth in $YBa_2Cu_3O_{7-\delta}$ by alkali metals (Li, Na, and K) substitution.—73-01622

Oriented grained Y-Ba-Cu-O superconductors having high critical currents and method for producing [the] same.—73-11983

Oxidation state of Cu ions in H-charged $YBa_2Cu_3O_{7-\delta}$ films.—73-11855

Oxide glass to high-temperature ceramic superconductors—a novel route.—73-11856

Oxygen ordering in $YBa_2Cu_3O_{6+x}$: low-temperature expansions.—73-08158

Oxygen ordering in $YBa_2Cu_3O_x$ ($7\geq x\geq 6$) superconductors with equilibrium defect structure at room temperature.—73-04783

Oxygen potentials corresponding to the $YBa_2Cu_3O_{6+x}$ phase in the [CuO-rich part of the] Y-Ba-Cu-O system.—73-01625

Pair breaking effect in the substitution for Cu in high-$T_c$ copper oxides.—73-08159

Parameters of electric field gradient tensor in copper sites of $YBa_2Cu_3O_{7-x}$ lattices.—73-15575

Particle size effect on the apparent brittle-ductile transition in $YBa_2Cu_3O_{7-x}$-Sn composite superconductor.—73-15576

Patterning method for high-$T_c$ superconducting YBaCuO thin films.—73-08161

Phase behavior during synthesis by metal carboxylate pyrolysis.—73-16246

Phase diagram of the vortex-solid phase in Y-Ba-Cu-O crystals: a crossover from single-vortex (1-D) to collective (3-D) pinning regimes.—73-08162

Phase transition toughening of high-$T_c$ superconducting ceramics.—73-15579

Phonon anomalies above $T_c$ in $YBa_2Cu_4O_8$ and $YBa_2Cu_3O_{7-\delta}$ superconductors: an effect of coupling to spin excitations.—73-01627

Phonon softening in the far-infrared spectra of $YBa_2(Cu_{1-x}Ni_x)_3O_{7-\delta}$.—73-01628

Photo- and electron-beam-induced currents from epitaxial $YBa_2Cu_3O_x$ metal-insulator-superconductor (MIS) structure in the normal state.—73-15580

Photoelectronic properties of $YBa_2Cu_3O_6$.—73-15581

Photoinduced changes in the absorption spectrum of superconducting $YBa_2Cu_3O_{7-\delta}$ films in the 1.5–3 eV region.—73-08165

Physics and diagnostics of laser ablation plume propagation for high-$T_c$ superconductor film growth.—73-11863

Picosecond $YBa_2Cu_3O_{7-\delta}$ detector for far-infrared radiation.—73-11864

Pinning and the size of grains in high-$T_c$ ceramics.—73-08166

Plasma expansion produced by excimer laser evaporation of $YBa_2Cu_3O_{7-x}$ target.—73-11865

Point-contact spectroscopy on oxygen-deficient $YBa_2Cu_3O_{7-\delta}$ single crystals.—73-08167

Polarized neutron determination of the magnetic excitation in $YBa_2Cu_3O_7$.—73-15582

Polaron origin for anharmonicity of the axial oxygen in $YBa_2Cu_3O_7$.—73-08168

Polymerized complex synthesis and post-$O_2$ HIP treatment of $YBa_{2-x}Sr_xCu_4O_y$ superconductors.—73-01630

Polymerized complex synthesis of a pure 93-K $Y_2Ba_4Cu_7O_{15-\delta}$ superconductor without the need of high oxygen pressure and additive catalysts.—73-01631

Possibility of "cold nuclear synthesis" in the deuterated ceramic $YBa_2Cu_3O_{7-x}$ in the superconducting state.—73-01634

Possibility of determining type of Josephson junctions from its noise characteristics.—73-15584

Possible mechanism of proximity effect coupled to spin fluctuation in $YBa_2Cu_3O_y$/magnetic manganese oxide/$YBa_2Cu_3O_y$ junctions.—73-11866

Precision measurements in the temperature dependence of $\lambda$ in $YBa_2Cu_3O_{6.95}$: strong evidence for nodes in the gap function.—73-15585

Preferential axis control of $YBa_2Cu_3O_x$ thin films by quasi-lattice-match engineering.—73-08171

Preparation and characterization of high-$T_c$ superconducting $YBa_2Cu_3O_{7-x}$ filaments.—73-01636

Preparation and characterization of $YBa_2Cu_3O_{7-x}$ high-$T_c$ superconducting thin films deposited by S-gun sputtering.—73-08173

Preparation and nanoscale characterization of highly stable $YBa_2Cu_3O_{7-\delta}$ thin films.—73-15586

Preparation and properties of $Ba_2YCu_3O_{7-x}$-$BaZrO_3$ superconductive composite by spray-drying method.—73-15587

Preparation and properties of $Ba_2YZrO_6$-$YBa_2Cu_3O_7$ composites.—73-15588

Preparation of a calcium-substituted copper-rich yttrium barium copper oxide superconductor from a spray-dried nitrate precursor.—73-08175

Preparation of Ag-YBaCuO composite tape with starting material produced by codecomposition method.—73-11870

Preparation of bicrystal substrates and properties of YBaCuO grain-boundary junctions.—73-08177

Preparation of superconducting $YBa_2Cu_3O_{7-x}$ fibers through metal citrate gel as a precursor.—73-08178

Preparation of superconducting YBCO tape on metal substrates by MOCVD.—73-15597

Preparation of thin high-$T_c$ superconducting films doped by metal ions.—73-15598

Preparation of $Y_{1-x}Ca_xBa_2Cu_4O_8$ ($0\leq x\leq 0.1$) superconductor films by the dipping-pyrolysis process.—73-04789

Preparation of Y-Ba-Cu oxide precursor by the citrate gel process.—73-11873

Preparation of $YBa_2Cu_3O_{7-x}$ powder by chemical methods.—73-04790

Preparation of $YBa_2Cu_3O_{7-x}$ films and $YBa_2Cu_3O_{7-x}$/$Y_2O_3$ multilayers using coevaporation and atomic oxygen.—73-01639

Preparation of $YBa_2Cu_3O_{7-x}$ superconducting thin films over large-area substrates.—73-04791

Preparation of $YBa_2Cu_3O_{7-x}$ superconductor by oxalate coprecipitation.—73-01640

Preparation of $YBa_2Cu_4O_8$ superconductor from oxalate precursor under ambient pressure.—73-04792

Preparation, processing, and tunneling in $YBa_2Cu_3O_{7-\delta}$-Pb native-barrier structures.—73-15600

Process for making high-temperature superconducting powders.—73-11988

Process for producing an elongated superconductor.—73-01735

Processing and characterization of high-temperature superconductor films formed by spin-on coating and rapid thermal annealing.—73-11876

Profiling of Y-Ba-Cu-O radio frequency sputtering by optical emission spectroscopy.—73-01641

Properties of epitaxial $YBa_2Cu_3O_7$ thin films prepared by pulsed laser ablation.—73-11879

Properties of $YBa_2Cu_3O_{7-y}$ large washer SQUID.—73-15603

Properties of $YBa_2Cu_3O_x$ doped with Si.—73-11880

Proximity-coupled $CuO_2$ planes in high-$T_c$ superconductors: evidence from pressure experiments up to 34 GPa on $Y_2Ba_4Cu_7O_{15.32}$.—73-08181

Quantum melting of the vortex lattice in high-$T_c$ superconductors.—73-15606

Radiative substrate heating for high-$T_c$ superconducting thin-film deposition: film-growth-induced temperature variation.—73-11884

Raman scattering and resistivity measurements for ion-irradiated $YBa_2Cu_3O_7$ epitaxial films.—73-01643

Raman scattering in $(Y_{1-x}Gd_x)Ba_2Cu_3O_y$ system and relationship between structure of vibrational spectra and critical temperature in (123) superconductors.—73-01644

Raman spectroscopy of some $(M)Ba_2Cu_3O_{7-\delta}$ "cocktails."—73-11886

Reaction of the oxygen-deficient $YBa_2Cu_3O_6$ phase with water.—73-04797

Reaction of $YBa_2Cu_3O_{7-x}$ superconducting film with YSZ substrate and crystal orientation in the film.—73-15608

Reactions between $YBa_2Cu_3O_{7-x}$ superconducting oxide and metallic copper and prevention of them.—73-01645
Reactions between $YBa_2Cu_3O_{7-x}$ superconducting oxide and metallic copper and preventions of them.—73-11888
Reactive coevaporation system for in situ, epitaxial $YBa_2Cu_3O_{7-x}$ thin film deposition.—73-01646
Reactivity of a Y-Ba-Cu-O superconductor with electrooptic crystals.—73-11889
Reduced thermal budget processing of Y-Ba-Cu-O high-temperature superconducting thin films by metallorganic chemical vapor deposition.—73-01647
Reflection high-energy electron diffraction oscillations modulated by laser-pulse deposited $YBa_2Cu_3O_{7-x}$.—73-08186
Relationship between microstructure and residual stress in $YBa_2Cu_3O_{7-x}$.—73-01648
Relative effect on the oxygen concentration in $YBa_2Cu_3O_{7-\delta}$ of atomic and ionic oxygen fluxes, produced by a small compact electron cyclotron resonance source.—73-01649
Relativistically parametrized extended Hueckel calculation of net charges on atoms in $YBa_2Cu_3O_7$.—73-08187
Relaxation of the HTSC $YBa_2Cu_3O_x$ ceramics after heat treatment in hydrogen.—73-15610
Remanent magnetization in single crystals of $YBa_2Cu_3O_7$.—73-04800
Residual hydrogen-gas-induced defects in heteroepitaxial $Y_1Ba_2Cu_3O_{7-x}$ films.—73-11891
Role of the silver intermediate layer in the $YBa_2Cu_3O_7$-/Ag/$In_2O_3$/Si system.—73-11894
Sample size dependence of the critical current density in polycrystalline $YBa_2Cu_3O_{7-\delta}$.—73-11895
Sandwich-geometry $YBa_2Cu_3O_{7-\delta}$/Au/Nb SNS [superconductor/normal-conductor/superconductor] devices.—73-08192
Scaling of the current-voltage characteristics of epitaxial high-$T_c$ thin films.—73-08193
Scaling of the longitudinal and Hall resistivities from vortex motion in $YBa_2Cu_3O_7$.—73-11896
Scanning Hall microprobe measurements of magnetization profiles in $YBa_2Cu_3O_{7-y}$ single crystals.—73-01653
Secondary and tertiary ordering in nonstoichiometric $YBa_2Cu_3O_{6+\delta}$.—73-01656
Selective etching of YBCO target by ion-plasma sputtering.—73-04803
Selective plasma oxidation of oxygen-deficient $YBa_2Cu_3O_{7-x}$.—73-08195
Self-limiting adsorption and in situ optical monitoring for atomic layer epitaxy of oxide superconductors.—73-04804
Sensitive bolometers using high-$T_c$ superconducting thermometers for wavelengths 20–300 μm.—73-08196
Sensitive YBaCuO thin-film bolometer with ultrawide wavelength response.—73-11897
Sintering of $YBa_2Cu_3O_x$ superconducting ceramics produced by carboxylate pyrolysis.—73-15621
Size effect in the vortex-glass transition in submicron $YBa_2Cu_3O_x$ strips: evidence for softening of vortex motion.—73-08198
Small-angle neutron scattering study of flux line lattices in twinned $YBa_2Cu_3O_7$.—73-15623
Soft X-ray emission study of $YBa_2Cu_4O_8$.—73-11900
Solution-based processing of $YBa_2Cu_3O_x$ superconducting thin films.—73-11901
Spatial variations in the oxygen content of $YBa_2Cu_3O_{7-\delta}$ epitaxially deposited on MgO as assessed using a transmission electron microscopy moire method.—73-08200
Spectroscopic ir ellipsometry of [100]- and [001]-oriented $YBa_2Cu_3O_{7-\delta}$ films.—73-11903
Spectrum of persistant photoconductivity in $YBa_2Cu_3O_{6.4}$ films.—73-01661
Spin gaps and spin dynamics in $La_{2-x}Sr_xCuO_4$ and $YBa_2Cu_3O_{7-\delta}$.—73-15625
Spin-age effects in the resistivity of copper oxide superconductors.—73-11904
Spiral mountains.—73-04807
Spring-defect model of structural phase transition in $YBa_2Cu_3O_{7-\delta}$.—73-15629
Stability diagram for the system $YBa_2Cu_3O_{7-x}$.—73-04808
Structural and electrical characterization of $YBa_2Cu_3O_{7-x}$ thin films grown on different substrates.—73-01664
Structural and superconducting properties of high-quality YBCO films with different orientation.—73-08209
Structural and superconducting properties of the $YBa_2Cu_3O_{7-\delta}$-$HfO_2$ system.—73-01665
Structural and transport properties of biaxially aligned $YBa_2Cu_3O_{7-x}$ films on polycrystalline Ni-based alloy with ion-beam-modified buffer layers.—73-08210
Structural characterization of yttria ($Y_2O_3$) inclusions in $YBa_2Cu_3O_{7-x}$ films: growth model and effect on critical current density.—73-08211
Structural consequences of the chemical reaction of $YBa_2Cu_3O_{7-y}$ with *n*-butyl lithium.—73-01666
Structural positions and magnetic ordering of Fe atoms in $YBa_2(Cu_{1-x}Fe_x)_3O_y$ system enriched in or depleted of oxygen.—73-15632
Structure and properties of oxyanion derivatives of 123 cuprate superconductors: effect of substitution of carbonate and nitrate ions in the Cu(I) position of $YBaSrCu_3O_{7-\delta}$.—73-11907
Structure and superconducting properties of Ga-substituted $YBa_2Cu_3O_{7-\delta}$ and $YBaSrCu_3O_{7-\delta}$ systems.—73-08213
Structure of $Au^{24+}$ ion-irradiation-induced defects in high-$T_c$ superconductors.—73-04809
Structure of high-$T_c$ superlattices.—73-08214
Structure of interdomain and interphase boundaries in 1-2-3 crystals.—73-01671
Structure of the superconducting ortho-II phase of $YBa_2Cu_3O_{6.51}$.—73-11909
Structure of $YBa_2Cu_3O_{7-\delta}$ epitaxial films.—73-01672
Substitution effect of Sn and/or Ca elements in $YBa_2Cu_3O_{7-\delta}$ superconducting ceramics.—73-11911
Substitution effects of Fe and Zn for Cu in $YBa_2(Cu_{1-x}M_x)_4O_8$.—73-11912
Superconducting characteristics of epitaxial growth analyses of $YBa_2Cu_3O_{7-x}$ thin films by direct current magnetron sputtering.—73-11914
Superconducting circuit elements with metallic substrate and method for manufacturing the same.—73-04872
Superconducting detector and method of making [the] same.—73-04875
Superconducting fibers made with yttrium and yttrium oxide interlayers and barium cuprate cover layers.—73-04876
Superconducting properties of $YBa_2Cu_3O_7$-Au composites.—73-15635
Superconducting proximity effect in $YBa_2Cu_3O_{7-\delta}$-Ag-Pb junctions.—73-08222
Superconductive alloys having bifurcated critical current density and method of preparation.—73-12003
Superconductivity and magnetism in niobium-doped $YBa_2Cu_3O_7$-related high-$T_c$ ceramics.—73-11918
Superconductivity and microstructure of powder-melting-processed YHoBaCuO and YGdBaCuO superconductor.—73-08226
Superconductivity enhancement at the surface of $Y_{1-x}Pr_xBa_2CuO_{7-\delta}$ in strong electric fields.—73-08227
Superconductivity in the $(YBa_2Cu_3)_{1-x}Na_xO_{7-\delta}$ system.—73-08228
Superconductivity in Y-Ba-Na-Cu-O.—73-08229
Superconductivity of $Y_{1-x}Ca_xBa_2Cu_4O_{8+y}$.—73-08231
Superconductivity-induced phonon softening in $YBa_2Cu_3O_7$ observed by inelastic neutron scattering.—73-15638
Superconductors are still hot.—73-11919
Superlattices of $YBa_2Cu_3O_{7-\delta}$/$PrBa_2Cu_3O_{7-\delta}$ grown by the pulsed organometallic beam epitaxy [POMBE] method.—73-08233
Superplastic forming of $YBa_2Cu_3O_{7-x}$ ceramic superconductors with or without silver addition.—73-12005
Surface step density oscillation during the growth of $YBa_2Cu_3O_{7-x}$ and $DyBa_2Cu_3O_{7-x}$ superconducting thin films.—73-08235
Surface-induced modifications in the electronic structure of $YBa_2Cu_3O_{7-\delta}$.—73-15643
Synthesis and properties of Ag-$YBa_2Cu_3O_{7-x}$ composite superconductor by mist-pyrolysis method.—73-01683
Synthesis and properties of Ag-$YBa_2Cu_3O_{7-x}$ composite superconductor by mist-pyrolysis method.—73-11924
Synthesis of $Ba_2YZrO_6$: a new phase in $YBa_2Cu_3O_7$-$ZrO_2$ system and its suitability as a substrate material for YBCO films.—73-09353
Synthesis of composite polycrystalline $Ba_2YCu_3O_{7-y}$ superconductor by the sol-gel method.—73-04817
Synthesis of composite polycrystalline $Ba_2YCu_3O_{7-y}$ superconductor by the sol-gel method.—73-11925
Synthesis of cuprate superconductors via a dual precipitation route.—73-08238
Synthesis of high-purity $YBa_2Cu_3O_{7-\delta}$ superconductors by polymerized complex method.—73-15645
Synthesis of high-purity $YBa_2Cu_3O_{7-\delta}$ superconductors by polymerized complex method.—73-08239
Synthesis of single-phase $YBa_2Cu_4O_8$ superconductor at atmospheric pressure of oxygen.—73-08240
Synthesis of superconductive thin films of $YBa_2Cu_3O_{7-x}$ by a nonaqueous electrodeposition process.—73-08241
Synthesis of Y-Ba-Cu-O fine powder and some of its magnetic properties.—73-06100
Synthesis of Y-Ba-Cu-O superconductors using organometallic precursors.—73-08242
Synthesis of $YBa_2Cu_3O_{6+x}$ from coprecipitated hydroxides.—73-11928
Synthesis of $YBa_2Cu_3O_{7-\delta}$ using barium nitrate.—73-01686
Synthesis, by triethylammonium oxalate coprecipitation, and superconducting properties of $Y(Ba_{1-x}Sr_x)_2Cu_4O_8$ [0≤*x*≤0.5].—73-01687
Systematic deviation from *T*-linear behavior in the in-plane resistivity of $YBa_2Cu_3O_{7-\delta}$: evidence for dominant spin scattering.—73-15648
Technique for determination of unit cell periods of $YBa_2Cu_3O_{7-\delta}$.—73-08244
TEM study of microstructures of growth interface in ultrathin $YBa_2Cu_3O_7$ films.—73-01689
Temperature dependence of the Hall angle in single-crystal $YBa_2(Cu_{1-x}Co_x)_3O_{7-\delta}$.—73-08248
Temperature sensor having a temperature correction in itself.—73-04818
Temperature-dependent point-contact characteristics of some granular high-$T_c$ superconductors.—73-08249
Temperature-dependent point-contact characteristics of $YBa_2Cu_3O_x$-Ag.—73-08250
Ternary system of a ceramic superconductor Y-Ba-Cu-O.—73-04819
Thermal conductivity of an untwinned $YBa_2Cu_3O_{7-\delta}$ single crystal and a new interpretation of the superconducting-state thermal transport.—73-08252
Thermal conductivity of twinned $YBa_2Cu_3O_{7-x}$ and tweeded $YBa_2(Cu_{0.95}Fe_{0.05})_3O_{7-x}$ in a magnetic field: evidence for intrinsic proximity effect.—73-08254
Thermal conductivity of $YBa_2Cu_{3-x}Ag_xO_{7-\delta}$.—73-08985
Thermal failure of superconductivity of $YBa_2Cu_3O_{7-x}$ thin films under various conditions of heat removal.—73-15652
Thermal transport in the charged Bose gas and in high-$T_c$ oxides.—73-15653
Thermally activated coherent vortex motion in $YBa_2Cu_3O_{7-\delta}$ thin-film microbridges.—73-15654
Thermodynamic evidence for a density-of-states peak near the Fermi level in $YBa_2Cu_3O_{7-y}$.—73-08255
Thermodynamic stability of 34 compounds of the Y-Ba-Cu-O system.—73-05516
Thermodynamic study of high-temperature superconductors $YBa_2Cu_3O_x$ and $Bi_2Sr_2CaCu_2O_y$.—73-01691
Thermopower of $YBa_2Cu_3O_{7-\delta}$ and its changes during heat treatment.—73-08257
Thermopower of $YBa_2Cu_3O_{7-\delta}$ single crystals.—73-01692
Thick $YBa_2Cu_3O_7$ film formation on $Y_2BaCuO_5$ ceramic substrates.—73-15658
Thin-film growth and compositional effects in $YBa_2Cu_3O_{7-x}$ layers prepared by metallorganic chemical vapor deposition.—73-11937
Third-order elastic constants of high-temperature superconductors $YBa_2Cu_3O_7$.—73-01694
Threshold magnetic field effect in $YBa_2Cu_3O_{7-x}$ single crystals.—73-08260
Time-resolved observation of coherent phonons in superconducting $YBa_2Cu_3O_{7-\delta}$ thin films.—73-08261
Transition to vanishing current superconductivity in $YBa_2Cu_3O_x$.—73-01697
Transmission electron microscopy and high-resolution transmission electron microscopy studies of the early stages in the degradation of $YBa_2Cu_3O_{7-\delta}$ superconductor in water vapor.—73-01698
Transmission electron microscopy of defect cascades in $YBa_2Cu_3O_{7-\delta}$ produced by ion irradiation.—73-08262
Transport critical current densities in shock-loaded and thermally processed $YBa_2Cu_3O_7$.—73-01699
Transport critical currents in ultrafine-grained high-temperature superconductors.—73-08263
Transport of YO molecules produced by ArF laser ablation of $YBa_2Cu_3O_{7-\delta}$ in ambient oxygen gas.—73-11939
Treatment of $YBa_2Cu_3O_{6+x}$ powder with a high-frequency oxygen discharge.—73-01700
Tunneling characteristics of $YBa_2Cu_3O_{7-\delta}$-Pb: Josephson junctions.—73-08264
Tunneling spectroscopy of YBCO "break junctions."—73-08269
Twin boundaries' role in superconducting properties' formation of single-crystal $YBa_2Cu_3O_{7-x}$.—73-04823
Twin-corner disclinations in $YBa_2Cu_3O_{7-\delta}$.—73-04824
Twins and properties of classical and high-$T_c$ superconductors.—73-08270
Upper critical magnetic field $H_{c2}$ of $YBa_2Cu_3O_{7-\delta}$ compounds.—73-08272
Utilization of formates for superconductivity of HTS films.—73-01702
Vanishing magnetization relaxation in the high field quantum limit in $YBa_2Cu_3O_{7-\delta}$.—73-15664
Vibrational spectra and the nature of thermal broadening of light absorption bands in $YBa_2Cu_3O_{7-x}$.—73-08274
Vortex lattice melting in untwinned and twinned single crystals of $YBa_2Cu_3O_{7-\delta}$.—73-08275
Vortex structure driven by magnetic interactions near a sawtooth twin boundary in $YBa_2Cu_3O_{7-\delta}$.—73-08276
Weak-links effect in 123/Cu and 123/CuO composites.—73-15667
Why the chain fragments in ortho-II and ortho-III phases of YBCO might be confined.—73-15668
X-ray microstructural analysis of thin polycrystalline coatings with $YBa_2Cu_3O_{7-x}$ coatings as example.—73-09521
X-ray studies of the $YBa_2Cu_3O_{6+x}$ superstructures in the range of 0.4(3)≤*x*≤0.73(3).—73-01704
XRD study of high-$J_c$ $YBa_2Cu_3O_{7-\delta}$ bulk material grown by melt-textured growth (MTG) method.—73-04826
XRD study on heavy ion disorder in $YBa_2Cu_3O_{7-y}$ film.—73-15670
$Y_2BaCuO_5$ [211] particle coarsening during melt processing of $YBa_2Cu_3O_{7-y}$ [123].—73-11943
Y-Ba-Cu-O superconductive substance.—73-01744
Y-Ba-Cu-O-based multilayers for optoelectronic devices.—73-01705
$YBa_2(Cu_{1-x}Fe_x)_3O_{7-\delta}$ in strong magnetic fields.—73-08277
$YBa_2Cu_3O_7$ growth on metal substrates with $SrTiO_3$ buffer layer by metallorganic chemical vapor deposition.—73-11944
$YBa_2Cu_3O_{7-\delta}$ films: calculation of the thermal conductivity and phonon mean-free path.—73-11945
$YBa_2Cu_3O_{7-\delta}$ thin films and microstrip resonators on $MgLaAl_{11}O_{19}$ substrates.—73-08278
$YBa_2Cu_3O_{7-y}$-type oxide superconductive material containing dispersed $Y_2BaCuO_5$ phase and having high critical current density.—73-12007
$YBa_2Cu_3O_{7-y}$/$Y_2BaCuO_5$ composites: growth and characterization.—73-08279
$YBa_2Cu_3O_7$/$NdGaO_3$/$YBa_2Cu_3O_7$ trilayers by modified off-axis sputtering.—73-08280
YBaCuO ceramics [studied] by positron annihilation and Rutherford backscattering techniques.—73-15672
YBaCuO films by pulsed laser deposition [PLD] and sputtering.—73-04827
YBCO oxalate coprecipitation in alcoholic solutions—correction.—73-15673
YBCO oxalate coprecipitation in alcoholic solutions.—73-11946
YBCO-BiO composite superconductor for granular-type Josephson microwave detector.—73-15674
Yttrium oxide chemiluminescence from the 308-nm excimer laser ablation of $YBa_2Cu_3O_{7-x}$, $Y_2O_3$, and $YCl_3$.—73-08281
Yttrium-barium-copper oxide powder and process for manufacturing yttrium-barium-copper oxide superconducting sintered body.—73-01745

**yttrium barium copper oxide (YBCO),**
Approximate evaluation of the elastic interfacial stresses in thin films with application to high-$T_c$ superconducting ceramics.—73-01494

**yttrium iron garnet (YIG),**
Angular dependence of auto-oscillation in YIG.—73-04589
Calculations of the Faraday rotation in RE-substituted iron garnets.—73-04592
Characteristics of yttrium iron garnet ultrafine particles prepared by the alkoxide method.—73-11647
Complex permeability of a high-purity yttrium iron garnet (YIG) sputtered thin film.—73-04593

Controlling chaos in a thin circular yttrium iron garnet film.—73-04594
Dipole and exchange spin excitations in inhomogeneous ferrite films.—73-15314
Effect of an electric field on the magnetization processes in $Y_3Fe_5O_{12}$.—73-04604
Effect of sintering atmosphere on magnetic aftereffect in polycrystalline yttrium iron garnet samples.—73-04605
Epitaxial yttrium iron garnet films grown by pulsed laser deposition.—73-07934
Exchange stiffness and nonuniform exchange constant in films of Ga,Sc-substituted yttrium iron garnet.—73-15322
Fabrication of yttrium iron garnet using a front-loading hot-press furnace.—73-16779
Features of acoustic wave attenuation in polycrystalline YIG.—73-01460
Fingers of auto-oscillation in a circular YIG film with pinned surface spins.—73-04613
High-efficiency ir generation by difference-frequency mixing using tangential phase matching.—73-08878
Interaction of optical waveguide modes with magnetostatic surface waves in tangentially magnetized finite samples.—73-01217
Interaction of optical waveguide modes with magnetostatic transverse surface eigenmodes in a channel yttrium iron garnet waveguides.—73-07944
Internal stresses in yttrium aluminum garnet crystals grown by horizontal directed crystallization technique.—73-02624
Magnetic properties of praseodymium-substituted iron garnet films.—73-11663
Magnetization process and magnetoacoustic resonance lineshape of polydomain YIG crystal.—73-15346
Magnetooptic channel waveguides in Ce-substituted yttrium iron garnet.—73-11665
Microstructure and magnetic properties of polycrystalline $Y_3Fe_5O_{12}$.—73-15349
Microwave magnetic envelope dark solitons in YIG thin films.—73-15350
Mossbauer study of $Y_{3-x}Fe_{5-x}O_{12}$ and $Y_{3-x}In_xFe_5O_{12}$ ($x$=0, 0.18, 0.33) system.—73-08673
Multistability and chaos at parametrically excited spherical modes in a yttrium iron garnet sphere.—73-04630
Nonmagnetic losses of acoustic waves in polycrystalline yttrium iron garnet and nickel cobalt spinel.—73-15352
Photoinduced magnetic anisotropy in yttrium iron garnet single crystals.—73-15358
Preparation of substituted $Y_3Fe_5O_{12}$ single-mode buried waveguides on a [100]-oriented $Gd_3Ga_5O_{12}$ substrate.—73-16939
Selective formation of thin-film iron garnet by complexing agent-assisted sol-gel processing.—73-11671
Sol-gel preparation of YIG ($Y_3Fe_5O_{12}$) thin film showing optomagnetic effect.—73-11673
Spin wave scattering by magnetic vortex lattice in high-$T_c$ superconductor-ferrite film structure.—73-15627
Subsidiary absorption spin wave instability processes in yttrium iron garnet thin films, critical modes, and the "kink" effect.—73-07978
Temperature dependence of the variation in the complex permeability of yttrium iron garnet (YIG) with applied magnetic field.—73-04660

**yttrium oxide,**
Cubic-tetragonal phase boundary in $Zr_{1-x}Y_xO_{2-x/2}$ solid solutions [determined] by Raman spectroscopy.—73-12569
Effects of $Y_2O_3$ addition on the sinterability and microstructure of mullite: I, Phase transformation and sinterability.—73-02808
Ferromagnetic correlations in the highly frustrated, spin-glass-like, pyrochlore oxide, $Y_2Mn_2O_7$, a neutron scattering study.—73-05567
Phase maps for sputter-deposited refractory metal oxide ceramic coatings: review of niobium oxide, yttrium oxide, and zirconium oxide growth.—73-16254
Physicochemical studies on $LaYO_3$ perovskite prepared at low temperature.—73-02922
Plasma sintering temperature for $Y_2O_3$-doped AlN.—73-02925
Preparation of $Y_3NbO_7$ powders with excess oxygen vacancies and conductivity of the sintered bodies.—73-16942
Structure and conductivity of zirconium-doped polycrystalline lithium yttrium oxide.—73-16329
Thermal stress characteristics of graphite coated with $Y_2O_3$.—73-02713

**yttrium,**
Annealing effects on $T_c$ in $Bi_2Sr_2Ca_{0.9}Y_{0.1}Cu_2O_{8+\delta}$ system.—73-01493
Compound $Y_2BaNiO_5$: a new example of a Haldane gap in an $S$=1 magnetic chain.—73-07929
Creep behavior of fine-grained two-phase $Al_2O_3$-$Y_3Al_5O_{12}$ materials.—73-17264
Crystal structure of $LiYF_4$.—73-12562
Crystal structure of $Sr_3Y_2Ge_3O_{12}$.—73-02213
Defect structure, nonstoichiometry, and phase stability of Ca-doped $YCrO_3$.—73-03085
Determination of yttrium and lanthanum in high-$T_c$ superconducting materials by potassium ferrocyanide amperometric titration.—73-01522
Effect of nitrogen on the diffusion coefficients of sodium and iron in yttrium oxynitride glasses.—73-13967
Effect of post-HIP treatment on the properties of Y-SiAlON ceramics.—73-13015
Effect of Y on the Ca and Sr planes in Y-doped $Bi_2Sr_2CaCu_2O_8$.—73-15441
Efficient 2.05-μm RT $Y_2SiO_5$:$Tm^{3+}$ cw laser.—73-12780
Electron paramagnetic resonance and optical spectra of $Cr^{3+}$-doped $YAlO_3$.—73-16485
Electronic band structure of $Bi_2Sr_2Ca_{1-x}Y_xCu_2O_y$ ($x$=0.4–1) determined by ir-induced intersite transition.—73-15452
$Eu^{3+}$-ion probe spectroscopy in $Na_5YSiO_4$ at low temperatures.—73-08619
Features of the electronic structure of high-temperature superconducting yttrium ceramics.—73-04723
Formation and properties of yttrium aluminosilicate glasses.—73-00485
Formation of alkoxy-derived yttrium aluminates in the $Al_2O_3$-rich region.—73-09138
Growth of thin dense gas-tight (Tb, Y)-$ZrO_2$ films by electrochemical vapor deposition.—73-09159
Incommensurable modulated structure in $YSr_2Cu_{2.5}B_{0.5}O_y$.—73-04742
Influence of oxygen content on formation of yttrium α-SiAlON ceramics.—73-16838
Influence of yttrium on microstructure and point defects in an α-$Al_2O_3$ in relation to oxidation.—73-17148
Localization of carriers of Y-doped $CaCuO_2$ films prepared by an organometallic chemical vapor deposition method.—73-15535
Low-temperature magnetoelastic properties of dilute Jahn-Teller $D_xY_{1-x}VO_4$ crystals.—73-08904
Low-temperature synthesis and phase equilibria in the Y-Cu-O binary system.—73-08658
Magnetic properties of $Y_{1-x}Gd_xCo_4B$ compounds.—73-07956
Magnetic susceptibilities of $Y_xU_{1-y}O_{2+z}$ solid solutions.—73-01752
Magnetic-field-induced weak ferromagnetic order in $Y_2CuO_4$.—73-07959
Mossbauer study of spin-reorientation in $YCo_4B$.—73-02334
Neutron diffraction study of $Y_2Fe_{14}BN_{1-\delta}$.—73-02347
Neutron diffraction study of yttrium α′-SiAlON.—73-08676
NMR of $^{27}Al$ in mixed $Y_xEr_{1-x}AlO_3$ crystals [$x$=1, 0.93, and 0.9].—73-16229
NMR study of spin reorientation in $Ho_{0.07}Y_{0.093}CrO_3$.—73-16231
Optical properties of the Y-Ba cuprates: mainly a band structure point of view.—73-11850
Orthogonal magnetic "impurity" ($Fe^{3+}$ in $c$ positions) in orthoferrite $YFeO_3$.—73-07968
Oxidizing-reducing effects in yttrium-doped $Bi_2Sr_2CaCu_2O_{8+\delta}$ (Bi-2212) superconductor.—73-01624
Preparation and thermal decomposition of yttrium hydroxide fluorides.—73-02404
Pressure-induced phase transition by $YVO_4$:$Eu^{3+}$: an emission lifetime study at high pressure.—73-05621
Pressure-induced phase transition in $YVO_4$:$Eu^{3+}$: a luminescence study at high pressure.—73-12660
Processes of magnetron dusting of films of yttrium-barium ceramics of composition 123, 247, and 124.—73-11875
Processing of nanograined materials.—73-09280
Quasi-continuous wave laser operation of $Cr^{4+}$-doped $Y_2SiO_5$ at RT.—73-16581
Solid-liquid reaction in the system $Si_3N_4$-$Y_3Al_5O_{12}$-$Y_2Si_2O_7$ under 1 MPa of nitrogen.—73-16307
Spectroscopy and scintillation properties of cerium-doped $YAlO_3$ single crystals.—73-16598
Stability of yttrium α-SiAlON under high pressures.—73-16312
Structural investigation of YAM-type yttrium silicon oxynitride by $^{15}N$ magic angle spinning nuclear magnetic resonance.—73-12699
Structural investigation of yttrium aluminosilicate glasses using $^{29}Si$ and $^{27}Al$ magic angle spinning nuclear magnetic resonance.—73-00408
Synthesis and characterization of pure and yttrium-containing alumina aerogels.—73-06079
System $YPO_4$-$Ca_3(PO_4)_2$-$Ca_2P_2O_7$.—73-02512
Thermal expansion of $Y_2SiO_5$ single crystals—correction.—73-12892
Upconversion dynamics of $Er^{3+}$:$YAlO_3$.—73-08787
Valence and magnetic properties of $YSr_{2-x}CaY_2O_{8-y}$.—73-15375

**zeolites,**
$^{129}Xe$ and $^{13}C$PFG NMR study of the intracrystalline self-diffusion of Xe, $CO_2$, and CO.—73-09430
$^{129}Xe$ NMR study of faujasite zeolites of varying Al content.—73-12733
5A zeolite/kaolinite adsorbent for gas purification.—73-12365
Absorption of MFI-type zeolites examined by isothermal microcalorimetry and neutron diffraction: I, Argon, krypton, and methane.—73-08798
Activated zeolite beta and its use for hydrocarbon conversion.—73-05185
Adequate reporting of zeolite synthesis in the literature.—73-09010
Adsorption and $^{129}Xe$ NMR of xenon in silver-exchanged Y zeolites: application to the location of silver cations.—73-08803
Adsorption by MFI-type zeolites examined by isothermal microcalorimetry and neutron diffraction: II, Nitrogen and carbon monoxide.—73-08804
Adsorption of methanol and related molecules on zeolite HZSM-5 and silicalite.—73-12534
Antimicrobial ceramics.—73-05154
Atlas of zeolite structure types.—73-05360
Biocidal zeolite particles.—73-05191
Catalyst for cracking of paraffinic feedstocks.—73-02025
Catalytic body and process for producing the same.—73-12343
Catalytic composite for deodorizing odorous gases and a method for preparing the same.—73-05195
Cation site energies for high-silica FAU-type zeolites.—73-12544
Cation site energies in dehydrated hexagonal faujasite (EMT).—73-12545
Cation-exchange in synthetic zeolite L: the exchange of hydronium and ammonium ions by alkali metal and alkaline earth cations.—73-08563
Cation-framework interaction in alkali-cation-exchanged zeolites: an XPS study.—73-16046
Characterization by ir and NMR spectroscopies of calcined beta zeolite.—73-12548
Characterization of natural zeolites and three kinds of inorganic admixtures for concrete.—73-13691
Characterization of ZSM-5 zeolite synthesized from silica stone (Ioh Island, Kagoshima pefecture).—73-02162
Comments on the autocatalytic nucleation of (Na,TPA)-ZSM-5.—73-12950
Computer simulation of the structure of ZSM-18.—73-12557
Computer simultion of the adsorption of fluid mixture in zeolite Y.—73-12759
Controllability of expansion of lightweight aggregates with natural zeolites on firing.—73-09870
Correlation between the fundamental properties of templates and the kinetics of ZSM-5 crystallization.—73-08582
Crystal chemistry of NaP zeolites.—73-08583
Crystalline zeolites and method of preparation from amorphous silica particles.—73-12360
Crystallization mechanism of zeolite ZSM-5: I, Kinetic compensation effect for the synthesis with some diamines.—73-09053
Crystallization of zeolite ZSM-39 studied by $^{13}C$ and $^{29}Si$ MAS-NMR spectroscopy.—73-12567
Crystallization of ZSM-5 zeolite under microgravity.—73-12568
Crystallization process of zeolite ZSM-5 and zeolite ZSM-35 in a special autoclave.—73-05726
Diffuse reflectance FTIR studies of H adsorbed on Na zeolites.—73-13387
Diffusion of sorbates in zeolites by the frequency response method: particle shape and anisotropic effects.—73-09400
Dissolution of amorphous aluminosilicate zeolite precursors in alkaline solutions: I, Kinetics of the dissolution.—73-12574
Dual zeolite fluid cracking catalyst composition for improved gasoline octane.—73-02034
Effect of conditions of zeolite Ni/H-DC preparation on catalytic properties in the reaction of $CO_2$ hydration.—73-16456
Effect of Si:Al ratio and type of binder on the catalytic properties of HZSM-5 catalysts.—73-13018
Effect of structure and composition on reactivity of zeolite-tuff used as blending material of portland cement.—73-13711
Effect of three zeolite-containing natural pozzolanic materials on alkali-silica reaction [ASR].—73-09924
Effects of gel aging on the synthesis of NaY zeolite from colloidal silica.—73-13031
Effects of supporting electrolyte and zeolite Co cation on the electrochemical response of zeolite-modified electrodes.—73-07310
Electric conductivity of Na and Ag forms of A and X zeolites: effect of cluster formation on the conductivity.—73-04083
Electron spin resonance and nuclear magnetic relaxation dispersion studies of commercial clay minerals and zeolites.—73-05142
Energy distribution function associated with Dubinin's description of water adsorption on zeolite Y.—73-16493
EPR study on the incorporation of Fe(III) ions in ZSM-5 zeolites in dependence on the preparation conditions.—73-05395
ESR linewidths of hydrated $Cu^{2+}$ in zeolites.—73-05396
Ethylbenzene dealkylation and realkylation over pore-size-regulated MFI zeolite.—73-16764
Exhaust gas purifying catalyst and an exhaust gas purifying method using the catalyst.—73-02036
Far-ir study of metal particle formation in alkali-metal cation-exchanged X zeolites exposed to Na vapor.—73-09405
Ferromagnetism in potassium clusters incorporated into zeolite LTA.—73-07936
Flexibility of the RHO framework: a comparison of the Rb-exchanged zeolite and the novel composition $Rb_{24}Be_{24}As_{24}O_{96}$·3.2$D_2O$.—73-05402
Formation of CoAPSO-44.—73-08626
Formation of zeolite membranes from sols.—73-05214
Formation of zeolites in OPC [ordinary portland cement]-PFA [pulverized fly ash] mixes.—73-06658
Fourier transform infrared and inelastic neutron scattering study of HY zeolites.—73-05406
Frequency-response analysis of sorption in zeolite crystals with finite intracrystal reversible mass exchange.—73-09407
FTIR study of the protonation of the protonation of the zeolite lattice—influence of Si:Al ratio and structure.—73-12592
Fully hydrated laumontite: a structure study by flat-plate and capillary powder diffraction techniques.—73-08632
Further investigations of nucleation by initial breeding in the Al-free $NH_4$-ZSM-5 system.—73-05821
Gallium zeolites.—73-02039
Gasoline hydrocracking catalyst and process.—73-12368
Germanium-loaded zeolite Y: preparation and characterization.—73-05410
Heats of hydrocarbon and water adsorption by high-silicon zeolites of ZSM-5 type.—73-16164
Heterogeneity of hydroxyl groups of zeolites.—73-16165
Hot gas, regenerative, supported $H_2S$ sorbents.—73-05219
Hydrated rare-earth metal-ion-exchanged zeolite A: characterization by luminescence spectroscopy: I, The $Gd^{3+}$ ion.—73-12596
Hydrothermal damage of ion-exchanged A-type zeolite cation-directed mechanisms of phase transformation.—73-12597
Hydrothermal preparation of vanadium zeolites.—73-13091

Influence of presorbed molecules on the sorption of *n*-alkanes in zeolite NaCaA.—73-16174
Influence of synthesis conditions on the morphology of dodecasil 1H.—73-09179
Ion exchange in zeolites: I, Prediction of $Ca^{2+}$-$Na^{+}$ equilibria in zeolites X and Y.—73-08647
Ion exchange in zeolites: II, Hydrolysis and dissolution of zeolites NaX and NaY.—73-12612
Ion exchange in zeolites: III, Hydrolysis and trace $^{45}Ca^{2+}$ and $^{22}Na^{+}$ exchanges in zeolites X and Y.—73-12613
Ir spectroscopic measurements of crystallinity and phase purity of ZSM-5 samples.—73-08651
Isopropylation of dibenzofuran over solid acid catalysts.—73-02625
Kinetics of nucleation of X zeolites.—73-08655
Kinetics of zeolite dissolution: III, Dissolution of synthetic mordenite in hot sodium hydroxide solutions.—73-12620
Large volume contraction accompanies the low-temperature to high-temperature phase transition of zeolite Sr-rho.—73-02314
Laser-induced glass layer formation in zeolite mortar.—73-10026
Limitations of resolution in the $^{1}H$ MAS-NMR spectroscopy of zeolites—further results.—73-12621
Low-temperature FTIR investigation of the interaction of CO with nanosized ZSM-5 and silicalite.—73-08903
Low-temperature FTIR investigation of the interaction of CO with nanosized ZSM5 and silicalite.—73-16202
Lowenstein's rule in zeolite A: a computational study.—73-12624
Mechanical properties of magnesium ammonium phosphate cements and their zeolite composites.—73-03496
Mechanochemistry of zeolites: I, Amorphization of zeolites A and X and synthetic mordenite by ball milling.—73-09204
Method for producing a particulate zeolite and a particulate zeolite produced thereby.—73-05224
Method for producing zeolites with reduced surface acidity.—73-02049
Method of manufacturing hydrocarbon conversion catalyst.—73-02052
Microwave heating of zeolites.—73-13138
Microwave preparation of zeolite Y and ZSM-5.—73-09210
Mixed zeolites and method for producing [the] same.—73-02053
Model for Sr-Cs-Ca-Mg-Na ion-exchange equilibria on chabazite.—73-16217
Modified zeolite beta method of preparation.—73-05235
Mossbauer study of hydrothermal transformation of natural clinoptilolite into Y and $P_1$ zeolites.—73-02333
Nanostructure assemblies and guest-host interactions in sodium zeolite-Y [studied] using $^{23}Na$ double-rotation NMR.—73-05070
Natural zeolite for preventing expansion due to alkali-aggregate reaction.—73-06692
Nonaqueous synthesis: iron aluminosilicates with the ZSM-48 structure.—73-13152
Novel method to generate ionic clusters within zeolites.—73-16884
Optical absorption spectra of sodium clusters incorporated into zeolite LTA.—73-16238
Photocatalytic oxidation of propan-2-ol by semiconductor-zeolite composites.—73-11375
Physicochemical and catalytic properties of a silica-enriched zeolite ZSM-20.—73-08701
Physicochemical study of the aging of colloidal silica gels used in zeolite Y synthesis.—73-13437
Preparation and ac/dc conductivity of tin-zeolite-Y materials.—73-01012
Preparation and optical study of zeolite-AgI inclusion complexes.—73-08709
Preparation of highly exchanged LaHZSM-5 zeolite.—73-09263
Preparation, characterization, and photoreactivity of titanium(IV) oxide encapsulated in zeolites.—73-12865
Preparation, structural, and thermal properties of $MAlSiO_4$ (M=Li, Na, K, Rb, Cs, Tl, Ag) of ABW-type.—73-08958
Process for preparing LTL nanocrystalline zeolite compositions.—73-15954
Production of silica-based MFI zeolites.—73-02065
Properties of zeolite as an air-entraining agent in cellular concrete.—73-06708
Proposal for a mechanism of nucleation in zeolite synthesis.—73-06003
Quantitative zeolite topology can help to recognize erroneous structures and to plan syntheses.—73-08715
Rare-earth-containing high-silica zeolite having pentasil type structure and process for the same.—73-02066
Reactions of cesium with dehydrated calcium zeolite A: crystal structures of $Cs_6Ca_2$-A, $Cs_{11}Ca_{0.5}$-A*-0.5Cs, and* $Cs_{12}$-*A-0.5Cs.—73-12672*
Relation between zeolite framework structure and vibrational spectra.—73-06278
Relative effectiveness of some tertiary alkanolamines in the synthesis of large-crystal zeolite NaA.—73-09302
Reversible redox behavior between silver cations and metal particles in hydrated Ag-Y zeolites.—73-13236
Salt-occluded zeolites as an immobilization matrix for chloride waste salt.—73-01757
Self-diffusion of barium and cesium cations in neutron- and gamma-irradiated high-silica zeolites and boron zeotypes.—73-09421
Semiempirical approach to determination of framework aluminum content in faujasite-type zeolites by X-ray powder diffraction.—73-08729
Silylation of H-ZSM-5: an X-ray photoelectron and ir spectroscopy study.—73-12682
Solid-state and catalytic characterization of intergrown zeolite structures based on six-membered rings.—73-08733
Sorbent-bed crop-drying system.—73-12330
Sorption kinetics in zeolite crystals with finite intracrystal mass exchange: isothermal systems.—73-12880
Stability and vibrational spectra of three-ring-containing zeolitic silica polymorphs.—73-12690
Stable zeolite of low unit cell constant and method of making [the] same.—73-02069
Strength of Bronsted acid sites in boralites.—73-12692
Structural changes in mordenites revealed by two-dimensional Fourier synthesis of X-ray powder diffraction patterns.—73-12696
Structural modification in phillipsite-rich tuff induced by thermal treatment.—73-12700
Structural modifications induced by dehydration in the zeolite gismondine.—73-08752
Structure of calcined $AlPO_4$-31: a new framework topology containing one-dimensional 12-ring pores.—73-05501
Surface properties of Mo-impregnated ZSM-5 catalysts.—73-08762
Synthesis and characterization of gallosilicates and galloaluminosilicates isomorphous to zeolite beta.—73-06077
Synthesis and characterization of zeolite (MFI) membranes on porous ceramic supports.—73-08764
Synthesis and characterization of zeolite (MFI) membranes on porous ceramic supports.—73-16349
Synthesis and structure of $Li_6(HPO_4)(BePO_4)_6{\cdot}H_2O$: a new zeolite LOS-type beryllophosphate molecular sieve.—73-08765
Synthesis of 13X zeolite from calcined kaolins and sodium silicate for use in detergents.—73-17028
Synthesis of Al,Si-MFI-type zeolites in the presence of $F^{-}$ anions: structural and physicochemical characteristics.—73-08767
Synthesis of mordenite with different $SiO_2/Al_2O_3$ ratios.—73-09361
Synthesis of NaY zeolite on preformed kaolinite spheres. Evolution of zeolite content and textural properties with the reaction time.—73-06092
Synthesis of single crystals and crystal structure of gallosilicate zeolites: I, Gallosilicate with ANA [analcime]: $NaGaSi_2O_6{\cdot}H_2O$ framework—temperature structure studies.—73-02499
Synthesis of single crystals and crystal structure of gallosilicate zeolites: II, Gallosilicate with NAT [natrolite]: $Na_2Ga_2Si_3O_{10}{\cdot}2H_2O$—synthesis and X-ray diffraction study.—73-02500
Synthesis of zeolite beta from nonalkaline fluoride aqueous aluminosilicate gels.—73-06102
Synthesis of ZSM-20 using crown ethers.—73-06103
Synthesis of ZSM-5 zeolite from silica stone occurred in Ioh Island, Kagoshima Prefecture, Japan.—73-03061
Synthetic film of zeolite crystal body and method for manufacturing the zeolite film.—73-05246
Synthetic zeolites and their catalyses—highly active catalysts with molecular size recognizability.—73-12333
Thermally stable chromium-exchanged zeolites and method of making [the] same.—73-02073
Time dependence of the structural changes occurring in $NH_4$-Y zeolite on dealumination: a preliminary study using energy-dispersive X-ray diffraction.—73-08783
Toluene disproportionation over ZSM-5 zeolite: effects of crystal size, silicon-to-aluminum ratio, activation method, and pelletization.—73-03065
Unique adsorption properties and potential energy profiles of microporous pillared clays.—73-16645
Use of Spanish natural clays as additional silica sources to synthesize 13X zeolite from kaolin.—73-17068
X-ray fluorescence analysis of solutions in the production of zeolites.—73-02545
XPS/XAES study of highly dispersed semiconductor CdS and CdO in zeolites.—73-11511
Yttrium-containing zeolite Y cracking catalyst.—73-05251
Zeofile: a stack of zeolite structure types.—73-08797
Zeolite catalyst of hexagonal structure and its application.—73-05252
Zeolite catalysts suitable for hydrocarbon conversion.—73-02075
Zeolite composite panel with humidity control property.—73-10193
Zeolite compositions.—73-05253
Zeolite crystallization [analyzed] using Avrami transformation methods.—73-12740
Zeolite L.—73-02076
Zeolite LZ-276 and process for preparing [the] same.—73-02077
Zeolite phi: a physical mixture of chabazite and offretite.—73-16401
Zeolite SSZ-32.—73-05254
Zeolite SSZ-37.—73-05348
Zeolite synthesis in the system pentaerythritol-$Na_2SO_4$-$Na_2O$-$SiO_2$-$Al_2O_3$-$CH_3OH$.—73-06136
Zeolite ZK-5 catalyst.—73-02078
Zeolite-$Al_2O_3$ membrane configuration.—73-12335
Zeolite-containing adsorptive composition and adsorptive decomposition composition containing such zeolite-containing composition.—73-02079
Zeolitic catalyst of MFI type, its preparation and use.—73-05255

**zeta potential,**
Correlation between zeta potential and mechanical properties for cementitious materials.—73-00051
Influence of aqueous phase composition on the zeta potential of cement in the presence of water-reducing admixtures.—73-10002
Practical zeta potential determination using electrophoretic light scattering.—73-15832
Zeta potential of cement with new type apparatus applying laser or ultrasonic technology.—73-10194

**zinc blende,**
Circular birefringence in zinc-blende-type semiconductors.—73-14808
Dielectric response functions of heavily doped zinc blende semiconductors with finite particle lifetime.—73-11138
Ionicity dependence of surface bond lengths on the (110) cleavage faces of isoelectronic zinc blende structure compound semiconductors: GaP, ZnS, and CuCl.—73-08649
Raman scattering by $3d^{6}$ electrons of $Fe^{2+}$ in zinc blende diluted magnetic semiconductors.—73-04459

**zinc oxide,**
*c-t* characteristics of Pr-doped ZnO varistors.—73-01088
*c-t* characteristics of Pr-doped ZnO varistors.—73-11087
*I-V* characteristics of single grain boundary in ZnO varistor.—73-01193
Ac impedance spectroscopic characterization of 10 mol% MgO-doped ZnO varistors.—73-07376
Aggregate structure of coralloid $ZnO_x$ films.—73-05353
Alcohol sensor by using a *p-n* semiconductor contact.—73-01070
Application of luminescence techniques to probe surface-adsorbate interactions on oxide single crystals.—73-05022
Atmospheric pressure chemical vapor deposition of gallium-doped zinc oxide thin films from diethyl zinc, water, and triethyl gallium.—73-12923
Band structure of ZnO using the LMTO method.—73-16036
Ceramic composition for microwave dielectric.—73-01044
Characteristics of ZnO varistors prepared by organic process.—73-04264
Characterization of copper-zinc mixed oxide system in relation to different precursor structures and morphology.—73-02160
Characterization of interface states in ZnO varistors using isothermal capacitance transient spectroscopy [ICTS].—73-01101
Characterization of interface states in ZnO varistors using isothermal capacitance transient spectroscopy.—73-11103
Characterization of pulsed-laser-deposited zinc oxide.—73-13377
CO gas-sensing property of ZnO/CuO heterocontact ceramics.—73-01104
Combined temperature-programmed desorption and FTIR spectroscopy study of $CO_2$, CO, and $H_2$ interactions with model ZnO/$SiO_2$, Cu/$SiO_2$, and Cu/ZnO/$SiO_2$ methanol synthesis catalysts.—73-12552
Comparative study of $ZnO_x$ overlayers on Cu(311), Cu(110), and a high defect concentration Cu(111).—73-13811
Conversion of chemically deposited ZnS films to photoconducting ZnO films.—73-16687
Cooling rate effects in ZnO varistors.—73-04276
Coupled exciton-plasmon polaritons at semiconductor-metal interface.—73-01113
Cryogenic behavior of ZnO varistors.—73-11128
Deep level transient spectroscopy of zinc oxide varistors doped with aluminum oxide and/or silver oxide.—73-14824
Densification and defect chemistry related to the varistor performance of ZnO-based ceramics.—73-14827
Dual-ion-beam sputter deposition of ZnO films.—73-08836
Effect of grain boundaries on the electrical properties of zinc-oxide-based varistor.—73-11153
Effect of heat treatment on the magnetic properties of a rapidly quenched ZnO-$Bi_2O_3$-$Fe_2O_3$ system.—73-15316
Effect of heat treatment on the nonlinear exponents in ZnO varistors.—73-04290
Effect of $Zn_7Sb_2O_{22}$ content on grain growth and microstructure of ZnO varistor.—73-14859
Effect of ZnO additive on the microwave dielectric properties of $(Zr_{0.6}Sn_{0.4})TiO_4$ ceramic.—73-14698
Effect of ZnO on burning of portland cement clinker in rapid heating-up burning.—73-09927
Effects of aluminum doping upon color formation in zinc oxide powders.—73-13026
Effects of grain size distribution on the breakdown voltage in ZnO varistors.—73-07471
Effects of sorption leaching conditions and sorbent type on ZnO and CuO dissolution.—73-16467
Effects of spinel on the formation process of nonohmic ZnO ceramics.—73-04295
Electrical activity at individual grain boundaries and interfaces in semiconducting oxides.—73-11176
Electrical and optical properties of ion-beam-sputtered ZnO:Al films as a function of film thickness.—73-08849
Electrical and optical properties of undoped and indium-doped ZnO thin films, prepared by the pyrosol process.—73-08850
Electrical behavior of the $MnO_2$-doped ZnO-$Bi_2O_3$ system.—73-16473
Electrical conduction of $La_2Cu_{1-x}Zn_xO_{4+\delta}$ at high temperature.—73-12788
Electrical properties and dc degradation characteristics of silver-doped ZnO varistors.—73-01144
Electrical properties and degradation phenomena of glass-doped ZnO chip varistors.—73-07486
Electrical properties of multilayer-chip ZnO varistors in a moist-air environment.—73-14871
Electrical properties of ZnO/PrCo oxide multilayered composites.—73-04306
Electrical switching of two-phase ZnO-$PrCoO_3$ threshold switching materials.—73-03140
Ellipsometry study of nonuniform lateral growth of ZnO thin films.—73-17132
EPR study of the interaction of the ZnO surface with air and air-reducing gas mixtures.—73-08617
Exaggerated grain growth of ZnO in low-voltage ZnO varistor.—73-14897
Extended defects in ZnO ceramics containing $Bi_4Ti_3O_{12}$ additive.—73-09404
Fabrication of thin-film varistors using sputtering technique.—73-14913

Formation of ZnO films by $CO_2$ laser ablation at atmospheric pressure.—73-05816
Fourier transform infrared spectroscopy of $H_2O$ on the hydroxylated ZnO surface.—73-12588
Gas detection utilizing the interface of a CuO/ZnO thin film.—73-01174
Geometric and electronic structure of the ZnO(000$\bar{1}$) surface.—73-03146
Grain growth of sintered ZnO with alkali oxide additions.—73-17140
Grain growth of sintered ZnO with alkali oxide additions.—73-17141
Grain-boundary properties of hot-pressed zinc oxide varistors.—73-14943
Growth and reactivity of $ZnO_x$ on Cu(111).—73-08633
Growth of textured ZnO:In thin films by chemical spray deposition.—73-09158
Growth of ZnO films by low-pressure organometallic chemical vapor deposition.—73-10444
High-frequency terminal resonance in ZnO-$Bi_2O_3$-based varistors.—73-11244
Highly conductive and transparent ZnO:Al thin films prepared on high-temperature substrates by dc magnetron sputtering.—73-10956
Highly transparent and conductive group IV impurity-doped ZnO thin films prepared by radio frequency magnetron sputtering.—73-14965
Hydrogen chemisorption on metal/oxide composite catalysts.—73-08883
Impedance spectroscopy study of sintering in Bi-doped ZnO.—73-12600
Improvement in the performance parameters of ZnO-based varistors with 10 mol% MgO.—73-01194
Improvement of the nonlinearity and degradation behavior of ZnO varistors.—73-11259
Influence of sintering temperature on electrical properties of ZnO varistors.—73-07602
Interface states at grain boundaries and their effects on the *I-V* characteristics in ZnO:Pr varistors—theoretical calculation.—73-11279
Ir investigation of the surface species obtained by chemisorption [of] acetylene (ethyne), $C_2H_2$, and $C_2D_2$ on high-area ZnO.—73-16188
Laser-induced grating in ZnO.—73-01228
Low-temperature conductivity of ZnO films prepared by chemical vapor deposition.—73-12826
Low-temperature preparation of transparent-conducting ZnO:Al thin films by chemical beam deposition.—73-10248
Measurement of electrical conduction in *c*-axis-oriented ZnO.—73-01239
Measurement of electrical conduction in *c*-axis-oriented ZnO.—73-12831
Method of preparing vitreous ceramic composition suitable for coating ceramic articles.—73-15949
Method of producing varistor.—73-11533
Microanalytical determination of ZnO solidus and liquidus boundaries in the ZnO-$Bi_2O_3$ system.—73-12630
Microemulsion mediated synthesis of zinc-oxide nanoparticles for varistor studies.—73-15041
Microwave processing of rare-earth-oxide-doped ZnO varistors.—73-04406
Modified ZnO absorbents for low-temperature gas desulfurization.—73-08518
Molecular recognition by a *p-n* semiconductor contact.—73-01252
$NO_x$ sensing characteristics of SiC/ZnO heterocontact.—73-15056
Nondegenerate two-photon absorption spectra of ZnSe, ZnS, and ZnO.—73-04419
Novel approach to control of ZnO-based varistor microstructures at the nanometer level.—73-11354
Novel porous glass with chemical resistance and good shaping ability prepared from borosilicate glass containing ZnO.—73-00672
Optical and electronic properties of cobalt-doped zinc oxide films prepared by the sputtering method.—73-02650
Phase equilibria in the system CdO-ZnO-$B_2O_3$ at 850°C.—73-02380
Phase relations in the $In_2O_3$-$Ga_2ZnO_4$-ZnO system at 1350°C.—73-02386
Phase relations in the system titanium dioxide-diniobium-zinc hexoxide.—73-02387
Photochromic glasses in the system SrO-ZnO-$Al_2O_3$.—73-03750
Piezoelectric thin films.—73-01425
Process for manufacturing a voltage nonlinear resistor.—73-01065
Quantum size effects in zinc oxide nanoclusters synthesized by reactive sublimation.—73-05462
Rapid formation of zinc oxide films by an atmospheric-pressure chemical vapor deposition method.—73-06006
Rapid-rate sintering of ZnO by microwave heating.—73-06010
Rapid-rate sintering of ZnO microwave heating.—73-13226
Reaction kinetics of $SiO_2$ and ZnO-$SiO_2$ sol-gel solutions.—73-07168
Relation between optical property and crystallinity of ZnO thin films prepared by rf magnetron sputtering.—73-01302
Semiconductor ceramic composition for secondary electron multipliers.—73-11542
Silver ionic conduction depending on atmosphere in ZnO films.—73-01025
Sintering and microstructural development of metal oxide varistor ceramics.—73-07800
Sintering characteristics of ZnO powder prepared by precipitation method.—73-13264
Stability of zinc oxide electrodes fabricated by dual ion beam sputtering.—73-01026
Structure of barium zinc aluminate glasses.—73-00416
Sub-grain-boundary phenomenon in ZnO varistor ceramics during sintering.—73-11463
Support effects in methanol synthesis over copper-containing catalysts.—73-02698
Synthesis of $BaTiO_3$ and ZnO varistor precursor powders by reaction spray pyrolysis.—73-11473
Synthesis of zinc oxide films for gaseous sensors.—73-03060
Synthesis of ZnO-based varistor precursor powders by means of the reaction spray process.—73-11474
Tape-cast rare-earth-oxide-doped ZnO varistor.—73-01342
Temperature-dependent studies on the electrical properties of pyrolytic ZnO thin films prepared from $Zn(C_2H_3O_2)_2$.—73-08980
Theoretic interpretation of characteristic electron energy loss spectra in $ZnO_2$.—73-16369
Thin films of high-resistivity zinc oxide produced by a modified CVD method.—73-07367
Transparent conducting ZnO films deposited by ion-beam-assisted reactive deposition.—73-07371
Twinning in ZnO ceramics with $Sb_2O_3$ additions.—73-02532
Varistor having interleaved electrodes.—73-01389
Voltage nonlinear resistor.—73-11058
XPS study of zinc oxide thin film growth on copper using zinc acetate as a precursor.—73-00278
Yellow high silica glass.—73-10672
Zinc oxide solubility in KOH aqueous solutions studied at 400–500°C and pressure of 0.5–2 kbar.—73-16650
Zinc oxide varistor, a method of preparing the same, and a crystallized glass composition for coating.—73-11551
Zinc oxide.—73-12307
ZnO films deposited on GaAs substrates with an $SiO_2$ thin buffer layer.—73-07373
ZnO varistors produced using colloidal-gel powders.—73-11512
ZnO-modified high-modulus glass fibers.—73-00723

**zinc selenide,**
Analysis of absorption in zinc selenide and fluoride mirrors and films.—73-02550
Atomic layer epitaxy of nitrogen-doped ZnSe.—73-04248
Attainment of *p*-type conduction in ZnSe single crystals.—73-04249
Band structure parameters of surface layers of epitaxial films of narrow-gap solid solutions.—73-11082
Blue/green light-emitting diodes and laser diodes [LD's] based on II-VI heterostructures grown on predeposited GaAs buffer layers.—73-11085
Calculated atomic structures of ZnS, ZnSe, and ZnTe(110) surfaces.—73-14789
Characterization of vapor phase epitaxial ZnSe films.—73-04268
Composition control by photoirradiation in MOVPE of ZnCdSe and ZnCdS alloy layers and multilayered structures.—73-04273
Correlation of room temperature photoluminescence to structural properties of ZnSSe/ZnSe superlattices grown by metallorganic vapor phase epitaxy.—73-11123
Crystallographic evaluation of ZnSe crystals by X-ray diffraction.—73-05380
Crystallographic orientation and impurity luminescence of streamer discharges in ZnS and ZnSe single crystals.—73-07429
Current transport processes in an $In_2O_3$-ZnSe-In heterostructure with a submicron ZnSe layer.—73-01117
Determination of the carrier concentration of doped ZnSe from infrared measurements.—73-01125
Disordering induced by impurity diffusion in ZnSe-based superlattices and optical waveguides fabricated by disordering.—73-07451
Edge luminescence of electron-bombarded ZnSe:Li.—73-14847
Effect of deposition parameters on the optical properties and microstructure of radio frequency magnetron sputtered ZnSe films.—73-02782
Effect of laser irradiation on physical properties of high-resistivity ZnSe crystals.—73-14852
Electrical and optical characterization of *p*-type ZnSe for diode laser structures.—73-04301
Electrical properties of *p*-type ZnSe single crystals.—73-08050
Electroabsorption and electrooptic modulation in single-crystal ZnSe-ZnSSe waveguides grown by OMPVE on GaAs.—73-01149
Electron and hole spin lifetimes in $Zn_{1-x}Mn_xSe$- and $Zn_{1-x}Fe_xSe$-based heterostructures.—73-07491
Elimination of surface site blockage due to ethyl species in MOMBE of ZnSe.—73-04317
Etching of zinc selenide and zinc telluride epitaxial films in a secondary afterglow plasma: a statistical experimental design study.—73-05794
Evaluation of $Zn\{N[Si(CH_3)_3]_2\}_2$ as a *p*-type dopant in OMVPE growth of ZnSe.—73-14894
Exciton gain and laser emission in ZnSe-based quantum wells.—73-07517
Exciton piezospectroscopy of semiconductor solid solutions [SS] with sphalerite wurtzite structural phase transition.—73-01160
Exciton properties of $Zn_{1-x}Cd_xSe$/ZnSe quantum well structures grown by metallorganic vapor phase epitaxy.—73-04340
Exciton recombination in Te-rich $ZnSe_xTe_{1-x}$ epilayers.—73-11203
Femtosecond scattering dynamics in magnetic semiconductor spin superlattices.—73-14923
Ferromagnetic *p-d* exchange in $Zn_{1-x}Sr_xSe$ diluted magnetic semiconductor.—73-15326
Growth and characterization of ZnSe epitaxial layers grown by the solution growth method.—73-11226
Hydrogen sensitivity of ZnSe/GaAs structures.—73-14970
In situ Raman studies during the epitaxial growth of ZnSe layers on GaAs(110).—73-07582
In situ, real-time diffuse optical reflectivity measurements during GaAs cleaning and subsequent ZnSe/GaAs heteroepitaxy.—73-07587
Influence of annealing on the spectrum of deep centers in ZnSe.—73-01200
Injection-contact phenomena in a heterostructure made of disordered ZnSe.—73-07609
Interface quantum well states observed by three-wave mixing in ZnSe/GaAs heterostructures.—73-07613
Laser FIR magnetospectroscopy of $Zn_{1-x}Cr_xSe$.—73-15006
Low-pressure MOVPE [LP-MOVPE] growth of ZnSe, ZnTe, and ZnSe/ZnTe strained-layer superlattices.—73-04385
Low-pressure OMVPE of ZnSe with hydrogen selenide and dimethylzinc-triethylamine.—73-04386
Low-temperature epitaxial growth of Zn chalcogenides on GaAs(001) by postheated molecular beams.—73-11296
Low-temperature growth and characterization of ZnSe films grown on GaAs.—73-04387
Low-temperature growth of $ZnS_xSe_{1-x}$ alloys fabricated by hydrogen-radical-enhanced chemical vapor deposition in an atomic layer epitaxy mode.—73-13121
MBE growth and microstructural evaluation of Zn(S, Se)-based LED's and diode lasers.—73-04398
Method for hardening zinc selenide and zinc sulfide.—73-02110
Methods for reducing deep level emissions from ZnSe grown by organometallic vapor phase epitaxy.—73-04403
Molecular beam epitaxial growth of wide-gap II-VI injection lasers and light-emitting diodes.—73-15045
Nondegenerate two-photon absorption spectra of ZnSe, ZnS, and ZnO.—73-04419
Nonparabolicity in the conduction band of II-VI semiconductors.—73-15063
Ohmic contacts to *p*-Zn(S, Se) using a pseudograded Zn(Te, Se) structure.—73-11355
Optical absorption of ZnSe-ZnTe strained-layer superlattices.—73-01263
Optical analysis of metallorganic vapor phase epitaxy grown ZnS/ZnSe/GaAs(100) heterostructures: carrier diffusion and interface sharpness.—73-07703
Optical method for evaluation of the net acceptor concentration in *p*-type ZnSe.—73-07704
Optical properties of diluted magnetic semiconductor $Zn_{1-x}Co_xSe$.—73-15072
Optical properties of highly strained CdSe/ZnSe quantum wells.—73-11361
Optical properties of the diluted magnetic semiconductors $Zn_{1-x}Fe_xSe$ thin films.—73-07705
Optical spectra of ultrathin II-VI quantum wells.—73-15074
Optoelectronic properties of In-doped ZnSe.—73-04432
Photocatalytic growth-rate enhancement in MOMBE of GaAs on ZnSe by surface photoabsorption.—73-04435
Photoelectrically active and inactive slow electron trapping centers in ZnSe crystals.—73-11376
Photoemission study of the ZnSe/GaAs(100) interface: composition and band offset.—73-01276
Photoluminescence of ZnSe/ZnMnSe superlattices under hydrostatic pressure.—73-07729
Preparation and characterization of polycrystalline $ZnS_xSe_{1-x}$ films prepared by a two-zone hot wall technique.—73-11399
Quantum wells, excitons, and lasers at blue-green wavelengths in ZnSe-based heterostructures.—73-07757
Raman studies of the growth mechanism of ZnSe/GaAs(001) heterostructures.—73-07761
Resonant Brillouin scattering from polaritons in ZnSe/GaAs epitaxial layers.—73-15148
Role of bulk deep centers in the generation of the surface photo-emf in low-resistivity ZnSe single crystals.—73-07775
Role of ZnSe films on GaAs using acoustoelectric voltage spectroscopy.—73-07780
Room-temperature stimulated emission in optically pumped narrow ZnSe/$ZnS_xSe_{1-x}$ multiple-quantum-well structures.—73-11427
Selective doping of *n*-type ZnSe layers with chlorine grown by molecular beam epitaxy.—73-04474
Stabilization and growth interruption effects at $ZnS_xSe_{1-x}$/ZnSe quantum-well interfaces grown by metallorganic vapor phase epitaxy.—73-11451
Stabilization of Li acceptors in ZnSe by above-band-gap photoirradiation.—73-07809
Stimulated emission from electron-hole plasmas in MOVPE-grown ZnSe epilayers.—73-07811
Structural properties of nitrogen-doped ZnSe epitaxial layers grown by MBE.—73-04490
Structural properties of ZnSe films grown by migration-enhanced epitaxy.—73-01323
Structure of luminescence centers in ZnSe crystals.—73-11462
Substructure of polysynthetic zinc sulfide and selenide crystals.—73-16344
Thermal quenching of the residual conductivity of Cu-doped ZnSe crystals.—73-01352
Transport properties of *n*-type ZnSe crystals with radiation defects.—73-03116
Transverse structures in resonatorless absorptive switching in bulk ZnSe.—73-01357
Ultraviolet quantum well structures based on ZnS/$ZnS_{1-x}Se_x$ and ZnS/$Zn_{1-x}Cd_xS$ multilayers grown by molecular beam epitaxy.—73-11494
$ZnSe_xTe_{1-x}$ films grown by pulsed laser deposition.—73-03073

**zinc sulfide,**
Calculated atomic structures of ZnS, ZnSe, and ZnTe(110) surfaces.—73-14789
Cesium coating of thin-film zinc sulfide cold cathodes.—73-11094

Characterization of ZnS grown by MOCVD on GaAs(100) using *t*-butyl mercaptan and dimethylzinc.—73-07412
Conductive ZnS:Zn thin films grown by molecular beam deposition.—73-10927
Correlation of room temperature photoluminescence to structural properties of ZnSSe/ZnSe superlattices grown by metallorganic vapor phase epitaxy.—73-11123
Cross relaxation and radiative recombination of $Co^{2+}$ ions in ZnS.—73-14819
Crystallinity of ZnS:Tb,F thin films and characteristics of green-color thin-film electroluminescent devices prepared by rf magnetron sputtering.—73-12963
Crystallographic orientation and impurity luminescence of streamer discharges in ZnS and ZnSe single crystals.—73-07429
Electrical characterization of atomic layer epitaxy ZnS:Mn alternating current thin-film electroluminescent devices subject to various wave forms.—73-11177
Electrical conductivity and Seebeck coefficient of high-pressure phase of zinc sulfide.—73-16476
Electroluminescence [EL] and photoluminescence [PL] of ZnS crystals.—73-01150
Epitaxial ZnS films grown on GaAs(001) and (111) by pulsed laser ablation.—73-07509
Excitation of the *4f-4f* emission of donor-type rare-earth centers through donor-acceptor pair states (ZnS:Tm).—73-04338
Influence of stacking faults on $d^7$ internal transitions in ZnS:Co.—73-05421
Influence of the impurity concentration on the microstructure of compound semiconductors—the example of ZnS:Cr optical spectra.—73-01209
Low-temperature epitaxial growth of Zn chalcogenides on GaAs(001) by postheated molecular beams.—73-11296
Low-temperature growth of $ZnS_xSe_{1-x}$ alloys fabricated by hydrogen-radical-enhanced chemical vapor deposition in an atomic layer epitaxy mode.—73-13121
MBE growth and microstructural evaluation of Zn(S, Se)-based LED's and diode lasers.—73-04398
Method for hardening zinc selenide and zinc sulfide.—73-02110
Microstructural development in nanocrystalline zinc sulfide powders.—73-06250
Molecular beam epitaxial growth of wide-gap II-VI injection lasers and light-emitting diodes.—73-15045
Monte Carlo simulation of electron transport in alternating-current thin-film electroluminescent devices.—73-03103
Nondegenerate two-photon absorption spectra of ZnSe, ZnS, and ZnO.—73-04419
Ohmic contacts to *p*-Zn(S, Se) using a pseudograded Zn(Te, Se) structure.—73-11355
Optical absorption and size effect in CdS and ZnS microcrystallites.—73-11357
Optical analysis of metallorganic vapor phase epitaxy grown ZnS/ZnSe/GaAs(100) heterostructures: carrier diffusion and interface sharpness.—73-07703
Optical studies of doping effect on anisotropy of zinc sulfide crystals.—73-16239
Phosphor currents in ZnS:Mn ac thin-film electroluminescent display devices.—73-11374
Photoionization of an $Fe^{2+}$ ion in ZnS: lattice relaxation.—73-11380
Photoluminescence spectra of plastically deformed ZnS crystals.—73-11387
Preparation and characterization of polycrystalline $ZnS_xSe_{1-x}$ films prepared by a two-zone hot wall technique.—73-11399
Room-temperature stimulated emission in optically pumped narrow $ZnSe/ZnS_xSe_{1-x}$ multiple-quantum-well structures.—73-11427
Stabilization and growth interruption effects at $ZnS_xSe_{1-x}$/ZnSe quantum-well interfaces grown by metallorganic vapor phase epitaxy.—73-11451
Substructure of polysynthetic zinc sulfide and selenide crystals.—73-16344
Surface forces between ZnS and mica in aqueous electrolytes.—73-07362
Synthesis and characterization of zinc sulfide thin films by pyrolysis and application of thin-film electroluminescence.—73-01341
Synthesis and characterization of zinc sulfide thin films by pyrolysis and application to thin-film electroluminescence.—73-11472
Thiophenol-capped ZnS quantum dots.—73-01354
Ultraviolet quantum well structures based on $ZnS/ZnS_{1-x}Se_x$ and $ZnS/Zn_{1-y}Cd_yS$ multilayers grown by molecular beam epitaxy.—73-11494
Use of ZnS as an additional highly nonlinear intercavity self-focusing element in a Ti:sapphire self-mode-locked laser.—73-15223

**zinc,**
Absorption edge structure of cubic cadmium and zinc chalcogenides.—73-14764
Application of Mn-Zn ferrite with fine grain size to magnetic heads.—73-04590
Cation distribution of $ZnFe_2O_4$ fine particles studied by neutron powder diffraction.—73-08561
Coherent precipitation of $Zn_3P_2$ during Zn diffusion in a GaInAsP/InP heterostructure.—73-07417
Coherent propagation of fs optical pulses in a monoclinic $ZnP_2$ single crystal.—73-14811
Coloration, impurities, and nonlocal charge compensation in $ZnWO_4$.—73-16421
Core losses of Mn-Zn ferrites with fine grain size.—73-04596
Crystal growth and magnetic characterization of $Zn_{1-x}Mn_xCr_2O_4$ [$x$=0–1] single crystals.—73-07930
Crystal structure of $Na^{[7]2}Zn^{[6]2}[P_2{}^{[4]}O_6(OH)]^{x-}$.—*73-02200*
Dielectric behavior of mixed lithium-zinc ferrites.—73-02567
Doping of epitaxial GaAs films by Zn acceptor impurity during LPE from Ga-Bi molten solutions.—73-14842
Effect of neutron bombardment on the displacement of the *p-n* junction interface in GaAsP:Zn light-emitting diodes.—73-11160
Effect of structural changes in complex perovskites on the temperature coefficient of the relative permittivity.—73-07307
Effects of rapid quenching on the impurity site location in Zn-diffused InP.—73-07475
Effects of the substitution of Zn for Cu in the spin-Peierls cuprate $CuGeO_3$: the suppression of the spin-Peierls transition and the occurrence of a new spin-glass state.—73-12578
Electrical and magnetic properties of $Zn_xCa_{1-x}Fe_2O_4$ ($x$=0–1).—73-05554
Electromagnetic properties of Mn-Zn ferrite single crystal with small variation of $Fe_2O_3$ concentration.—73-15321
Electron and hole energy spectrum parameters of cubic cadmium and zinc chalcogenides.—73-14878
Electron microscope investigation of surface features of (100)$Cd_{1-x}Zn_xTe$ grown by metallorganic chemical vapor deposition.—73-09448
Energy spectrum of $PbTe:Zn^+$ deduced from optical absorption data.—73-14889
Excitonic luminescence of CdTe and $Cd_{0.87}Zn_{0.13}$ submonolayers in ZnTe films grown by MBE.—73-11205
Fabrication of nonfired brick using lead-zinc tails.—73-06653
Fabrication of normal-native oxide *p*-ZnTe heterojunctions by the anodic oxidation of ZnTe MBE layers.—73-14912
Fast growth of $Cd_{1-x}Zn_xTe$ single crystals by physical vapor transport.—73-14917
Femtosecond dynamics of resonantly excited RT excitons in II-III CdZnTe/ZnTe quantum wells.—73-07527
Ferroelectric properties of $Cd_{1-x}Zn_xTe$ solid solutions.—73-07889
Gap anisotropy and gapless superconductivity in the Zn-doped $YBa_2Cu_3O_7$.—73-08087
Growth and characterization of CdTe-ZnTe short-period superlattices.—73-04347
Growth and characterization of hot-wall epitaxial CdTe on (111)HgCdTe and CdZnTe substrates.—73-11224
Growth kinetics and properties of heteroepitaxial (Cd,Zn)Te films prepared by metallorganic molecular beam epitaxy [MOMBE].—73-11228
Implantation-enhanced interdiffusion of CdTe-ZnTe heterostructures.—73-07574
Impurity effects in cuprate superconductors.—73-01572
In situ ellipsometric measurements of the MBE growth of CdTe/HgTe and CdTe/ZnTe superlattices.—73-11263
Incommensurate-commensurate phase transition of $BaZnGeO_4$ studied by electron microscopy and diffraction.—73-12601
Influence of $Cu^{2+}$ ion on magnetic moment and Curie temperature of $Zn_2$-X hexaferrites.—73-07941
Influence of nonstoichiometry on exciton, electron, and vibrational states in $ZnP_2$.—73-04367
Influence of oxygen partial pressure on the shape of the *B-H* curve for Mn-Zn ferrites.—73-15330
Influence of process parameters on power loss minimum versus temperature of Mn-Zn ferrites.—73-11657
Infrared laser-assisted zone refining of inorganic materials.—73-02878
Infrared study and characterization of Zn diffused InP.—73-07605
Interactions in the systems ZnS-$Sm_2S_3$ and Zn-$Sm_2S_3$.—73-02299
Interband transitions in $Zn_3As_2$.—73-08893
Intersubband transition of $CdTe/Cd_{0.94}Zn_{0.06}Te$ strained single quantum wells grown by hot-wall epitaxy.—73-14998
Intersubband-transition studies of $Cd_{0.936}Zn_{0.064}Te/CdTe$ superlattices grown by double-well temperature gradient vapor transport deposition.—73-14999
Local structure analysis of $ZnFe_2O_4$ by extended X-ray absorption fine structure.—73-16198
Low-energy spin fluctuations in $La_{2-x}Sr_xCu_{1-y}Zn_yO_4$ ($x$=0.14, $y$=0.012).—73-01591
Low-temperature photoluminescence of single-crystal $Zn_xCd_{1-x}Te$ films grown by solid-phase substitution.—73-04388
Luminescence centers induced in *p*-type GaAs:Zn by radiation and heat treatment.—73-15027
Magnetic properties of diluted $(Zn_{1-x}Mn_x)_3As_2$ solutions.—73-02638
Magnetic properties of high-$T_c$ superconductors studied by means of positive muons.—73-01595
Manganese zinc ferrite single crystal growth by continuous crystal growing method.—73-01472
Mechanical properties of squeeze-cast zinc alloy matrix composites containing α-alumina fibers.—73-06820
Mechanisms of ultrasound-induced changes in electrical and photoelectric properties of single crystals of $Zn_xCd_{1-x}Te$ solid solutions.—73-01242
Melting, processing, and color control of zinc sulfide glasses.—73-07149
Micromorphological structure and superconductive properties of $YBa_2(Cu_{3-y}Zn_y)_3O_{6.9}$ alloys.—73-01603
MnZn ferrite preparation by coprecipitation method.—73-11666
Mossbauer effect and electron paramagnetic resonance studies on zinc borate glasses containing transition metal oxides.—73-03741
Nonphotorefractive impurities in lithium niobate: magnesium and zinc.—73-02649
Optical nonlinearities of ZnCdTe at RT.—73-05602
Optical properties of $Zn_3P_2$ thin films.—73-08935
Oriented films of semiconductor compounds $Zn_3As_2$ and $Cd_3As_2$ on sapphire substrates.—73-15080
Phase composition, microstructure, and nucleation temperature range of zinc aluminosilicate glass-ceramics.—73-14455
Phase cooperation between the $ZnFe_2O_4$ and α-$Fe_2O_3$ phases of ferrite catalysts in the oxidate dehydrogenation of *n*-butenes.—73-02373
Phosphate coating composition and method of applying a zinc-nickel-manganese phosphate coating.—73-00290
Photoinduced thermal Faraday rotation in semimagnetic semiconductors.—73-01277
Photoluminescence of epitaxial $Zn_xCd_yHg_{1-x-y}Te$ films.—73-01280
Picosecond dynamics of absorption bleaching in polycrystalline ZnCdTe films.—73-11394
Preparation and magnetic properties of monodispersed Zn ferrites of submicrometric size.—73-07971
Preparation of high-purity zinc oxalate powder by the precipitation stripping method.—73-13191
Preparation of Ni-Zn ferrite thin films by ICP flash evaporation method.—73-15360
Preparation of $Zn_xFe_{3-x}O_4$ fine powders by thermite method with zinc.—73-16943
Preparation of $Zn_xFe_{3-x}O_4$ fine powders by thermite method with Zn.—73-09273
Properties of CdZnTe crystals grown by a high-pressure Bridgman method.—73-07747
Quantum well width dependence of exciton-phonon interaction in $Cd_{0.33}Zn_{0.67}Te/ZnTe$ single quantum wells.—73-07756
Rearrangement of vibrational spectra of $Cd_{1-x}Zn_xTe$ semiconductor alloys [0≤x≤0.5].—73-15141
Recipe to minimize Te precipitation in CdTe and (Cd, Zn)Te crystals.—73-07765
Resonant electron spin-flip Raman scattering in $Zn_{1-x}Mn_xTe$.—73-07770
Schottky barrier induced injecting contact on wide band gap semiconductors.—73-07788
Self-limiting growth of zinc chalcogenides and their superlattices.—73-04476
Sintering of MnZn ferrites of large cross section.—73-11672
Structure and optical characterization of $Zn_xCd_{1-x}Te$ thin films prepared by the close-spaced vapor transport method.—73-01324
Structure of alkali and alkaline-earth zinc tellurite glasses.—73-14105
Surface morphology study on CdZnTe single crystals by atomic force microscopy.—73-11467
Synthesis and crystal structure of $Zn_2VO(PO_4)_2$, a vanadyl(IV) orthophosphate containing a dimer of edge-sharing $ZnO_5$ square pyramids.—73-02484
Synthesis and structure of $ZnMn_2As_2$.—73-02495
Synthesis of crystalline zinc ferrite near room temperature.—73-17037
System ZnS-$Dy_2S_3$.—73-02513
Tails of the density of states in $Zn_xCd_yHg_{1-x-y}Te$ solid solutions.—73-15198
Thermal stability and microstructure of new laser matrix cadmium-zinc glasses.—73-00563
Tight binding model for $Zn_3P_2$ valence bands.—73-15211
Ultrasonic detection of microphase separation in binary zinc tellurite glasses.—73-14303
Vapor phase equilibria in the $Cd_{1-x}Zn_xTe$ alloy system.—73-12729
X-ray characterization of (Zn, Cd)Te/CdTe strained layer superlattices.—73-01366
X-ray diffraction study of high-temperature modification of $Rb_2ZnBr_4$, $T$=368 K.—73-02543
X-ray, transport, magnetic, Mossbauer, and catalytic studies of the system $Zn_{1-x}Cu_xMnFeO_4$.—73-08796
ZnO precipitation during sintering of Ni-Zn ferrite used for the substrate of thin-film heads.—73-01485
ZnTe: a potential interlayer to form low-resistance back contacts in CdS/CdTe solar cells.—73-07868

**zircon,**
Application of superfine zircon powders to glazes for daily fine stoneware.—73-07233
Characterization of interfacial properties in SiC-zircon composites.—73-09548
Discrete mechanism of amorphization of crystals with radioactive impurities.—73-02239
Dispersion and high-pressure filtration of zircon/alumina composite slurry.—73-05745
Effect of firing regimes on the microstructure and the properties of zircon-containing ceramics.—73-02783
Effect of forming pressure on the reactivity and microstructure of zircon powder compacts.—73-13005
Effect of zircon dissolution on the color stability of glazes.—73-07249
Explosive pretreatment of $ZrSiO_4$ powder.—73-05797
Fabrication of electrofusion-cast zircon mullite brick.—73-10728
Formation mechanism of $ZrSiO_4$ powders.—73-13064
Fractal properties of boundary surfaces in zircon powders prepared by plasmochemistry methods.—73-09454
Higher-chroma zircon colors for glaze applications.—73-07260
Influence of interfacial shear strength on matrix properties and crack-fiber interactions in ceramic matrix composites.—73-09620
Inhouse refractory capability for U.S. specialist glassmaker.—73-14599
Low-sodium zircon refractory and fused silica process.—73-14639
Method for preparing zircon powder.—73-05223
Reactive sintering of zircon and alumina/bauxite.—73-09505
Reactivity of high-purity $ZrSiO_4$ sintered bodies for alkaline glass melts.—73-13489
Sintering of zircon–silicon carbide whisker composites and their mechanical properties.—73-06521
Sintering of zircon-silicon carbide whisker composites and their mechanical properties.—73-17430
Synthesis and mechanical properties of alumina–MgO-stabilized zirconia–zircon composite.—73-06082
Synthesis of zirconium silicate ceramic pigments from zircon mineral: I.—73-14668
Ultrathin zircon coating and membrane.—73-12407

**zirconate,**
Chemical synthesis of tantalum zirconate from alkoxide precursors.—73-12943
Combustion synthesis and properties of fine-particle rare-earth-metal zirconates, $Ln_2Zr_2O_7$.—73-16677
Dynamics of an anion subsystem in new olivofluorozirconate glasses by the method of $^{19}F$ nuclear magnetic resonance.—73-00328
Growth of $BaZrO_3$ epitaxial seed layer by magnetron sputtering.—73-13080
$La_2Zr_2O_7$ formed at ceramic electrode/YSZ contacts.—73-07332
Low-volume-fraction ceramic filled fluoropolymeric composite material.—73-12373
Mechanical properties and microstructure of $Ca_2SiO_4$-$CaZrO_3$ composites.—73-06244
Preparation and properties of $Ba_2YZrO_6$-$YBa_2Cu_3O_7$ composites.—73-15588
Preparation of fine-particle $(PbCa)ZrO_3$ for resonator.—73-10983
Proton conduction in sintered oxides based on $CaZrO_3$.—73-04154
Protonic conduction in the single crystals of Y-doped $SrZrO_3$.—73-04157
Reaction sintering and dielectric properties in the $BaTiO_3$-$CaZrO_3$-$TiO_2$ system.—73-13229
Reaction sintering of $Ca_2SiO_4$-$CaZrO_3$ composites.—73-13230
Synthesis of $Ba_2YZrO_6$: a new phase in $YBa_2Cu_3O_7$-$ZrO_2$ system and its suitability as a substrate material for YBCO films.—73-09353
System $LiTaO_3$-$SrZrO_3$.—73-02511
Twin (domain) boundaries of *S*-type in $PbZrO_3$ crystals.—73-15297
Viscosity and density of molten barium zirconate and related melts.—73-09007
X-ray diffraction study of $PbZrO_3$ ferroelectric phase induced by strong electric field.—73-15301
**zirconia,**
Activating crystallization in zirconia glazes.—73-07231
Agglomeration control in the preparation of ultrafine $ZrO_2$ ($Y_2O_3$) powder by means of a wet-chemical process.—73-05686
$Al_2O_3$ and $ZrO_2$ composites with high-TiC contents fabricated by tailoring oxide powders.—73-09012
$Al_2O_3$- and $ZrO_2$-modified dental glass-ceramics.—73-14316
Anomalous dilatation-temperature curves of PZT-$ZrO_2$ composites.—73-12745
Aqueous sol-gel synthesis of powders in the $ZrO_2$-$SiO_2$ system using zirconium formate and tetraethoxysilane.—73-09020
Aspects of the chemical technology of $ZrO_2$-$Y_2O_3$-$Al_2O_3$ powders and testing them in ceramics technology.—73-02729
Bending strength changes of fiber-dispersed porous $ZrO_2$ ceramics during repeating thermal shock tests.—73-06332
Bending strength changes of fiber-dispersed porous $ZrO_2$ ceramics during repeating thermal shock tests.—73-17240
Binary system $ZrO_2$-$Y_2O_3$.—73-02151
Boundary film for structural ceramic materials.—73-06741
Burned refractories with low soluble chromium.—73-14635
Cation ordering and the stability of fluorite-related phases in $ZrO_2$-$Ln_{1.5}$ systems: a phase diagram simulation study using Monte Carlo methods.—73-08562
Ce 3*d* and Zr 3*d* X-ray photoelectron spectroscopy spectra of $ZrO_2$-12 mol% $CeO_2$ after heat treatments and $Ar^+$ etching.—73-08565
Centrifugal casting of alumina-zirconia mixed powder.—73-16664
Ceramic composition.—73-02028
Changes of microstructure and high-temperature strength of ceramic composite in the mullite-$ZrO_2$-$Al_2O_3$ system using an in situ reaction between synthetic zircon and $Al_2O_3$.—73-17244
Characteristics of cordierite-$ZrO_2$ composites fabricated by the multiphase sol-gel route.—73-06193
Characterization of nanosized $ZrO_2$ powder.—73-03124
Characterization of zirconia gels by $^{17}O$ nuclear magnetic resonance.—73-12550
Characterization of $ZrO_2$-$SiO_2$ glasses prepared with silicium and zirconium alkoxides.—73-13937
Coating of hydroxyapatite on zirconia utilizing a radio-frequency thermal plasma process.—73-05710
Coating of hydroxyapatite on zirconia utilizing a radio-frequency thermal plasma process.—73-12946
Coloration in ceria-doped zirconia induced by reduction heat treatment.—73-08824
Coloring aluminum flakes.—73-03678
Compaction and sintering behavior of zirconia powders: I, Compaction response.—73-02750
Compaction and sintering behavior of zirconia powders: II, Sintering behavior.—73-12951
Comparative study of the solid solutions in the $ZrO_2$-$HfO_2$-MgO(CaO) systems.—73-02165
Concrete shapes based on zirconia and a calcium-aluminum zirconate binder.—73-10709
Concrete shapes based on zirconia and aluminum-barium zirconate cement.—73-10710
Conductivity of $ZrO_2$-$Y_2O_3$-$In_2O_3$ ceramics.—73-16424
Conductivity of $ZrO_2$-$Y_2O_3$-$In_2O_3$ ceramics.—73-16425
Continuous processing of monodispersed zirconia powders.—73-12954
Control of microstructures and properties of composites of the $Al_2O_3$/$ZrO_2$ spinel system: II, $Al_2O_3$/$ZrO_2$ spinel composites prepared by the solution infiltration method.—73-16685
Control of microstructures and properties of composites of the $Al_2O_3$/$ZrO_2$-spinel system: I, Preparation and sintering behavior of $Al_2O_3$-$ZrO_2$ composite powder.—73-12956
Control of pore characteristics of porous glass in the $ZrO_2$-$SiO_2$ system prepared by the sol-gel method.—73-10512
Coprecipitation of copper(II) on hydrated zirconium oxide.—73-13813
Cordierite–$ZrO_2$ and cordierite–$Al_2O_3$ composites obtained by sonocatalytic methods.—73-12958
Correlation function and statistical properties of xerogel $(Sn,Ti,Zr)O_2$.—73-16433
Correlations between flaw tolerance and reliability in zirconia.—73-17257
Crack growth in zirconia-bearing ceramics under cyclic loading.—73-06348
Creep in $(Al_2O_3+ZrO_2)$ ceramics [investigated] by ultrasonic surface waves.—73-17266
Crystallization behavior of zirconia 10 mol% yttria by hot-stage X-ray diffraction.—73-02223
Cubic-tetragonal phase boundary in $Zr_{1-x}Y_xO_{2-x/2}$ solid solutions [determined] by Raman spectroscopy.—73-12569
Decalcification of stabilized zirconia by silica and some other oxides.—73-12571
Degradation of plasma-sprayed alumina and zirconia coatings on stainless steel during thermal cycling and hot corrosion.—73-00219
Dense $Al_2O_3$/$ZrO_2$ particulate composites by free sintering of coated powders.—73-05730
Densification behavior of high-purity $Al_2O_3$ and $Al_2O_3$-15 vol% $ZrO_2$.—73-02765
Densification of zirconia-containing SiAlON composites by $Sm_2O_3$.—73-09060
Deposition of transparent $ZrO_2$ on polyetherimide using a KrF excimer laser.—73-02769
Development of high-temperature raw zirconia opalescent glaze.—73-10819
Developments in highly toughened $CeO_2$-$Y_2O_3$-$ZrO_2$ ceramic system.—73-02772
Dielectric properties of alumina/zirconia composites at millimeter wavelengths.—73-07299
Diffusion bonding of a nickel (chromium) alloy to zirconia: mechanical properties and interface microstructures.—73-06770
Diffusionless tetragonal–cubic transformation temperature in zirconia–ceria solid solutions.—73-02237
Direct bonding of zirconia system without any fillers—basic research for self-healing.—73-05167
Durability of zirconia thermal barrier coatings.—73-10218
Dynamic compaction of $Al_2O_3$-$ZrO_2$ compositions.—73-12993
E-beam deposition of $In_2O_3$-stabilized $ZrO_2$ films.—73-02777
Effect of chemically added zirconia and yttria on the mechanical properties of zirconia-dispersed alumina.—73-08510
Effect of dopants on zirconia stabilization—an X-ray absorption study: I, Trivalent dopants.—73-05384
Effect of dopants on zirconia stabilization—an X-ray absorption study: II, Tetravalent dopants.—73-08605
Effect of dopants on zirconia stabilization—an X-ray absorption study: III, Charge-compensating dopants.—73-08606
Effect of hydrolysis time and type of catalyst on the stability of tetragonal zirconia-silica composites synthesized from alkoxides.—73-14359
Effect of impregnation of $ZrO_2$ on the chemical stability and the superconductivity of Y and Bi systems.—73-11733
Effect of seeding on preparation of $ZrO_2$/$Al_2O_3$ composite by sol-gel method.—73-13017
Effect of ultrasound on the formation of $ZrO_2$ sols and wet gels.—73-05774
Effect of zirconium on wettability of alumina and zirconia by silver-indium base alloy.—73-00223
Effective ionic radius of $Y^{3+}$ determined from lattice parameters of fluorite-type $HfO_2$ and $ZrO_2$ solid solutions.—73-05387
Effects of annealing on properties of MgO-$ZrO_2$ composite ceramics.—73-02804
Effects of annealing on properties of MgO-$ZrO_2$ composite ceramics.—73-13027
Effects of high-temperature vaporization of impurities from refractory on the colorization of zirconia surface.—73-14589
Effects of mechanical activation of inorganic gels on their thermal behavior: II, Comparison of structure and thermal behavior between zirconia and titania gels.—73-02248
Effects of rare-earth oxides and silica on sintering and microstructure of $Al_2O_3$-$ZrO_2$-$SiO_2$ (AZS)-40 brick.—73-10725
Effects of shear stresses on crack-growth microstructures in transformation-toughened ceramics.—73-09587
Effects of solids loading and dispersion schedule on the state of aqueous alumina/zirconia dispersions.—73-17128
Effects of synthesis by melting in solar and radiation furnaces on changes in phase composition in the systems $ZrO_2$-$Ge_2O_3$-CaO(MgO).—73-02249
Effects of thermal annealing on the properties of zirconia films prepared by ion-assisted deposition.—73-13036
Effects of $TiO_2$ on microstructure and properties of zirconia corundum materials.—73-13392
Effects of zirconia additions on the crystallization behavior of MgO-$Al_2O_3$-$SiO_2$ glass-ceramics.—73-08608
Effects of zirconia on crystallization of glasses with lepidolite composition.—73-14370
Effects of $ZrO_2$ addition on the mechanical properties of $TiB_2$ HIPed compacts.—73-03278
Effects of $ZrO_2$ addition on the mechanical properties of $TiB_2$ HIPed compacts.—73-13521
Effects of $ZrO_2$ addition on the mechanical properties of $TiB_2$-6% $TaB_2$-1% CoB-2% TiC-α% $ZrO_2$ ceramics.—73-17301
Electrical and dielectric studies on AgBr-$ZrO_2$ composites.—73-16471
Electrical characterization of zirconia-niobium and zirconia-titanium composites.—73-08852
Electrically conductive material.—73-01052
Electrofused zirconia powders.—73-02010
Electron and X-ray powder diffraction study of cubic fluorite-related phases in various $ZrO_2$-$Ln_2O_3$ systems.—73-02253
Electron microscopic observation of rapidly cooled $ZrO_2$-3 mol% $Sm_2O_3$ from the melt.—73-17130
Electrophoretic deposition and its use to synthesize $ZrO_2$/$Al_2O_3$ microlaminate ceramic/ceramic composites.—73-16760
Environmental effects on wear and friction of toughened zirconia ceramics.—73-09591
Erosion-resistant stopper rod.—73-04030
Fabrication of zirconia fibers from sol-gel process.—73-02827
Fabrication of zirconia-alumina functionally gradient material by superplastic diffusion bonding.—73-15924
Film formation and sintering of colloidal monoclinic zirconia.—73-13060
Fluorides in zirconia glazes.—73-00907
Formation and dissolution behavior of $ZrO_2$ film in $H_3PO_4$ acid solutions.—73-10231
Formation of alumina/zirconia (3 mol% yttria) composite powders prepared by the hydrazine method.—73-16788
Formation of Ti-Al-$ZrO_2$ film on the surface of mechanical alloying ball.—73-06794
Formation of Ti-Al-$ZrO_2$ film on the surface of mechanical alloying ball.—73-16794
Formation of zirconia solid solutions containing alumina prepared by new preparation method.—73-09142
Formaton, transformation, and sintering of $ZrO_2$-MgO compositions prepared from alkoxides.—73-16797
Fracture strength-fracture resistance response and damage resistance of sintered $Al_2O_3$-$ZrO_2$ (12 mol% $CeO_2$) composites.—73-17331
Friction-chemical activation of polycrystalline aluminum and zirconium oxides in water dispersions.—73-02837
FTIR and HREM study of some morphological and adsorptive properties of monoclinic $ZrO_2$ microcrystals.—73-03145
Functional ceramics for automobiles.—73-01170
Gel formation and drying characteristics in the $Na_2O$-$ZrO_2$-$SiO_2$ system.—73-02839
Gel formation and drying characteristics in the $Na_2O$-$ZrO_2$-$SiO_2$ system.—73-10540
Gelation on solid surfaces in water-free $Na_2O$-$ZrO_2$-$SiO_2$ sols.—73-16802
Graded casting of materials with continuous gradients.—73-16804
Grain size effect on mechanical strength of MgO-$ZrO_2$ composite ceramics.—73-06448
Grain size effect on mechanical strength of MgO-$ZrO_2$ composite ceramics.—73-13543
Growth kinetics of sintered NiO/$ZrO_2$ (5 mol% $Y_2O_3$) composites.—73-02281
Growth of thin dense gas-tight (Tb, Y)-$ZrO_2$ films by electrochemical vapor deposition.—73-09159
High fracture toughness of $ZrO_2$ solid-solution ceramics with nanometer grain size in the system $ZrO_2$-$Al_2O_3$.—73-09610
High-temperature humidity sensor using a limiting-current-type plane oxygen sensor.—73-01188
High-temperature stability of $Ca_2ZrSi_4O_{12}$.—73-16169
High-temperature stability of $SiC_w$/ZTM composite.—73-06309
High-temperature wear of plasma-sprayed $ZrO_2$-$Y_2O_3$ coating.—73-17350
High-zirconia fused-cast refractories: a solution to defect and corrosion problems in special glasses.—73-00821
HREM observation of domain boundaries in tetragonal zirconia.—73-06227
Hydroxide precursor to zirconia: extended X-ray absorption fine structure study.—73-05416
Hydroxyapatite ceramics with tetragonal zirconia particles dispersion prepared by HIP postsintering.—73-02856
Improvement of mechanical properties of ZTM ceramics by heat treatment and deep-cool treatment.—73-05853
Improving the composition and investigating the properties of modified zirconia concrete by hydration hardening for high-temperature linings.—73-00825
Improving the crack resistance of zirconium dioxide.—73-03311
In situ study on the generation of radiation damage in cubic-zirconia in the high-voltage electron microscope.—73-03152
In situ surface vibrational spectroscopy of the vapor/solid and liquid/solid interfaces of acetonitrile on $ZrO_2$.—73-09464
In situ TEM observations of the tetragonal-to-monoclinic phase transformation of zirconia in $Al_2O_3$-$ZrO_2$ (2 mol% $Y_2O_3$) composite.—73-09465
Inclusion removal in ceramic green body by acid treatment: zirconia ceramic capillary for optical-fiber connector as an example.—73-02862
Indentation hardness and fracture in single-crystal magnesia, zirconia, and silicon carbide.—73-03314
India-stabilized zirconia coating for composites.—73-12476
Influence of a reduced cross section on the mechanical properties of transformation-toughened zirconia bars.—73-15807
Influence of alcoholic solvents on the formation of monodispersed particles by hydrolysis of zirconium tetra-*n*-butoxide.—73-05862
Influence of batch preparation method on the structure and properties of ceramics in the $Al_2O_3$-$ZrO_2$-$Y_2O_3$ system.—73-02865
Influence of hydrolysis conditions on crystallization, phase transitions, and sintering of zirconia gels prepared by alkoxide hydrolysis.—73-10554

Influence of sintering behavior on mechanical properties and thermal shock resistance at temperature difference of 600 K of fiber-dispersed $ZrO_2$ ceramics.—73-17361
Influence of substrate composition on the sintering behavior of zirconia thick films.—73-05875
Influence of the network of microcracks upon the crack propagation behavior inside of transparent zirconia.—73-06463
Influence of zirconia addition on the sintering behavior of bimodal size distributed alumina powder mixtures.—73-16844
Internal friction and anelastic relaxation of $ZrO_2$ polycrystals containing 2 mol% $Y_2O_3$, 8 mol% $Y_2O_3$, and 12 mol% $CeO_2$.—73-02304
Internal friction and modulus of nano-$ZrO_2$ solids.—73-12822
Ivory-colored zirconia sintered body, process for its production and its use.—73-05220
Lapping abrasive of alumina–zirconia system and method for producing the same.—73-00001
Laser melting of refractory $Al_2O_3$-$ZrO_2$ ceramics.—73-13116
Liquid infiltration in $ZrO_2$ ceramics.—73-09192
Long-term casting with zirconia nozzles.—73-14600
Low-melting zirconia glazes based on glass fiber wastes.—73-04044
Low-temperature phase equilibria by the flux method and the metastable-stable phase diagram in the $ZrO_2$-$CeO_2$ system.—73-12623
Low-voltage field emitter array cathode for high-frequency applications.—73-10970
Making porous zirconia for heat pipes.—73-08517
Mechanical and electromechanical properties of monoclinic $ZrO_2$ fiber/PZT composites.—73-17376
Mechanical properties and microstructural development during heat treatment of a plasma-sprayed thermal barrier coating: $ZrO_2$-8 wt% $Y_2O_3$.—73-06819
Mechanical properties of $Al_2O_3$ and $Al_2O_3$+$ZrO_2$ ceramics reinforced by SiC whiskers.—73-09633
Mechanical properties of doped zirconia ceramics.—73-09637
Mechanical properties of reaction-bonded $Al_2O_3/ZrO_2$ composites.—73-17390
Mechanical properties of yttria- and ceria-doped zirconia ceramics.—73-03339
Mechanical properties of zirconia–alumina whisker composite ceramics.—73-13568
Mechanical properties of zirconia-alumina whisker composite ceramics.—73-06485
Mechanical strength and chemical resistance of zirconium-oxide-based porcelain enamel.—73-10250
Mechanically induced zone darkening of alumina/ceria-stabilized zirconia composites.—73-17393
Mechanics of stress-induced phase transformation in zirconia.—73-08665
Mechanism of $ZrO_2$ strengthening and toughening in mullite-zirconia composites.—73-06488
Metastable phase selection and partitioning for $Zr_{(1-x)}Al_yO_{(2-x/2)}$ materials synthesized with liquid precursors.—73-16215
Metastable zirconia phases prepared from zirconium alkoxide and yttrium acetylacetonate: I, Formation and characterization of metastable zirconia solid solutions.—73-08666
Method for producing zirconia-based sintered body.—73-12381
Microstructural and thickness uniformity of zirconia coatings produced by rf ion plating.—73-09477
Microstructural changes and mechanical properties of mullite-$ZrO_2$ and mullite-$ZrO_2$-$Al_2O_3$ composites prepared using in situ reaction between synthetic zircon and alumina.—73-17399
Microstructure and mechanical properties of hybrid sol-gel-processed $Al_2O_3$-$ZrO_2$ composites.—73-09482
Microstructure and mechanical properties of mullite-zirconia reaction sintered composites.—73-06492
Microstructure and mechanical properties of platelet-reinforced mullite–zirconia composites.—73-13573
Microstructure and sintering mechanism of $TiB_2$-$ZrO_2$-SiC composite.—73-06254
Microstructure and sintering mechanism of $TiB_2$-$ZrO_2$-SiC composite.—73-13427
Molten steel pouring nozzle.—73-00888
Mullite-$ZrO_2$ ceramic with bentonite, soapstone, and MnO+$TiO_2$ additives.—73-02337
Neighbor switching by grain-boundary penetration during diffusional deformation of an alumina/zirconia composite.—73-09494
Neutron diffraction measurements of the residual stresses in $Al_2O_3$-$ZrO_2$ ($CeO_2$) ceramic composites.—73-13574
Nickel cermet, and process for preparing it.—73-03698
Nitridation of calcium-stabilized zirconia.—73-08926
Nitriding of zirconia.—73-02908
Nonlinear fracture behavior of porous zirconia ceramics.—73-09655
Nonoxide ceramic particles coated with zirconium oxide or hydrous oxide.—73-05322
Optical properties of ion-assisted deposited zirconia thin films.—73-11362
Oxidation behavior of zirconia–SiAlON composites.—73-06314
Oxidation of calcia-stabilized zirconia–graphite refractories containing silicon and/or silicon carbide additives.—73-10750
Oxygen chemisorption on titania–zirconia mixed oxide supported vanadium oxide catalysts.—73-08688
Oxygen enrichment in zirconium oxide films.—73-06267
pH-metric and Raman investigation of zirconium aqueous solutions and gels submitted to a reflux.—73-08707
Phase characterization and grain size effects of nanophase $Y_2O_3$, $ZrO_2$, and $Y_2O_3$-$ZrO_2$ composites produced by the gas-phase condensation technique.—73-05446
Phase characterization of precipitated zirconia.—73-12651
Phase diagram of the system $ZrO_2$-$HfO_2$.—73-05448
Phase maps for sputter-deposited refractory metal oxide ceramic coatings: review of niobium oxide, yttrium oxide, and zirconium oxide growth.—73-16254
Phase relations in the ternary system $ZrO_2$-MgO-$Gd_2O_3$ and its dependence on synthesis method.—73-16260
Phase transformations in monoclinic zirconia caused by milling and subsequent annealing.—73-12657
Physical and chemical properties of the solid electrolytes consisting of $ZrO_2$ stabilized partially with a mixture of $Y_2O_3$-$Yb_2O_3$-$Sc_2O_3$.—73-01009
Plasma coating made from zirconium dioxide powder produced by the sol-gel technique.—73-02923
Polycrystalline $t$-$ZrO_2$($Ln_2O_3$) formed by displacive transformations.—73-09656
Porous inorganic membranes.—73-00292
Positrons in $ZrO_2$.—73-02673
Powder processing technique for development of zirconia-nickel functionally gradient materials.—73-05953
Powder processing technique for development of zirconia-nickel functionally gradient materials.—73-10263
Precipitation and solidification of calzirtite in liquid-phase-sintered $ZrO_2$ (10.8 mol% CaO) with $TiO_2$ additions.—73-13439
Precision ultra-microhardness measurements of sol-gel-derived zirconia thin films.—73-03343
Preparation and characteristics of ceramic composite powders coated with $Al_2O_3$: III, Composite powders of $Al_2O_3$-$ZrO_2$.—73-05956
Preparation and thermal evolution of the microstructure of sol-gel-derived cordierite and cordierite-zirconia powders.—73-03185
Preparation of $Al_2O_3$-$ZrO_2$ composites by inorganic sol-gel processing.—73-05966
Preparation of continuous $ZrO_2$-$Y_2O_3$ fibers by precursor method using polyzirconoxane.—73-05971
Preparation of continuous $ZrO_2$-$Y_2O_3$ fibers by precursor method using polyzirconoxane.—73-16920
Preparation of heat- and water-vapor-resistant composite porous glass membrane coated on porous alumina tubing by sol-gel method.—73-02951
Preparation of porous $SiO_2$-$ZrO_2$ glass from sol containing polyethylene glycol [PEG].—73-00685
Preparation of shaped zirconia particles.—73-05239
Preparation of sintered zirconia body.—73-15953
Preparation of $SiO_2$-$TiO_2$-$ZrO_2$ gel glasses and coatings by means of modified alkoxide solutions.—73-10585
Preparation of $ZrO_2$ thin films by CVD using $H_2$-$CO_2$ as oxidizer.—73-05986
Preparation of $ZrO_2$ thin films by CVD using $H_2$-$CO_2$ as oxidizer.—73-16945
Preparation of $ZrO_2$-$Y_2O_3$ films by CVD using ß-diketone metal chelates.—73-05987
Preparation of $ZrO_2$-$Y_2O_3$ films by CVD using ß-diketone metal chelates.—73-16946
Preparation of $ZrSiO_4$ powder using sol-gel process: IV, Preparation from $ZrOCl_2$ and colloidal $SiO_2$.—73-02978
Process for preparing zirconia sols and/or zirconia forms.—73-02061
Process for producing solid oxide fuel cells.—73-11046
Process for the manufacture of a rigid insulating refractory material and material thus obtained.—73-04038
Process of preparing zirconium oxide-containing ceramic formed bodies.—73-15956
Processing of tape-cast laminates prepared from fine alumina/zirconia powders.—73-16952
Production and properties of zirconia ceramics.—73-02018
Production of $ZrO_2$ by use of plasma technique and its application.—73-16959
Properties and application of electrofused technical zirconia powders.—73-05179
Properties investigation of ceramics based on $ZrO_2$.—73-06503
Properties of magnesia-stabilized zirconia powders prepared by a combustion route.—73-17184
Properties of porcelain bodies containing zirconia.—73-00923
Properties of zirconia films prepared by direct current reactive magnetron sputtering.—73-02676
Quantitative determination of the cubic-to-monoclinic phase transformation in fully stabilized zirconias by Raman spectroscopy.—73-16283
Quasi-binary systems $HfO_2$-$ZrO_2$, $ZrO_2$-$Y_2O_3$, and $HfO_2$-$Y_2O_3$.—73-02410
Raman scattering study of cubic-tetragonal phase transition in $Zr_{1-x}Ce_xO_2$ solid solution.—73-08717
Raman spectral characterization of ceramics in the system $ZrO_2$-$TiO_2$.—73-02415
Raman spectroscopic study on $ZrO_2$-$TiO_2$ using $MoO_3$ as molecular probe.—73-02416
Rapid purity evaluation and impurity rare earth analysis of zirconium oxide powders by ICP-MS.—73-01926
Reaction bonding of $ZrO_2$ and NiTi: reaction products' analyses on $ZrO_2$/NiTi bonding interface with AEM.—73-13890
Reaction sintering of Zr-containing mullite materials.—73-10757
Recent development of fused high zirconia refractory.—73-14612
Redox control in industrial glass melting by means of zirconia-based sensors.—73-01968
Reference electrode assembly and process for constructing.—73-01067
Relationships between dopants, microstructure, and the microwave dielectric properties of $ZrO_2$-$TiO_2$-$SnO_2$ ceramics.—73-04161
Rheological and electrokinetic properties of $ZrO_2$-$Al_2O_3$ slurry.—73-05630
Rheological and technological properties of corundum-zirconia suspensions.—73-02996
Role of mechanochemical activation in the evolution of the structure and properties of reaction-bonded mullite-zirconia refractories.—73-14623
Role of Zener's pinning effect on the grain growth in $Al_2O_3$-$ZrO_2$.—73-06279
Role of Zener's pinning effect on the grain growth in $Al_2O_3$-$ZrO_2$.—73-13242
Science and Technology of Zirconia V.—73-09764
Sensor system [with $ZrO_2$ sensor].—73-15244
Separation of Pt metal complex chlorides on hydrated zirconia and their isolation from nonferrous mtals.—73-16594
Serial cosputtering of mixed Al/Zr and $Al_2O_3/ZrO_2$ films.—73-10274
Short-range structure of zirconia xerogel and aerogel, determined by wide angle X-ray scattering.—73-05476
Sintering behavior and mechanical properties of reaction-sintered $TiO_2$-$ZrO_2$ composite ceramics.—73-06053
Sintering kinetics of ultrafine $ZrO_2$-$Y_2O_3$ powder.—73-06056
Sintering of $ZrO_2$-toughened mullite ceramic and its microstructure.—73-03012
Sliding wear properties of sintering mullite ceramics.—73-03352
Slip casting of monoclinic $ZrO_2$ fiber/PZT composites.—73-17000
Slurry composition and sintered part prepared therefrom.—73-12404
Sol-gel route to synthesis of microporous ceramic membranes: preparation and characterization of microporous $TiO_2$ and $ZrO_2$ xerogels.—73-13279
Solid solutions in the $ZrO_2$-$HfO_2$-$SiO_2$ system and obtaining new refractories from them.—73-00865
Solid-state reaction, microstructure, and phase relations in the $ZrO_2$-rich region of the $ZrO_2$-$Yb_2O_3$ system.—73-09507
Stability of metastable tetragonal zirconia.—73-02442
Stabilization of cubic zirconia with manganese oxide.—73-16314
Stabilization of high-temperature modification of zirconium dioxide.—73-03028
Stabilized tetragonal zirconium oxide as a support for catalysts: evolution of the texture and structure on calcination in static air.—73-02444
Stabilized zirconias prepared by mechanical alloying.—73-03029
Starting powder characteristics/fired compact properties relationships in reaction-sintered mullite/$ZrO_2$ composites.—73-06068
Structural evolution in $ZrO_2$-$Al_2O_3$ gels during sintering.—73-17012
Structural investigation of powders based on zirconium dioxide obtained by high-frequency plasmochemical denitration.—73-03199
Structural investigations of zirconia powders obtained by HF-plasmochemical denitration.—73-03200
Structural studies of phase transformations in ultrafine zirconia powders.—73-06290
Structure and properties of ceramics of the system $Al_2O_3$-$ZrO_2$-$SiO_2$.—73-07224
Structure development in polycrystalline zirconium dioxide fibers.—73-02461
Structure of vapor-deposited yttria and zirconia thin films.—73-16340
Structure, texture, and aging of thin $ZrO_2$ films.—73-02468
Surface characterization of an $SiO_2$-$ZrO_2$ glass by gas-solid adsorption.—73-14115
Surface chemistry and rheology of $ZrO_2$ suspensions containing polyacrylate: effects of molecular weight [MW] and $ZrO_2$ surface area.—73-09345
Synthesis and mechanical properties of alumina–MgO-stabilized zirconia–zircon composite.—73-06082
Synthesis and mechanical properties of alumina–MgO-stabilized zirconia-zircon composite.—73-17021
Synthesis and properties of hydroxyapatite-zirconia composite ceramics.—73-13296
Synthesis and sintering of MgO-doped mullite/$ZrO_2$ composite powders using the sol-gel method.—73-06083
Synthesis and sintering of MgO-doped mullite/$ZrO_2$ composite powders using the sol-gel method.—73-13300
Synthesis of metastable tetragonal ($t'$) zirconia-ceria solid solutions by the polymerized complex method.—73-17040
Synthesis of nanocrystalline alumina and alumina-zirconia composites by a combustion-assisted process.—73-17041
Synthesis of $Y_2O_3$-doped $ZrO_2$ gel monoliths by polycondensation of metal alkoxide and their change on heating: II, Crystallization behavior of gel monoliths and synthesis of translucent $Y_2O_3$-doped $ZrO_2$ ceramics.—73-13316
Tape casting of fine alumina/zirconia powders for composite fabrication.—73-17050
Temperature effects on rodlike zirconia particles: morphology, degree of crystallinity, and texture.—73-06296
Tensile strength of a water-setting (hydration-hardening) zirconium-dioxide-based concrete in the 300–2300 K range.—73-00197
Tetragonal zirconia powders from the zirconium $n$-propoxide–acetylacetone–water–isopropanol system.—73-13318
Tetragonal-cubic inversion in unstabilized zirconia dispersed in alumina matrix.—73-16365
Texture evolution of zirconium oxide xerogels prepared by sol-gel process.—73-13319
Thermal and hydrothermal properties and microstructure of zirconia-alumina-mullite.—73-17445
Thermal barrier coatings from sol-gel-derived spray-grade $Y_2O_3$-$ZrO_2$ microspheres.—73-09375
Thermodynamics of zirconia system with a possibility of intelligent characters.—73-05518

Thermomechanical properties and thermal shock resistance of reaction-sintered zirconia-corundum-mullite materials.—73-04025
Three-phase zirconia sensor for rapid determination of silicon levels in hot metal.—73-10997
Transformation driving force for indentation cracking in zirconia ceramics.—73-03372
Transformation shear of precipitated zirconia particles.—73-05521
Transformation twinning in monoclinic zirconia particles.—73-16385
Tribochemical activation of polycrystalline alumina and zirconia in aqueous suspensions.—73-03066
Ultrafine-grained dense monoclinic and tetragonal zirconia.—73-13331
Use of coupling agents as a route to improvement of the compressibility of fine zirconia and alumina powders.—73-09383
Use of experimental design for developing glasses with a comparatively low $ZrO_2$ content which are highly resistant to alkali and which can be formed by a melt-spinning process.—73-03900
Use of the ion-beam current as a process control in the reactive sputtering of zirconium oxide.—73-09384
Usefulness of spark plasma sintering on densification and mechanical properties of alumina whisker/zirconia composites.—73-17069
Using surfactants to control ultrafine $ZrO_2$ powder aggregation in drying and firing processes.—73-13333
Wear mechanisms of amorphous carbon and zirconia coatings on rigid disk magnetic recording media.—73-09694
Wettability and interfacial reaction between molten iron and zirconia substrates.—73-00275
Wettability and interfacial reaction of alumina and zirconia by reactive silver-indium base alloy at mid-temperatures.—73-00276
Wetting and joining of mullite ceramics by active-metal braze alloy.—73-03665
X-ray diffraction study of the *t*-to-*m* phase transformation in 12 mol% ceria-doped zirconia at low temperatures.—73-16394
X-ray measurement of triaxial residual phase stress in zirconia–alumina composite ceramics.—73-13609
Zirconia oxygen sensor.—73-11552
Zirconia powders for high-tech ceramics.—73-05184
Zirconia sol and method for production thereof.—73-02080
Zirconia sol coating of single-crystal ceramic fibers.—73-09387
Zirconia sol, method for production thereof, porous ceramic-producing slurry, and porous ceramic product obtained by use thereof.—73-12408
Zirconia-, yttria-, and ceria-based ceramics with high electrical conductivity.—73-10999
Zirconia-modified calcium oxide ceramics and industrial recommendations.—73-12906
Zirconia-pillared clays and micas.—73-02001
Zirconia/zirconium: a new, abrasion-resistant material for orthopedic applications.—73-13912
Zirconium acetylacetonate as a precursor for the chemical vapor deposition of $ZrO_2$.—73-06137
Zirconium and silicon oxide fibers and microspheres produced by the sol-gel transition and plasma-chemical methods.—73-14531
Zirconium oxide and nitride coated cardiovascular implants.—73-03705
Zirconium oxide powder, process for its preparation and its use.—73-05256

**zirconia-toughened alumina (ZTA),**
Characterization of zirconia-toughened alumina (ZTA) ceramics by SEM cathodoluminescence.—73-12551
Effect of calcination on characteristics and sintering behavior of $Al_2O_3$-$ZrO_2$ composite powders.—73-05755
Effect of calcination on the sintering of gel-derived, zirconia-toughened alumina.—73-16724
Effect of microstructure on the wear transition of zirconia-toughened alumina.—73-06386
Erosion wear properties of tetragonal $ZrO_2(Y_2O_3)$-toughened $Al_2O_3$ composites.—73-06405
Evaluation of zirconia-toughened alumina tool inserts during machining of high-strength stee!.—73-17313
Grain growth kinetics in alumina–zirconia (CeZTA) composites.—73-09457
Preparation and sinterability of zirconia-toughened-alumina composite powder.—73-02936
Preparation and sintering of zirconia-toughened alumina powder.—73-05964
Solid oxide fuel cell development.—73-10991
Stability under hydrothermal conditions and fracture strength of yttria- and ceria-doped tetragonal zirconia/alumina composites fabricated by HIPing.—73-03353
Synthesis and properties of novel mullite–zirconia-toughened alumina composites.—73-17023
Thermomechanical properties and microstructures of ZTA-$Al_2O_3$ whisker composites.—73-13605
Toughening in zirconia-toughened alumina composites with nontransforming zirconia.—73-03371

**zirconia: partially stabilized (PSZ),**
$Al_2O_3$-MgO-$ZrO_2$ ceramic foam filter.—73-03989
Annealing-induced defect clustering at $Ni_{1-x}O$-Y partially stabilized $ZrO_2$ interfaces.—73-09388
Annealing-induced defect clustering at $Ni_{1-x}O$-Y-partially stabilized $ZrO_2$ interfaces.—73-03077
Brazing titanium vapor-coated zirconia.—73-10199
Creep of Mg-PSZ at room temperature.—73-06358
Effect of milled particle size on transverse rupture strength of sintered Mg-PSZ.—73-17291
Effect of oxygen partial pressure during sintering on the microstructure of Mg-PSZ with strontia and silica additions.—73-17125
Effect of zirconia allotropes on fracture toughness of α-alumina.—73-09584
Experimental *R*-curve behavior in partially stabilized zirconia using moire interferometry.—73-06412
Features of notch preparation for fracture toughness measurements in partially stabilized zirconia.—73-05047
Formation mechanism of oxygen-deficient region in electrochemically reduced Y-PSZ crystal.—73-17134
Friction and wear properties of partially stabilized zirconia with solid lubricant.—73-09605
Influence of heating rate on the thermal strain induced fracture of Mg-PSZ samples.—73-05583
Interaction of CaO-FeO-$SiO_2$ slags with partially stabilized zirconia.—73-04009
Martensite transformation behavior during isothermal aging in partially stabilized zirconia with and without alumina addition.—73-03161
Mechanical properties of composites of alumina and partially stabilized zirconia.—73-09636
Microstructure and mechanical properties of 2.5 yttria partially stabilized zirconia-reinforced molybdenum disilicide composites.—73-09650
Nonplanar $Al_2O_3$/YPSZ laminates by electrophoretic deposition using $Al_2O_3$ fiber electrodes.—73-16883
Partially stabilized $ZrO_2$ ceramic and its behavior under load.—73-00834
Partially stabilized $ZrO_2$-based laminar ceramic composites.—73-12391
Phase transition and oxygen deficiency in electrochemically reduced Y-, Ca-PSZ crystals.—73-05455
Phase transition and oxygen deficiency in electrochemically reduced Y-, Ca-PSZ crystals.—73-16262
Precipitate coarsening by liquid film migration in (Mg,Ca)-PSZ's.—73-17183
Processing stabilized zirconia underwater—spherical composite powders for plasma-sprayed thermal barrier coatings.—73-09281
*R*-curve behavior of alumina and PSZ at ambient and high temperatures.—73-06506
Relationship between fracture toughness and phase assemblage in Mg-PSZ.—73-06510
Shape evolution of a coherent tetragonal precipitate in partially stabilized cubic $ZrO_2$: a computer simulation.—73-03192
Stability of the properties of ceramics based on partially stabilized zirconia.—73-09672
TEM characterization of indented polycrystalline Y-PSZ.—73-17209
Temperature-variant hardness response of duplex TBC's [thermal barrier coatings].—73-12886
Tetragonal↔monoclinic phase transition temperature of rare-earth-doped zirconia prepared by arc melting.—73-08774
Tetragonal-to-monoclinic phase transition temperature of rare-earth-doped zirconia prepared by arc melting.—73-16366
Thermal shock resistance of composites of alumina and partially stabilized zirconia.—73-08990
Toughening of magnesia partially stabilized zirconia, due to dilatational transformation.—73-17449
Transmission electron microscopy study of wear of magnesia partially stabilized zirconia.—73-06300
Tricalcium phosphate coating on zirconia by using calcium metaphosphate and tetracalcium phosphate.—73-03067

**zirconia: tetragonal polycrystals (TZP),**
Abrasive wear resistance of transformation-toughened ceramics.—73-09541
Advanced ceramic application in the ceramic industry.—73-05152
Characterization of three-dimensional through-thickness transformation zone in 9-mol% Ce-TZP ceramics.—73-17247
Crack shielding in Ce-TZP/$Al_2O_3$ composites: comparison of fatigue and sustained load crack growth specimens—correction.—73-09555
Crack shielding in Ce-TZP/$Al_2O_3$ composites: comparison of fatigue and sustained load crack growth specimens.—73-06354
$C_1$-axis orientation on ground surface of tetragonal zirconia polycrystals.—73-12542
*c-t*-axis orientation on ground surface of tetragonal zirconia polycrystals.—73-02153
Destabilization behavior of ceria-stabilized tetragonal zirconia polycrystals by sodium sulfate and vanadium oxide melts.—73-08596
Effect of compaction pressure on the sinterability of submicron powders of tetragonal zirconia.—73-16725
Elastic modulus and fracture toughness of $CeO_2$-containing tetragonal zirconia polycrystals.—73-17302
Electrophoretic deposition [ED] forming of SiC-TZP composites in a nonaqueous sol media.—73-13044
Experimental study of stress-induced localized transformation plastic zones in tetragonal zirconia polycrystalline ceramics.—73-09451
Fabrication and properties of (Y,Ce)-TZP/$Al_2O_3$ and Y-TZP/$Al_2O_3$ composites from fine powders prepared by a hydrolysis technique.—73-02821
Grain-boundary modification of ceria-stabilized tetragonal zirconia polycrystals by a small amount of alumina addition.—73-09151
Mechanical properties of low-tempeature-sintered Ce-TZP: I, Bending strength and Weibull modulus.—73-03335
Mechanical properties of low-temperature sintered ceria-stabilized tetragonal zirconia polycrustals: III, Thermal shock resistance.—73-13564
Mechanical properties of low-temperature sintered ceria-stabilized tetragonal zirconia polycrystals: II, Fracture toughness.—73-13565
Palladium-zirconia diffusion bonds: mechanical properties and interface reactions.—73-13878
Plasticity-induced fatigue damage in [12 mol%] ceria-stabilized tetragonal zirconia polycrystals.—73-17408
Role of CaO in the sintering of 12Ce-TZP ceramics.—73-06024
Stability under hydrothermal conditions and fracture strength of yttria- and ceria-doped tetragonal zirconia/alumina composites fabricated by HIPing.—73-03353
Stress-strain characteristic of Ce-TZP ceramics under compression.—73-06533
Zirconia powders for high-tech ceramics.—73-05184

**zirconia: yttria stabilized (YSZ),**
Ambient and high-temperature stable fracture tests in ceramics: applications to yttria-partially-stabilized zirconia.—73-03235
Apatite coating on yttria-doped partially stabilized zirconia plate in the presence of water vapor.—73-05693
Apatite coating on yttria-doped partially stabilized zirconia plate in the presence of water vapor.—73-12920
Behavior of elastic constants, refractive index, and lattice parameter of cubic zirconia at high temperatures.—73-08813
Ceramic innovations—disappeared and rediscovered.—73-03384
Characteristic of the pore structures in the compacts of ultrafine zirconia powder.—73-02740
Characteristics and sintering behavior of 3 mol% $Y_2O_3$-$ZrO_2$ powders synthesized by reaction in molten salts.—73-02741
Characterization of laser-glazed plasma-sprayed yttria-stabilized zirconia coatings.—73-00215
Crystal growth and color centers of yttria-stabilized cubic zirconia (YSCZ) single crystals.—73-12421
Cubic metal oxide thin film epitaxially grown on silicon.—73-04197
Cyclic voltammetric study of the electrochemical formation of platinum oxide in a Pt/yttria-stabilized zirconia cell.—73-04070
Deformation characteristics of cubic zirconia monocrystals.—73-13502
Densification and grain growth of ultrafine 3 mol% $Y_2O_3$-$ZrO_2$ ceramics.—73-16695
Deposition and properties of yttria-stabilized zirconia thin films using reactive direct current magnetron sputtering.—73-02767
Deposition of stabilized zirconia onto metallic substrates using a dc thermionic triode ion plating technique.—73-10213
Dislocation structures around Vickers indents in 9.4 mol% $Y_2O_3$-stabilized cubic $ZrO_2$ single crystals.—73-03131
Effect of alumina addition on bending fracture behavior in Y-PSZ.—73-13506
Effect of alumina on sintering behavior and electrical conductivity of high-purity yttria-stabilized zirconia.—73-14693
Effect of microstructural design on the electrical properties of $Y_2O_3$-stabilized $ZrO_2$.—73-12773
Effect of microstructure on the interface resistance between a perovskite-type oxide electrode and yttria-stabilized zirconia.—73-07305
Effect of $Nb_2O_5$ alloying on thermal expansion anisotropy of 2 mol% $Y_2O_3$-stabilized tetragonal $ZrO_2$.—73-02584
Effect of NiO dissolution on the microstructural development of $t'$-$ZrO_2$ with 5 mol% $Y_2O_3$.—73-09447
Effect of YSZ addition to solid oxide fuel cell electrodes on electrical performance.—73-00953
Electrical conductivity of plasma-sprayed yttria-stabilized zirconia.—73-08854
Electrochemical vapor deposition of stabilized zirconia and interconnection materials for solid oxide fuel cells.—73-05786
Electrode polarization at the Au, $O_2(g)$/yttria-stabilized zirconia interface: I, Theoretical considerations of reaction model.—73-04093
Electrode system $O_2$/Pt‖$ZrO_2$:8$Y_2O_3$ investigated by impedance spectroscopy.—73-04094
Epitaxial growth of monoclinic and cubic $ZrO_2$ on Si(100) without prior removal of the native $SiO_2$.—73-16138
Fabrication of YSZ/NiO-YSZ two-layer ceramics for tubular SOFC by multilayer slurry casting process.—73-05807
Fabrication of YSZ/NiO-YSZ two-layer ceramics for tubular SOFC by multilayer slurry casting process.—73-16778
Fire-resistant barriers for composite materials.—73-02038
Fluorescence line narrowing study of $Eu^{3+}$ in YSZ: a new direction of research in superionic materials.—73-00971
Formation mechanism of oxygen-deficient region in electrochemically reduced Y-PSZ crystal.—73-05403
Improvement of the crystalline quality of a yttria-stabilized zirconia film on silicon by a new deposition process in reactive sputtering.—73-09168
Improving stabilized zirconia with strontium gallate.—73-13094
Indentation studies on $Y_2O_3$-stabilized $ZrO_2$: I, Development of indentation-induced cracks.—73-09466
Indentation studies on $Y_2O_3$-stabilized $ZrO_2$: II, Toughness determination from stable growth of indentation-induced cracks.—73-09618
Influence of production conditions on the densification of zirconia powders obtained from acetates.—73-09175
Influence of temperature on microhardness and birefringence of $ZrO_2$-$Y_2O_3$ crystals.—73-02621
Joining of 8 mol% YSZ solid electrolyte and perovskite $LaMnO_3$.—73-00989
Luminescence of tetrahedrally coordinated $Co^{2+}$ in zirconia.—73-08659
Mechanical characteristics of zirconia monocrystals for structural applications.—73-03325
Mechanism of YSZ/metal, $O_2$ electrode [studied] by the application of harmonics current measurement.—73-04134
Mechanism of YSZ/metal, $O_2$ electrode [studied] by the application of harmonics current measurement.—73-14717
Microanalysis of $Ar^+$-bombarded zirconia–yttria films on silicon substrates.—73-12629

Microlaminate ceramic/ceramic composites (YSZ/$Al_2O_3$) by electrophoretic deposition.—73-16867
Microstructural study of melt-processed $YBa_2Cu_3O_{7-\delta}$ thick films on yttria-stabilized zirconia.—73-11833
Microstructure and mechanical properties of SiC whisker-reinforced $ZrO_2$–6 mol% $Y_2O_3$ composites.—73-13424
Microstructures of $Y_2O_3$-stabilized $ZrO_2$ electron beam–physical vapor deposition coatings on Ni-base superalloys.—73-09491
New biepitaxial grain-boundary junction.—73-08143
Optical properties of cubic-stabilized zirconia.—73-05605
Physicochemical characteristics of partially stabilized zirconia powders produced at Chepetsk mechanical plant.—73-17182
Precious metal catalysts with oxygen-ion conducting support.—73-00294
Preparation and mechanical properties of 3Y-TZP/SiC composites.—73-13174
Preparation of biaxially aligned cubic zirconia films on Pyrex glass substrates using ion-beam-assisted deposition.—73-09257
Preparation of bicrystal substrates and properties of YBaCuO grain-boundary junctions.—73-08177
Preparation of spherical monodispersed Y-doped $ZrO_2$ powders from metal alkoxide.—73-05981
Preparation of ultrafine ceria-stabilized zirconia particles coated with yttria.—73-09272
Preparation of yttria-stabilized zirconia thin films by a sol-gel procedure using alkoxide precursors.—73-02977
Properties of ceramics based on zirconia partly stabilized with yttrium concentrate.—73-01016
Reaction mechanism of electrochemical vapor deposition [EVD] of yttria-stabilized zirconia film.—73-13227
Reaction of $YBa_2Cu_3O_{7-x}$ superconducting film with YSZ substrate and crystal orientation in the film.—73-15608
Sintering behavior of YSZ/NiO-YSZ two-layer ceramics for tubular SOFC fabrication by multilayer slurry casting process.—73-16994
Site resolution spectroscopy of $Nd^{3+}$ in YSZ.—73-16304
Specific heat and thermal conductivity of $ZrO_2$-$Y_2O_3$ fianites.—73-16597
Spinodal decomposition in zirconia–yttria ($ZrO_2$-$Y_2O_3$) alloys.—73-08739
Structural properties of $Y_2O_3$-stabilized $ZrO_2$ films deposited by reactive thermal coevaporation.—73-08754
Structure of plasma-deposited $ZrO_2$-$Y_2O_3$ ceramic layers.—73-16337
Synthesis of $Y_2O_3$-doped $ZrO_2$ gel monoliths by polycondensation of metal alkoxide and their change on heating: I, Preparation of transparent gel monoliths of $Y_2O_3$-doped $ZrO_2$.—73-13315
Synthesis of $Y_2O_3$-doped $ZrO_2$ gel monoliths by polycondensation of metal alkoxide and their change on heating: II, Crystallization behavior of gel monoliths and synthesis of translucent $Y_2O_3$-doped $ZrO_2$ ceramics.—73-03059
Synthesis of $Y_2O_3$-doped $ZrO_2$ gel monoliths by polycondensation of metal alkoxide and their changes on heating: I, Preparation of transparent gel monoliths of $Y_2O_3$-doped $ZrO_2$.—73-06099
Synthesis of YSZ-coated SiC particles and their sintering behavior.—73-09367
Synthesis of YSZ-coated SiC particles and their sintering behavior.—73-17049
Temperature dependence of the elastic moduli, dilational and shear internal frictions, and acoustic wave velocity for alumina, (Y)TZP, and ß´-SiAlON ceramics.—73-09684
Thermal diffusivity of plasma-sprayed coatings of $ZrO_2$ with 8 wt% $Y_2O_3$ and $ZrO_2$ with 25 wt% $CeO_2$.—73-02707
Thermal shock resistance of fiber-dispersed $ZrO_2$ ceramics—influence of $Y_2O_3$ content of matrix.—73-16632
Thermodynamics of zirconia system with a possibility of intelligent characters.—73-05518
Time-dependent tetragonal-to-monoclinic transition in hot-pressed zirconia stabilized with 2 mol% yttria.—73-17213
Transported entropy in zirconia with 3–12 mol% yttria.—73-06181
Unusual twin structure in transformed precipitates in Y-PSZ single crystals—correction.—73-06303
Unusual twin structure in transformed precipitates in Y-PSZ single crystals.—73-05522
$ZrO_2$ oxygen sensors: an evaluation of behavior at temperatures as low as 300°C.—73-01369
$ZrO_2$ oxygen sensors: an evaluation of behavior at temperatures as low as 300°C.—73-04185

**zirconia: yttria-stabilized tetragonal polycrystals (Y-TZP),**
Annihilation of paramagnetic centers in yttria-stabilized zirconia.—73-03078
Characterization of grain boundaries in superplastically deformed Y-TZP ceramics.—73-17116
Characterization of laser-glazed, plasma-sprayed yttria-stabilized zirconia coatings.—73-06746
Correlations between strength and acoustic properties in yttria-stabilized zirconia polycrystals.—73-03250
Effect of HIPing on defect and strength characteristics in Y-TZP.—73-02786
Effect of HIPing on defect and strength characteristics in Y-TZP.—73-13007
Effect of $SiO_2$ addition on the microstructure and mechanical properties of Y-TZP.—73-05771
Effect of surface grinding on low-temperature degradation of 3Y-TZP.—73-09099
Effect of $Ta_2O_5$ alloying on low-temperature degradation of 3 mol% Y-TZP.—73-05385
Elaboration by acid dispersion of yttria-stabilized zirconia-alumina composites with good mechanical properties.—73-16757
Electrical characterization of grain boundaries in ultrafine-grained Y-TZP.—73-13393
Electrode polarization at the Au, O2(*g*)/yttria-stabilized zirconia interface: II, Electrochemical measurements and analysis.—73-00962
EPR structural study on hydrothermally aged yttria-doped tetragonal zirconia polycrystals.—73-08615
Fabrication and properties of (Y,Ce)-TZP/$Al_2O_3$ substrates.—73-04099
Fabrication of high-strength Y-TZP components by slip casting.—73-02825
Fatigue behavior of tetragonal polycrystals containing 4 mol% $Y_2O_3$.—73-03288
Formation and sintering of yttria-doped tetragonal zirconia with 50 mol% alumina prepared by the hydrazine method.—73-13063
Grain growth in ultrafine Y-TZP ceramics.—73-06221
Implications of void growth in submicrometer and nanocrystalline structures.—73-13549
Impurity and yttrium segregation in yttria-tetragonal zirconia.—73-06229
Internal friction of 9.4 mol% $Y_2O_3$-$ZrO_2$ cubic single crystal.—73-17365
Isolated pore generation mechanism and mechanical properties in MAS system with 3Y-TZP.—73-17366
Isothermal phase transformation behaviors in $Al_2O_3$-coated Y-TZP powders.—73-12618
Low-temperature degradation behavior for CaO-doped 2.5Y-TZP ceramics.—73-02323
Mechanical properties of $Al_2O_3$ particle–Y-TZP matrix composite and its toughening mechanism.—73-09634
Monoclinic-to-tetragonal transformation and crack healing by annealing in aged 2Y-TZP ceramics.—73-17176
Net-shape fabrication of Y-TZP ceramic through a statistically designed experiment.—73-09220
New technique for monitoring aging in yttria–tetragonal zirconia polycrystals.—73-01919
Paramagnetic defect kinetics in yttria-stabilized zirconia.—73-03105
Preparation of zirconia sintered body.—73-02058
Process-tolerant manufacturing: an optimization strategy for processing advanced ceramics.—73-09276
Processing and characterization of alumina (platelet)-reinforced Y-TZP (matrix) composites.—73-09500
Processing and mechanical properties of alumina platelet-reinforced zirconia.—73-09278
Processing and properties of Y-TZP/$Al_2O_3$ composites.—73-16951
Spontaneous martensitic transformation at room temperature in 2Y-TZP powders.—73-09509
Superplastic forging procedure for manufacture of ceramic yttria-stabilized tetragonal zirconia products.—73-06073
Superplasticity of Cu-doped $ZrO_2$ ($Y_2O_3$).—73-13598
Synthesis of Y-TZP ultrafine powder and its properties.—73-06101
Thermal barrier coating system with intermetallic overlay bond coat.—73-00299
Thermal shock behavior of Y-TZP/Y-TZP-$Al_2O_3$ composites having dual microstructure.—73-05667
Toughening mechanism and mechanical properties of $SiC_w$/Y-TZP composites.—73-06541
Uniaxial stress behavior of Y-TZP.—73-16644
Wear and friction of Y-TZP spheres reciprocating against various SiAlON plates.—73-09691
Y-TZP fine powder preparation by ultrasonic spray pyrolysis.—73-09386
Y-TZP sliding reciprocatively against various AlON ceramics.—73-13611

**zirconium boride,**
Influence of various process gases on the magnetron sputtering of $ZrB_{12}$.—73-03603
Method of modifying ceramic composite bodies by a post-treatment process and articles produced thereby.—73-10330
Method of modifying ceramic composite bodies by a posttreatment process and articles produced thereby.—73-12497
Preparation of $ZrB_2$ fine powders using thermite method by reduction with Mg.—73-05984
Preparation of $ZrB_2$ fine powders using thermite method by reduction with Mg.—73-13212
Reaction sintering of $TiO_2$ with $ZrB_2$, a new method for the production of $ZrO_2$-reinforced $TiB_2$ composite ceramics.—73-13231
Zirconium diboride.—73-12308

**zirconium carbide,**
Deposition of Zr-C thin films and plasma-polymerized hydrocarbon films in the reactive magnetron sputtering process.—73-12978
Laser diagnostics of zirconium carbide vaporization.—73-13477
Method of modifying ceramic composite bodies by a post-treatment process and articles produced thereby.—73-10330
Method of modifying ceramic composite bodies by a posttreatment process and articles produced thereby.—73-12497
Preparation and characterization of crystalline ZrC films.—73-05957
Preparation and formation processes of ZrC fine powders by Mg thermite method.—73-05963
Preparation and formation processes of ZrC fine powders by Mg thermite method.—73-16910
Preparation of ZrC/$Al_2O_3$ fine composite powders by thermite reaction.—73-16944
Stability, bonding, and geometric structure of $Ti_8C_{12}$, $Ti_8N_{12}$, $V_8C_{12}$, and $Zr_8C_{12}$.—73-16313
Structure of deformed polycrystalline zirconium carbide.—73-12704

**zirconium nitride,**
Anisotropy in residual strains and the lattice parameter of reactive sputter-deposited ZrN films.—73-16031
Effects of precoating and bias voltage on the adhesion of reactive arc evaporated TiN and ZrN coatings.—73-00224
Material properties of a $ZrN_x$ film on silicon prepared by ion-assisted deposition method.—73-16535
Mechanical properties of hot isostatically pressed zirconium nitride materials.—73-03332
Preparation and microstructure of reactively sputtered $Ti_{1-x}Zr_xN$ [x=0.3–0.8] films.—73-06269
Preparation of ZrN fine powders from $ZrO_2$ by reduction with Mg and their recovery.—73-05985
Structural analysis of Zr-N and Ti-N films prepared by reactive plasma beam deposition.—73-06285
Structure and adhesion of ZrN films formed by reactive magnetron sputtering ion plating [RMSP] and dynamic ion mixing [DIM].—73-08973
Substoichiometric zirconium nitride coating.—73-02141
Synthesis of nanosized ceramic nitride powders by microwave-supported plasma reactions.—73-17044
X-ray residual stress measurement in TiN, ZrN, and HfN films using the Seemann-Bohlin method.—73-16649

**zirconium,**
Application of the model of quasi-ideal solutions for consideration of the phase equilibria in the system Zr-$ZrI_4$.—73-16033
Conditions of fabrication and some properties of zirconium-containing fluorophosphate glasses.—73-00440
Conditions of synthesis and some properties of zirconium-containing fluorophosphate glasses.—73-00441
Dielectric relaxation in $Ba(Ti_{0.8}Zr_{0.2})O_3$ ceramics prepared from sol-gel and solid-state reaction powders.—73-01401
Fabrication and characterization of polymer-derived $Si_2N_2O$-$ZrO_2$ nanocomposite ceramics.—73-16769
Incommensurately modulated $ZrO_{2-x}F_{2x}$: $0.698 \le r \le 0.714$.—73-02292
Influence of chemical processing in the crystallization behavior of zirconium titanate materials.—73-05863
Interactions of zirconium (hafnium) with silicon and phosphorus.—73-16184
Ion transport in alumina-pillared zirconium phosphate.—73-06166
Kinetic and structural characteristics of Zr-doped Y-Ba-Cu-O ceramic.—73-08119
Kinetic study of crystallization in zirconium titanate from an amorphous reactive prepared precursor.—73-12619
Microwave characteristics and far-infrared reflection spectra of zirconium tin titanate dielectrics.—73-10973
Microwave loss quality of $(Zr_{0.8}Sn_{0.2})TiO_4$.—73-14718
Novel elastic anomalies in Zr-N films.—73-08929
Numerical analysis of deposition rates of zirconium thin films by thermal chemical vapor deposition.—73-02913
Numerical analysis of deposition rates of zirconium thin films by thermal chemical vapor deposition.—73-13155
Polymorphism of the dioxides of zirconium and hafnium.—73-02396
Polynuclear hydroxy metal cations pillared zirconium phosphates and their proton conductivity.—73-12863
Preparation and crystal structures of new barium zirconium sulfides, $Ba_2ZrS_4$ and $Ba_3Zr_2S_7$.—73-02400
Preparation and properties of new zirconium oxyfluoride glass by plasma-enhanced chemical vapor deposition.—73-14470
Preparation and properties of zirconium oxynitrides by the reaction of zirconia with layer-structured zirconium nitrochloride.—73-04451
Preparation of $Pb(Zr_{1-x}Ti_x)O_3$ ceramic fibers by the alginate method.—73-16928
Preparation of some intercalation compounds of layered γ-*zirconium phosphate and zirconium phosphate-phosphite.—73-02405*
Proton-metal ion conduction in monoalkali salt forms of α-zirconium phosphate.—73-04155
Proton-metal ion conduction in polyhydrated α-$ZrHM_{0.5}(PO_4)_2$ and α-$ZrH_{0.5}Cr_{0.5}(PO_4)_2$ studied by ac/dc conductivity and emf measurements.—73-01018
Reactivity of high-purity $ZrSiO_4$ sintered bodies for alkaline glass melts.—73-00849
Reversible γ→α+δ transformation in zirconium deuteride.—73-16296
Sintering of high-purity $ZrSiO_4$ powder.—73-03008
Sintering studies of NZP materials.—73-09328
Slip casting of zirconium silicate for the production of structural parts as an alternative to traditional extrusion methods.—73-12063
Stabilization of ordered zirconium titanates through the chemical substitution of $Ti^{4+}$ by $Al^{3+}/Ta^{5+}$.—73-04173
Structural study of $Zr_{0.8}Sn_{0.2}TiO_4$.—73-05496
Thermal shock resistance of $KZrO_2(PO_4)_3$ [KZP] ceramic.—73-16633
Zirconia/zirconium: a new, abrasion-resistant material for orthopedic applications.—73-13912
Zirconium-containing fluorophosphate glasses colored with oxides of *d* and *f* elements.—73-07189
Zr-EXAFS study of fluoride ion-conducting $ZrF_4$-$BaF_2$-CsF glasses.—73-01042

**zone melting,**
High-$J_c$ YBaCuO superconducting materials prepared by zone melting.—73-11782
Infrared laser-assisted zone refining of inorganic materials.—73-02878